Report

Phase II

Site Investigation Cherry Farm Site Tonawanda, New York

NIAGARA MOHAWK

Niagara Mohawk Power Corporation
Syracuse, New York

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O'BRIEN & GERE

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REPORT

SITE INVESTIGATION
CHERRY FARM SITE
TONANWANDA, NEW YORK

NIAGARA MOHAWK POWER CORPORATION

SYRACUSE, NEW YORK

O'BRIEN & GERE ENGINEERS, INC.
1304 BUCKLEY ROAD
SYRACUSE, NEW YORK 13221

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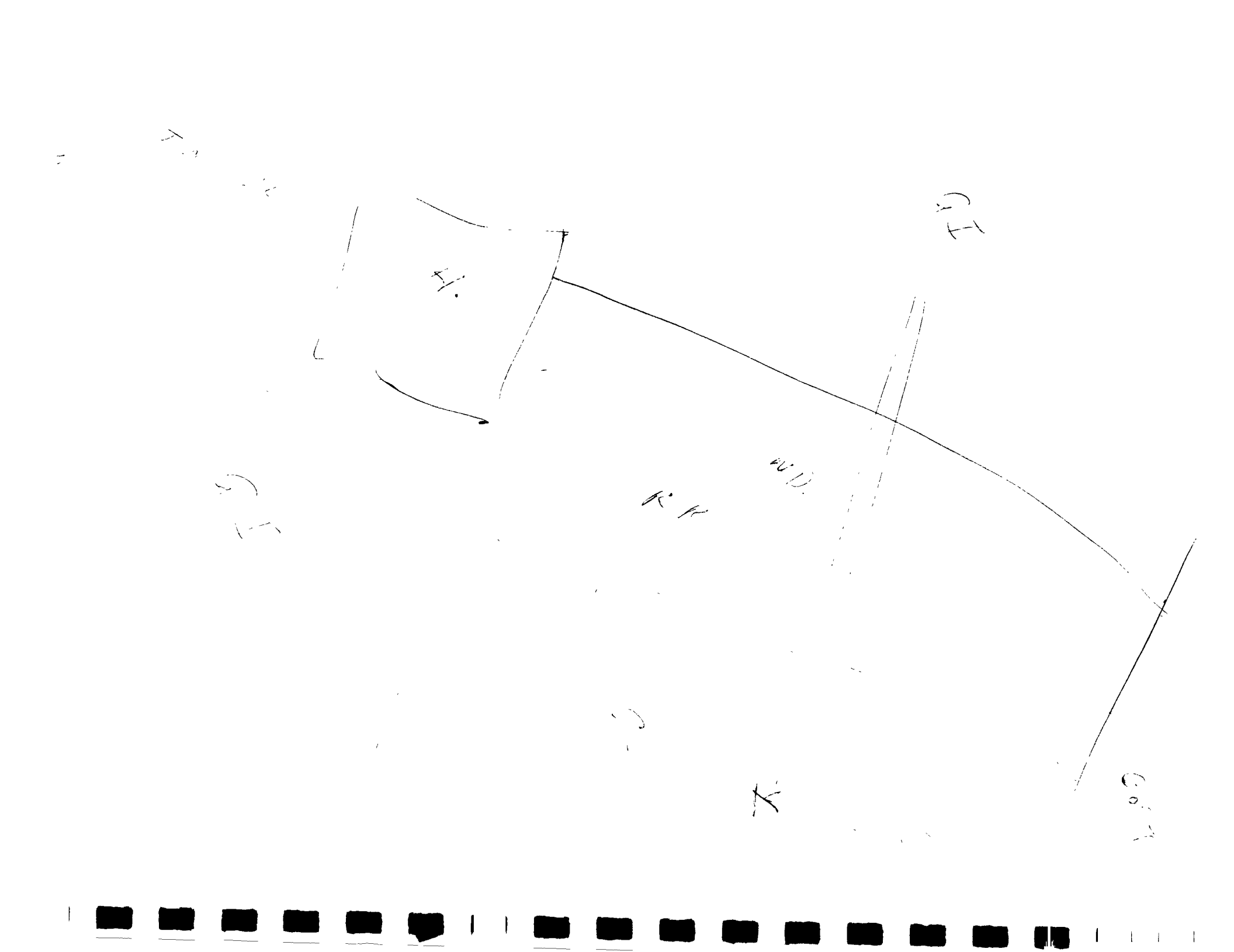
SECTION 1 - EXECUTIVE SUMMARY

The Cherry Farm site is located between River Road and the Niagara River in the Town of Tonawanda, New York (Figure 1). The site encompasses approximately 55.4 acres, 80% of which is covered with fill material. The elevation of the landfill area is approximately 20 feet above the original land surface. The fill is surrounded on three sides by wetlands and small drainage creeks. The fourth side is bounded by the Niagara River.

Documentation from CF&I Steel Corporation (CF&I) submitted to NYSDEC on October 10, 1985, indicates that CF&I owned the Cherry Farm property between 1945 and 1970. Dusts and slags from the CF&I blast furnace and open hearth furnace operations were disposed at the site until 1963 when the plant was closed down. CF&I then formed an agreement with INS Equipment Company (INS) to allow INS to dispose of foundry sand from a Chevrolet Plant on the property. Laboratory analyses were conducted on slag material similar to that disposed at Cherry Farm as well as the Chevrolet Plant foundry sand. The results of these analyses reveal that the CF&I waste contained less than 2.5 ppm heavy metals and the 85% of the foundry sand was silica dioxide and magnesium oxide.

The site, along with some additional acreage, was purchased by Niagara Mohawk Corporation in 1970 from CF&I. Steel Corporation. At the time of purchase, foundry sand was exposed at the surface of the fill area. To prevent wind erosion, the surface of the fill was capped with approximately six inches of clay and rye grass was planted.



The Interagency Task Force on Hazardous Waste conducted a site investigation at the Cherry Farm property between 1978 and 1980 in connection with a state-wide program. In 1980 the site was listed in the NYSDEC's Hazardous Waste Disposal Sites in New York State - First Annual Report. The USGS and NYSDEC followed-up with additional soil and water sampling efforts between 1981 and 1983. A NYSDEC Phase I investigation was completed in June of 1983. The Phase I investigation report included a preliminary Hazardous Ranking System scoring. As a result of this investigation the NYSDEC determined that additional information was necessary, and therefore, requested that Niagara Mohawk undertake a Phase II investigation of the Cherry Farm property.

In April 1985, Niagara Mohawk retained O'Brien & Gere Engineers, Inc. of Syracuse, N.Y. to conduct a Phase II investigation in accordance with NYSDEC guidelines. The Phase II investigation at the Cherry Farm site included completion of geophysical surveys, installation of seven monitor wells, completion of five soil borings and collection and analysis of soil, ground water, surface water and sediment samples.

The site investigations revealed that the site is comprised of a surface landfill area 20 feet high which was placed on top of natural fine to medium sand and silt deposits. The landfill material is comprised of foundry sand, sandcasts, slag and a black sandy material.

The chemical analyses completed on the fill material reveal the presence of phenolic compounds, polynuclear aromatics (PNAs) and phthalates in addition to a variety of metals. Additionally, PCBs were detected in the soils. In general, these results are consistent with those reported by the NYSDEC and USGS.

The metals can be, most likely, attributed to the abundance of foundry sand and furnace slag known to have been used as fill material. Phthalates are commonly found in all types of plastics. The phenolic compounds and PNAs are generally found in tarlike substances which are associated with road paving material. PCBs were once widely used in electrical switchgear and industrial machinery and had hundreds of other applications as well..

The ground water analyses results revealed trace levels of some metals in addition to benzoic acid, PNAs and phthalates, all of which were found in the fill material. The higher levels of some of these compounds were observed in the upgradient well which may be indicative of an off site source.

Only one of the seven wells, MW6, was found to contain elevated levels of aromatic compounds (benzene, toluene, ethylbenzene and xylenes). The presence of these substances may be due to an isolated deposit possibly located close to the bottom of the landfill. This isolated appearance is further supported by the absence of purgeable substances in the waste material composites.

In general, only some of the substances detected in the soils were found to be present the ground water and levels of those compounds were found to be considerably lower in the ground water. This suggests that the compounds are not highly soluble given that the bottom five feet of the fill is saturated.

The surface water and sediment sample analyses reveal a number of metals, phenolics and PNAs present. A significant number of these compounds were found to be present at higher levels in the upstream samples. This indicates that an upstream source may be present.

The Quality Assurance/Quality Control (QA/QC) data, as required by the NYSDEC Generic Work Plan for Phase II investigations, is included as a separate document. The QA/QC documentation includes spike, duplicate, surrogate and blank data; calibration standards and chromatograms. The amount of data contained in this document required that it be separated into two volumes. Volume 1 contains the organic and inorganic data. Volume 2 contains the acid extractable/base neutral scan data.

The Hazard Ranking of the Cherry Farm site was completed using the MITRE System as required by the NYSDEC. The data used for this ranking was obtained from this report as well as the information supplied by the NYSDEC pertaining to previous NYSDEC and USGS sampling and analysis efforts. The Hazard Ranking Score as computed for the Cherry Farm Site is 13.1. The documentation and worksheets are included as a separate document entitled "HAZARD RANKING, CHERRY FARM SITE, TONAWANDA, NEW YORK".

EPA Form 2070-13, "Potential Hazardous Waste Site, Site Inspection Report," was completed by O'Brien & Gere Engineers on behalf of Niagara Mohawk Power Corporation. This document is included as Appendix G of this report. All available data including historic land use and operations; previous site investigations; and this Phase II investigation of the Cherry Farm property were used in completion of this document.

SECTION 2 - PURPOSE

Investigations were conducted at the Cherry Farm Site between July 15, 1985 and September 1, 1985. These investigations were completed as part of a NYSDEC Phase II investigation. The purpose of this investigation was to determine the physical and chemical characteristics of the site. This characterization included ground water quality and flow, landfill content, subsurface stratigraphy and surface water/sediment quality.

This site investigation followed a scope of work developed through negotiations between Niagara Mohawk Power Corporation (NMPC) and the New York State Department of Environmental Conservation (NYSDEC). A NYSDEC representative was present during all stages of the site investigation. Any on-site decisions were made with concurrence by this NYSDEC representative.

The report which follows is based upon the NYSDEC Generic Phase II Investigation guidance documents. The Hazard Ranking System scoring results will be included in a separate document.

SECTION 3 - SITE INVESTIGATION

3.01 Geophysical Surveys

Three types of geophysical surveys were conducted at the Cherry Farm Site: Electromagnetic Terrain Conductivity (EM), Magnetic and Electrical Resistivity. These surveys were selected as the best methods to define the subsurface characteristics of the landfill (stratigraphy, metallic content) and direct the subsequent drilling program. The EM and magnetic surveys were conducted along a 50 feet by 50 feet grid. Additional EM and magnetic survey lines were completed along the eastern border and the north-east-south perimeters of the site, respectively. The resistivity soundings were conducted at selected locations within the site. Figures 2 and 3 show the EM and magnetometer grid boundaries and perimeter lines as well as the locations of the resistivity soundings, respectively.

The magnetic survey was conducted using an EG&G Geometrics ® Proton magnetometer (Model G-816/826). A base station was established at grid location 200, 200 (see Figure 2) to monitor any diurnal variations in the natural magnetic field during the survey period. A series of three readings were collected at each station to ensure validity of the measurements. The readings were then plotted and contoured for evaluation.

A terrain conductivity (EM) survey was conducted along the same 50 feet x 50 feet grid as the magnetic survey. An additional survey line was completed in the low lying area east of the landfill to serve as background data. A Geonics Limited ® terrain conductivity meter (Model EM-31) was employed during this survey. This instrument

employs inductive electromagnetics to measure variations in the conductivity of the soils or other fill materials. The collected data was plotted and contoured for evaluation.

The electrical resistivity survey was conducted using a Schlumberger array with a Bison 2390T Transmitter and 2390R Receiver. This survey was completed to provide vertical electrical profiles of the site to assist in evaluating the local lithology. A total of ten survey soundings were completed at the site as shown on Figure 3. The locations of these soundings were selected to provide information across the landfilled area. The data evaluation of the electrical resistivity survey was facilitated by a computer program developed by A.A.R. Zohdy (A Computer Program for the Automatic Interpretation of Schlumberger Sounding Curves Over Horizontally Stratified Media, 1973, NTIS PB 232703).

3.02 Air Monitoring Survey

Ambient air quality monitoring was conducted on August 1, 1985 along the perimeter of the landfill. The perimeter of the fill was selected as the most likely location for air emissions from the fill as the top of the landfill has been capped with clay and seeded. Two traverses across the site were also conducted as part of this survey. A Model PI-101 Photoionization Analyzer (HNU Systems, Inc. ^{R}) calibrated to benzene was used for this survey. The HNU photoionization analyzer readings were zero throughout the entire air quality monitoring survey. The results, therefore, will not be discussed in the remaining sections of this report.

3.03 Test Boring/Ground Water Monitoring Wells

Seven test borings were completed at the Cherry Farm Site for the purpose of installing ground water monitoring wells and determining the subsurface site lithology. The locations of these test borings/monitoring wells are shown on Figure 2. MW-1 was located east of the landfilled area to monitor the background ground water conditions. The six remaining test borings/monitoring wells were completed through the landfill to determine the characteristics and thickness of the fill material. The locations of these wells were selected through negotiations with the NYSDEC.

All of the test borings were completed using conventional hollow-stem auger drilling methods. Soil samples were collected using Split-Barrel Sampling Method ASTM D-1587-67 continuously to 10 feet below the fill or ground water table, whichever was greater. At two locations, MW-1 and MW-5, the test borings were completed to refusal. Soil samples at these two locations were collected at 5-foot intervals from 10 feet below the water table or fill to the bottom of the boring. All of the collected soil samples were screened with an HNU immediately after the split-barrel sampler was opened. Five samples were selected for additional indicator parameter analysis based on the HNU reading. Additional soil samples were selected from the screened intervals of MW1, MW2 and MW7 for grain size, atterburg limits and moisture content analyses. All drilling cuttings were placed in standard 55 gallon drums provided by Niagara Mohawk and left on-site pending results of the laboratory analyses. The test boring logs, showing HNU readings, lithology and well construction detail, are included as Appendix A.

All drilling and sampling equipment which was in contact with the soil and ground water were decontaminated using a high pressure steam cleaner. The split-barrel samplers were cleaned between each sample using water from a controlled source and methanol. The split-barrel samplers were steam cleaned between borings.

Monitor wells were installed within each of the seven test borings. The upgradient monitor well, MW-1, was set at 24 feet. The remaining six wells were installed to a depth 12 feet below the fill.

Each monitor well was constructed of 10-feet long, 2-inch I.D., stainless steel well screen with a slot size of 0.010 inches welded to 2-inch diameter stainless steel riser. The screen and riser assembly was installed to the base of the borehole. The two test borings which were completed to refusal were grouted back to the appropriate depth prior to the well installation. A washed, graded sand was placed around the screen and extended to a minimum of 1 foot above the top of the screen. A 2-3 feet thick bentonite pellet seal was placed above the sand and the remaining annulus was then filled with a bentonite/cement grout to within 2 feet of the ground surface. A six-inch locking steel cover was then placed over the well and cemented in place.

The monitor wells were developed using a centrifugal pump after a minimum of 24 hours had elapsed after the well installation was completed. The development process was continued until each well yielded sediment free water. Water levels were measured prior to the initiation of the development process.

3.04 Natural Gamma Ray Logging

Natural gamma ray logging was conducted in borings MW-1 and MW-5, which were completed to refusal. These logs served to correlate between the five-foot sampling intervals. The gamma ray probe was inserted into the hollow stem augers to the base of the borehole. The probe was then raised in 2-foot intervals and readings were recorded. This procedure was continued from the base of the borehole to the ground surface. The readings were then graphed with respect to depth and the known stratigraphic units. This data is presented in Appendix B.

3.05 In-Situ Permeability Tests

In situ permeability tests were conducted on each monitor well to determine the horizontal hydraulic conductivity of the subsurface material in which the wells are screened. These tests were conducted using a computerized pressure transducer system manufactured by EnviroLabs, Inc. and a solid Teflon^{R} rod. The static water level was measured prior to the initiation of the test. The pressure transducer was lowered to the bottom of the well and the recording system was started. The Teflon^{R} rod was then introduced into the well. Thus, creating a positive head in the well and surrounding formation. The head change and subsequent return to the static level was then monitored at preset time intervals by the transducer and recorder. The Teflon^{R} rod was removed and the water level recovery was monitored in a similar manner. This test procedure allowed for replication of data to ensure valid results. The data collected from these permeability tests are included in Appendix C and the results are summarized in Table I.

3.06 Soil Sampling

A total of 15 soil samples were collected for analysis at the Cherry Farm Site. Five of the samples were selected from the test boring/monitor well program based on the HNU readings. The additional ten samples were collected from the five soil borings and along the landfill face.

Five soil borings were completed through the landfill at locations shown on Figure 2. These soil borings were completed using conventional hollow-stem auger drilling methods. Soil samples were collected at 5-foot intervals to the base of the fill using split-barrel sampling method ASTM D1586-67. Each soil sample was screened with an HNU upon opening the sampler. The soil samples collected at each boring were then composited into glass jars with teflon liners and crimp tubes, placed in a cooler and shipped to the laboratory for analysis. The drilling and sampling equipment was decontaminated in the same manner as the test boring/monitor well drilling equipment. Upon completion, the soil boring was backfilled to the ground surface with bentonite cement grout.

Five additional soil samples were collected along the face of the landfill. These samples were collected using a post-hole digger or shovel. The locations of these samples, shown on Figure 2, were selected visually in the field as agreed upon by a DEC and OBG representative. Each sample was collected from between 1 and 3 feet below the surface. The samples were collected in jars with teflon liners, labeled and placed in coolers for shipment to the laboratory. Chain-of-custody procedures were followed. The equipment used for

collection of these samples was decontaminated with methanol and a controlled source water rinse after each sample was collected.

3.07 Surface Water and Sediment Sampling

Six surface water and two sediment samples were collected along the drainage ditches on the north, east and south boundaries of the site. The locations of these samples are shown on Figure 2. The narrow width of the drainage ditches did not necessitate the collection of the three samples across the channel as originally proposed but rather a single sample at each location. The collected samples were placed in glass jars and placed on ice for transport to the laboratory. Appropriate chain-of-custody procedures were followed.

Additional sediment samples were originally proposed for the southern drainage ditch and the Niagara River. These samples were not collected because recent (1985) dredging operations and field observations suggested they would be of limited benefit. The on-site NYSDEC representative was in agreement with this decision.

3.08 Seep Sampling

Two seeps along the landfill face were proposed to be sampled. However, no seeps were observed during the sampling tasks, possibly due to the relatively dry summer months. This condition prevented sampling of seeps during the site investigation.

3.09 Ground Water Sampling

Ground water samples were collected from each of the seven monitor wells on August 15, 1985. Prior to collection of the samples, each

of the monitor wells was evacuated using a centrifugal pump. Wells MW1, MW3 and MW5 were pumped dry. A minimum of three well volumes of water was removed from the remaining wells. The wells were allowed to recover and the samples were then collected with a stainless steel bailer. New polypropylene rope was used at each well location and the bailer was decontaminated using methanol and distilled water after sampling each well to prevent cross-contamination. The samples were collected in containers with the appropriate preservatives and placed on ice for transport to the O'Brien & Gere laboratory for analysis. Those samples being analyzed for metals were filtered in the field prior to adding the preservative. The ground water samples collected from MW7 and MW4 were split with the NYSDEC.

3.10 Sample Analysis

A total of 17 soil/sediment samples and 13 ground/surface water samples collected at the Cherry Farm Site were selected for analysis. A screening process which included field screening with an HNU, pH, Specific Conductance and Total Organic Carbon analysis, was conducted on each sample. The results of these analyses, shown on Table 2, were used to select those samples for complete priority pollutant analysis. The shallow soil samples and samples collected from the soil borings were screened for analysis using a heated headspace method as agreed upon by the NYSDEC. A portion of each soil sample was placed into a 40 ml vial and partially immersed in a hot water bath (50°C) for 20 minutes. The head space was then monitored with an HNU photoionization detector and the reading was recorded. The results of this screening procedure (Table 2) were used in conjunction with the

other screening parameters (pH, Specific Conductance and TOC) to select three soil samples for further analysis.

As indicated above, all of the samples collected for analysis were screened for pH, Specific Conductance and Total Organic Carbon. Those samples within each sample media which registered the highest levels of indicator parameters were selected for further priority pollutant analysis. All surface water and ground water samples were analyzed for pH and Specific Conductance in the field at the time of sampling. The Total Organic Carbon as well as all of the soil and sediment sample analyses were completed in the laboratory. Table 2 summarizes the results of these analyses.

All of the ground water and the two sediment samples were analyzed for priority pollutants. The "Upstream South" and "Downstream South" surface water samples were selected for priority pollutant analysis based on the results of the indicator parameter analyses and the fact that both of the sediment samples were collected from the northern drainage ditch. The three soil samples selected for priority pollutant analysis were composite samples collected from B-1, B-3 and B-5. These samples were selected based on their location with respect to earlier sampling locations reported by the USEPA and NYSDEC in addition to the results of the indicator parameter analyses. Also, visual inspection of the sample from B-5 revealed a reddish colored material which could not be readily identified.

The results of the priority pollutant analyses are presented in three separate tables based on sample media: ground water (Table 3), soil (Table 4) and surface water/sediment (Table 5). Each table only includes those parameters detected in at least one sample. A complete

list of the analytical parameters and detection limits is included as Appendix D.

The analytical procedures were in accordance with the EPA methods as described in EPA Publication SW-846-1980 - Test Methods for Evaluating Solid Wastes and Federal Register Volume 49 Number 209; October 26, 1984. QA/QC procedures were in accordance with the NYSDEC guidelines for Phase II investigations; specifically, the contract laboratory protocols (CCPs) were followed for priority pollutant analysis.

SECTION 4 - SITE ASSESSMENT

4.01 Topography

The Cherry Farm Site is located along the eastern bank of the Niagara River in the Town of Tonawanda, Erie County, New York. The site is comprised of an elevated fill area surrounded on three sides by low lying wetland. River Road runs along the eastern boundary of the site.

The fill area is approximately 2400 feet by 900 feet and extends approximately 20 feet above the original landsurface.

The fill area is bordered on three sides by wetland. Drainage ditches enter this wetland area at four locations along the eastern boundary of the site (Figure 2) and empty into the Niagara River at the southern and northern ends. On-site observations indicate that these drainage ditches are periodically dry as the flow is dependent upon precipitation and runoff.

4.02 Geophysical Survey Results

The EM and magnetic surveys were conducted over the fill area to provide information regarding the presence of buried metallic or ferrous materials. The data collected during these surveys were contoured for evaluation and are included as Figures 5 and 7.

The EM and magnetometer survey results indicate that the site contains large amounts of metallic or ferrous material. The EM survey results were consistent with the results of the EM traverses completed by the USGS in 1982. Some anomalies observed were substantiated by the presence of metallic objects at the surface, especially in the vicinity

of the two softball fields (See Appendix B). The foundry sand, fly ash and slag material present within the fill has a high iron content which would also produce the numerous anomalies observed. It is not possible, however, to determine whether buried drums are responsible for some of the anomalies although drums were observed on the surface along the edge of the fill material.

A single EM traverse was completed along the eastern boundary of the landfill in the wetland area to serve as background. A similar traverse was completed with the magnetometer which also included the northern and southern ends of the site (Figure 3). Figures 6 and 8 show in cross-section, the results of these traverses. The anomalies observed in the data for these lines are attributable to surface objects (i.e. manhole covers and utility poles).

Ten resistivity soundings were completed at locations shown on Figure 3. The resistivity data is included as Appendix E. This data generally identified the lithologic units encountered during drilling. The resistivity data indicated between 15 feet and 20 feet of fill with a lower resistive material, such as silt, beneath the fill. Lateral inhomogeneities in the subsurface deposits and the variable thickness of different units produced variations in the results of individual soundings.

4.03 Geology

Figure 4 represents cross sections showing the general geology of the sites. The logs of the monitor wells and soil borings indicate that the thickness of the fill material ranged from 10.5 feet to 20 feet. This fill material appeared to be comprised of foundry sand, fly ash and

pieces of slag. The slag resembled very porous, gray cinders of various sizes. Numerous sand casts were also observed.

A fine to medium sand and silt deposit was encountered below the fill material. The upper foot of this material contained organic material such as twigs, roots and marsh mat. The presence of organic material indicates that this deposit was once exposed at the land surface.

The deeper' boring at the MW5 location revealed that the fine grained sand and silt is 15 feet thick. A coarse grained sand and gravel layer approximately 8 feet thick, was encountered below the fine sand deposit. Fine gravel, sand and silt continued from below this coarse layer to approximately 45 feet below the landfill surface. A dense glacial till was found underlying the sand deposit. Refusal was logged at 51.5' below the surface. It was not determined whether the refusal was due to a boulder or bedrock, however, review of the local geology of the area suggests that bedrock may be present at this elevation.

The boring for MW1 was located on the eastern edge of the property and outside the limits of the landfill. This boring encountered a dry, dense, clay fill which extended from the surface to 11 feet. A black sand layer, approximately 1 foot thick underlies this fill. A silt and fine grained sand deposit was found below this black layer. This deposit is similar in appearance to that encountered below the fill material in the other borings with the exception that it is predominantly silt and contains intermittent clay layers. This was verified by the grain size analysis completed on three soil samples from the screened intervals of MW1, MW2 and MW7 (Appendix F). The above mentioned coarse grained sand and gravel layer was encountered between 42 and

47 feet. Refusal was logged at 47 feet. The presence of gypsum in the split-barrel samples at this depth indicates that this may be bedrock.

The former Erie Canal reportedly was located along the eastern edge of the site. The clay encountered within the MW1 boring may represent the now-filled channel. The black silt and fine sand may be the old canal deposits.

4.04 Hydrogeology

Ground water elevations were measured at each well location on August 15, 1985 and August 28, 1985. These elevations are included in Table 1. The ground water elevations within the fine to medium sand and silt which underlies the fill material indicate that the ground water flow direction in the vicinity of the Cherry Farm Site is towards the north-northwest (Figure 9). This direction seems reasonable, given the location and flow direction of the Niagara River. It is likely that at least a portion of the shallow ground water underlying the site discharges to the Niagara River. The ground water elevations further indicate that the ground water extends approximately 5 feet into the base of the fill material. Although no seeps were observed during the site investigation, the NYSDEC and USGS have reported at least three seeps during previous site inspections.

The in-situ permeability test data (Table 1) indicates that the hydraulic conductivity of the silt and sand material underlying the landfill ranges from 5×10^{-7} ft/sec to 2×10^{-4} ft/sec. This range of values is typical of a silty sand. The material with the lowest hydraulic conductivity was found at the MW1 location. The hydraulic

conductivity of the deposits screened, in general, increases from east to west across the site. The grain size analyses (Appendix D) conducted on samples from MW1, MW2 and MW7 support this variation in the hydraulic conductivity as the silt content of the formation decreases from east to west.

The 1965 USGS Buffalo NW, New York Quadrangle (Figure 1) reveals a small intermittent stream was once flowing diagonally across the site. The old settling ponds are also visible on this map. These areas were likely filled in with the foundry sand during landfilling operations. The more permeable fill material within the natural silty sand deposits would enhance ground water flow to the Niagara River.

4.05 Sample Analysis Results

The results of the priority pollutant analyses are presented in Tables 3, 4 and 5 which represent ground water, soil and surface water/sediment samples respectively. The major inorganic and organic substances detected at each of the sample locations is presented on Figure 9.

The ground water quality analyses reveal detectable concentrations of mercury, nickel, zinc and arsenic at some of the monitor well locations. Zinc was detected in each of the wells at overall levels ranging from 0.02 to 0.18 mg/l. Mercury was detected in MW-2 and MW-4 located on the northern portion of the site. Nickel was detected in MW1, MW2 and MW4. The concentrations were similar in MW1 and MW4, 0.28 mg/l and 0.21 mg/l, respectively. MW2 contained 0.10 mg/l of Nickel. Arsenic was present at levels equal to or slightly above the

detection limit of 0.01 mg/l in wells MW2, MW3, MW6, MW7 and the upgradient well, MW1. The only metal found to exceed Class GA ground water standards (NYCRR Title 6, Part 703.5) was Arsenic in MW2, MW3 and MW6.

Cyanide analysis of the ground water samples were inadvertently overlooked in the laboratory. However, the absence of cyanide in the soil samples would suggest that it would not be found in the ground water.

The purgeable priority pollutant scan revealed the presence of aromatics (benzene, toluene, ethylbenzene and xylene) in MW6. The levels of these compounds are above ground water standards. The only other purgeable compound detected was trans-1,2-Dichloroethene at 4 ug/l in MW4. Phenols were detected in MW3, MW4, MW5, MW6 and MW7 at levels from 0.002 mg/l to 0.077 mg/l. These levels are above the groundwater standard of 0.001 mg/l.

The acid extractable/base neutral scan detected phthalates, benzoic acid and benzo(a)pyrene in the ground water samples. The upgradient well, MW1, contained higher levels of benzo(a)pyrene (21 ug/l) and bis(2-ethylhexyl)phthalate (210 ug/l) than the downgradient wells. Di-n-OctylPhthalate was found in wells MW5, MW6 and MW7 at levels ranging from 11 ug/l to 95 ug/l. Benzoic acid was also detected in MW2 and MW3 at levels of 32 ug/l and 42 ug/l, respectively. The benzo (a) pyrene concentrations are above the "not detectable" groundwater standard. The remaning acid extractable/base neutral compounds found in the wells are not listed in NYCRR Title 6, Part 703.5.

Table 4 summarizes the results of the priority pollutant analyses for composite soil samples from Borings 1, 3 and 5. As discussed in Section 3.10 of this report, these samples were selected based upon the screening analysis results. The metals analyses revealed the presence of almost all of the analyzed metals in each of the three samples. The largest amount of metals was found in Boring 5. This can be expected due to the known presence of foundry sand. Phenols were detected in each of the soil samples at concentrations ranging from 1.05 mg/kg to 65 mg/kg. Boring 1 contained the greatest amount of phenolic compounds. The Pesticide/PCB scan detected PCB-1248 in all of the composite soil samples in concentrations ranging from 7.3 mg/kg in Boring 1 to 63.0 mg/kg in Boring 3. This aroclor is fairly uncommon and may actually be aroclor 1242 which is commonly used in electrical switchgear, industrial machinery and has many other applications. The weathering process would tend to alter the chromatogram so that aroclor 1242 would appear to be aroclor 1248. No purgeable priority pollutant compounds were detected in the soil samples.

The base neutral/acid extractable scan detected several compounds in the soil samples. These compounds are of three types: phenols, phthalates and polynuclear aromatics (PNAS). The phenols and polynuclear aromatics are commonly associated with asphalt materials. Phthalates are found in all plastic compounds. Table 4 summarizes those compounds with concentrations above the detection limit (330 ug/kg). Additional substances are listed in Appendix F.

The priority pollutant analysis results for the surface water/sediment samples are included as Table 5. The surface water samples (upstream and downstream south) were selected based upon their location as well as the indicator parameter results (Section 3.10). The surface water samples (upstream and downstream south) show traces of copper, mercury and arsenic. Upstream sample contained higher concentrations of these metals than the downstream sample. Beryllium was also detected in the downstream sample at .01 mg/l but not detected in the upstream sample. Phenols were found to be present in the upstream surface water sample at 5.32 mg/l. The downstream sample contained 0.580 mg/l of phenols.

The purgeable priority pollutant scan revealed the presence of 1,1-dichloroethane and tetrachloroethane in the downstream south surface water sample and values of 9 ug/l and 2 ug/l, respectively. These substances were not detected in the upstream sample.

The acid extractable/base neutral scan of the upstream south surface water sample revealed the presence of phenol, 2-methylphenol and bis (2-ethylhexyl) phthalate. The phenol concentration in the upstream sample was 2290 ug/l. The 2-methylphenol and bis (2 ethylhexyl) phthalate levels were both 17 ug/l. The downstream south surface water sample contained bis (2-ethylhexyl) phthalate at 19 ug/l, a level similar to the upstream sample.

Sediment samples from upstream and downstream in the northern drainage channel were analyzed. The results of these analyses are summarized in Table 5. The analyses revealed the presence of several metals. With the exception of nickel, the concentration of the detected metals were higher in the upstream sediment sample.

Phenols were detected at .091 mg/l in both, the upstream and the downstream sample. No purgeable priority pollutants, pesticides or PCB's were detected in the sediment samples.

The acid extractable/base neutral scans revealed the presence of phenanthrene, fluoranthene, pyrene, and chrysene at levels above the detection limit in the upstream sample. (Table 5) These compounds were below the detection limit of 330 ug/kg in the downstream sample. Bis (2-ethylhexyl) phthalate, however, was detected at 533 ug/kg in the downstream sample. This substance was below the 330 ug/kg detection limit in the upstream sample.

Library searches were only completed on the soils and sediment samples as the groundwater and surface water sample scans did not identify any peaks greater than 25% of the calibrating standard. The completed searches can be found in volume 2 of the QA/QC documentation. The library searches of the sediment samples indicate the presence of five to ten organic compounds. These compounds have low molecular weights which suggests they are of natural origin. Library searches completed on the soil composite samples (Boring 1, Boring 3 and Boring 5) reveal that ten to twenty non-priority pollutant compounds are present with peaks greater than 25% of the calibrating standard. These substances are most likely associated with the phenols and polynuclear aromatics identified in the fill material with the base neutral/acid extractable scan.

In general, this report is based on the data generated during this investigation. However, the data collected by NYSDEC and USGS during previous investigations (NYSDEC 1981 and 1982, USGS 1982 and 1983) was reviewed and considered. Because of the lack of available

documentation and quality assurance/quality control information, it was difficult to evaluate this previous data. Generally the present findings were consistent with the results of the past investigation.

Tables

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TABLE 1
WELL DATA AND GROUND WATER ELEVATIONS
CHERRY FARM SITE

Well	Top of Casing Elevation	Screened Interval	Hydraulic Conductivity*	Ground Water Elevation 8/15/85	Ground Water Elevation 8/28/85
1	573.72	547.72 - 557.72	5×10^{-7} ft/sec	567.59'	567.30'
2	582.42	552.1 - 562.1	3×10^{-5} ft/sec	566.13'	566.69'
3	582.16	552.16 - 562.16	9×10^{-6} ft/sec	566.47'	566.01'
4	583.37	551.87 - 561.87	1×10^{-4} ft/sec	565.54'	565.67'
5	578.65	550.6 - 560.6	5×10^{-6} ft/sec	565.65'	565.69'
6	578.71	548.9 - 558.9	2×10^{-4} ft/sec	565.67'	565.67'
7	584.13	552.13 - 562.13	1×10^{-4} ft/sec	565.81'	565.77'

*Based on in-situ permeability test

TABLE 2

INDICATOR PARAMETER RESULTS
CHERRY FARM SITE
NIAGARA MOHAWK CORPORATION

Surface Water	HNU Reading (ppm)	pH	Specific Conductance (umhos)	Total Organic Carbon (ppm)
Upstream North	NA	6.9	500	11 mg/l
Downstream North	NA	7.5	6000	12 mg/l
NE Corner	NA	7.5	550	32 mg/l
Upstream South	NA	7.5	3500	30 mg/l
Downstream South	NA	10.4	1010	22 mg/l
SE Corner	NA	7.5	1600	9 mg/l
Sediments				
Upstream North	NA	6.9	4340	4500 mg/kg*
Downstream North	NA	6.6	12500	7700 mg/kg
Soils				
1	0	6.8	590	9900 mg/kg
2	4	6.7	820	4000 mg/kg
3	2	7.1	1410	6500 mg/kg
4	0	6.3	1610	6200 mg/kg
5	10	7.1	2220	14600 mg/kg
B1 (composite)	30	7.0	4500	2800 mg/kg
B2 (composite)	8	7.3	4900	4900 mg/kg
B3 (composite)	22	5.9	3600	7100 mg/kg
B4 (composite)	20	7.8	5300	4700 mg/kg
B5 (composite)	21	7.8	4200	6000 mg/kg
MW1 10'-12'	.8***	7.7	4800	1200 mg/kg
MW3 8'-10'	2***	7.7	5100	8100 mg/kg
MW6 2'-4'	1-3***	7.1	3200	6600 mg/kg
MW7 6'-8'	.4***	7.2	4000	8600 mg/kg
MW7 20'-22'	0***	8.0	5100	4400 mg/kg

NOTES: - NA - Not Analyzed
* - Soil/Sediment results on wet weight basis.
** - Heated Headspace Method
*** - Split Spoon Monitoring

TABLE 3

GROUNDWATER ANALYSIS RESULTS
CHERRY FARM SITE
NIAGARA MOHAWK POWER CORPORATION

	MW 1	MW 2	MW 3	MW 4	MW 5	MW 6	MW 7
INDICATOR PARAMETERS							
pH	7	6.9	9.8	6.8	11.1	8.5	
Specific Conductivity (umhos)	1,200	900	510	2,000	2,550	1,000	
METALS (mg/l)							
Mercury	<0.0005	0.0009	<0.0005	0.0006	<0.0005	<0.0005	<0.0005
Nickel	0.21	0.10	<0.01	0.28	<0.01	<0.01	<0.01
Zinc	0.03	0.02	0.02	0.18	0.03	0.15	0.02
Arsenic	0.01	0.04	0.04	<0.01	<0.01	0.03	0.02
Total Phenols (mg/l)	<0.001	<0.001	0.045	0.002	0.008	0.088	0.077
PURGEABLES (ug/l)							
t-1,2-Dichloroethene	<1	<1	<1	<1	4	<1	<1
Benzene	<1	<1	<1	<1	<1	320	<1
Toluene	<1	<1	<1	<1	<1	160	<1
Ethylbenzene	<1	<1	<1	<1	<1	45	<1
Xylenes	<1	<1	<1	<1	<1	49	<1
ACID EXTRACTABLES/BASE NEUTRALS (ug/l)							
Benzoic Acid	<10	32	42	<10	<10	<10	<10
Benzo(a)pyrene	21	<10	<10	<10	<10	11	11
bis(2-Ethylhexyl)Phthalate	210	10	65	<10	31	60	43
Di-n-Octyl Phthalate	<10	<10	<10	<10	95	20	11

TABLE 4

SOIL SAMPLES ANALYSIS RESULTS
CHERRY FARM SITE
NIAGARA MOHAWK POWER CORPORATION

	Boring 1 Composite	Boring 3 Composite	Boring 5 Composite
METALS			
(mg/kg wet weight)			
Antimony	< 10	< 10	< 10
Arsenic	4.3	18	5.3
Beryllium	< 1	5	7
Cadmium	2	5	9
Chromium	35	17	66
Copper	16	67	142
Lead	34	80	441
Mercury	0.03	0.02	0.34
Nickel	30	44	67
Silver	1	3	5
Thalium	< 100	< 100	100
Zinc	74	163	1980
Total Phenols (mg/kg wet weight)	65	1.05	4.13
PESTICIDE/PCB (mg/kg wet weight)			
PCB 1248	7.3	63.0	10.0

TABLE 4 (Continued)

SOIL SAMPLES ANALYSIS RESULTS
CHERRY FARM SITE
NIAGARA MOHAWK POWER CORPORATION

	Boring 1 Composite	Boring 3 Composite	Boring 5 Composite
ACID EXTRACTABLES/ BASE NEUTRALS (ug/kg wet weight)			
Phenol	<330	<330	491
2-Methylphenol	862	<330	355
4-Methylphenol	6,460	<330	1675
2,4-Dimethylphenol	2,934	<330	1,054
Napthalene	1,017	816	854
2-Methylnapthalene	572	1,142	807
N-Nitrosodiphenylamine	662	4,798	787
Phenanthrene	605	2,328	<330
Anthracene	<330	368	1,078
Fluoranthene	<330	1,009	<330
Benzo (a) Anthracene	<330	536	<330
bis (2-Ethylohexyl)-Phthalate	1,661	<330	<330
Chrysene	<330	551	365
Benzo (k) Fluoranthene	373	729	<330
Benzo (a) Pyrene	<330	787	<330
Benzo (g,h,i) Perylene	<330	902	<330
Total Acid Extractables	10,256	0	3,575
Total Base Neutrals	4,890	13,966	3,891

NOTES: No Purgeable Priority Pollutants were detected.

TABLE 5

SURFACE WATER/SEDIMENT ANALYSIS RESULTS
CHERRY FARM SITE
NIAGARA MOHAWK POWER CORPORATION

	Surface Water		Sediment	
	Upstream South	Downstream South	Upstream North	Downstream North
METALS*				
Antimony	< 0.1	< 0.1	30	30
Cadmium	< 0.01	< 0.01	3	< 1.0
Chromium	< 0.01	< 0.01	19	15
Copper	0.04	0.02	31	21
Lead	< 0.01	< 0.01	92	36
Mercury	0.0012	< 0.0005	0.19	0.01
Arsenic	0.04	0.01	4.0	6.2
Beryllium	< 0.01	0.01	< 1.0	5.0
Nickel	< 0.01	< 0.01	30	52
Total Phenols	5.32	0.580	0.091	0.091
PURGEABLES**				
1,1-Dichloroethane	< 1	9	< 10	< 10
Tetrachloroethene	< 1	2	< 10	< 10

* Water Samples presented in mg/l. Soil Samples presented in mg/kg-wet weight.

** Water Samples presented in ug/l. Soil Samples presented in ug/kg-wet weight.

TABLE 5 (Continued)

SURFACE WATER/SEDIMENT ANALYSIS RESULTS
CHERRY FARM SITE
NIAGARA MOHAWK POWER CORPORATION

	Surface Water		Sediment	
	Upstream South	Downstream South	Upstream North	Downstream North
ACID EXTRACTABLES/BASE NEUTRAL**				
Phenol	2,290	<10	<330	<330
2-Methylphenol	17	<10	<330	<330
Phenanthrene	<10	<10	631	<330
Fluoranthene	<10	<10	704	<330
Pyrene	<10	<10	1,020	<330
bis (2-Ethylhexyl)-Phthalate	17	19	<330	533
Chrysene	<10	<10	354	<330

* Water Samples presented in mg/l. Soil Samples presented in mg/kg-wet weight.

** Water Samples presented in ug/l. Soil Samples presented in ug/kg-wet weight.

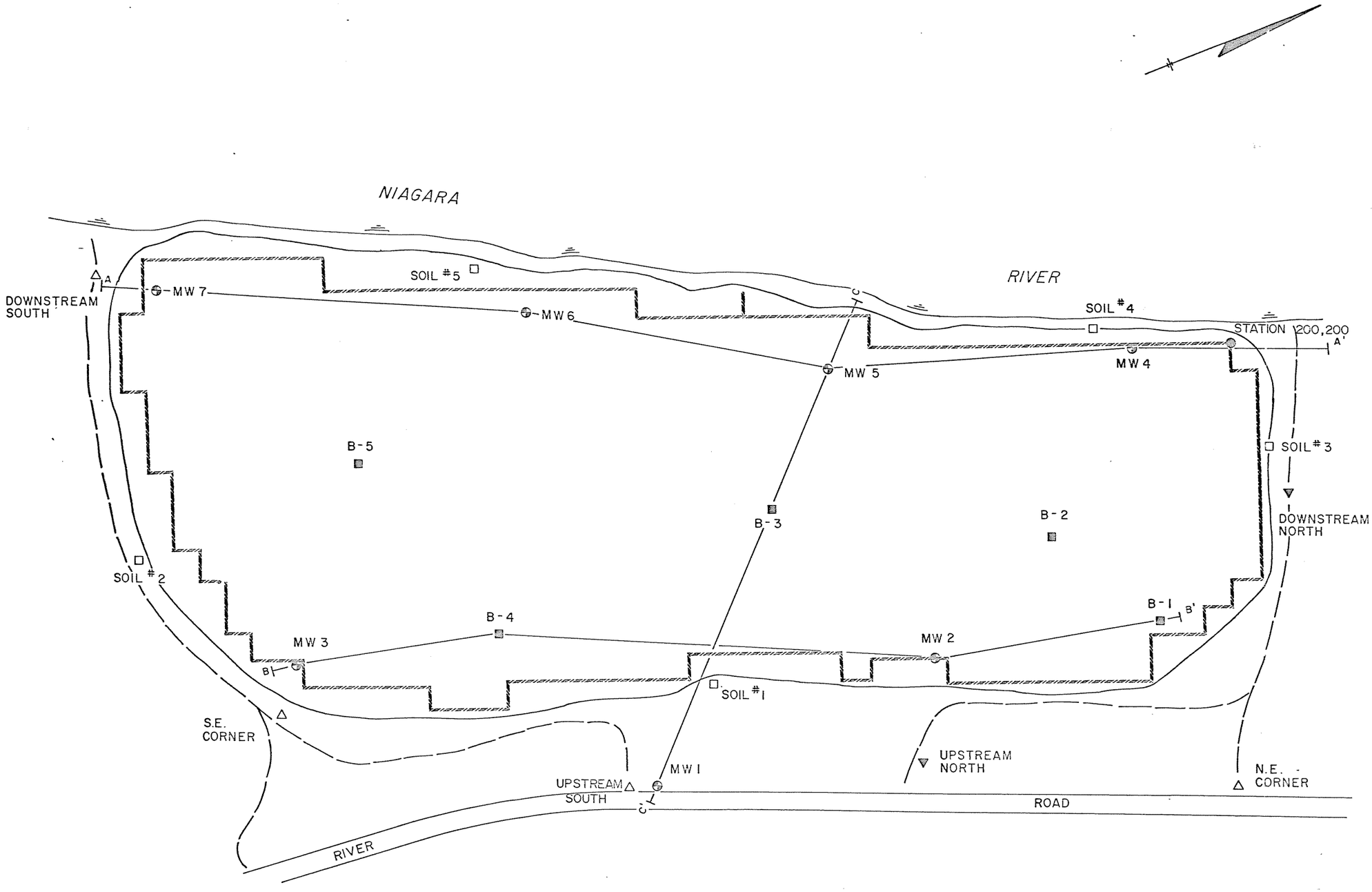
Figures

O'BRIEN & GERE

FIGURE 2

SITE MAP

CHERRY FARM SITE
NIAGARA MOHAWK POWER CORP.
TONAWANDA , N.Y.



LEGEND

- MONITOR WELL
- SURFACE WATER SAMPLE
- SOIL BORING
- SHALLOW SOIL SAMPLE
- SURFACE WATER / SEDIMENT SAMPLE
- DRAINAGE CHANNEL
- GRID BOUNDARIES
- A' — CROSS - SECTION LINE

SCALE :

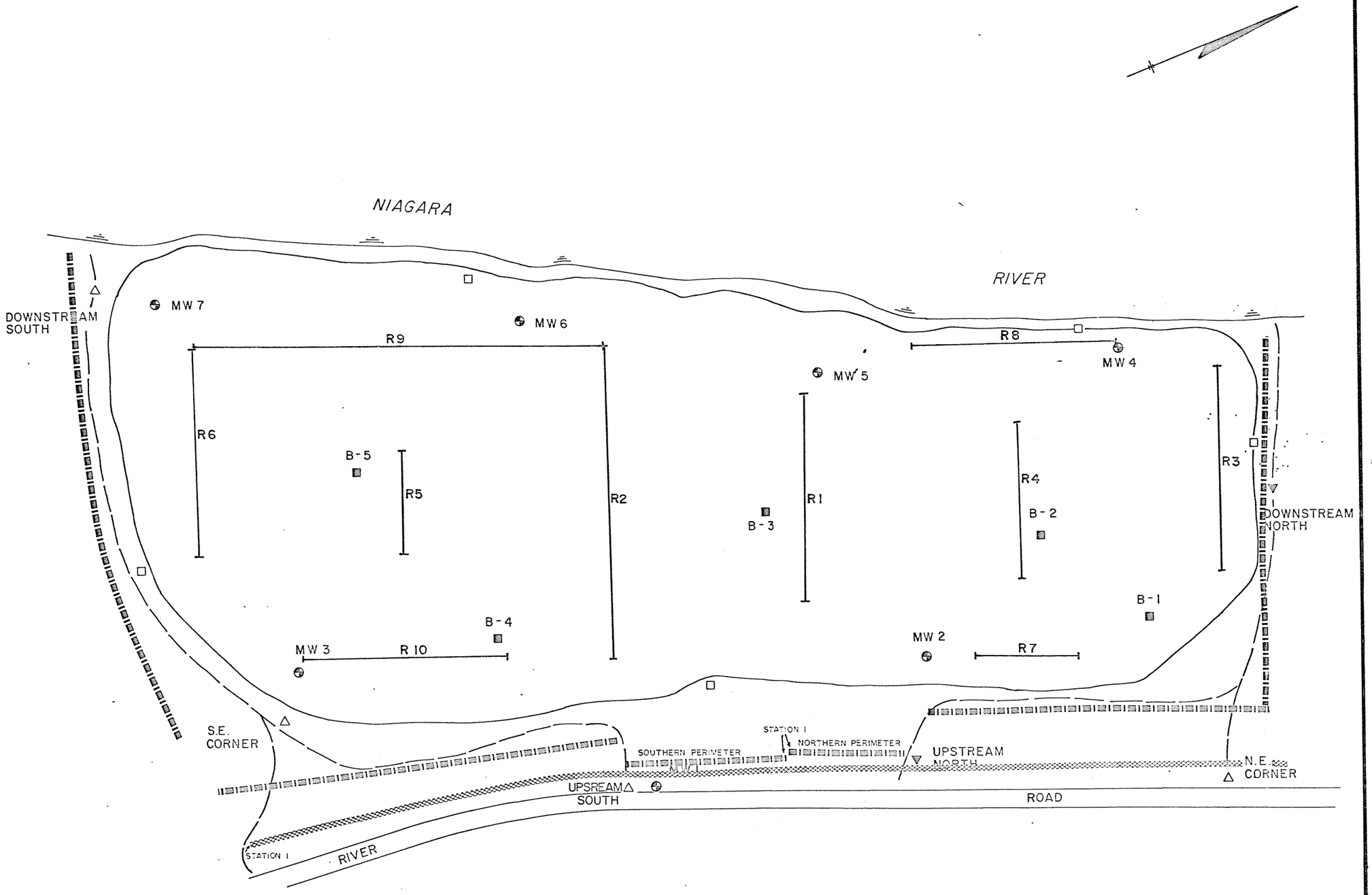
1" = 100' 100 0 100 200

O'BRIEN & GERE

FIGURE 3

RESISTIVITY LINES & TRAVERSE LOCATION MAP

CHERRY FARM SITE
NIAGARA MOHAWK POWER CORP.
TONAWANDA , N.Y.



LEGEND

- MONITOR WELL
- SURFACE WATER SAMPLE
- SOIL BORING
- SHALLOW SOIL SAMPLE
- SURFACE WATER / SEDIMENT SAMPLE
- EM TRAVERSE
- MAGNETOMETER TRAVERSE
- R1 RESISTIVITY LINE

SCALE :
1" = 100'
100 0 100 200

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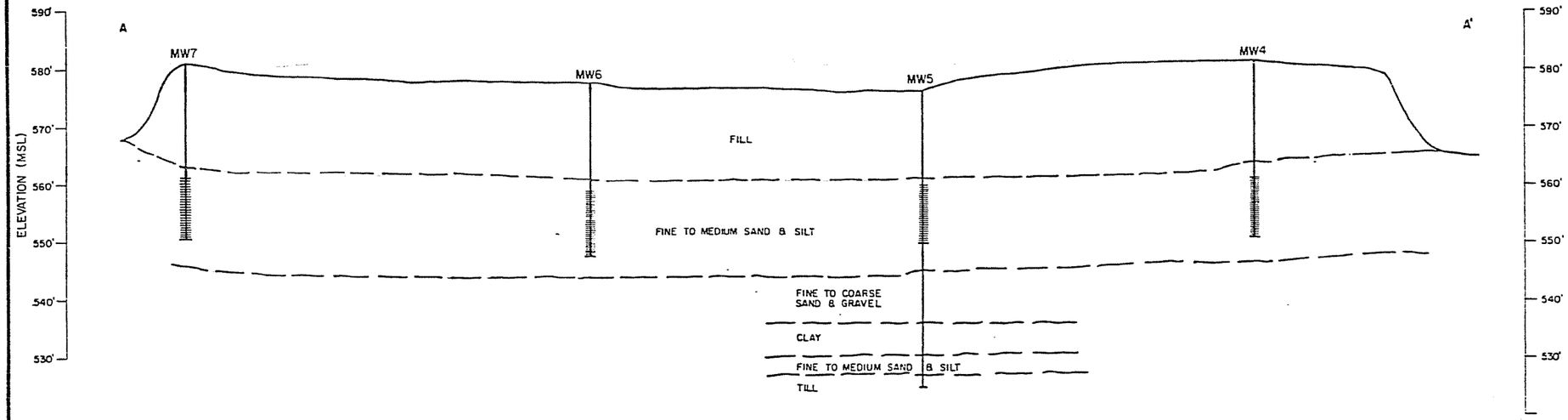
O'Brien & Gere Engineers, Inc

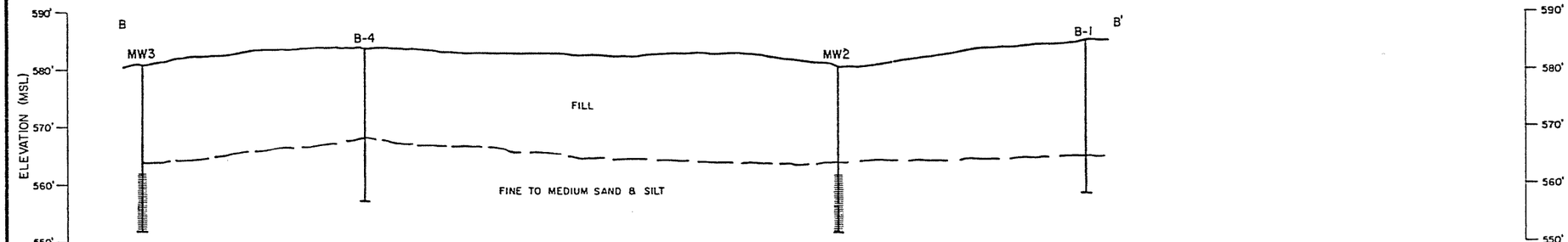
FIGURE 4

CROSS - SECTIONS

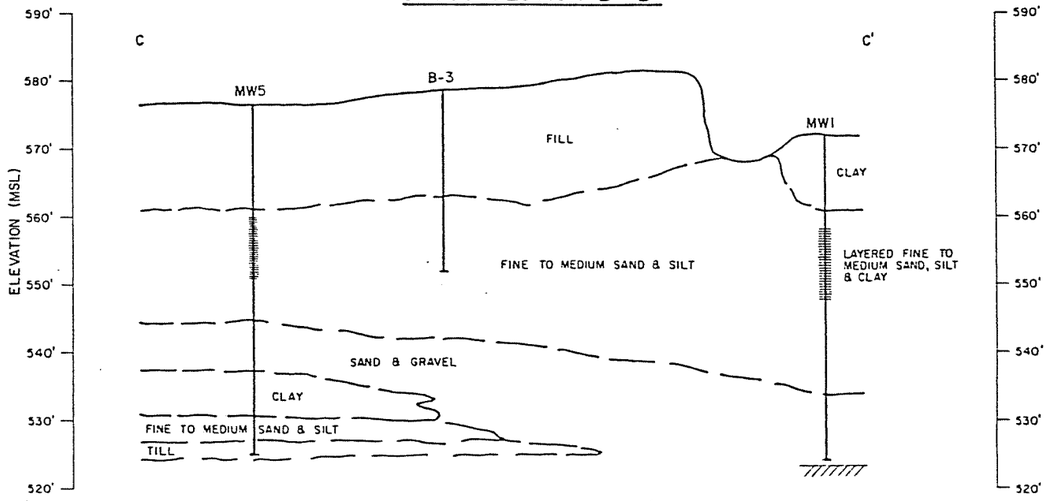
CHERRY FARM SITE
NIAGARA MOHAWK POWER CORP.
TONAWANDA , N.Y.



CROSS SECTION A - A'



CROSS SECTION B - B'

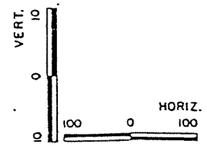


CROSS SECTION C - C'

LEGEND

- GROUNDWATER MONITOR WELL INCLUDING SCREENED INTERVAL
- SOIL TEST BORING

SCALES:



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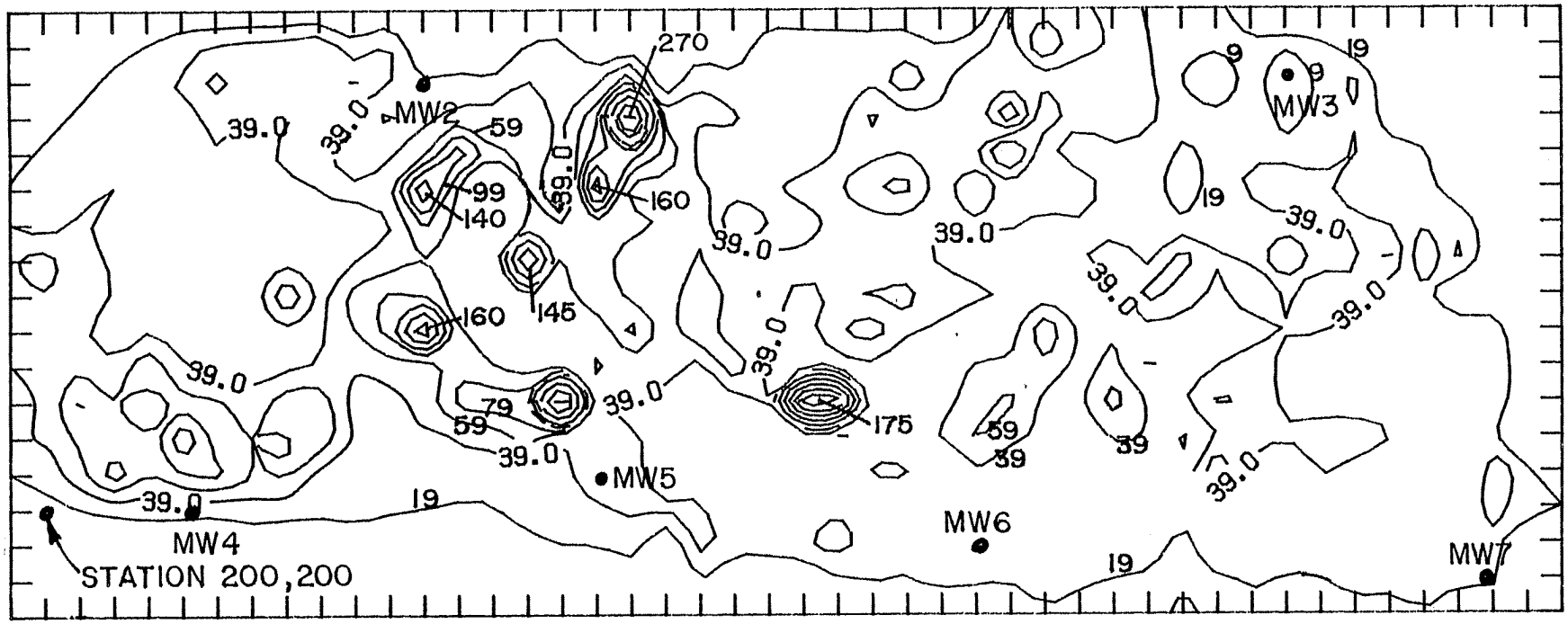


FIGURE 5

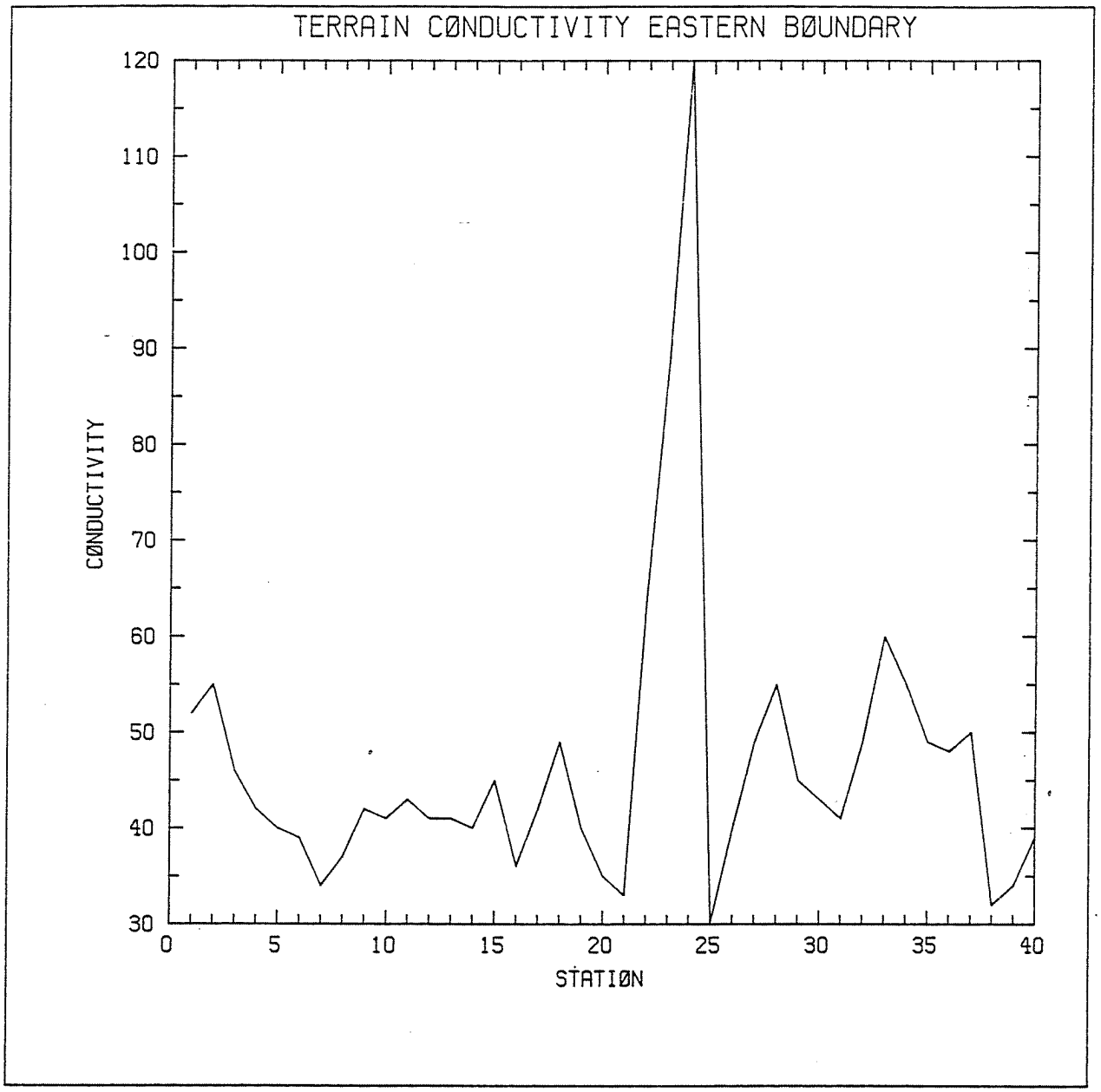
EM SURVEY RESULTS

CHERRY FARM SITE

NIAGARA MOHAWK POWER CORPORATION

TONAWANDA, NEW YORK

FIGURE 6



EM TRAVERSE PROFILE

CHERRY FARM SITE
NIAGARA MOHAWK POWER CORPORATION
TONAWANDA, NEW YORK

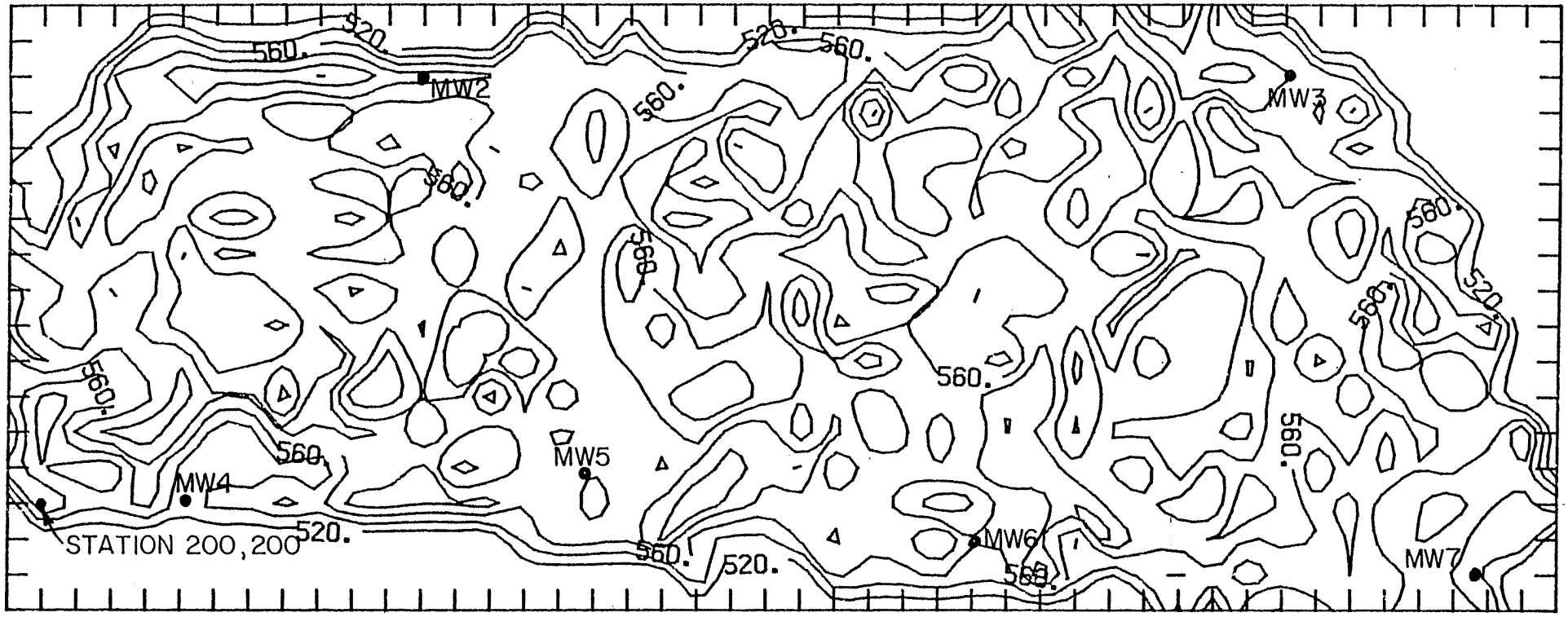


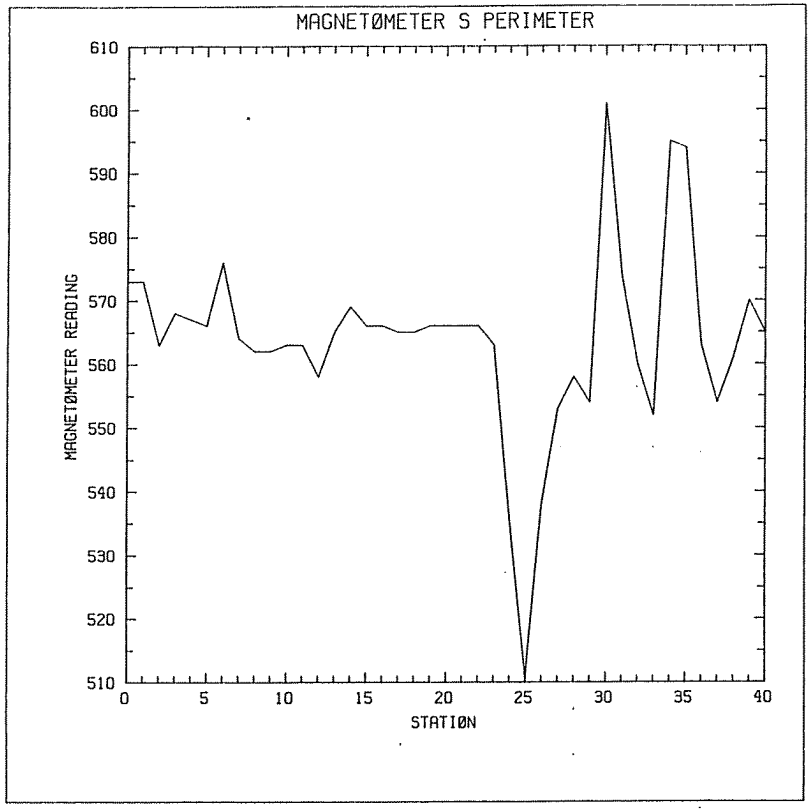
FIGURE 7

MAGNETOMETER SURVEY RESULTS

CHERRY FARM SITE

NIAGARA MOHAWK POWER CORPORATION

TONAWANDA, NEW YORK



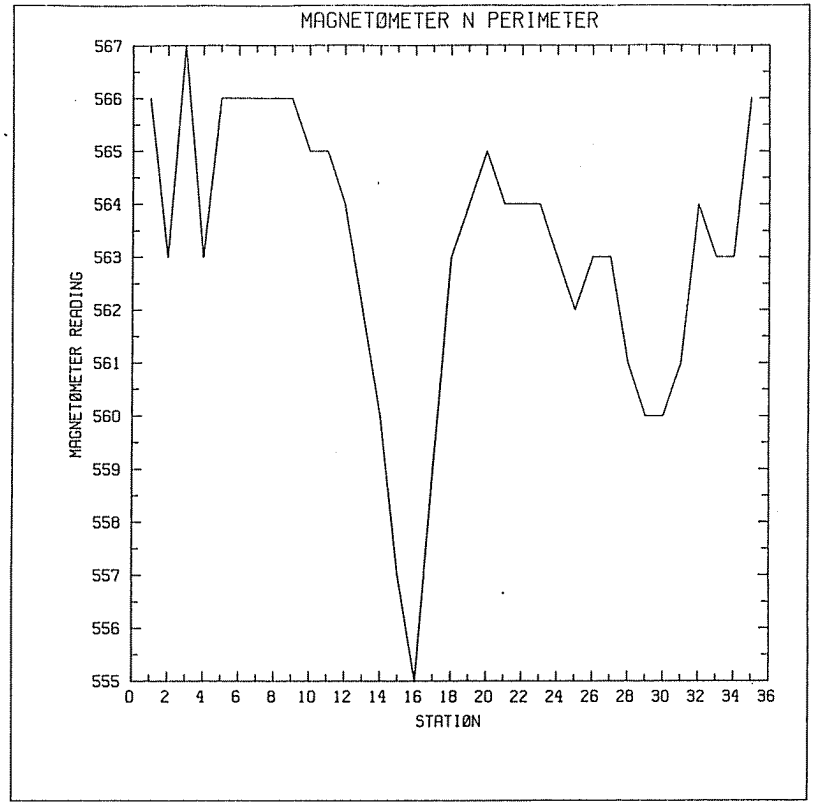


FIGURE 8

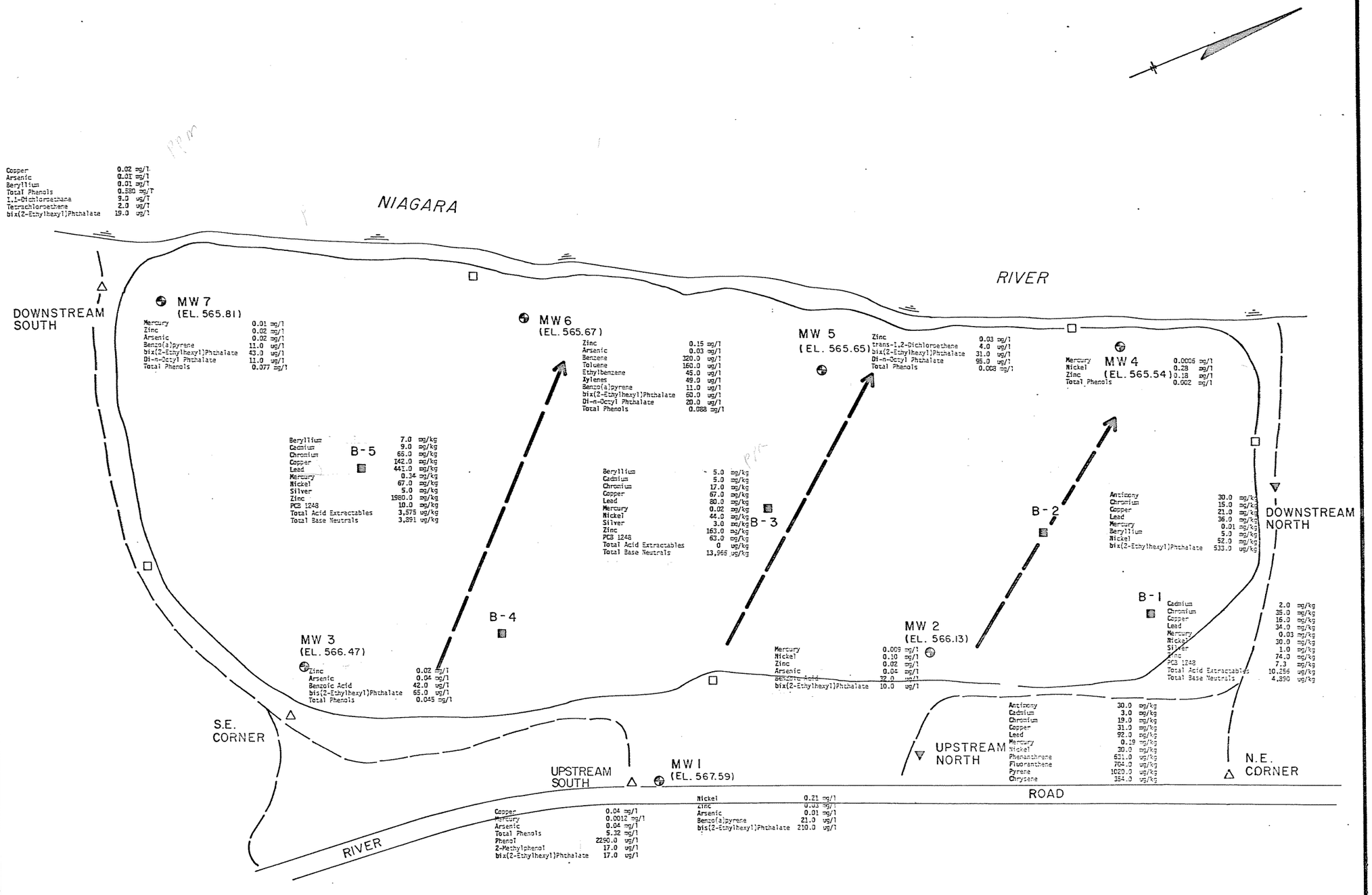
MAGNETOMETER TRAVERSE PROFILE

CHERRY FARM SITE
NIAGARA MOHAWK POWER CORPORATION
TONAWANDA, NEW YORK

FIGURE 9

GENERALIZED GROUNDWATER FLOW DIRECTION

CHERRY FARM SITE
NIAGARA MOHAWK POWER CORP.
TONAWANDA , N.Y.



LEGEND

- MONITOR WELL
- SURFACE WATER SAMPLE
- SOIL BORING
- SHALLOW SOIL SAMPLE
- SURFACE WATER / SEDIMENT SAMPLE
- (EL.565.54) GROUNDWATER ELEVATION MEASURED AUG. 15, 1985
- GROUNDWATER ELOW DIRECTION

SCALE :

1" = 100' 100 0 100 200

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Appendices

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APPENDIX A

SITE SAFETY PLAN

General Site Safety Plan

Niagara Mohawk Cherry Farms Site

Town of Tonawanda, New York

July 1985

O'BRIEN & GERE

GENERAL SITE SAFETY PLAN

NIAGARA MOHAWK - CHERRY FARMS SITE

TOWN OF TONAWANDA, NEW YORK

JULY, 1985

Prepared by:

O'BRIEN & GERE ENGINEERS, INC.
1304 BUCKLEY ROAD
SYRACUSE, NEW YORK 13221

TABLE OF CONTENTS

SECTION 1 - INTRODUCTION AND BACKGROUND INFORMATION

This document is the General Site Safety Plan for site activities to be conducted during the NYS Phase II Field Investigation and Hazard Ranking being performed at the Niagara Mohawk Cherry Farms Site by O'Brien & Gere Engineers.

All personnel (here defined as employees of O'Brien & Gere Engineers, respondents, all visitors and representatives from the EPA, State, local groups, media, etc.) will be required to follow and adhere to the procedures set forth in this plan.

1.01 Identification

Site Name: Niagara Mohawk - Cherry Farms Site

Address/Location: River Road
Town of Tonawanda, New York

Project Description: NYS Phase II Field Investigation and Hazard Ranking

On-Site Work Dates: 7/85 through 12/85

Overall Degree of Hazard: Low to Moderate

1.02 Key Personnel for Investigation

Niagara Mohawk Contacts:	Frank Sciortino (315) 428-6618 Mike Sherman (315) 428-6624
O'Brien & Gere Contact:	Edwin C. Tifft (315) 451-4700
Safety Coordinator:	Swiatoslav Kaczmar (315) 451-4700

1.03 Site Description

Type of Facility: Inactive hazardous waste disposal site.

Size: 55.4 acres.

Buildings: None

Surrounding Land Uses: Industrial.

Layout: The site is located adjacent to the Niagara River.

1.04 Site History

Niagara Mohawk (NiMo) purchased the site on July 20, 1970 from C.F.& I. Steel Corporation. According to NiMo, the site was subsequently capped with clay and rye grass was planted in order to control windblown foundry sand that had existed on the site prior to its purchase. Since the purchase, the site has not been used for waste disposal by NiMo, nor has such use been authorized to anyone else. Since 1978 several investigations, inspections and reports from private, state and federal agencies have been generated. These include the NYSDEC Phase I investigation and report conducted in June 1983. Findings from this effort indicated insufficient data to complete the hazard ranking and recommended both groundwater and air monitoring for Phase II.

1.05 Summary of Site Hazards

Surface water and soil sampling has revealed the presence of low concentrations of several priority pollutants on the site, including PCB's (1248), toluene, phenol, naphthalene and benzene.

1.06 Project Description and Purpose

The Investigation will determine the nature, extent and concentration of on-site wastes and environmental contaminants. Information will be compiled to score the site under the Hazard Ranking System (HRS) in accordance with USEPA and NYSDEC procedures and requirements. Finally, an assessment of the allegations concerning waste types, quantities and disposal activities at the site will be made.

SECTION 2 - HAZARD EVALUATION

2.01 Previous Monitoring Performed On-Site

6/8/81 - RECRA Research, Inc. completed a report of analytical results for "DEC Inplace Toxics" sampling at Cherry Farms.

7/82 - USGS sampled soil and surface water. Inorganic (metals) results were reported.

5/83 - USGS sampled soil and surface water. Organic results were reported.

2.02 Previous Levels of Personnel Protection

Personnel protection employed during previous monitoring was not documented.

2.03 Hazardous Materials Known to be On-site

The 6/8/81 RECRA Research, Inc. analytical report showed total recoverable phenolics in surface water at .01 ppm to 1.0 ppm and chlorinated benzenes in soil at .02 ppm to 4.5 ppm. The 7/82 USGS sampling results showed the presence of iron, lead, nickel, cadmium and arsenic in soil and surface water samples. Lead concentrations (120 ppm) in one soil sample exceeded background concentrations from undisturbed soils in the Tonawanda area. Surface water concentrations of iron (4.0 to 4.45 ppm) exceeded USEPA criterion for maximum permissible concentration in drinking water.

Finally, the 5/83 USGS sampling results identified PCB-1248 (.32 to 199 ppm), toluene (.013 to .052 ppm), phenol (.133 to 35 ppm), naphthalene (.037 to 5.6 ppm) and benzene (.013 to .018 ppm) as the major priority pollutants. The major non-priority pollutants were 2-methylphenol (3.6 to 11 ppm) and 4-methylphenol (.046 to 7.9 ppm). No chlorinated benzenes were identified.

2.04 Overall Degree of Hazard

Low to Moderate

Level D protection adequate.

Air monitoring is required during well drilling and sampling.

2.05 Specific Hazards

None

2.06 Respiratory Protection (RP) Action Levels

Level D - (no respirator protection necessary) is expected to be used during most activities on the site. Monitoring of the work zone using a calibrated HNU-PI-101 photoionization air monitor will be employed during field activities. Any reading showing an elevation of 2 ppm above background will be cause for an upgrading to Level C-RP.

Level C-RP - Air purifying respirator, high efficiency organic vapor/particulate filter cartridge will be used by all site personnel who have been fit-tested.

2.07 Contact Protection

General dress requirements (minimum requirements for Level D) for work in designated contaminated zones are:

1. Rubber safety boots or safety work boots and rubber over boots.
2. Work clothing.
3. Rubber gloves.
4. Protective eyewear.
5. Hard hats.
6. Noise protection.

SECTION 3 - PROTOCOLS FOR ROUTINE ACTIVITIES

3.01 Health and Safety Management and Responsibilities

Swiatoslav Kaczmar (O'Brien & Gere) -

Dr. Kaczmar will act as the Site Health and Safety Officer (SHSO). He will have responsibility for the safety of operations and health and safety of all contractor personnel. A representative of O'Brien & Gere trained in safety and hygiene aspects of field operations may be designated as the Safety Officer during certain tasks.

3.02 General Requirements for Entry in Contaminated Zones

A contaminated zone is an area with a definite perimeter constituting an environmental or human health hazard, on which work is to be conducted. One specific location on the perimeter will be designated as the Entry and Exit (E&E) Point for the contaminated zone. Any passage of personnel and/or equipment onto or off of the contaminated zone is permitted only through the E&E point.

Before proceeding onto the site past the Entry and Exit Point, all O'Brien & Gere and subcontractor personnel shall:

1. Be advised of the Site Safety Plan, instructed in safety procedures and use of all safety equipment and aware of potential hazards.
2. Be properly dressed and equipped.
3. Notify the SHSO.

All personnel entering into areas or performing Tasks requiring Level C respiratory protection shall:

1. Have been fit tested and have medical approval.

2. Be clean shaven in areas where the mask touches the face.

3. Have had necessary training in the use of respiratory protective devices.

3.03 Site Entry and Exit (E&E) Procedures

Entry procedures are as follows:

1. Personnel will dress in required safety clothing and activate necessary monitoring equipment.
2. All personnel (or team/Task leader) notify the SHSO of intended operations.
3. SHSO reviews team personnel with respect to Section 3.02 above.
4. Entry time and personnel are logged.
5. Team proceeds through the designated, controlled E&E point (entry and exit).

Exit procedures are:

1. All personnel exit through the designated E&E point.
2. All personnel go through appropriate decontamination. (See Section 3.07)
3. All personnel are logged out and time recorded.

3.04 Daily Start-up and Shut-down Procedures

Start-up procedures are:

1. SHSO (or representative) reviews site conditions with respect to modifications of work and safety plans.
2. Personnel and team briefing, review and update of safety procedures.

3. Check out of safety and monitoring equipment.

4. SHSO ensures that first aid station is operable.

5. SHSO initiates appropriate monitoring.

6. Site Entry Procedures (3.03) are followed.

Shut-down procedures are:

1. All personnel exit and decontaminate.

2. SHSO logs all personnel out.

3. When appropriate, the SHSO and OSC performs a site walk to ensure that all personnel are off site and that the site is secure.

4. Equipment and site are secured.

3.05 Action Levels/General Personnel Protection Guidelines

Dress requirements may vary from Task to Task. Minimum dress requirements are outlined in Section 2.07. Respiratory protection requirements are outlined in Section 2.06.

1. Level C (half-face respirator, high efficiency organic vapor/acid gas cartridge) Action Levels

Level C may be required during certain tasks. Level C requires continual air monitoring of work areas with a portable organic vapor analyzer. If Level C is deemed necessary, it will be documented in future Task Specific Safety Plans.

2. Level D (no respiratory protection):

Level D will be required in the Work Zone and in support and clean areas. Level D requires air monitoring in down range and/or work areas.

3.06 Heat/Cold Stress

During weather above 70° and/or under conditions of high humidity, workers will be routinely observed for symptoms of heat stress. Heat stress will be prevented by periodic test breaks and the availability of cold fluids. At cold temperatures (below 40°F) workers will be required to wear adequate warm, dry clothing.

3.07 Decontamination Procedures

Personnel

As a minimum, all personnel entering the Contaminated Zone will go through the following decontamination upon exiting:

1. Segregated equipment drop on plastic drop clothes.
2. Outer boot wash (detergent or water).
3. Outer boot rinse.
4. Removal of outer boots and gloves.
5. Removal of respirator and/or change of canisters.

All personnel shall be free of visible contamination prior to leaving the site.

Sample Containers

After obtaining the sample, all containers will be decontaminated with a detergent/water wash and water rinse. Waste samples may require additional decontamination with acetone, methanol, or other non-priority pollutant solvent.

Sampling Equipment

All reusable sampling equipment (bailers, buckets, augers, split spoons, etc.) will undergo the following decontamination prior to initial use on site, between each use, and upon final use. Equipment shall be cleaned of all visible contamination.

1. Thorough detergent/water rinse.
2. Tap water rinse.
3. Solvent wash/rinse (methanol, or other nonpriority pollutant).
4. De-ionized/distilled water rinse.

After decontamination, sample equipment shall be placed in clean plastic bags or other suitable wrapping to prevent recontamination.

Geotechnical Apparatus

All geotechnical apparatus such as augers, rods, drill bits, casings, etc., and backhoe buckets (where used to excavate test pits for sampling) will undergo the following decontamination prior to use on-site, between each use on-site, and prior to removal from the site to remove all visible contamination and soils:

- High pressure hot water (tap water) wash and/or steam cleaning (steam jenny).

Heavy Equipment

All trucks, drill rigs, backhoes, or other equipment will undergo decontamination prior to leaving the site. The decontamination as a minimum will require high pressure hot water (tap water) and/or a steam cleaning of tires and treads to remove all visible muck, soils and contamination.

SECTION 4 - EMERGENCY INFORMATION

4.01 Emergency Telephone Numbers

State Police: (716) 759-6831 (Clarence)

Fire Department: (716) 876-1212

Ambulance Service: (716) 876-5300 (Town Police)

Hospital: Kenmore Mercy Hospital (716) 879-6100

Poison Control Center: (Buffalo Children's Hospital) (716) 878-7654

State your name, location and nature of emergency

For Hospital Victim:

Name and phone of family or emergency physician.

Description of incident - chemicals involved, symptons, nature of injury, proposed treatment, plan of transportation.

4.02 Directions to Hospital

River Road north to I-190 (just before the bridge)

I-190 north to Elmwood Ave. exit

Hospital is 1-2 miles down on Elmwood Ave., on the right, just past Sheridan Drive (major intersection).

4.03 Procedures for Serious Injury/Exposure

1. Perform necessary emergency first aid.
2. Evacuate all personnel from area if dangerous.
3. Notify SHSO.
4. Call appropriate emergency support.
5. Perform secondary first aid and prepare victim for transport.
6. Evacuate victim to hospital.

7. Notify hospital of the incoming patient and type/severity of injury and/or exposure.

4.04 Procedures for Fire

1. Isolate the location of the fire and alert on-site personnel.
2. Evacuate all personnel from the area.
3. If possible, contain the fire. A fire extinguisher will be available at the entry and exit point(s).
4. Notify the fire department.

4.05 Contingency Plan

Signal - 5 one-second blasts of auto or air horn.

Action - All personnel immediately evacuate downrange areas and report to the site access point/decontamination line for instruction.

SECTION 5 - FIRST AID FOR EXPOSURE

The following is a general description of first aid measures to be employed on site. In all cases of symptoms of chemical exposure, first aid treatment is to be followed by full medical examination.

5.01 Inhalation

Symptoms: dizziness, nausea, choking, gagging, lack of coordination, headache, irregular rapid breathing, weakness, loss of consciousness, coma.

Treatment:

1. Bring victim to fresh air. Rinse eyes or throat if irritated.
2. Be prepared to administer CPR.
3. Evacuate victim to hospital.

5.02 Dermal

Symptoms: Same as above. With phenol the affected area is typically white, wrinkled and softened with no pain (may also be reddened). Solvents may product irritation, rash, or burning.

Treatment:

1. Flush affected area with water for 5 minutes.
2. Cover with a clean dressing.
3. If phenol is suspected or CNS symptoms develop, evacuate victim to hospital.
4. Monitor victim for at least 48 hours.

5.03 Ingestion

Symptoms: Same as above, with stomach cramps.

Treatment:

1. Evacuate victim to hospital.
2. Do not induce vomitting.

5.04 Eye Contact

Symptoms: Redness, irritation, pain, impaired vision.

Treatment:

1. Flush with water for at least 5 minutes using a portable eyewash unit.

2. If severe, evacuate victim to a hospital.

APPENDIX B

GEOPHYSICAL SURVEY DATA

MAGNETOMETER SURVEY DATA
CHERRY FARM SITE
NIAGARA MOHAWK CORPORATION
TONAWANDA, NEW YORK

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EM SURVEY DATA
CHERRY FARM SITE
NIAGARA MOHAWK CORPORATION
TONAWANDA, NEW YORK

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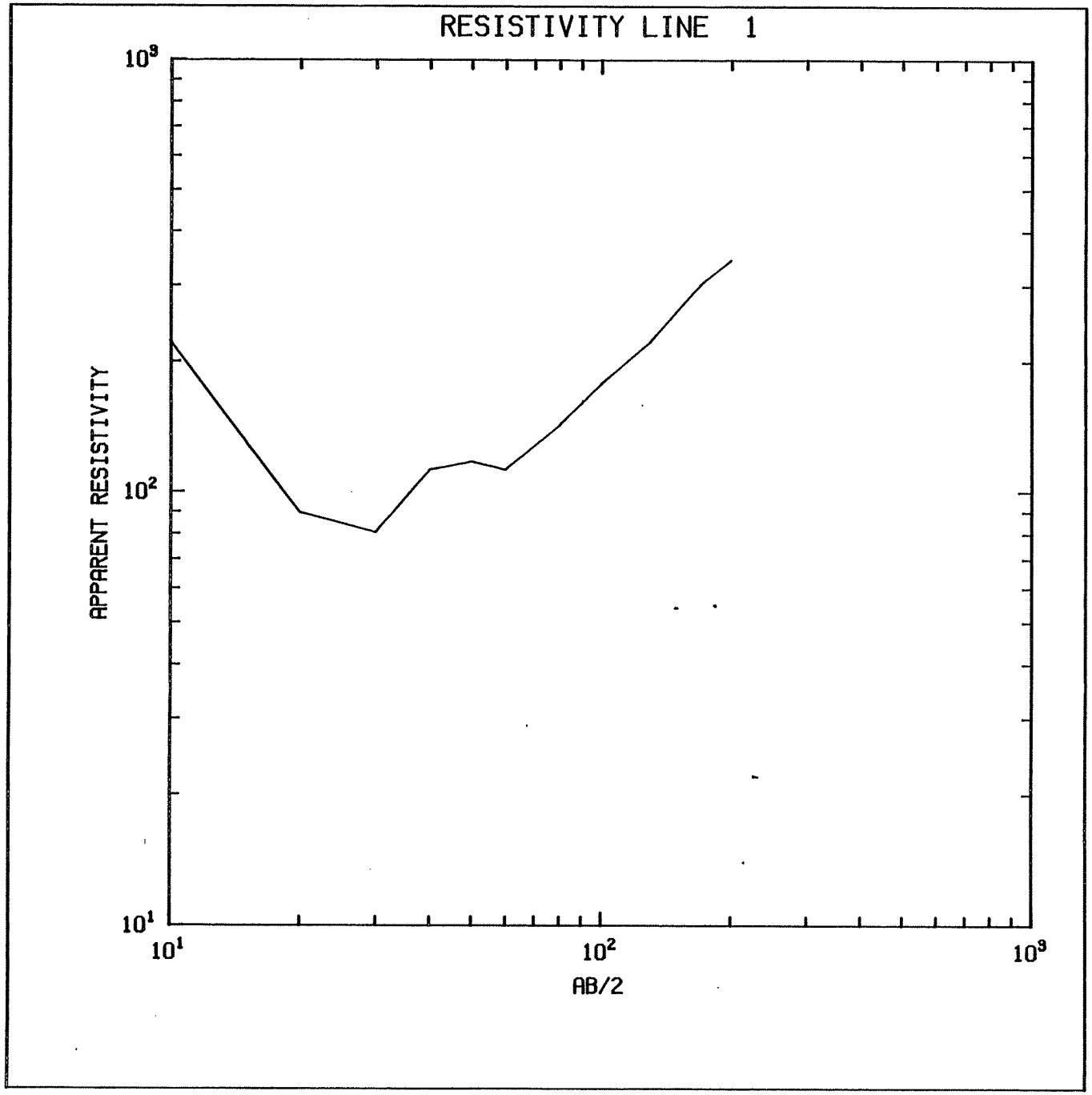

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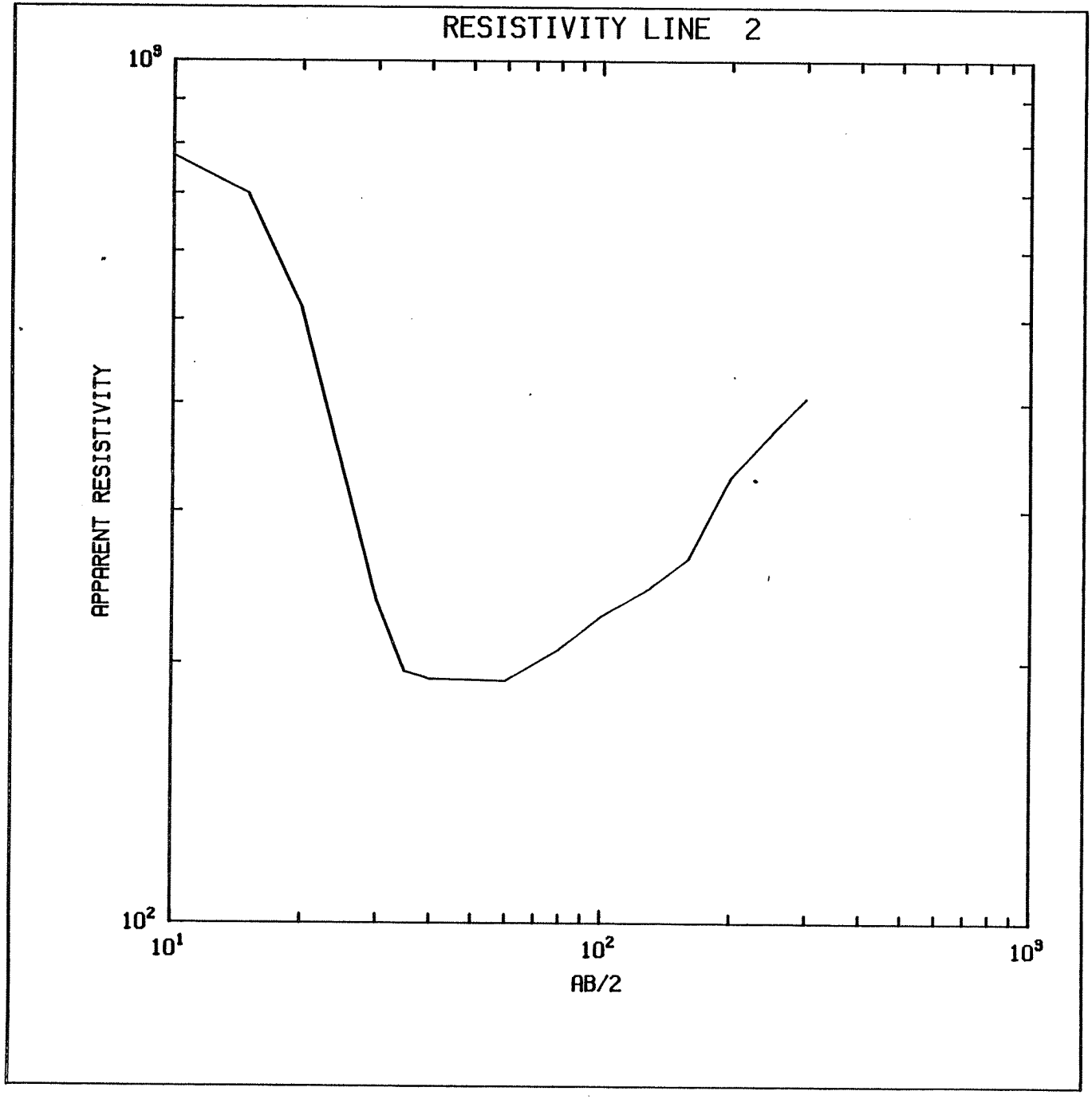
20.90	
30.81	
40.113	
50.118	
60.113	
80.143	
100.178	
130.223	
170.302	
200.345	

Line #1

Depth(ft)	Corrected Resistivities(ohm-ft)
0-6	300
-24	60
-58	360
greater than 58	1270



DATA

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30.238	
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60.191	
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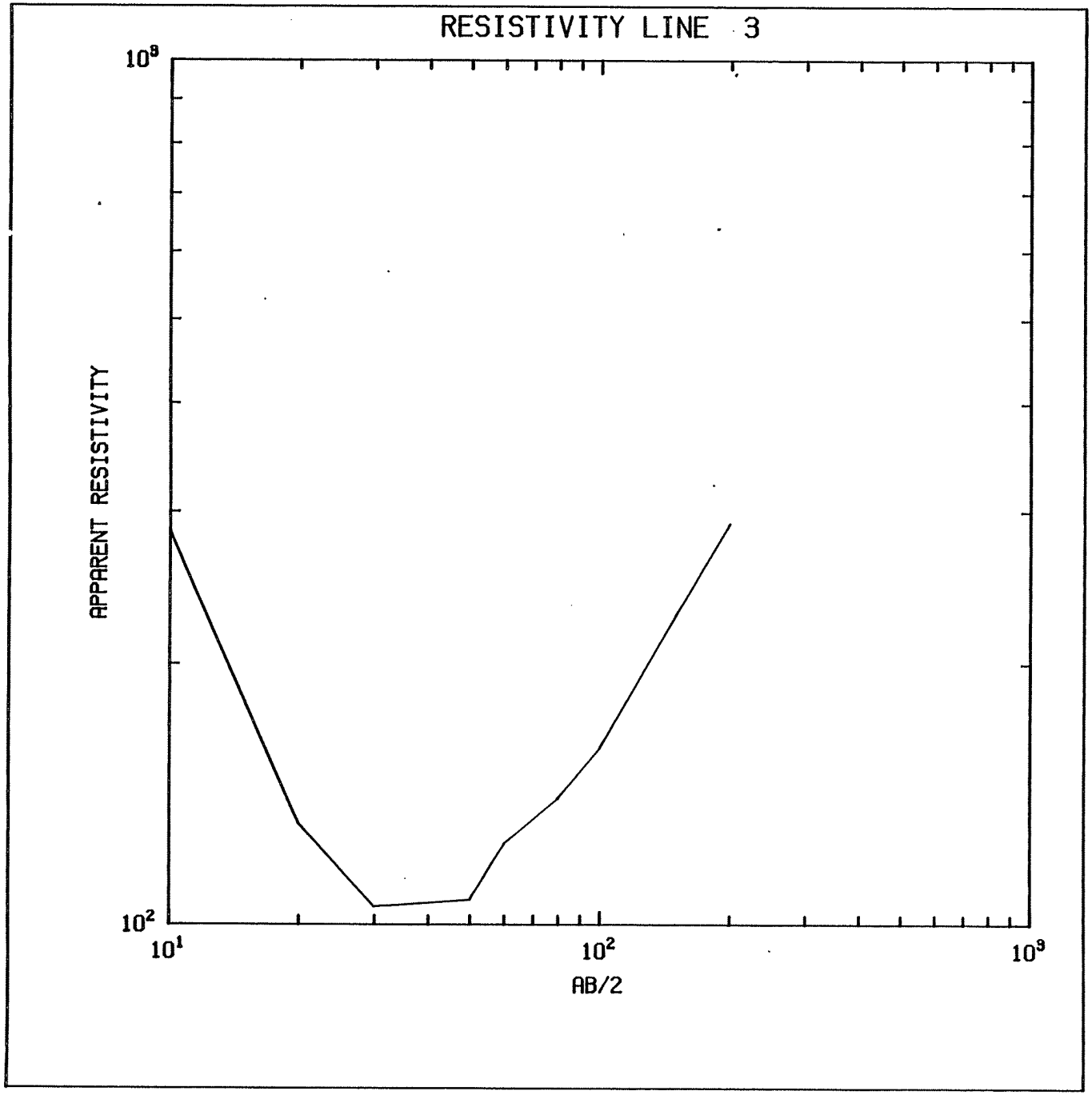
100.227	
130.245	
160.265	
200.328	
250.370	
300.406	

Line #2

Depths(ft)	Corrected Resistivities(ohm-ft)
0-9	1060
-12	300
-29	70
-33	980
-102	330
greater than 102	720

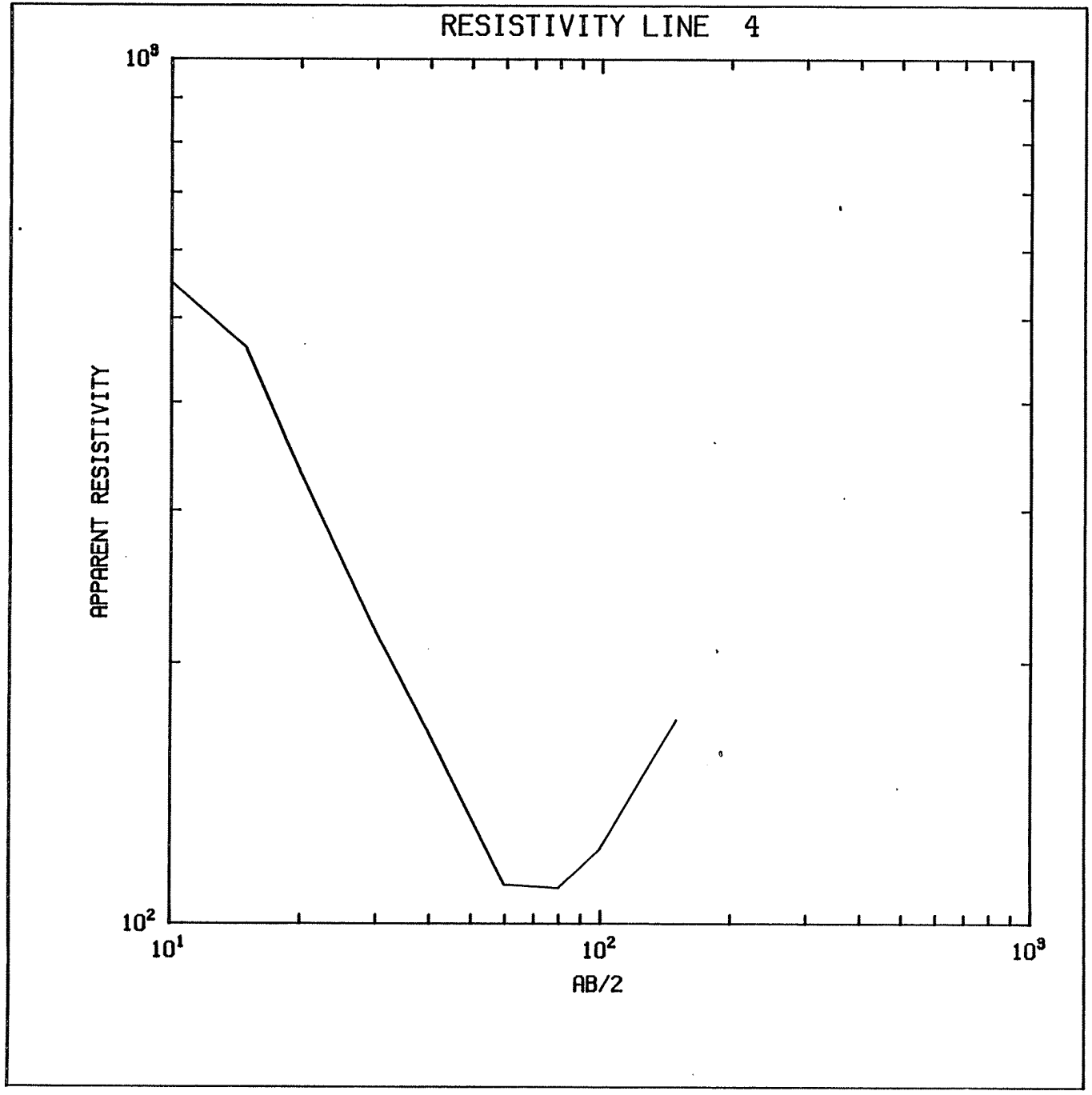


DATA

AB/2	ρ
10.286	
15.181	
20.131	
30.105	
50.107	
60.124	
80.140	
100.160	
150.228	
200.291	

Line #3

Depths(ft)	Corrected Resistivities(ohm-f
0-6	400
-8	130
-21	70
-78	150
greater than 78	1320

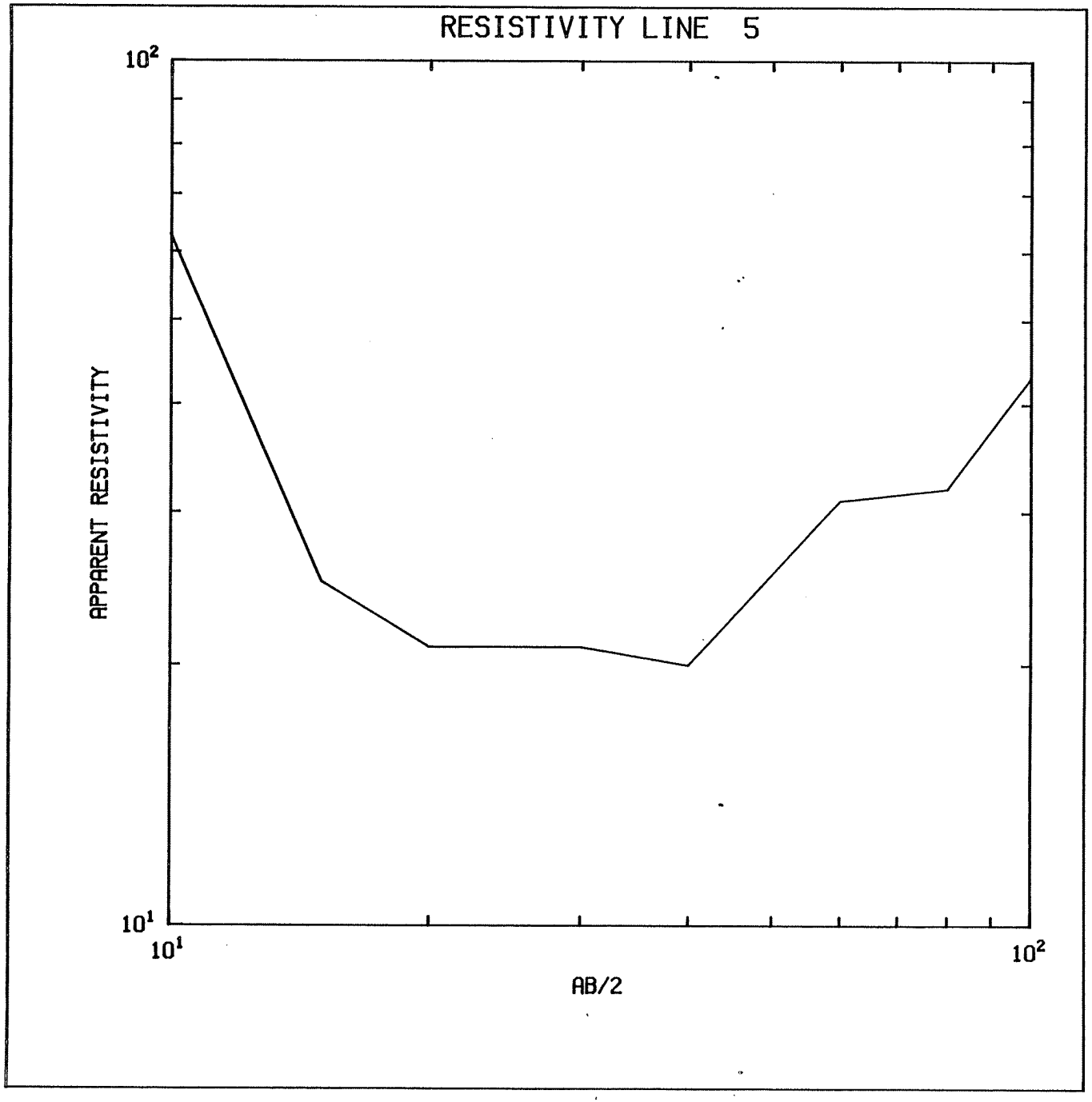


DATA

AB/2	ρ
10	552
15	463
20	334
30	218
40	166
60	111
80	110
100	122
150	172

Line #4

Depths(ft)	Corrected Resistivities(ohm-ft)
0-7	640
-14	330
-18	140
-54	70
-86	200
greater than 86	630

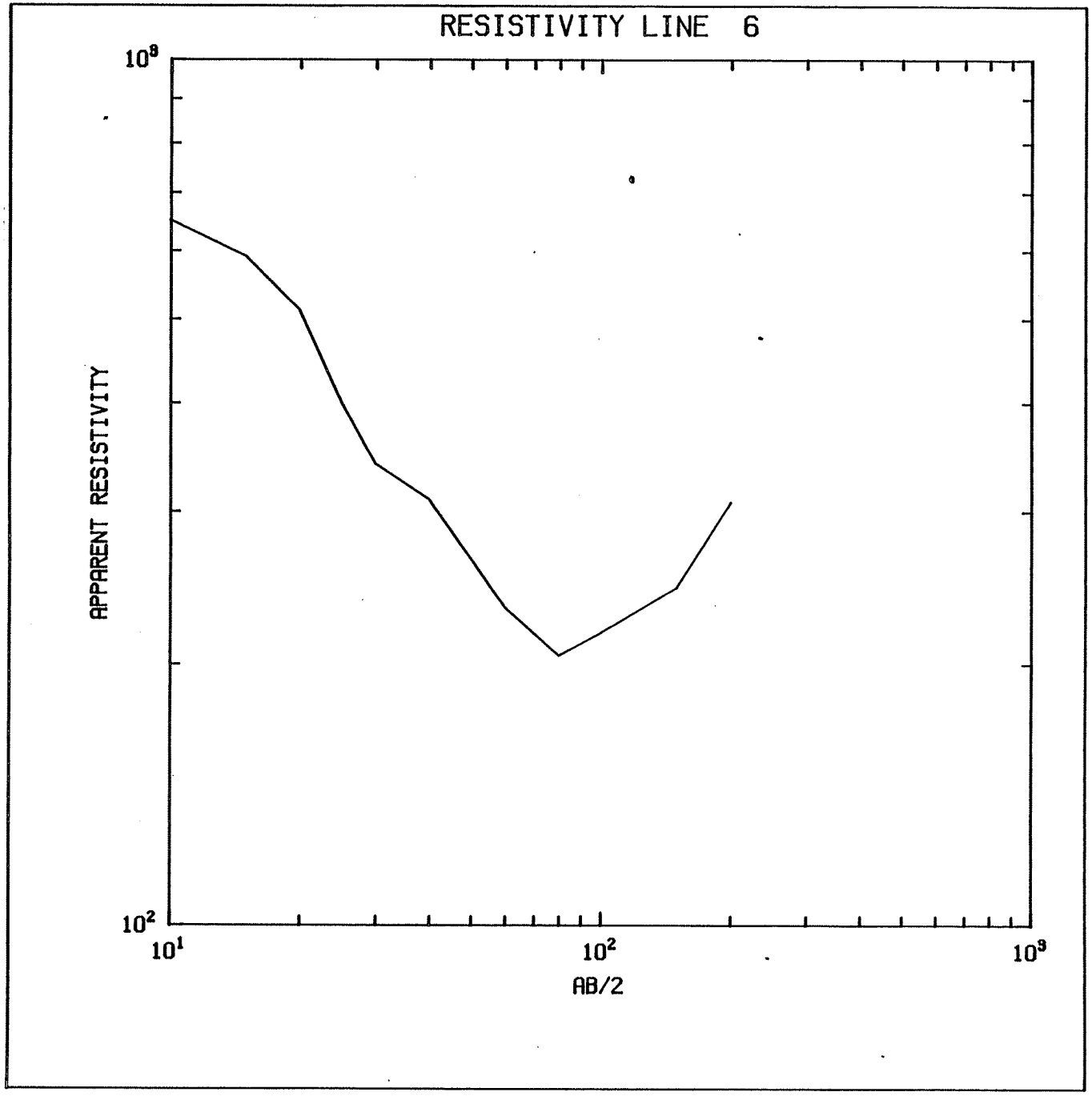


DATA

AB/2	ρ
10.63	
15.25	
20.21	
30.21	
40.20	
60.31	
80.32	
100.43	

Line #5

Depths(ft)	Corrected Resistivities(ohm-ft)
0-5	160
-26	20
greater than 26	130

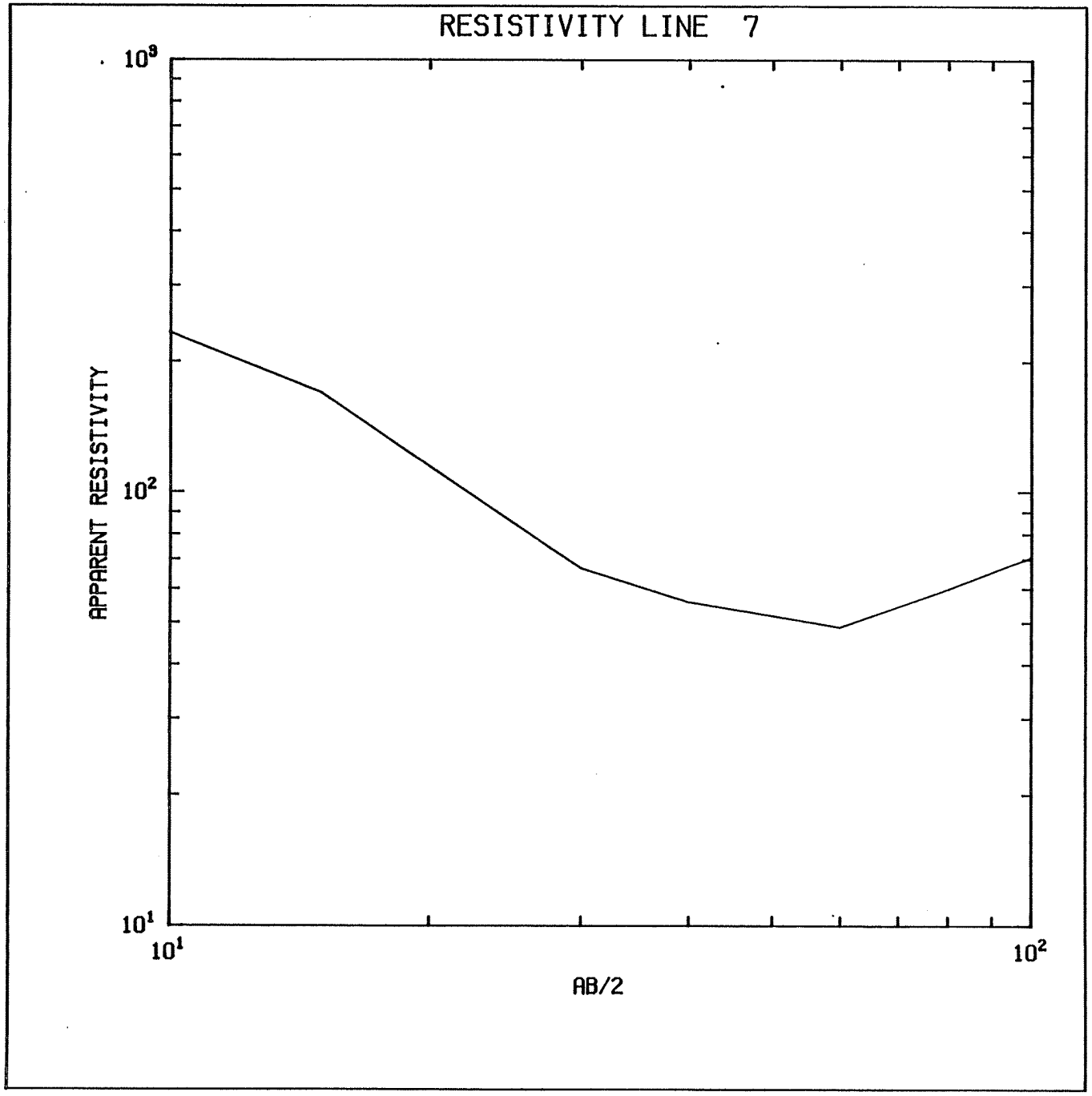


DATA

AB/2	ρ
10.652	
15.592	
20.513	
25.402	
30.341	
40.310	
60.233	
80.205	
100.218	
150.246	
200.308	

Line #6

Depths(ft)	Corrected Resistivities(ohm-ft)
0-10	710
-20	270
-78	170
-135	410
greater than 135	840

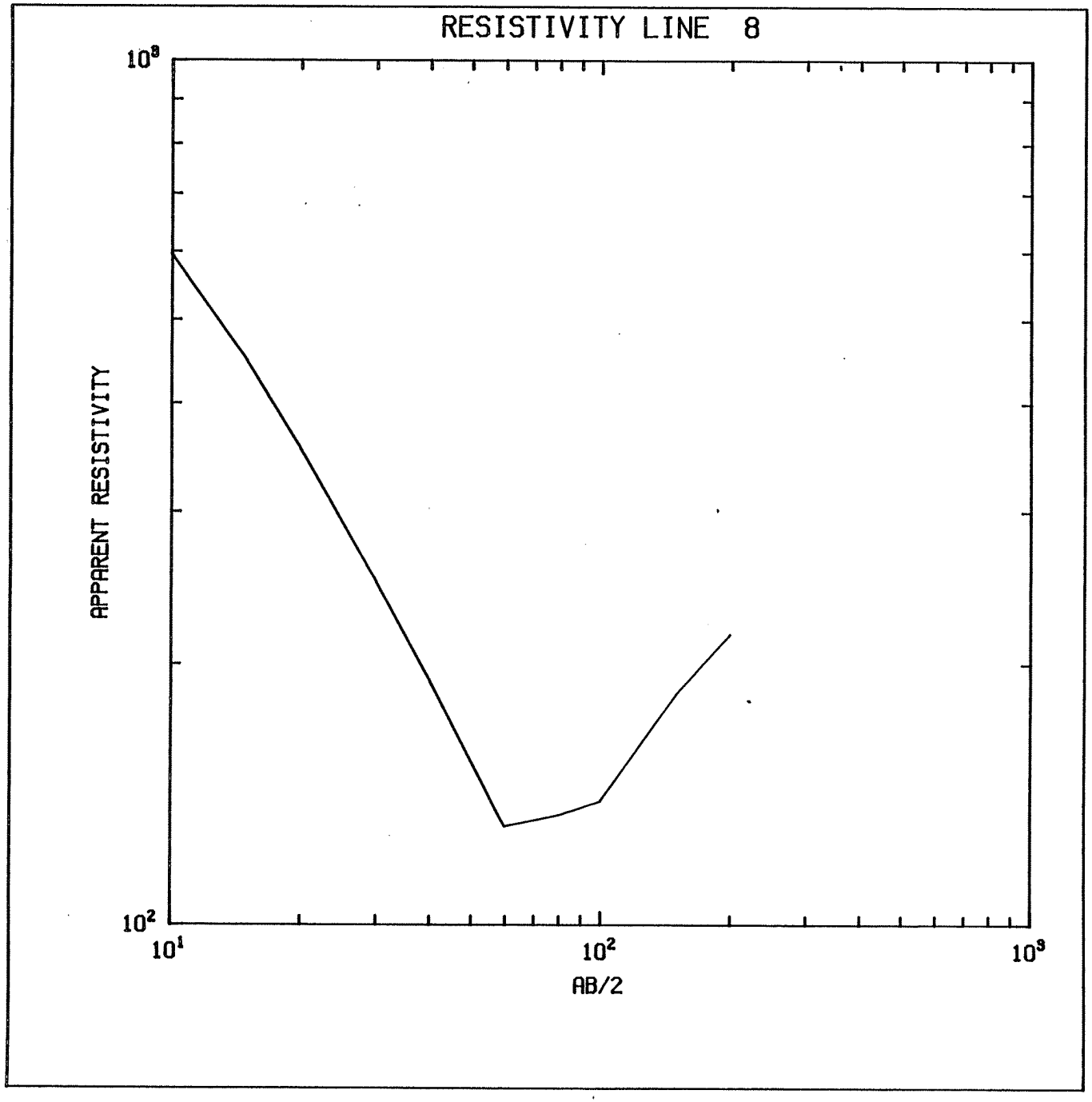


DATA

AB/2	ρ
10.234	
15.170	
20.115	
30.67	
40.56	
60.49	
80.60	
100.71	

Line #7

Depths(ft)	Corrected Resistivities(ohm-ft)
0-7	290
-10	160
-14	50
-26	20
-71	80
greater than 71	170

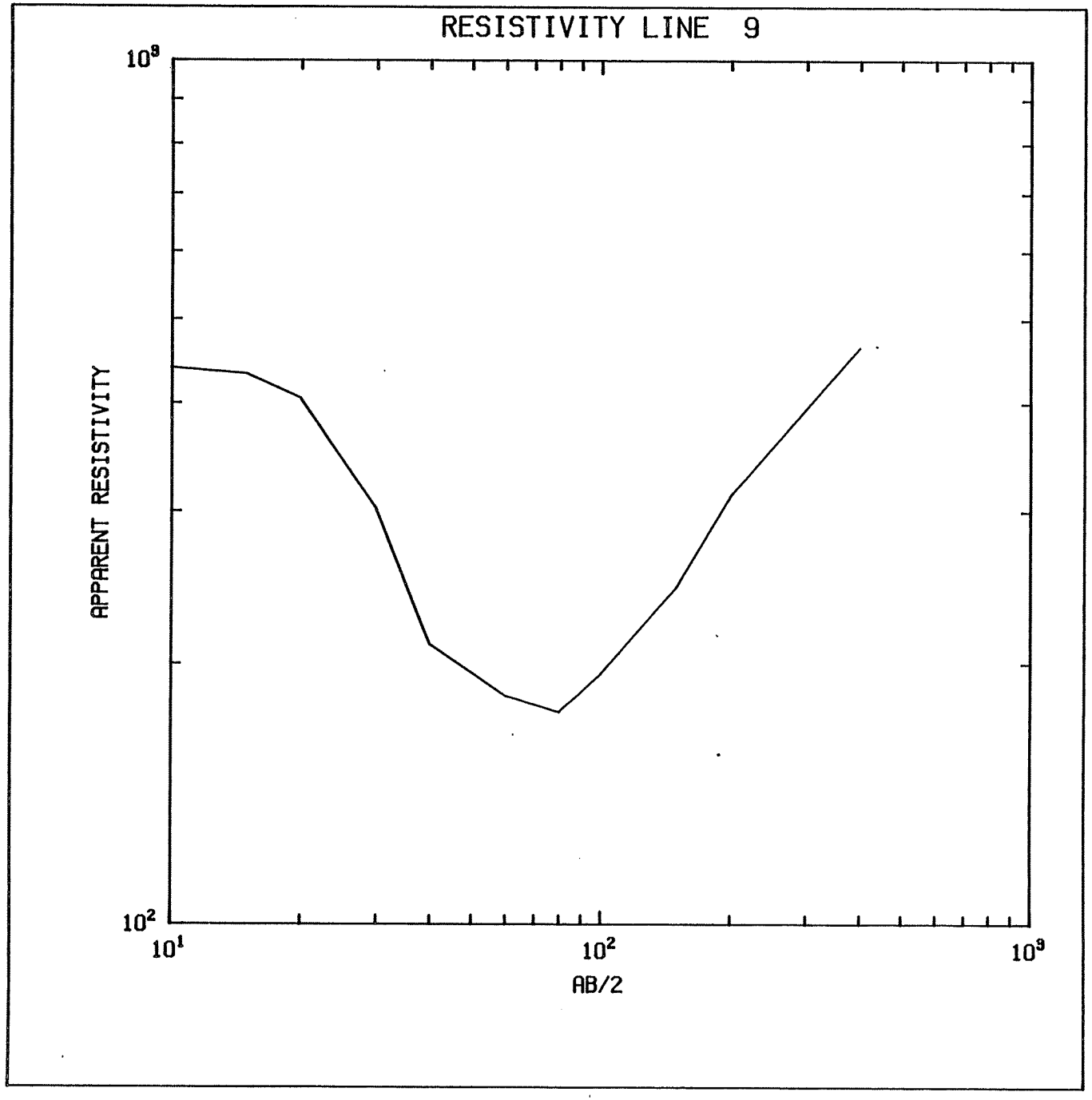


DATA

AB/2	ρ
10.597	
15.450	
20.356	
30.250	
40.192	
60.130	
80.134	
100.139	
150.185	
200.217	

Line #8

Depths(ft)	Corrected Resistivities(ohm-ft)
0-4	860
-10	380
-26	240
-45	40
greater than 45	360

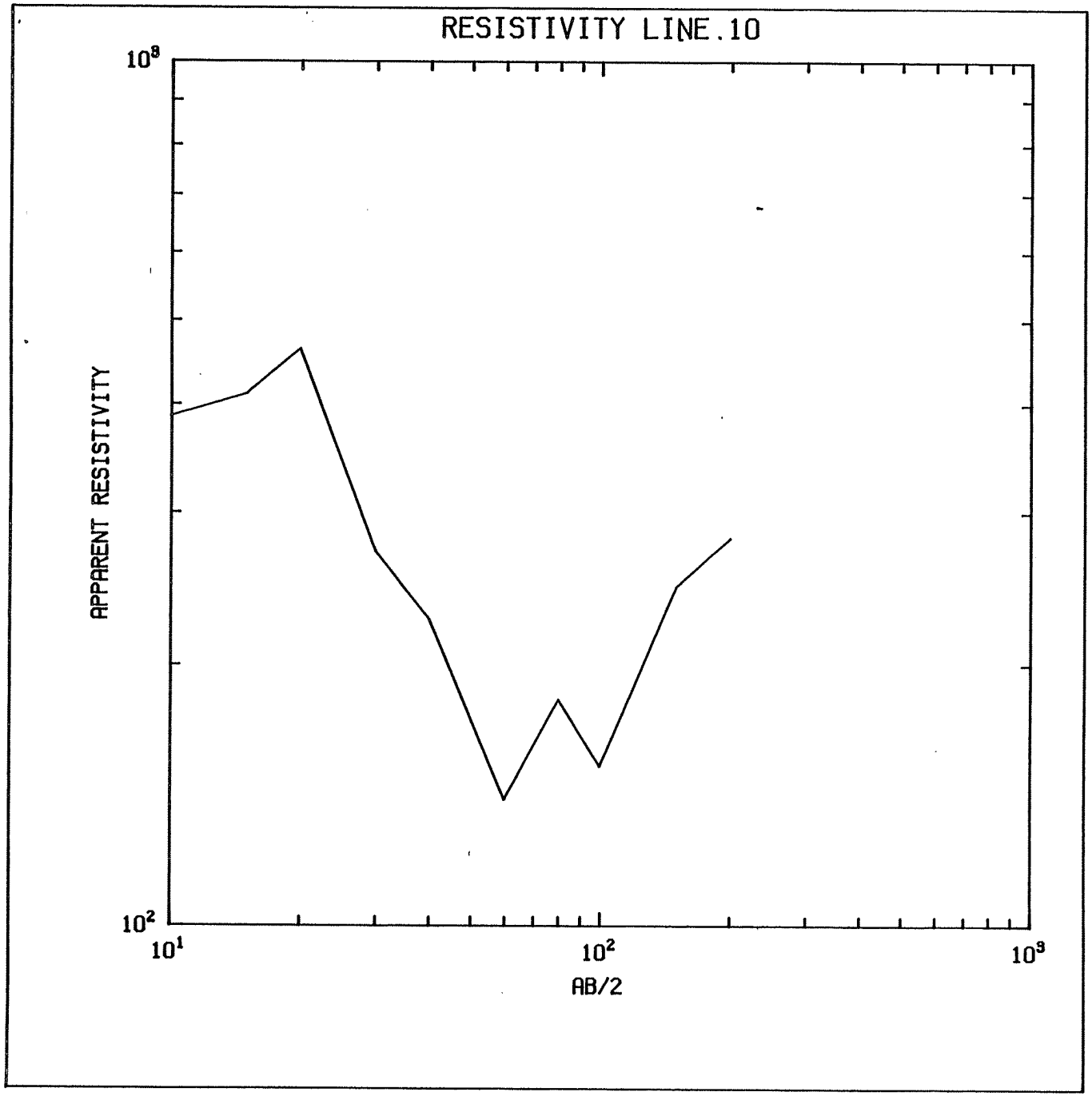


DATA

AB/2	ρ
10	440
15	433
20	406
30	303
40	211
60	184
80	176
100	195
150	246
200	313
400	465

Line #9

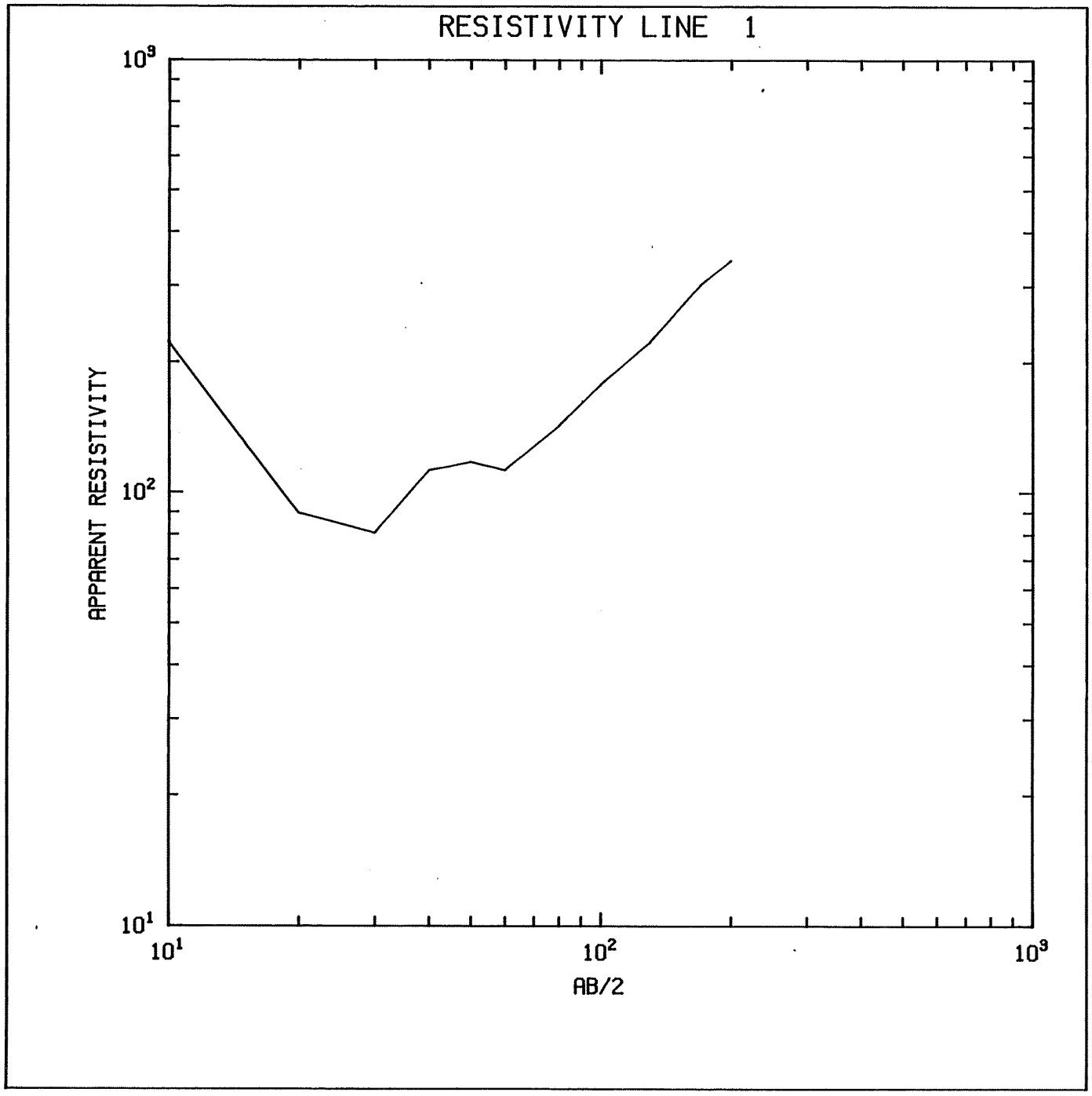
Depths(ft)	Corrected Resistivities(ohm-ft)
0-15	480
-20	190
-35	60
-68	260
greater than 68	760



DATA

AB/2	ρ
10	388
15	412
20	465
30	271
40	226
60	140
80	183
100	153
150	247
200	281

Line #10
Not interpretable. Lateral inhomogenities are too great.

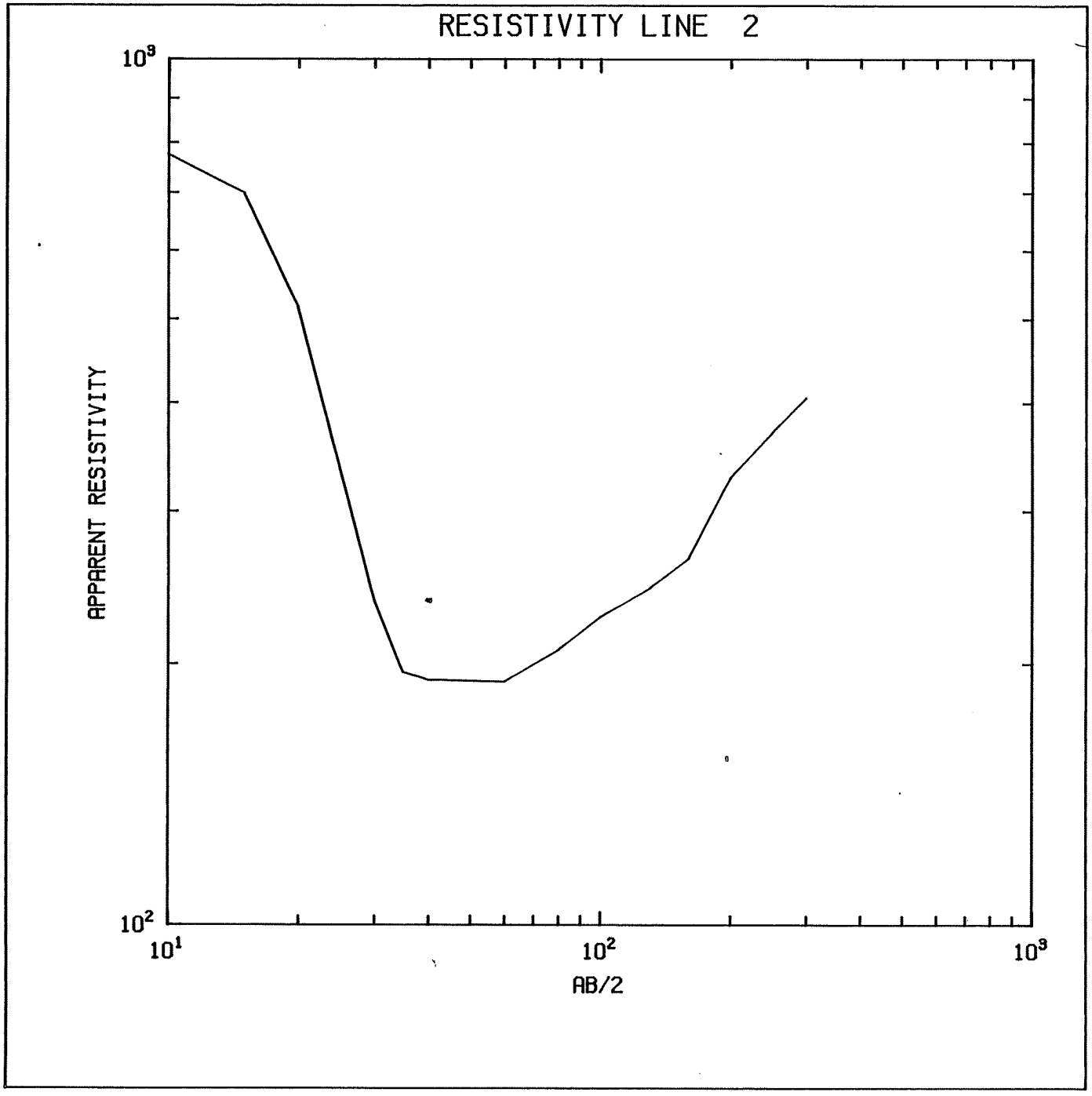


DATA

AB/2	ρ
10.224	
15.131	
20.90	
30.81	
40.113	
50.118	
60.113	
80.143	
100.178	
130.223	
170.302	
200.345	

Line #1

Depth(ft)	Corrected Resistivities(ohm-ft
0-6	300
-24	60
-58	360
greater than 58	1270

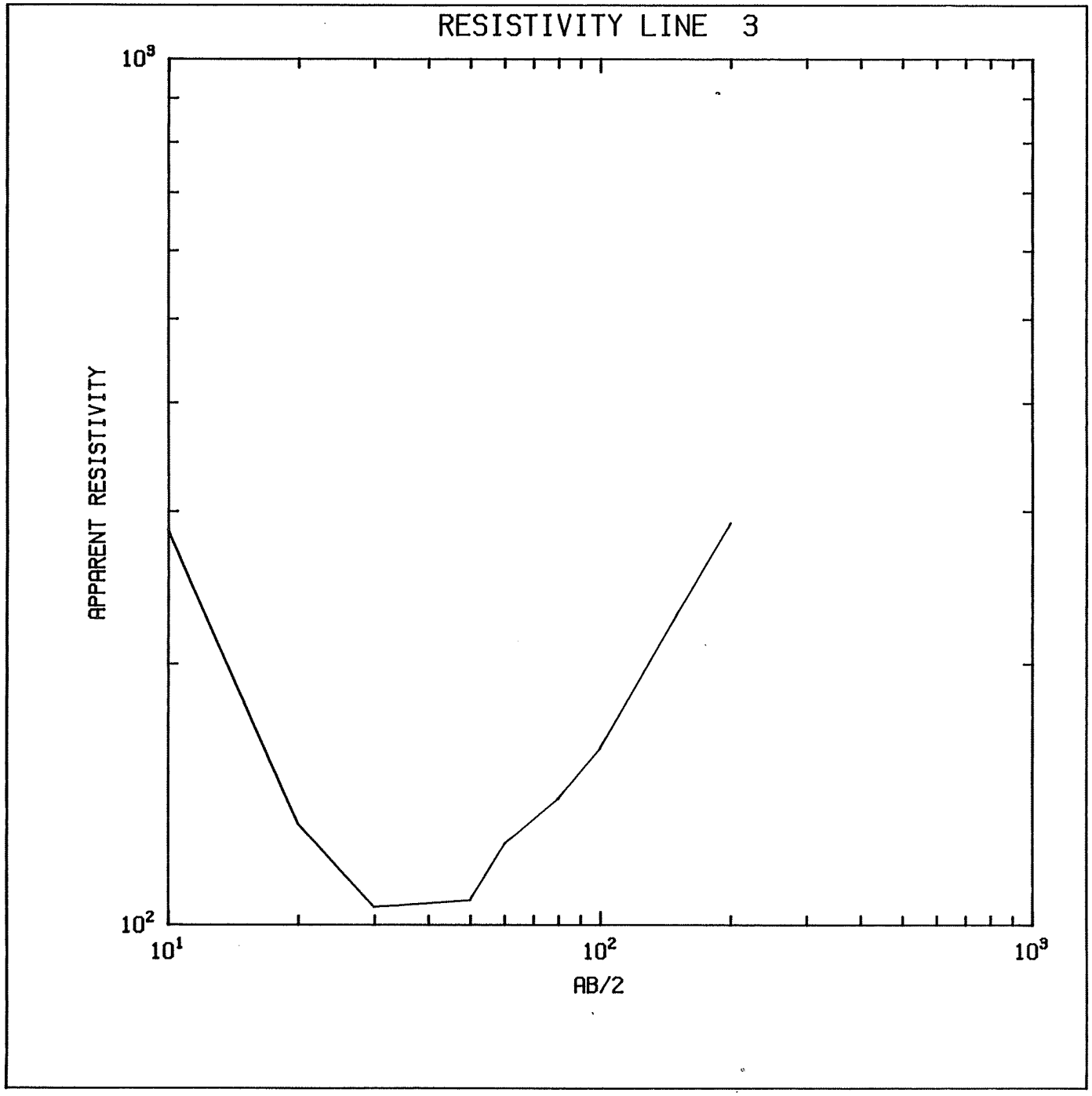


DATA

AB/2	ρ
10.777	
15.701	
20.518	
30.238	
35.196	
40.192	
60.191	
80.208	
100.227	
130.245	
160.265	
200.328	
250.370	
300.406	

Line #2

Depths(ft)	Corrected Resistivities(ohm-ft
0-9	1060
-12	300
-29	70
-33	980
-102	330
greater than 102	720

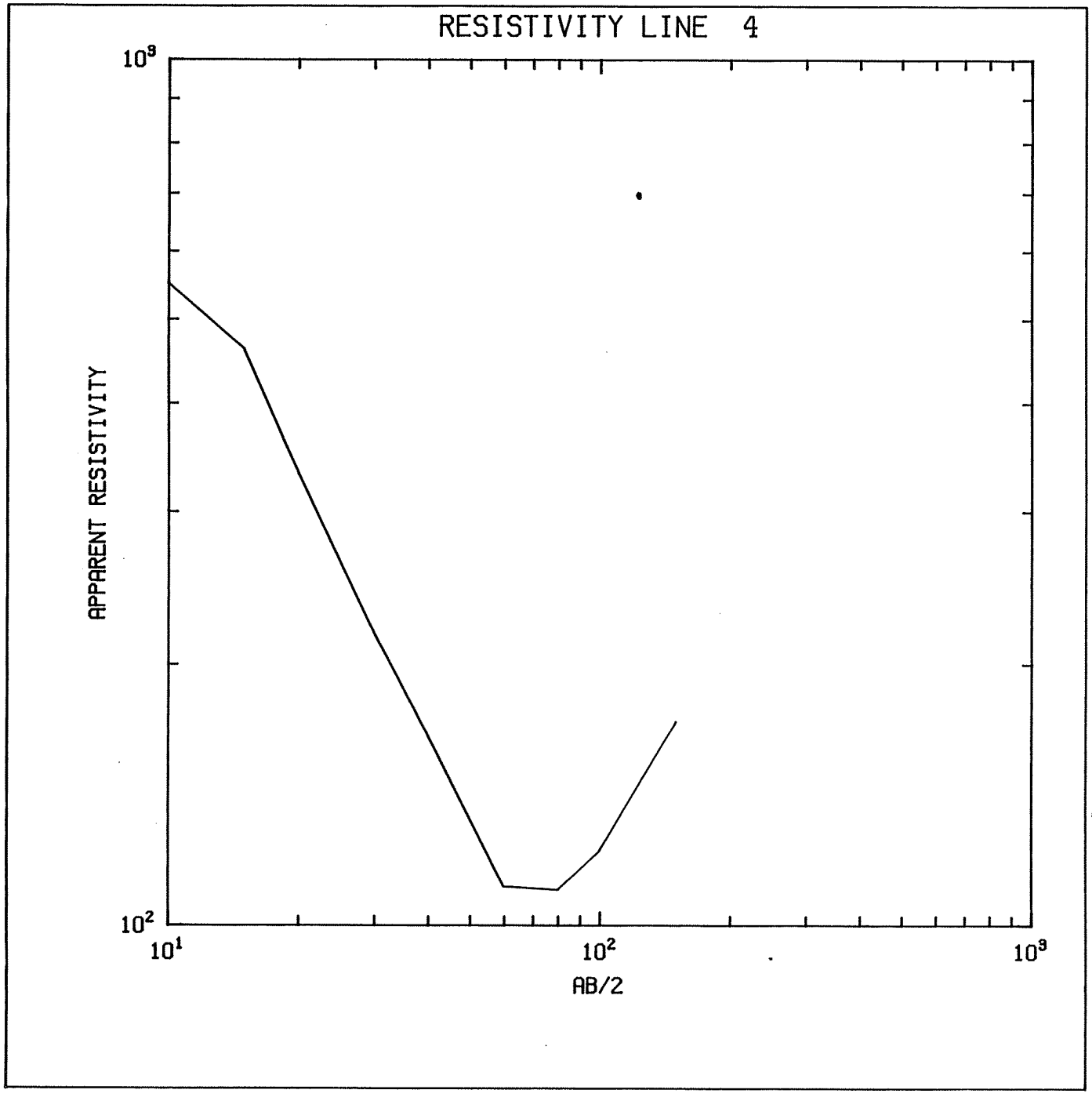


DATA

AB/2	ρ
10.286	
15.181	
20.131	
30.105	
50.107	
60.124	
80.140	
100.160	
150.228	
200.291	

Line #3

Depths(ft)	Corrected Resistivities(ohm-f
0-6	400
-8	130
-21	70
-78	150
greater than 78	1320

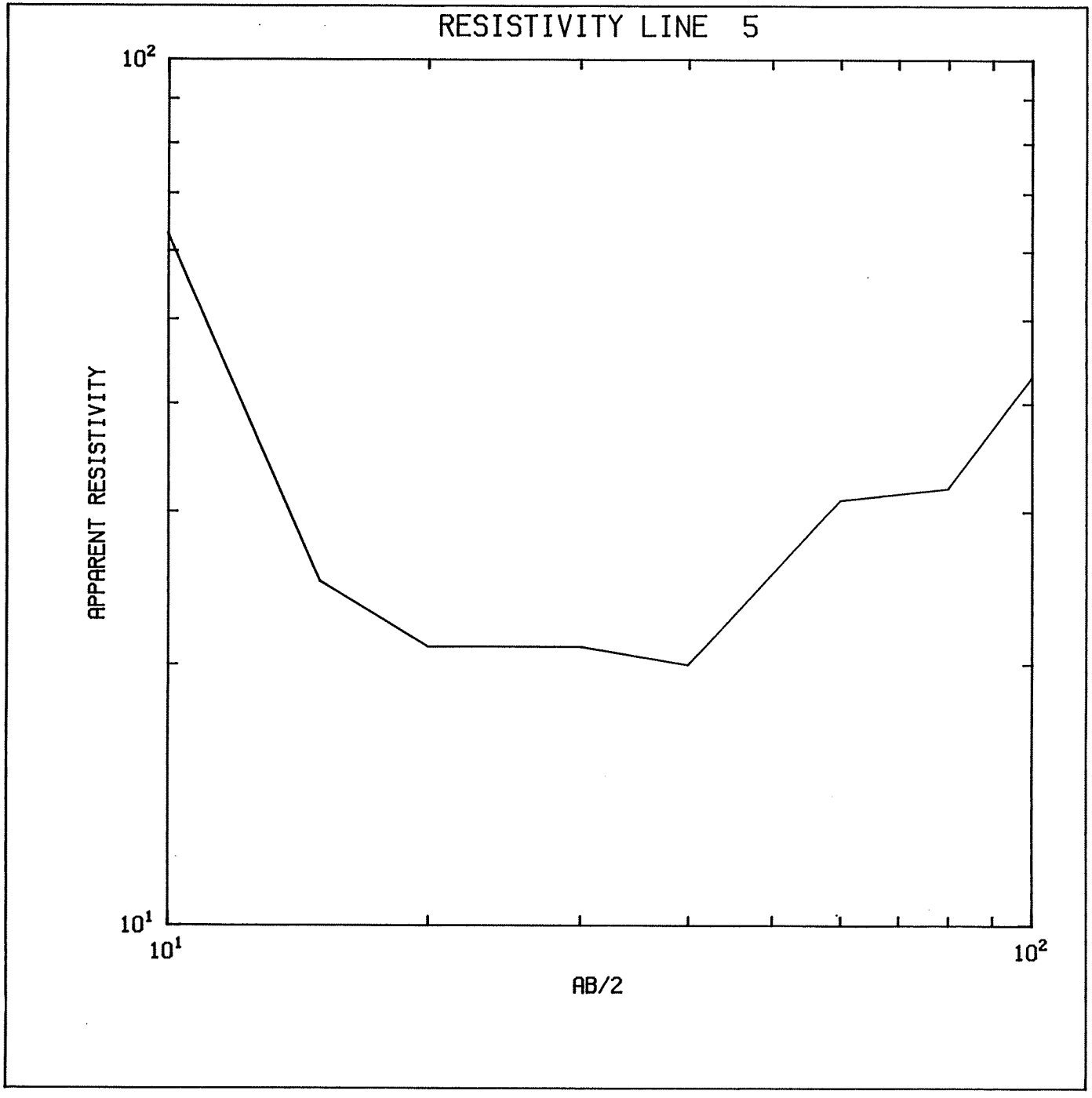


DATA

AB/2	ρ
10	552
15	463
20	334
30	218
40	166
60	111
80	110
100	122
150	172

Line #4

Depths(ft)	Corrected Resistivities(ohm-ft
0-7	640
-14	330
-18	140
-54	70
-86	200
greater than 86	630

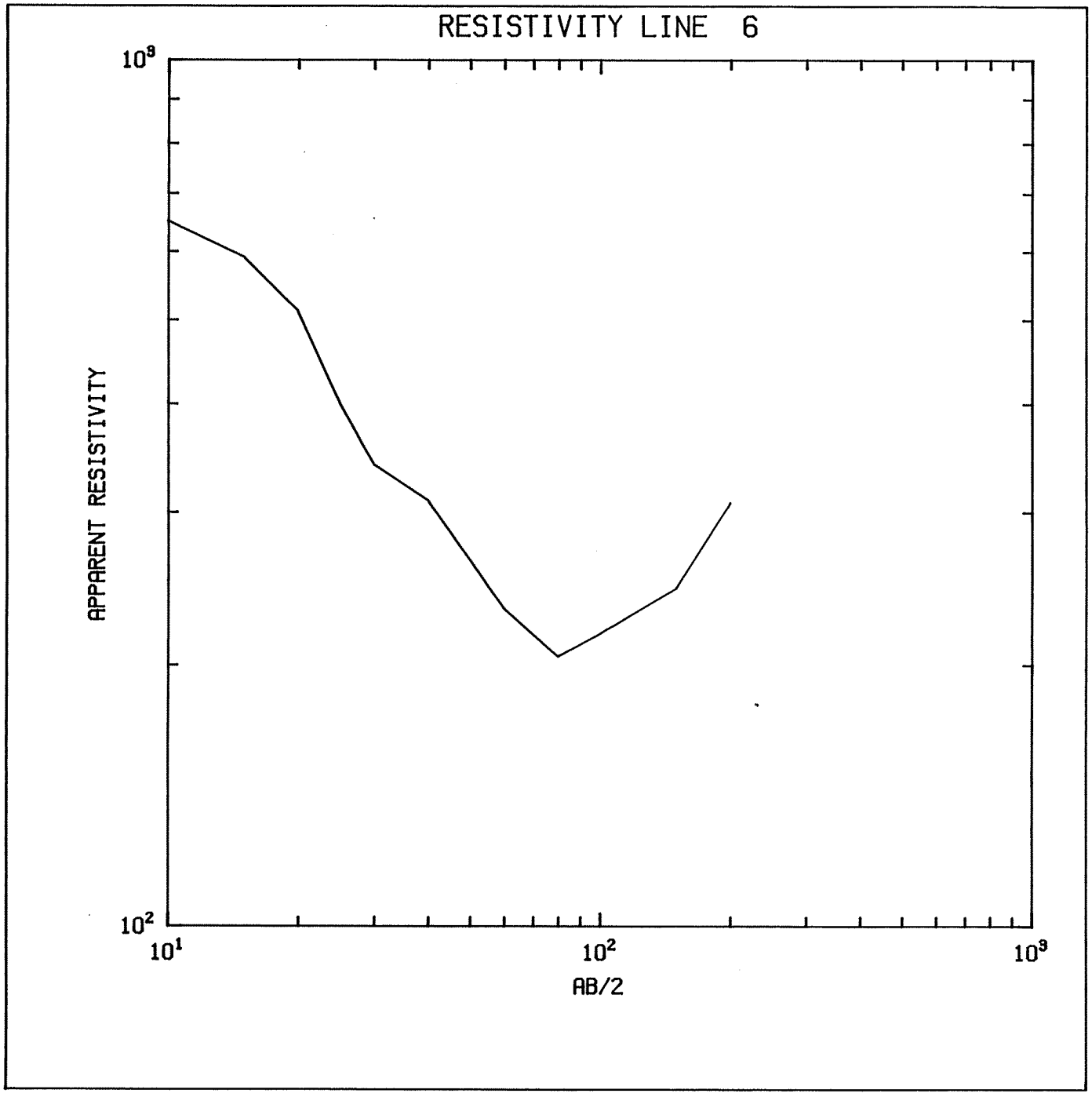


DATA

AB/2	ρ
10.63	
15.25	
20.21	
30.21	
40.20	
60.31	
80.32	
100.43	

Line #5

Depths(ft)	Corrected Resistivities(ohm-f
0-5	160
-26	20
greater than 26	130

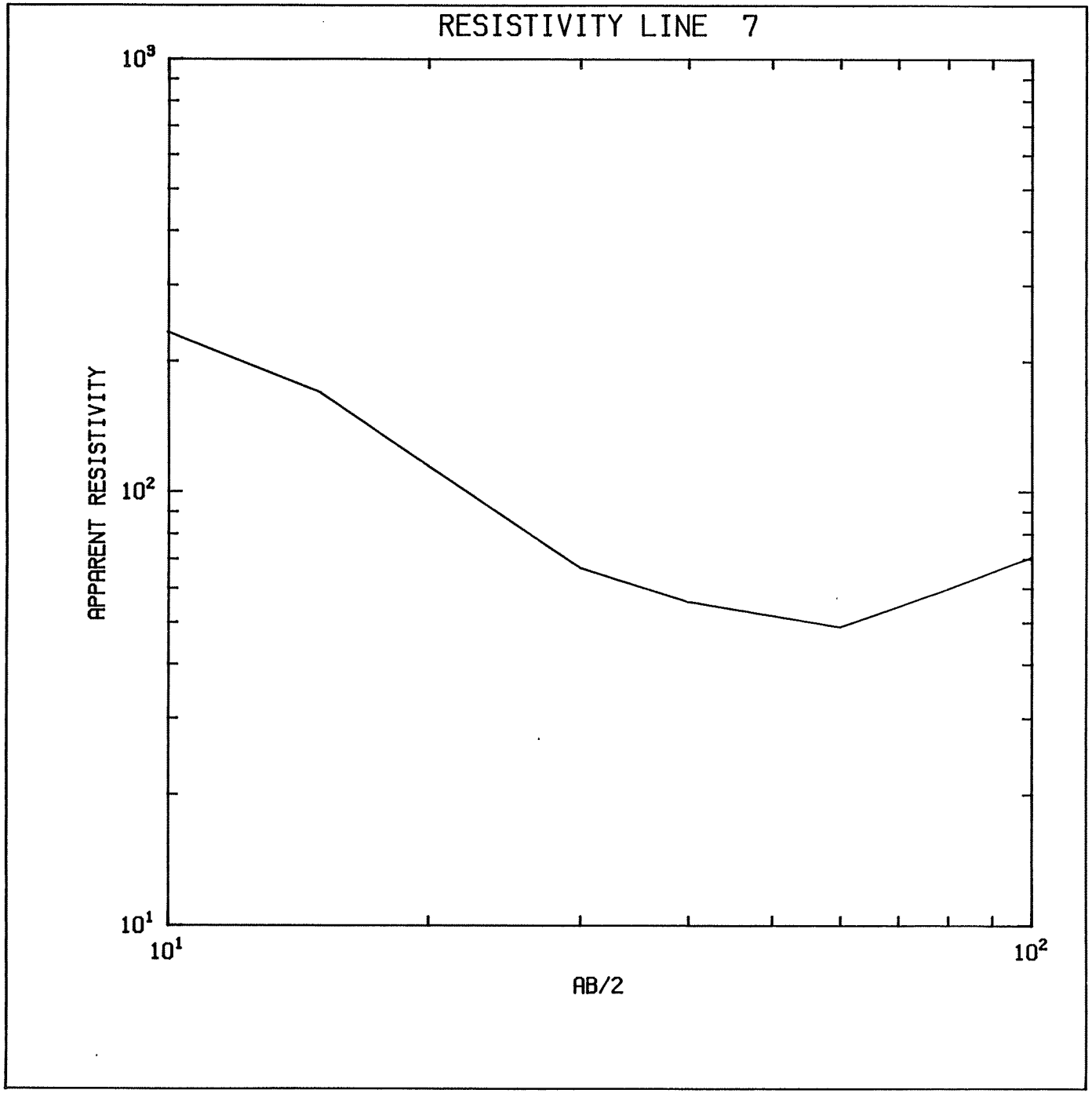


DATA

AB/2	ρ
10.652	
15.592	
20.513	
25.402	
30.341	
40.310	
60.233	
80.205	
100.218	
150.246	
200.308	

Line #6

Depths(ft)	Corrected Resistivities(ohm-ft
0-10	710
-20	270
-78	170
-135	410
greater than 135	840

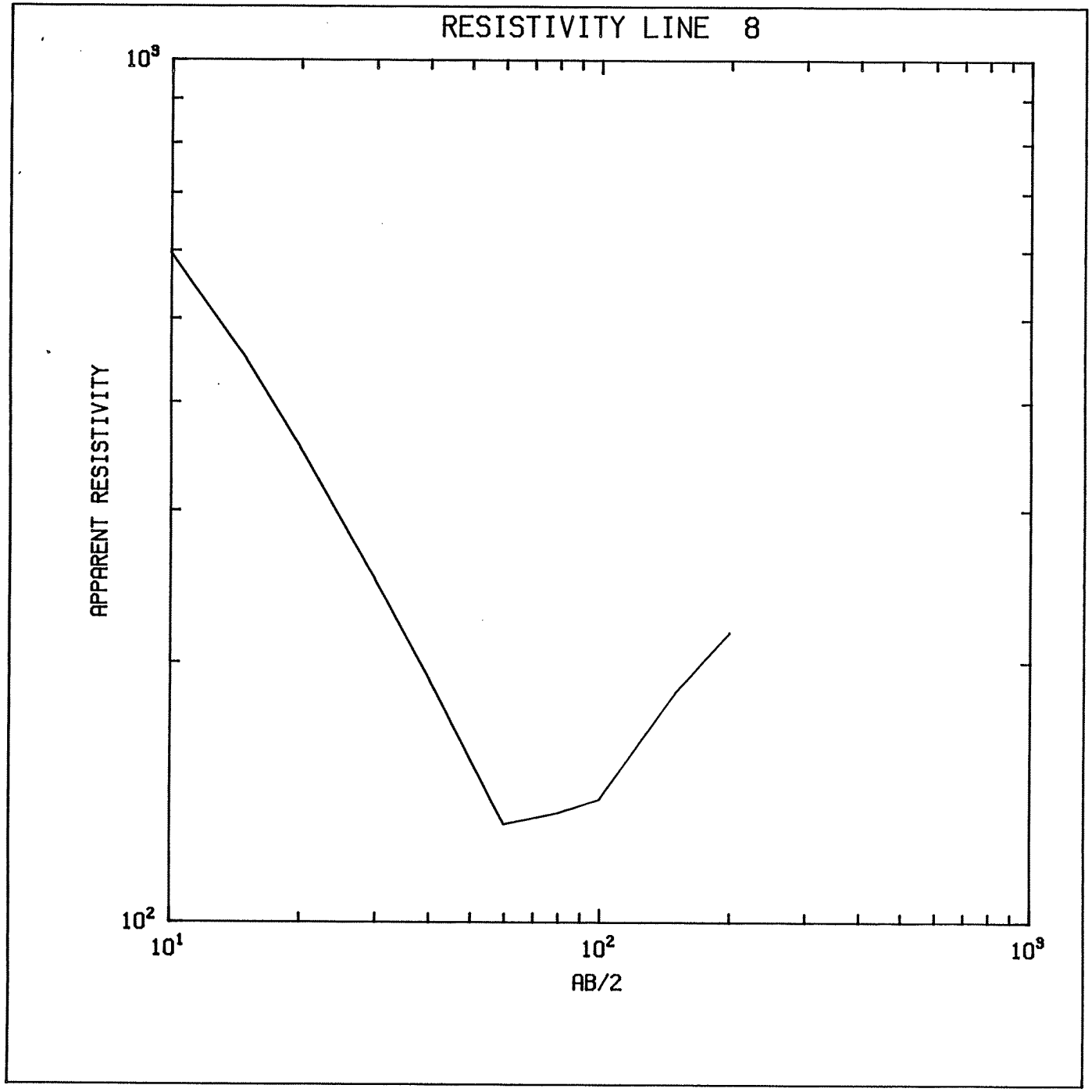


DATA

AB/2	ρ
10.234	
15.170	
20.115	
30.67	
40.56	
60.49	
80.60	
100.71	

Line #7

Depths(ft)	Corrected Resistivities(ohm-ft)
0-7	290
-10	160
-14	50
-26	20
-71	80
greater than 71	170

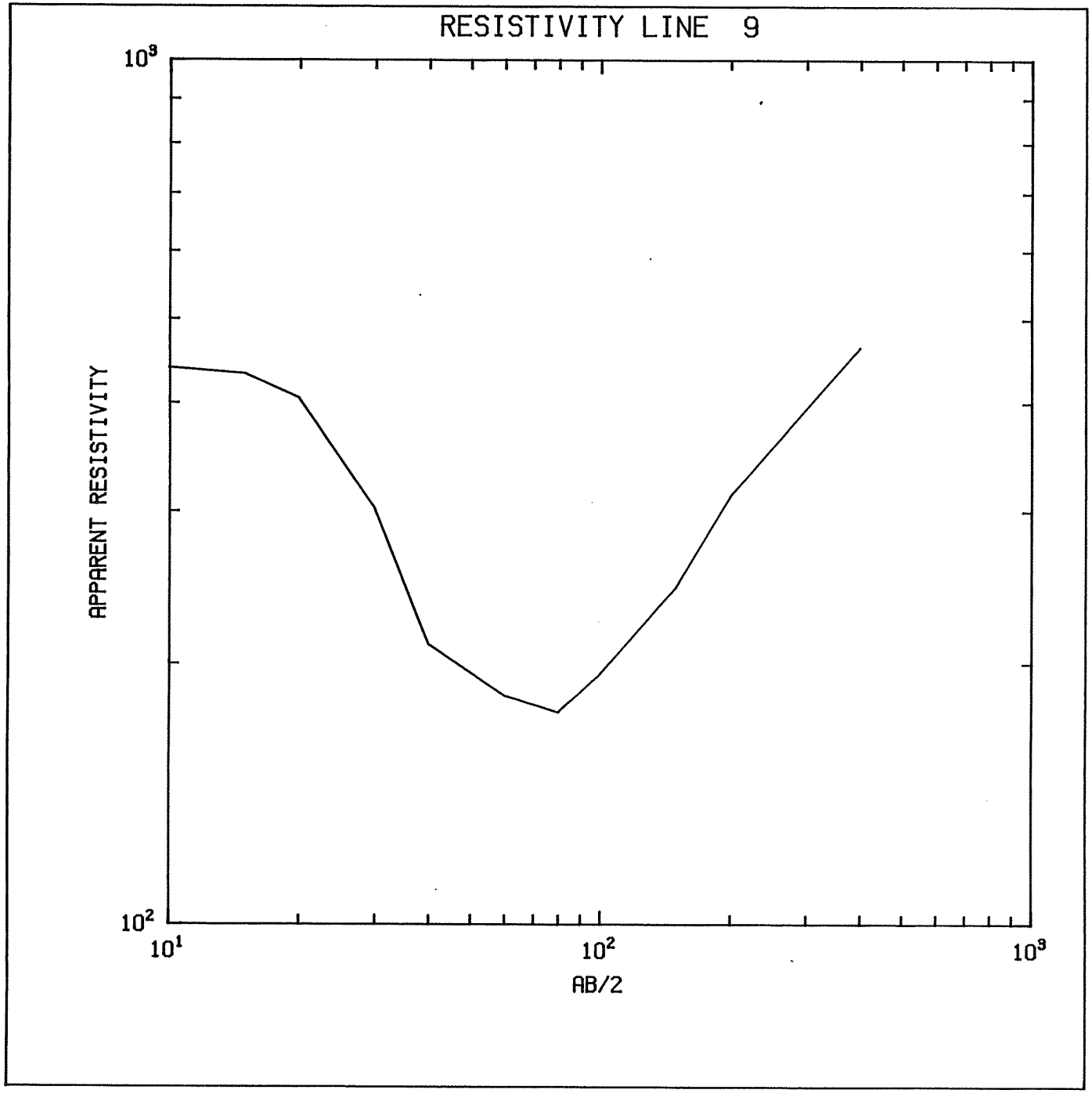


DATA

AB/2	ρ
10.597	
15.450	
20.356	
30.250	
40.192	
60.130	
80.134	
100.139	
150.185	
200.217	

Line #8

Depths(ft)	Corrected Resistivities(ohm-ft)
0-4	860
-10	380
-26	240
-45	40
greater than 45	360

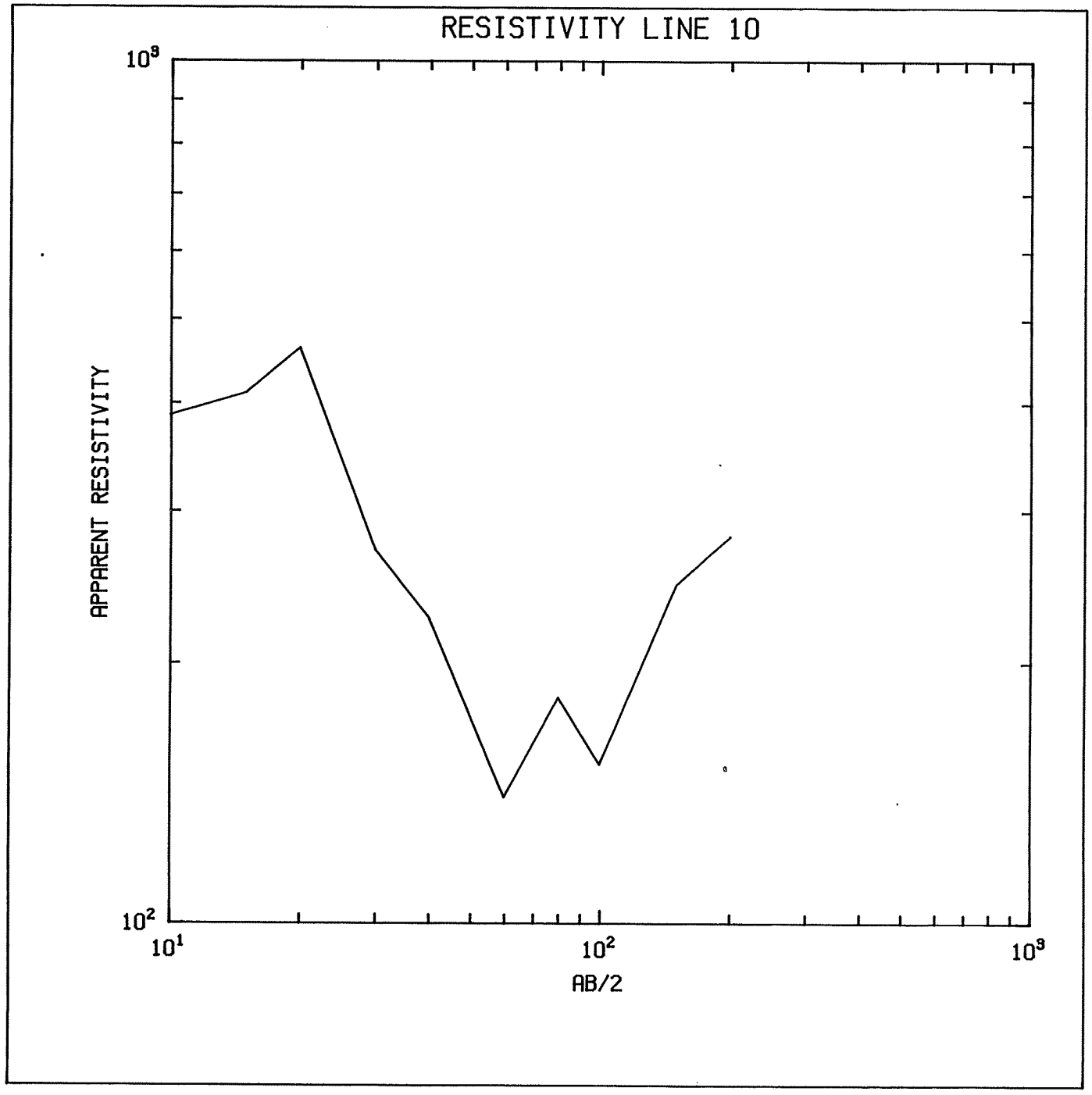


DATA

AB/2	ρ
10.440	
15.433	
20.406	
30.303	
40.211	
60.184	
80.176	
100.195	
150.246	
200.313	
400.465	

Line #9

Depths(ft)	Corrected Resistivities(ohm-ft)
0-15	480
-20	190
-35	60
-68	260
greater than 68	760



DATA

AB/2	ρ
10.388	
15.412	
20.465	
30.271	
40.226	
60.140	
80.183	
100.153	
150.247	
200.281	

Line #10
Not interpretable. Lateral inhomogenities are too great.

APPENDIX C

WELL AND BORING LOGS

O'BRIEN & GERE ENGINEERS INC.

TEST BORING LOG

REPORT OF BORING NUMBER MW-1
SHEET 1 OF 2
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE: Split Barrel
HAMMER FALL

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils Investigations
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION MW-1
GROUND ELEV.
DATE STARTED 8/2/85 DATE ENDED 8/5/85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	RMKS
		1	2'/2'	0-2'	9-11-	Red brown, dry, SILT, little CLAY			HNU 0	
					12-14					
		2	2'/2'	2'-4'	12-14-	(piece of slag at 3.8')			HNU 0	
					16-16	4.0'				
5		3	2'/1'	4'-6'	6-7-9-	Brown, dry to moist, CLAY, some SILT			HNU 0	
					10					
		4	2'/1.5'	6'-8'	9-9-10-	(silt lens at 7') 7.0'			HNU .4	
					9	Brown, moist, CLAY & SILT, trace GRAVEL, some lenses of SAND & SILT				
		5	2'/1'	8-10'	2-2-2-				HNU 3	
10					4					
		6	2'/.8'	10-12'	3-4-5-				HNU .8	
					6	Black, wet, fine-med. SAND, little SILT, little CLAY (odor) 11.0'				
		7	2'/2'	12-14'	3-2-1-	Red brown, moist, SILT & CLAY 12.0'			HNU 0	
					2					
15		8	2'/2'	14-16'	2-3-3-	Gray, wet, fine SAND. Some SILT.			HNU 0	
					3	(CLAY layer at 15'-15.3')				
		9	2'/2'	16-18'	1-2-2-	(wet layer at 16-16.5') 17.0'			HNU 0	
					2	Gray, wet, SILT, some CLAY, some fine SAND (varved)				
		10	2'/2'	18-10'	WR-WH				HNU 0	
20					21					
		11	2'/2'	20-22'	WH-2-1-				HNU 0	
					1					
		12	2'/2'	22-24'	1-2-2-				HNU 0	
					6					
25		13	2'/2'	24-26'	1-1-1-				HNU 0	
					1					
						(running SAND) 29.5'				
30		14	2'/2'	29-31	WR/1'-	Gray, wet, CLAY, some SILT 30.5'			HNU 0	
					3-4	Gray, wet, fine-med. SAND (sorted) 31.0'				
						34.0'				
35		15	2'/2'	34-36'	WR/1'-3-3	Gray, wet, fine-med. SAND & SILT, some CLAY (in 4" layers)			HNU 0	

REMARKS:

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING NUMBER MW-1
SHEET 2 OF 2
DATE FILE

PROJECT LOCATION Cherry Farm
CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER
FALL

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils Investigations
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION MW-1
GROUND ELEV.
DATE STARTED 8/2/85 DATE ENDED 8/5/85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	RMKS
35										
		16	2'/2'	38-40'	4-4	38.5'				
						Gray,wet,f-c SAND,little f GRAVEL (hydrogen sulfide odor) 40.0'			HNU 0	
40						Gray,wet f-c GRAVEL (hydrogen sulfide odor)				
						(Boulder at 42.5')				
						44.0'				
		17	2'/2'	44-46'	9-3-2-	Gray,wet,f-c GRAVEL,little f-c SAND,little SILT			HNU 0	
45					2					
		18	.5'/.3'	47-47.3	100/.2'	47.3'				
						BEDROCK, Shale and Gypsum 47.5'				
						BOTTOM OF BORING @47.5'				
50										

REMARKS:

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING NUMBER MW-2
SHEET 1 OF 1
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER
FALL

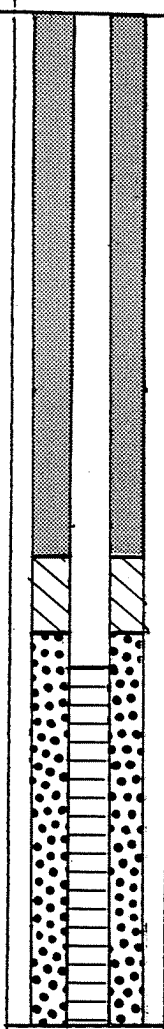
GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION MW-2
GROUND ELEV.
DATE STARTED 8-6-85 DATE ENDED 8-6-85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS / 6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	REMKS
		1	2'/1.5'	0-2	4-7-7-	Brown, dry CLAY cap 0.5'			HNU 0.2	
					12	Black/Dk Brown, dry f/m SAND & SILT cinders 3.0'				
		2	2'/.9'	2-4'	7-11-				HNU 0	
					15-12	Tan, dry, f/m SAND 3.2'				
5		3	2'/1'	4-6'	3-4-4-	Black, moist f/m SAND, little SILT trace fine GRAVEL 6.0'			HNU 0	
					4					
		4	2'/2'	6-8	2-2-2-	Black, moist, f/c SAND, little SILT, little f/m GRAVEL (2" m/c SAND LENSE @ 7.0')			HNU 0	
					2				HNU 0	
		5	2'/.5'	8-10'	5-4-3-	Piece of wood @ 9.0'			HNU 0	
10					2	Piece of wood @ 10.0'				
		6	2'/.2'	10-12	5-5-20-				HNU 0	
					24					
		7	2'/.8'	12-14'	14-4	13.0'			HNU 0	
					3-3	Black, wet, f/m SAND.				
15		8	2'/2'	14-16	1-1-1-	15.5'			HNU 0	
					1	Black, moist, SILT, tr CLAY, roots 16.0'			HNU 0	
		9	2'/2'	16-18	4-5-7-	Gray, mst, SILT, some CLAY, roots 17.0'				
					9					
		10	2'/2'	18-20	1-3-1-	Gray, wet, fine/medium SAND.			HNU 0	
20					1	Some silty fine CLAYEY layers.				
		11	2'/2'	20-22	1-1-1-				HNU 0	
					2					
		12	2'/2'	22-24	1-2-1-				HNU 0	
					2					
25		13	2'/	24-26	WR-1-2	Runny fine SAND 24-26'			HNU 0	
					3					
		14	2'/	26-28	2-3-4-	Stiff fine SAND, little SILT 26-28'				
					6					
						BOB @ 28'				
30										



REMARKS:

O'BRIEN & GERE ENGINEERS INC.

TEST BORING LOG

REPORT OF BORING NUMBER MW-3
SHEET 1 OF 1
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER FALL

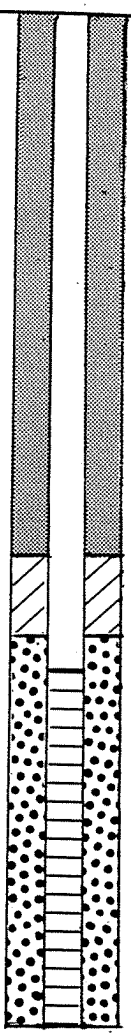
GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION MW-3
GROUND ELEV.
DATE STARTED 8-7-85 DATE ENDED 8-7-85

DEPTH	"N" Value	SAMPLE NO.	PEN./REC.	DEPTH	BLOWS / 6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	RMKS
		1	2'/.3'	0-2'	10-5	Brown,dry CLAY cap 0.5'			HNU 0	
					5-6	Brown,dry, SILT, some f/m SAND 2.0'			HNU 0	
		2.	2'/1.5'	2-4	1-1-3-	Black,dry,f/c SAND,some f/m GRAVEL SILT, CINDERS 3.5'			HNU 0	
					11	Brown/Black,dry f/c SAND 4.0'				
5		3	2'/2;	4-6	7-7-3-	Brown & Black, f/c SAND, some SILT some f/m GRAVEL, cinders			HNU 0	
					2	Iron Oxide @ 7.0'				
		4	2/.5'	6-8	5-7-14	Silty @ 8-8.5'			HNU 0	
					9					
		5	2'/2'	8-10'	12-28-	8.5'				
10					30-12	Brown/Orange,moist,f/m SAND 9.5'			HNU 2	
		6	2'/1'	10-12	4-3-8-	Black,moist, f/m SAND, some SILT, cinders. Large piece of slag @ 12'			HNU 0.2	
					16	12.0'				
		7	.9/.9'	12-12.9	32-100/	Black,wet,f/m SAND,some SILT, pieces of brick & slag 12.4'			HNU 0	
					.4	Black,wet f/c GRAVEL,lt. f/c SAND odor 12.9'			HNU 0	
15						13.0			HNU 0	
		8	2'/1'	16-18	5-3-2-	Large COBBLES,BOULDER or pieces of slag (no sample) 15.5				
					1	Black,wet,SILT,little f SAND 16.5				
		9	2'/1.5'	18-20	1-2-2-	Gray,wet,f SAND & SILT, organics 18.0'				
					5	Gray,wet,f/m SAND,some SILT, organics				
20		10	2'/1.8'	20-22	3-3-3-				HNU 0	
					2					
		11	2'/2'	22-24	1-1-1-				HNU 0	
					2				HNU 0	
		12	2'/2'	24-26	2/2'					
						24.0				
25						Gray,wet, f/m SAND & SILT				
		13	2'/2'	26-28	3-3-2-				HNU 0	
					3					
30						BOB @ 28.5'				



REMARKS:

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING NUMBER MW-4
SHEET 1 OF 1
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER
FALL

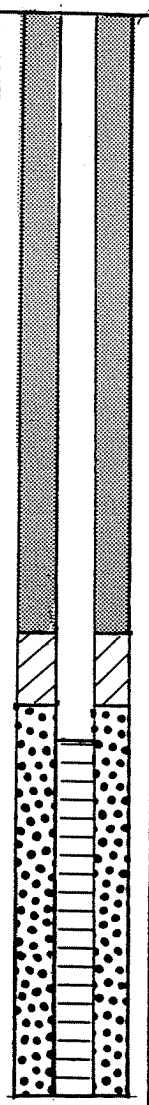
GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER D. Wright

BORING LOCATION MW-4
GROUND ELEV.
DATE STARTED 8-8-85 DATE ENDED 8-8-85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	REMARKS
		1	2'/	0-2'	4-5-8-	Brown,dry CLAY cap .5'			HNU .6	
					15	Drk brown,dry, f/m SAND, some SILT, pieces of cinders & slag				
		2	.5'/	2-2.5	18-50/0	Tan sand at 4.5-4.8'			HNU 0	
			.5'							
5		3	2'/2'	4-6	15-12-9-				HNU 0	
					12					
		4	2'/2'	6-8	9-12-	Dk brown & Black,moist f/m SAND; some SILT,piece of wood @ 7', cinders, tan sand @ 7.8',piece of sand cast at 8.2-8.4' 9.6'			HNU 0	
					12-12					
		5	2'/2'	8-10	5-4-2-				HNU 0	
10					2	Gray,dry,ash & cinders 10.0'				
		6	2'/.4'	10-12	3-4-3-	Dk brown,tan & gray,moist layered f/m SAND & SILT,sand cast @ 10.2' 12'			HNU 0	
					4					
		7	2'/2'	12-14'	3-3-2-	Black,moist,SILT 12.4'			HNU .6	
					3	Black,moist,f SAND & SILT,some c SAND & f/m GRAVEL,sand cast @13.8' 14.0'				
15		8	1.6/1.3	14-	4-4-40				HNU 2	
				15.6	50/.1	Black,moist,f SAND & SILT,some c SAND & f/m GRAVEL,sand cast @ 13.8 15.2'				
		9	2'/ 2'	18-20	1-2-3-				HNU 3	
					2	Black,wet, f/c GRAVEL,tr f/c SAND cinders @ 15.6' 16.0'				
		10	2'/2'	20-22	1-1-2-	Hard cinders or slag (metal) 17.0'				
20					3	Gray,moist-wet,SILT,lt CLAY,lt f SAND (finer @ top) 20.0'				
		11	2'/1.8'	22-24	2-3-5	Gray,moist to wet SILT,some f SAND 22.0'			HNU 2	
					7					
		12	2'/1.8'	24-26	2-4-5-					
25					9	Gray,wet, f SAND,some SILT			HNU .4	
		13	2'/ 1.8	26-28	5-5-7				HNU 0	
					11				HNU 0	
30						30.0'				



REMARKS:

O'BRIEN & GERE ENGINEERS INC.

TEST BORING LOG

REPORT OF BORING NUMBER MW-5
SHEET 1 OF 2
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER FALL

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION MW-5
GROUND ELEV.
DATE STARTED 8-5-85 DATE ENDED 8-5-85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	RMKS
		1	2'/.8'	0-2'	20-14-	Brown, dry CLAY cap 0.5'			HNU 0.6	
					14-20	Dk Brown, dry SILT, tr cinders, glass chips 0.8'			HNU 5	
		2	2'/.5'	2-4'	30-34	2.0'				
					8-8	Black, moist, f/m SAND, some SILT Pieces of cloth				
5		3	2'/2'	4-6'	5-3-2-				HNU 0.8	
					2	6.5'				
		4	1.3/1.3	6-7.3	5-7-	Dk Brown-Black, wet f/m SAND, some SILT, some cinders, piece of brick 7.0'			HNU 0	
					100/.3	BOULDER, concret or cinder or slag (no sample) 10.0'			HNU 0.8	
10		5	2'/1'	10-12	14-70-	Black & Brown, moist to wet, f/c SAND, some f/m GRAVEL (cobble @ 10-10.5') Piece of slag & metal. Wet at 12.5' 13.0'			HNU 0	
					33-21	Brown, wet, f/c SAND, some SILT. 14.0'				
		6	2/1'	12-14	30-33-	Gray/Black, wet f SAND & SILT, organics (Black sandy lense @ 14.5' 16.0'			HNU 0	
					10-5				HNU 0	
		7	2'/	14-16'	WR-1.3				HNU 0.8	
15					5	Gray, wet f/m SAND (layered f/m SAND, SILT) 20.0'				
		8	2'/	16-18	2-2-3				HNU 0	
					4	Gray, wet, f/m SAND, trace SILT				
		9	2'/1'	18-20	1-3-8				HNU 0	
					8				HNU 0	
20		10	2'/2'	20-22	2-2-6	26.0'				
					8	Gray, wet, f/m SAND (running into augers - 5') 31.0'				
		11	2'/2'	22-24	2-5-4				HNU 0	
					5				HNU 0	
		12	2'/.5'	24-26	WR/1'-1				HNU 0	
25					7					
		13	2'/	26-28	NONE					
					RunUp in					
					Augers					
30										
						Gravelly layer indicated by auger noise. 34.0'			HNU 0	
		14	1.5'/ NR	34-35.5	10-6-6					
35										

REMARKS:

O'BRIEN & GERE ENGINEERS INC.

TEST BORING LOG

REPORT OF BORING NUMBER MW-5
SHEET 2 OF 2
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk.

SAMPLER
TYPE:
HAMMER FALL

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION MW-5
GROUND ELEV.
DATE STARTED 8-5-85 DATE ENDED 8-5-85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	RMKS
						39.0'				
40		15	2'/2'	39-41	WR/1-	Gray, wet, c/m SAND 40.0'			HNU 0	
					5-6	Gray, wet, CLAY (thin f/m SAND lenses @ 4" intervals)				
									HNU 0	
		16	2'/2'	44-46	4-2-2-					
45					4					
		17	1.5'/	49-	22-100	Gray, wet f/m SAND 49.5'				
50				50.5	58	Gray, moist-wet, silty till (silt & f/m gravel)			HNU 0	
						Gray, wet, f/c GRAVEL, some COBBLES				
						Refusal @ 51.5				
55										

REMARKS:

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING NUMBER MW-6
SHEET 1 OF 1
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER FALL

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION MW-6
GROUND ELEV.
DATE STARTED 8/8/85 DATE ENDED 8/8/85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	RMKS
		1	2'/1.5'	0-2'	15-15	Brown, moist CLAY cap 0.2'			HNU 0	
					15-15	Brown, dry-moist, f/c SAND, some SILT, little f/c GRAVEL, cinders piece of metal.				
		2	2'/1.5'	2-4'	15-15	Blue med SAND @ 3.5'			HNU 1-3	
					15-19	Lt Brown f/m SAND @ 4.2'				
5		3	1.3'/	4-5.3	8-18	Tan f/m SAND @ 4.6' 5.0'			HNU 1	
			1.3'		50/.3	Cinders or slag (no samples) 7.0'				
		4	.9'/.7'	8-8.9	28-	Dk. Brown, dry, f/c SAND, some SILT, little f/m GRAVEL. Clayey SILT layer @ 8.8' 9.0'			HNU .4	
					100/.4					
10						Slag, cinders or boulders. 13.5'			HNU .6	
15		5	2'/.5	14-16	4-3-4-	Brown, wet, f/c SAND & f/c GRAVEL (fill) trace SILT, odor. 17.0'			HNU 0	
					3					
		6	2'/2'	16-18	1-2-2-	Gray, wet SILT, little CLAY, f SAND Organics 18.0'			HNU .4	
					2					
		7	2'/2'	18-20	1-1-2-	Gray, wet, fine SAND, some SILT (lenses of fine SAND, SILT & CLAY) 24.0'			HNU .4	
					4					
20		8	2'/2'	20-22	1-2-2-				HNU .6	
					1					
		9	2'/2'	22-24	4-4-2				HNU 1	
					4					
25		10	2'/ 2'	24-26	WH-WH	Gray, wet f/m SAND, little SILT.			HNU 0	
					1-3					
		11	2'/ 2'	26-28	3-3-4-					
					4					
30						BOB @ 30'				

REMARKS:

O'BRIEN & GERE ENGINEERS INC.

TEST BORING LOG

REPORT OF BORING NUMBER MW-7
SHEET 1 OF 1
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER FALL

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION MW-7
GROUND ELEV.
DATE STARTED 8-7-85 DATE ENDED 8-7-85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING		RMKS
		1	2'/2'	0-2'	5-7-9-	Brown,dry CLAY cap 0.5'			HNU	0	
					14	Brown,dry,f/m SAND,tr.SILT,some cinders 2.5'			HNU	0	
		2	2'/6"	2-4	7-5-4-	Tan,dry f/m SAND 2.7'			HNU	0	
					1	Black/Brown f/c SAND, trace fine GRAVEL, trace SILT 6.0'			HNU	.4	
5		3	2'/6"	4-6	1-1-4-	Black/White dry f/c SAND & f/c GRAVEL 6.5'			HNU	.4	
		4	2/6"	6-8	14-2-2	Black, moist,f/m SAND & SILT 8.2'			HNU	0	
		5	2'/1.5'	8-10	2-2-11				HNU	0	
10		6	2'/.5'	10-12	4-7-9	Black,dry,f/c SAND,f/c GRAVEL, cinders,slag and little SILT. 12.5'					
					10						
		7	.9/.7'	12-	12-	BOULDER or ROCK 13.5'					
				2.9	100/.3						
15		8	1.1/1'	14-	21-30-	Black,brown,red miscellaneous fill cinders, pieces of brick & slag little SAND. 17.5'					
				15.1	80/.1						
		9	2'/	18-20	21-18				HNU	0	
			NR		21-25	19.0'					
20		10	2'/2'	20-22	17-8-				HNU	0	
					14-11	Gray, wet f/m SAND & SILT (some SILT & CLAY LENSES) occasional pebbles					
		11	2'/2'	22-24	17-17-				HNU	0	
					14-4						
25		12	2'/1.5'	24-26	50-25				HNU	0	
					5-5						
		13	2'/1'	26-28	5-4-				HNU	0	
					7-14						
		14	2'/1.7'	28-30	WR/1'				HNU	0	
30					2-2						
						BOB @ 31'					

REMARKS:

O'BRIEN & GERE ENGINEERS INC.

TEST BORING LOG

REPORT OF BORING NUMBER B-1
SHEET ____ OF ____
DATE ____ FILE ____

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE: ____
HAMMER FALL ____

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION B-1
GROUND ELEV. ____
DATE STARTED 7-31-85 DATE ENDED 7-31-85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	RMKS
		1	2.0/2.0	0-2	5-11-68-	Brown, dry CLAY .5'			HNU 1.2	
					50	Dk. Brown, dry SILT & f SAND 1.5'				
						Pink, dry, f/m SAND 1.6'				
						Black, dry, SILT & f SAND (slight odor) 2.0'			HNU 3.1	
5		2	2.0/2.0	4.5-	4-6-4	5.0'				
				6.5						
10		3	2.0/6"	9.5-	5-4-3-					
				11.5	3	Black, moist f/c SAND (odor) silty layer 12.0'			HNU .8	
15		4	2.0/6"	14.5-	5-5-5-	14.5'				
				16.5	6	Black, moist f/c SAND. Misc wood, CLAY, GRAVEL 17.0'			HNU 1.8	
20		5	1.0'	19.5-	1-2-3-4	19.5'				
				20.5		Black, wet, f/c SAND 19.8'			HNU 0	
						Gray, wet, m/c SAND 20.8'				
25		6		24.5-	3-5-6-	Gray, moist, SILT & CLAY 25.2'			HNU 0	
				26.5	9	Gray, wet, f/m SAND, Organics, some SILT 26.0'				
						Gray, wet, f/m SAND 26.5'				

BOB

REMARKS:

O'BRIEN & GERE ENGINEERS INC.

TEST BORING LOG

REPORT OF BORING NUMBER B-2
SHEET 1 OF 1
DATE FILE

PROJECT LOCATION Cherry Farms

CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER FALL

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION B-2
GROUND ELEV.
DATE STARTED 7-31-85 DATE ENDED 7-31-85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	RMKS
		1		0-2	7-9-19	Clay Cap .5'			HNU 0	
			1.5'		38	Brown,dry,f/c SAND,some GRAVEL 1.2				
						Black,dry,f/c SAND,tr.GRAVEL 1.5'				
5		2		4.5-6.5	6-6-6-4	Black,moist,f/c SAND 5.0'			HNU 0	
			2'			Tan,moist f/m SAND,lt.br.moist 5.2				
						Black,moist f/c SAND 6.2				
						Dk Brown,dry-moist,f/m SAND 6.5				
						9.5				
10		3		9.5-	21-24	Black,moist DILT,lt SAND(Odor) 10.0			HNU .8	
			1'	11.5	29-17	Red,dry piece concrete/slag(?) 10.2				
						Tan-dk brown,f/m SAND(casting) 10.5				
						14.5				
15		4		14.5-	2-3-2-	Black,wet,f/c SAND (Brown sand			HNU 0	
				16.5	3	lense cemented) 16.5				
						19.5				
20		5		19.5-	9-8-7-	Brown/Gray,wet,f SAND and SILT			HNU 0	
				21.5	6	trace ORGANICS				
						21.5'				
						BOB				
25										
30										

REMARKS:

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING NUMBER B-3
SHEET 1 OF 1
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER FALL

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION B-3
GROUND ELEV.
DATE STARTED 8-1-85 DATE ENDED 8-1-85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	REMKS
		1	2'/	0-2'	8-18-	Dry CLAY cap .33'				
			2'		24-50	Brown,dry,f SAND & SILT .8'			HNU 3	
						Black,dry,f SAND & SILT (HARD) some metal pieces & dust(iron oxide stain @1.8' 2'				
5			2'/	4.5-	8-14-	Brown,moist,f/m SAND 4.5' 4.9'	FILL		HNU 3	
			2'	6.5'	36-20	Black,moist,f/m SAND,tr GRAVEL, lt SILT (blue cloth piece) 6.5'			HNU .5	
						9.5'				
10			2'/	9.5-11.5	5-6-6-7					
			.5'	NR-went	back &					
				picked up some in spoon						
						Black,wet f/m SAND, tr GRAVEL 15.5'				
15			2'/	14.5-	3-4-5-					
			.5	16.5	4	Gray/green,wet f SAND,little SILT (organics in top 2") 16.5'			HNU 0	
						Gray/green, wet, f SAND				
20			2'/	19.5-	10-4-					
			2'	21.5	4-13				HNU 0	
25			2'/	24.5-	1-3-6					
			2'	26.5	8				HNU 0	
						26.5'				
						BOB				

REMARKS: Samples 1-3 composited for analysis.
WL 18'

O'BRIEN & GERE ENGINEERS INC.

TEST BORING LOG

REPORT OF BORING NUMBER B-4
SHEET 1 OF 1
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER FALL

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION B-4
GROUND ELEV.
DATE STARTED 8-1-85 DATE ENDED 8-1-85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	RMKS
		1	2'/	0-2'	9-19-	CLAY cap dry .33			HNU 2	
					30-70	Brown & tan, layered, dry f/m SAND, foundry sand 1'				
						Black, silty material (cloth layers) 1.5				
						Br, dry f/m SAND, s GRAVEL (slag) 2.0				
5		2	2'/	4.5-	7-5-	4.5'				
				6.5	4-2	Black, moist, f/c SAND, s GRAVEL (slag) (wet SILT layer 5-'5.3') 6.0'			HNU 14	
						Black, moist, f/m SAND 6.5'				
10		3	1.7/	9.5-	5-10-					
			1.7	11.5	21-100/3	Black, moist, f/m SAND, pieces of slag, brick, metal 11.0'			HNU .8-2.8 Layered	
						Hard, Boulder or piece of Slag 12.3'				
15		4	2/.5"	14.5-	2-2-2	14.5				
				16.5		Red brown, SILT, some f SAND, trace CLAY, odor 15 ?	FILL		HNU 2.6	
20		5	2'/2'	19.5-	4-4-	19.5'				
			Rec	20.5	4-4	Gray, wet, f/m SAND			HNU 4.8	
			Disturbed							
25		6	2'/2'	24.5-	4-4-				HNU 2.5	
				26.5	7-7	26.5'				

REMARKS: Samples 1 - 5 composited for analysis
WL 231

O'BRIEN & GERE ENGINEERS INC.

TEST BORING LOG

REPORT OF BORING NUMBER B-5
SHEET 1 OF 1
DATE FILE

PROJECT LOCATION Cherry Farm

CLIENT: Niagara Mohawk

SAMPLER
TYPE:
HAMMER FALL

GROUNDWATER READINGS

DATE	DEPTH		

BORING CO. Empire Soils
FOREMAN Joe Genovese
OBG ENGINEER Deborah Wright

BORING LOCATION Boring 5
GROUND ELEV.
DATE STARTED 8/9/85 DATE ENDED 8/9/85

DEPTH	"N" Value	SAMPLE NO.	SAMPLE PEN./REC.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRA. CHG. GEN. DESC.	EQUIPMENT INSTALLED	FIELD TESTING	RMKS
		1	2'/1'	0-2'	27-35	Brown,dry,CLAY cap .3'				
					60-66	Dk.brown,dry,SILT & f/c SAND .7'			HNU	
						Black/gray,dry ash and cinders .9'			Broken	
						Dk.brown,moist,SILT & f SAND				
5						4.5'				
		2	2'/2'	4.5-	6-6-8-	Black, moist, f/c SAND, some SILT				
				6.5'	8	9.5'				
		3	2'/1'	9.5'-	1-2-6-	Blk.moist,f SAND & SILT 10.0'				
10				11.5'	9	Red brown,moist,SILT,lt CLAY, piece of slag 10.5'				
						Gray, moist to wet, f/m SAND, some SILT 11.5				
						BOB				
15										

REMARKS: Due to presence of red brown clayey material, this sample will be analyzed regardless of HNU reading.

APPENDIX D

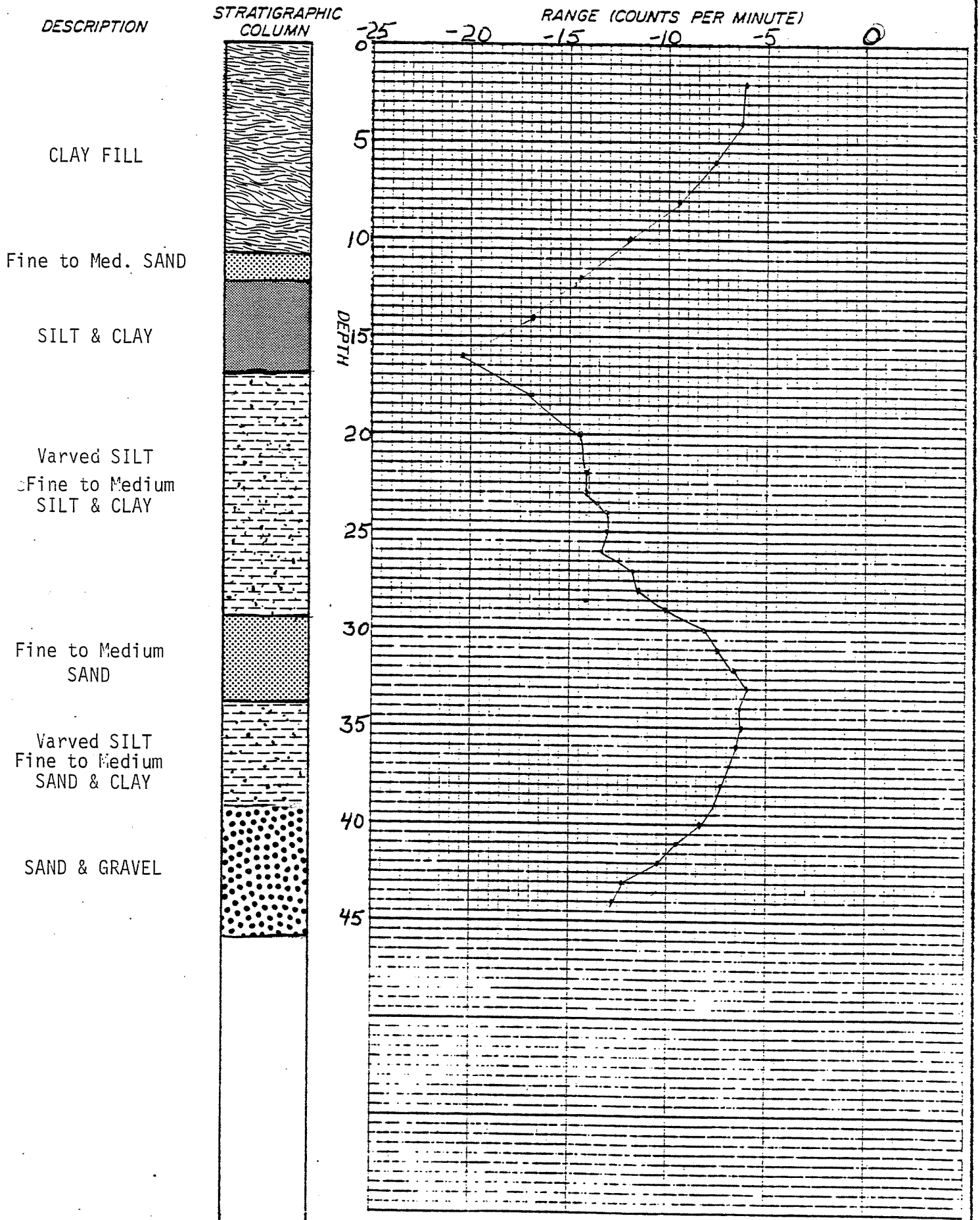
GAMMA RAY LOGS AND SOIL DATA

GAMMA RAY LOG

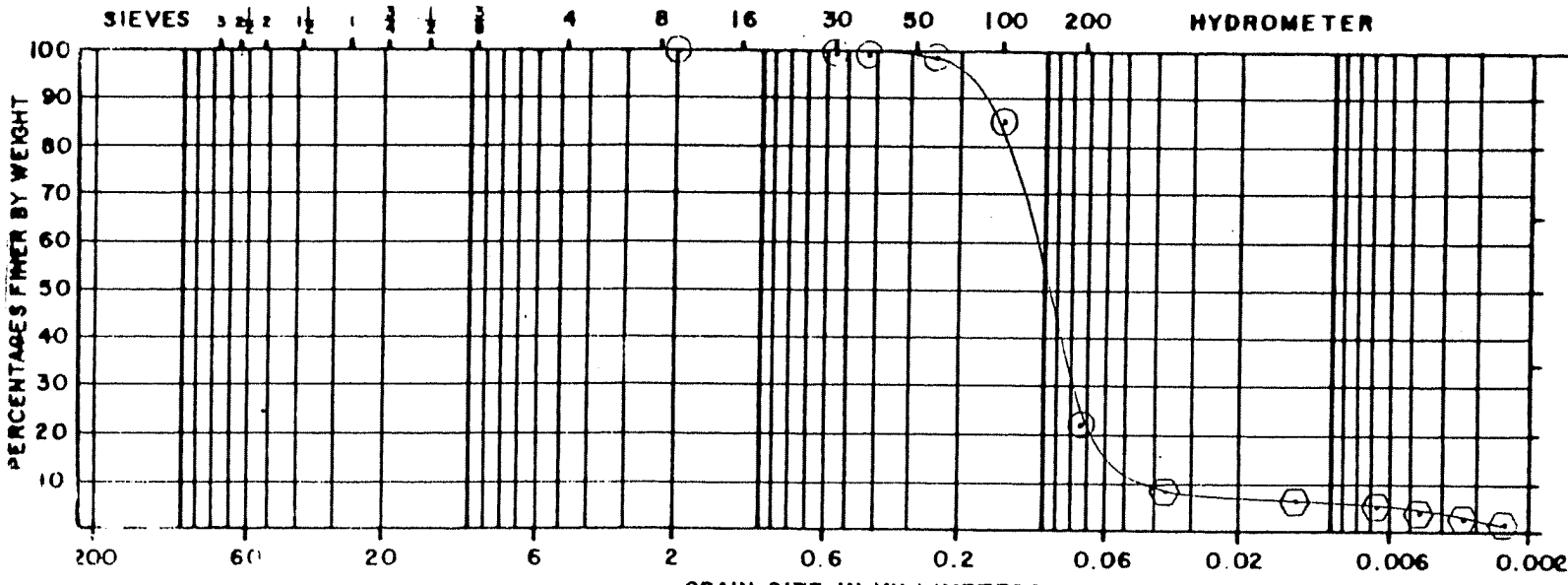
LOCATION MW1 TIME CONSTANT 10 TYPE OF FLUID

LOGGED BY RANGE 200K BORE HOLE TYPE

DATE/TIME DEPTH TO FLUID PROBE TYPE



GRAIN SIZE ANALYSIS



L-85131
Nimo - Cherry Farms
File # 1118.046

Sample MW7
Depth 24'-26'

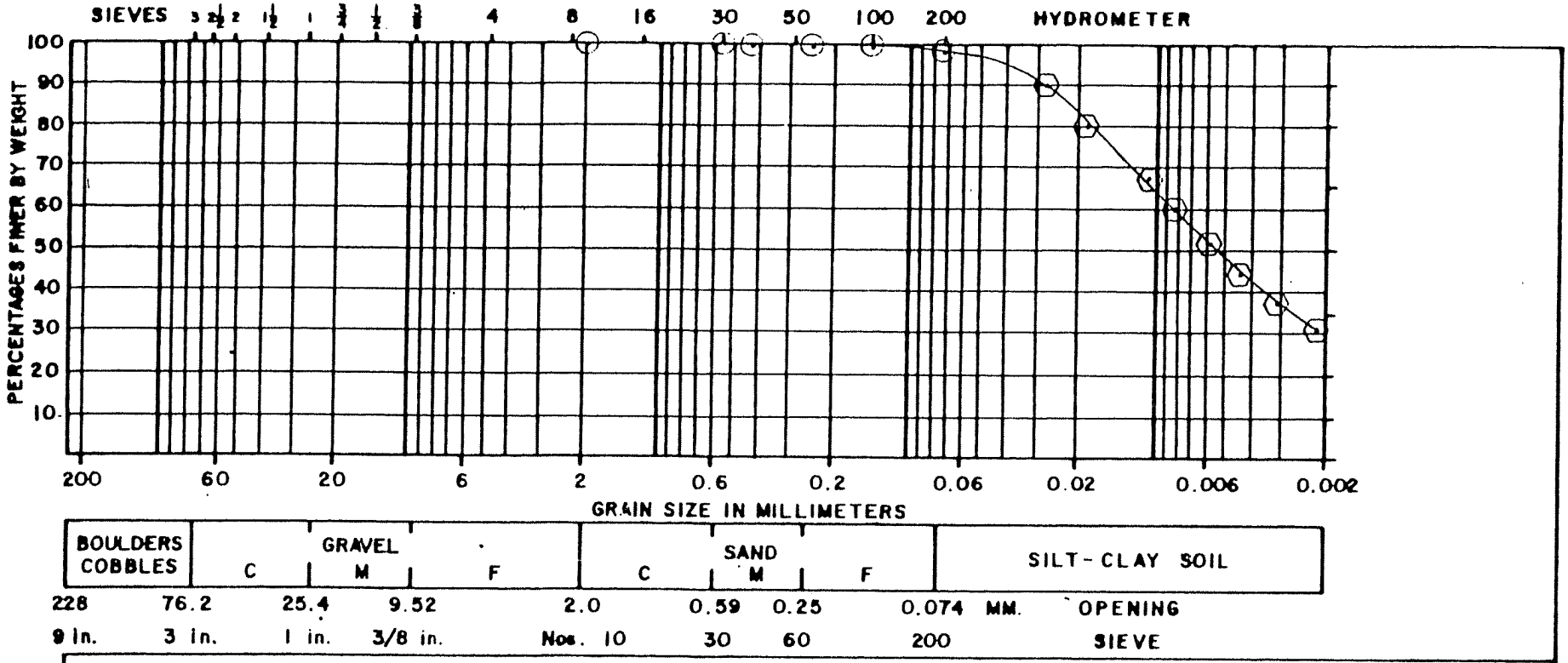
⊙ Sieve Analysis
⊙ Hydrometer Analysis

Classification - Unified Soil System (ASTM D2487): SM

parratt wolff inc
FISHER RD. EAST SYRACUSE N.Y. 13057
TELEPHONE AREA CODE 315-437-1429

JOB NO. L-85131
REPORT NO. 3

GRAIN SIZE ANALYSIS



L-85131
Nimo - Cherry Farms
File # 1118.046

Sample MW1
Depth 18'-20'

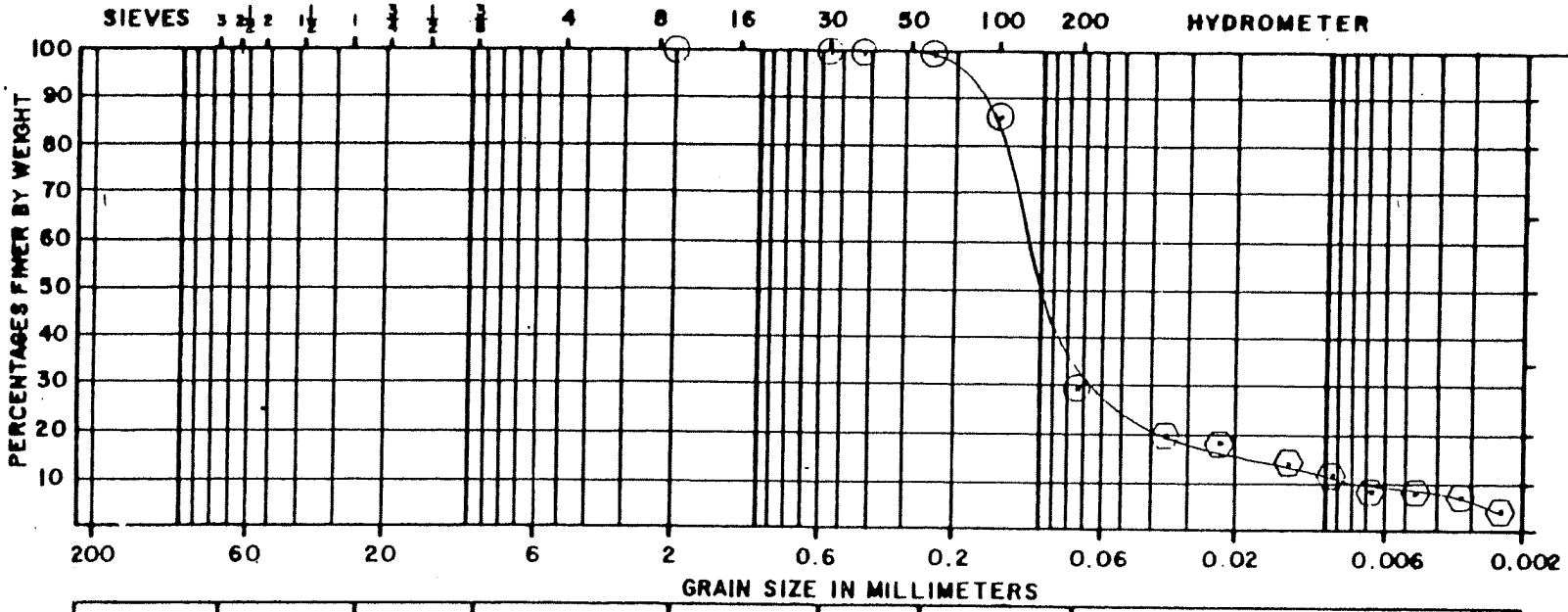
⊙ Sieve Analysis
⊙ Hydrometer Analysis

Classification - Unified Soil System (ASTM D2487): CL

parratt wolff inc
FISHER RD EAST SYRACUSE N.Y. 13057
TELEPHONE AREA CODE 315 437 1429

JOB NO. L-85131
REPORT NO. 1

GRAIN SIZE ANALYSIS



L-85131
Nimo - Cherry Farms
File # 1118.046

Sample MW2
Depth 22'-24'

⊙ Sieve Analysis
⊙ Hydrometer Analysis

Classification - Unified Soil System (ASTM D2487): SM

parratt wolff inc
FISHER RD EAST SYRACUSE N Y 13057
TELEPHONE AREA CODE 315 437 1429

JOB NO. L-85131
REPORT NO. 2

PHYSICAL CHARACTERISTICS OF SELECTED SOILS

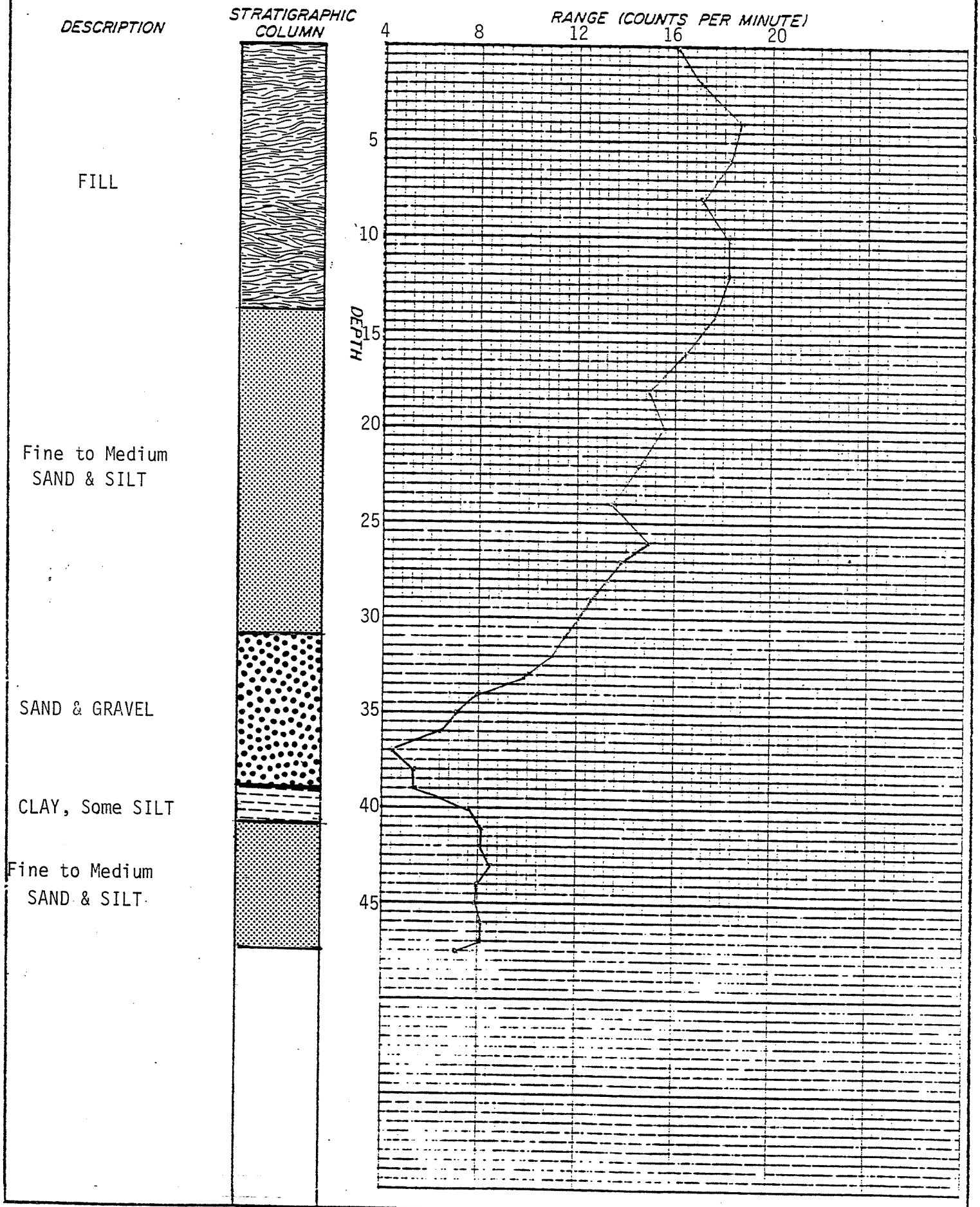
Sample	Moisture Content	Plasticity Index
MW1 18'-20'	30.9%	8
MW2 22'-24'	32.3%	Non-Plastic
MW7 24'-26'	32.0%	Non-Plastic

GAMMA RAY LOG

LOCATION MW5 TIME CONSTANT 20 TYPE OF FLUID

LOGGED BY RANGE 200K BORE HOLE TYPE

DATE/TIME DEPTH TO FLUID PROBE TYPE



APPENDIX E

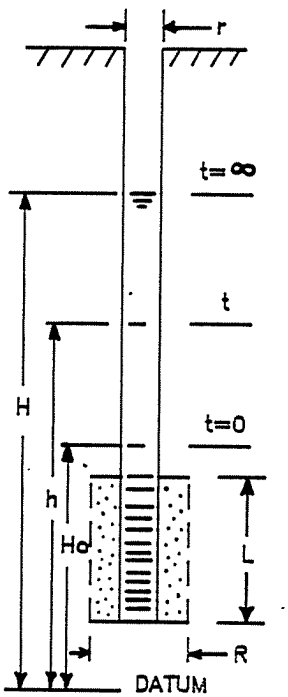
IN-SITU PERMEABILITY TEST DATA

O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT 1118.046
WELL NUMBER MW 1
DATE _____

LOCATION CHERRY FARM
ELEVATION _____



STATIC HEAD (H) 19.87'

PIPE RADIUS (r) .08'

SCREEN RADIUS (R) .25'

SCREEN LENGTH (L) 10'

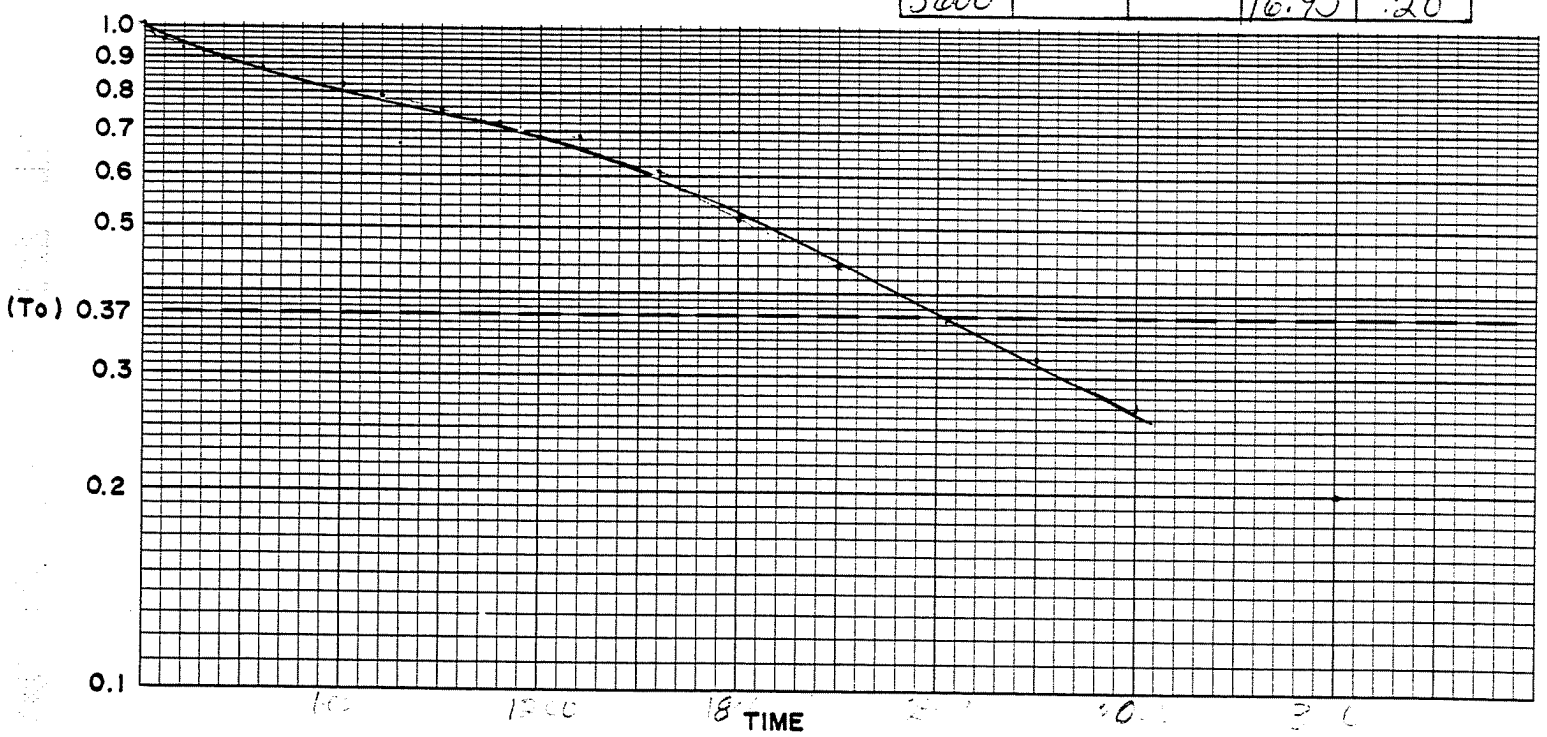
INITIAL HEAD (Ho) 5.42'

HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$K = 5.3 \times 10^{-1}$ ft/sec

TIME (sec)	WATER DEPTH	t	h	H−h / H−Ho
0			5.42	1.0
60			6.12	.95
120			6.48	.93
180			6.68	.91
240			6.95	.89
360			7.32	.87
480			7.82	.83
600			8.07	.82
720			8.50	.79
900			9.00	.75
1080			9.45	.72
1320			9.94	.69
1560			11.01	.61
1800			12.39	.52
2100			13.54	.44
2430			14.56	.367
2700			15.25	.32
3000			15.93	.27
3600			16.95	.20

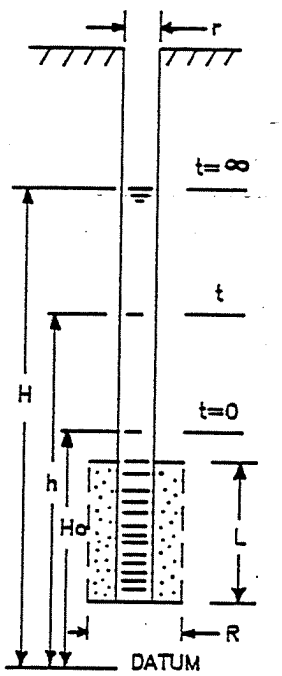


O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT 1118.046
WELL NUMBER MW 2
DATE _____

LOCATION CHERRY FARM
ELEVATION _____



STATIC HEAD (H) 8.44'

PIPE RADIUS (r) .08'

SCREEN RADIUS (R) .104'

SCREEN LENGTH (L) 10'

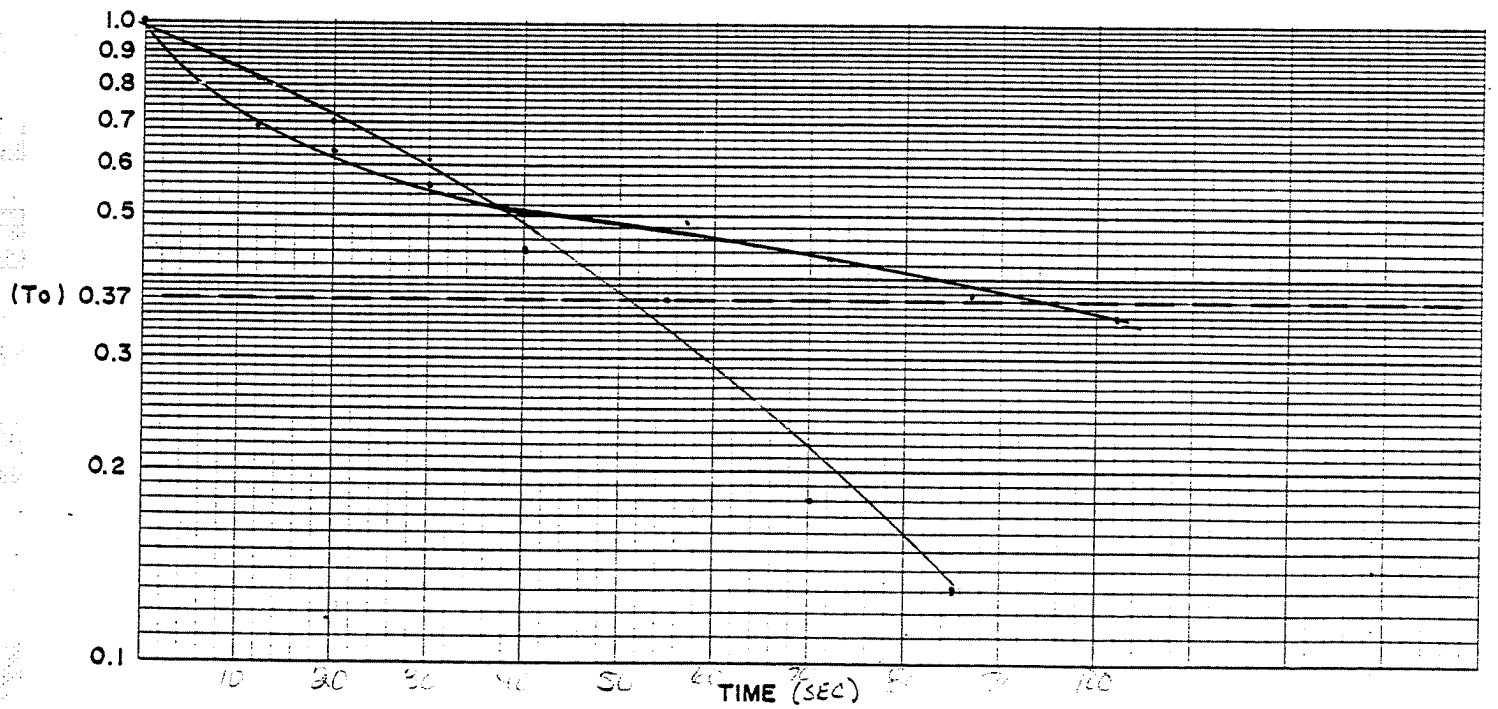
INITIAL HEAD (Ho) $6.68_{R}/9.88_{S}$'

HYDRAULIC CONDUCTIVITY :

$$K=\frac{r^2 \ln(L/R)}{2LTo}$$

$$K=\frac{1.7 \times 10^{-5}\ ft/sec}{3.1 \times 10^{-5}\ ft/sec}$$

	RECOVERY		SLUG	
TIME (SEC)	h	$\frac{H-h}{H-Ho}$	h	$\frac{H-h}{H-Ho}$
0	6.68	1.00	9.88	1.00
12	7.23	.69	9.41	.81
20	7.34	.63	9.45	.70
30	7.45	.56	9.32	.61
40	7.54	.51	9.08	.44
52/55	7.57	.49	8.97	.37
72/70	7.69	.43	8.70	.18
87/85	7.77	.38	8.62	.13
102/100	7.83	.35	8.56	.08
	To =	96 SEC	To =	51 SEC

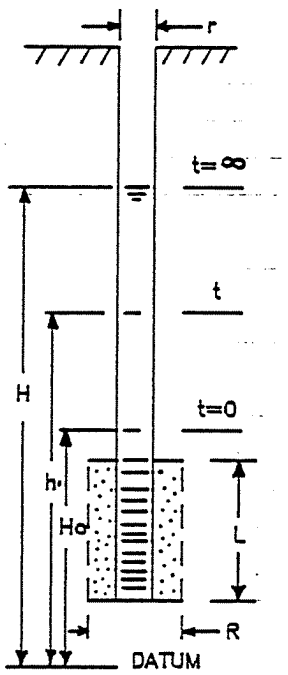


O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT 1118.046
WELL NUMBER MW 3
DATE _____

LOCATION CHERRY FARM
ELEVATION _____



STATIC HEAD (H) 8.84'

PIPE RADIUS (r) .08'

SCREEN RADIUS (R) .104'

SCREEN LENGTH (L) 10'

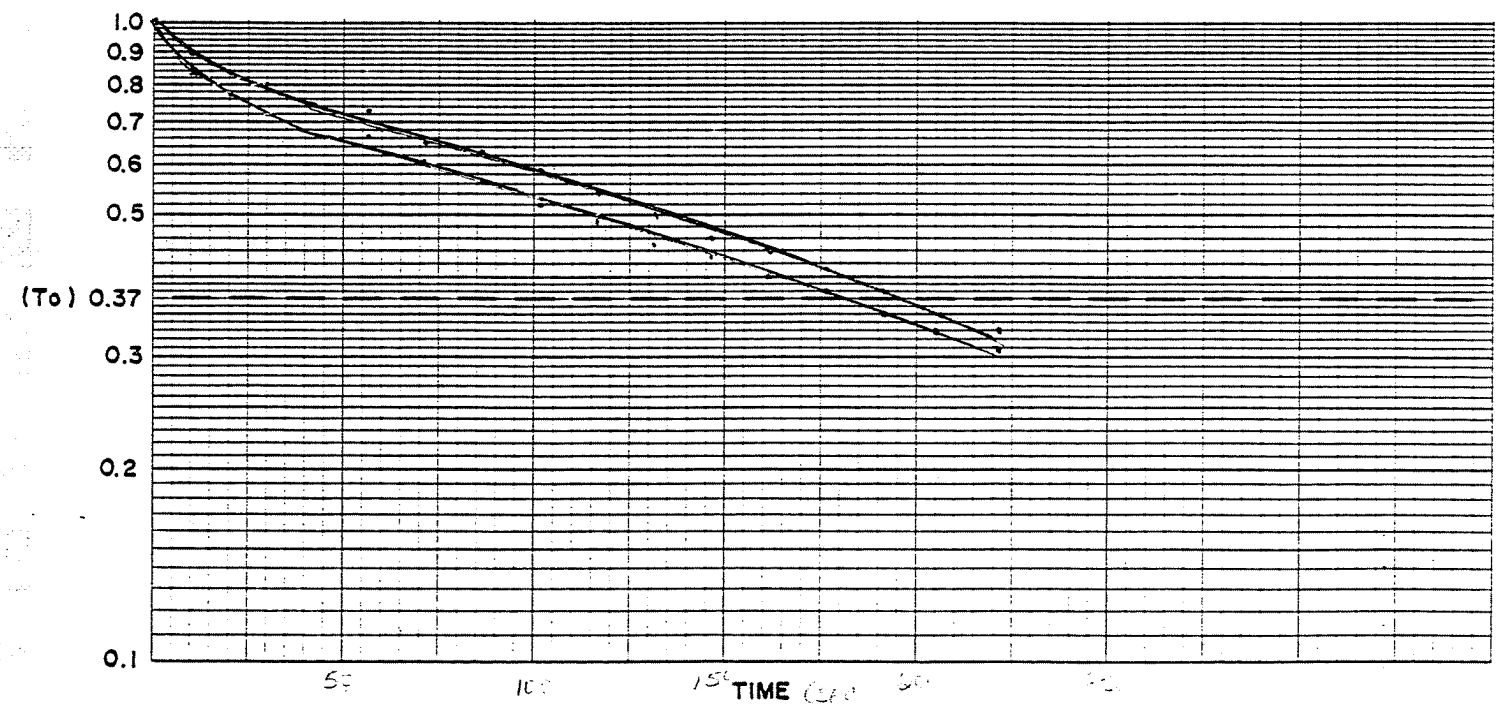
INITIAL HEAD (Ho) 7.61' (R) / 10.25' (S)

HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$$K = \frac{8.1 \times 10^{-6} \text{ ft/sec}}{8.8 \times 10^{-6} \text{ ft/sec}}$$

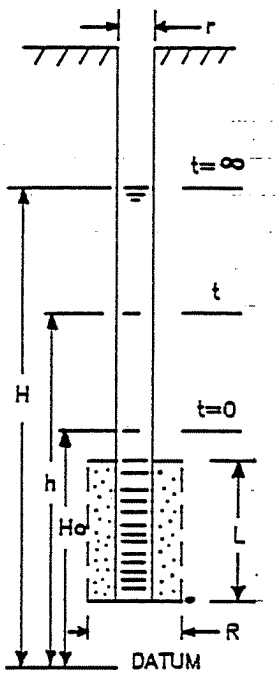
TIME	RECOVERY h	RECOVERY (H−h)/(H−Ho)	SLUG h	SLUG (H−h)/(H−Ho)
0	7.61	1.00	10.25	1.00
10	7.73	.90	10.01	.83
20	7.80	.845	9.92	.77
30	7.86	.80	9.86	.72
40	7.92	.75	9.80	.68
57	7.94	.73	9.78	.67
72	8.01	.67	9.70	.61
87	8.07	.63	9.64	.57
102	8.12	.59	9.58	.52
117	8.18	.54	9.53	.49
132	8.22	.50	9.48	.45
147	8.27	.46	9.44	.43
162	8.30	.44	9.40	.40
177	8.34	.41	9.37	.38
192	8.37	.38	9.34	.35
207	8.41	.35	9.31	.33
222	8.44	.33	9.26	.31
	T_o = 195 sec		T_o = 180 sec	



O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT 1118.046 LOCATION CHERRY FARM
WELL NUMBER MW 4 ELEVATION _____
DATE _____

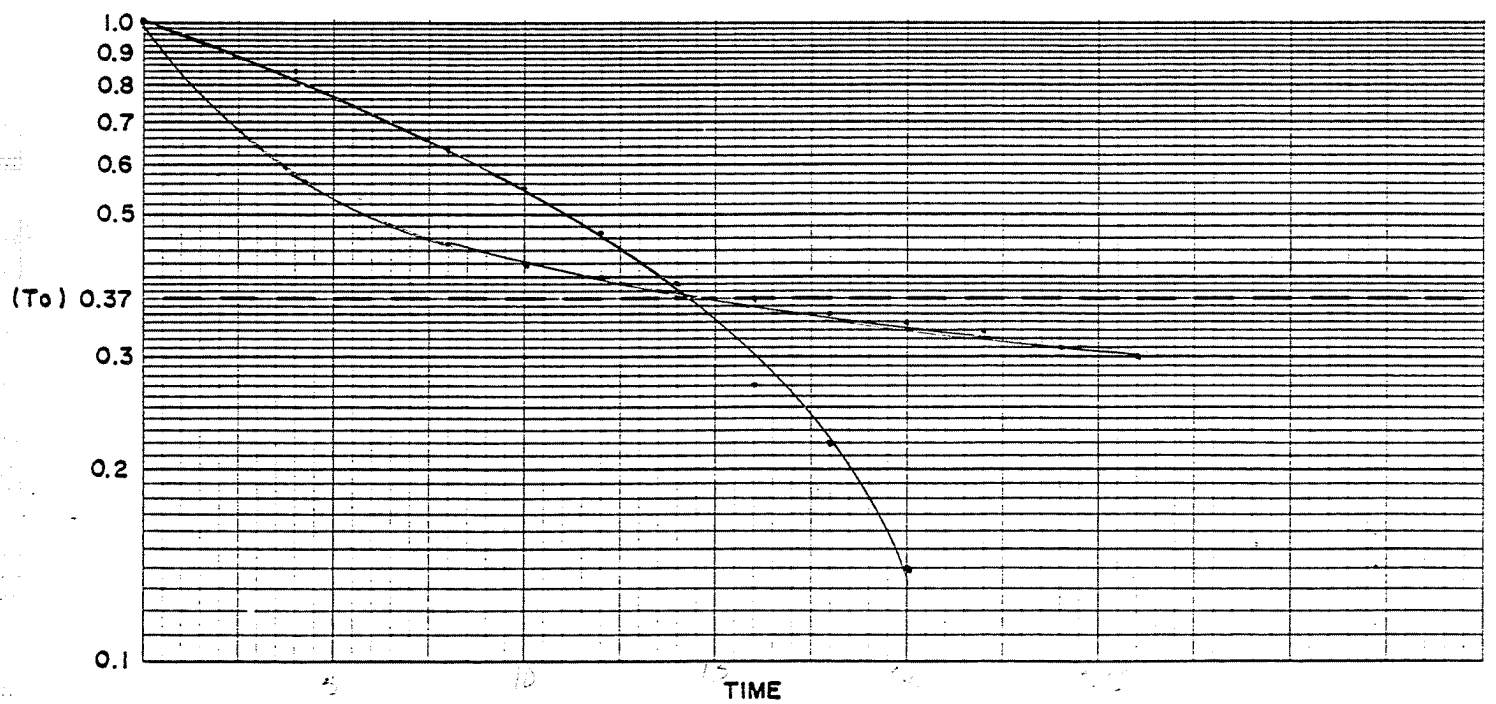


STATIC HEAD (H) 8.78'
PIPE RADIUS (r) .08'
SCREEN RADIUS (R) .104'
SCREEN LENGTH (L) 10'
INITIAL HEAD (Ho) 8.29/12.00
HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

K= 1.1 X 10^{-4} ft/sec

	RECOVERY		SLUG	
TIME	h	$\frac{H-h}{H-Ho}$	h	$\frac{H-h}{H-Ho}$
0	8.29	1.00	12.00	1.00
4	8.37	.84	10.65	.58
8	8.47	.63	10.23	.45
10	8.51	.55	10.14	.42
12	8.55	.47	10.08	.40
14	8.60	.37	10.02	.39
16	8.65	.27	9.97	.37
18	8.67	.22	9.92	.35
20	8.71	.14	9.87	.34
22	8.73	.10	9.83	.33
24	8.75	.06	9.79	.31
26	8.77	.02	9.76	.30
	To =	14.5 sec	To =	14.5 sec

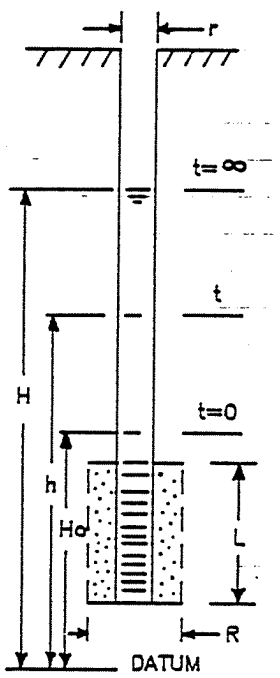


O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT 1118.04/6
WELL NUMBER MW 5
DATE _____

LOCATION CHERRY FARM
ELEVATION _____



STATIC HEAD (H) 9.46'

PIPE RADIUS (r) .08'

SCREEN RADIUS (R) .104'

SCREEN LENGTH (L) 10'

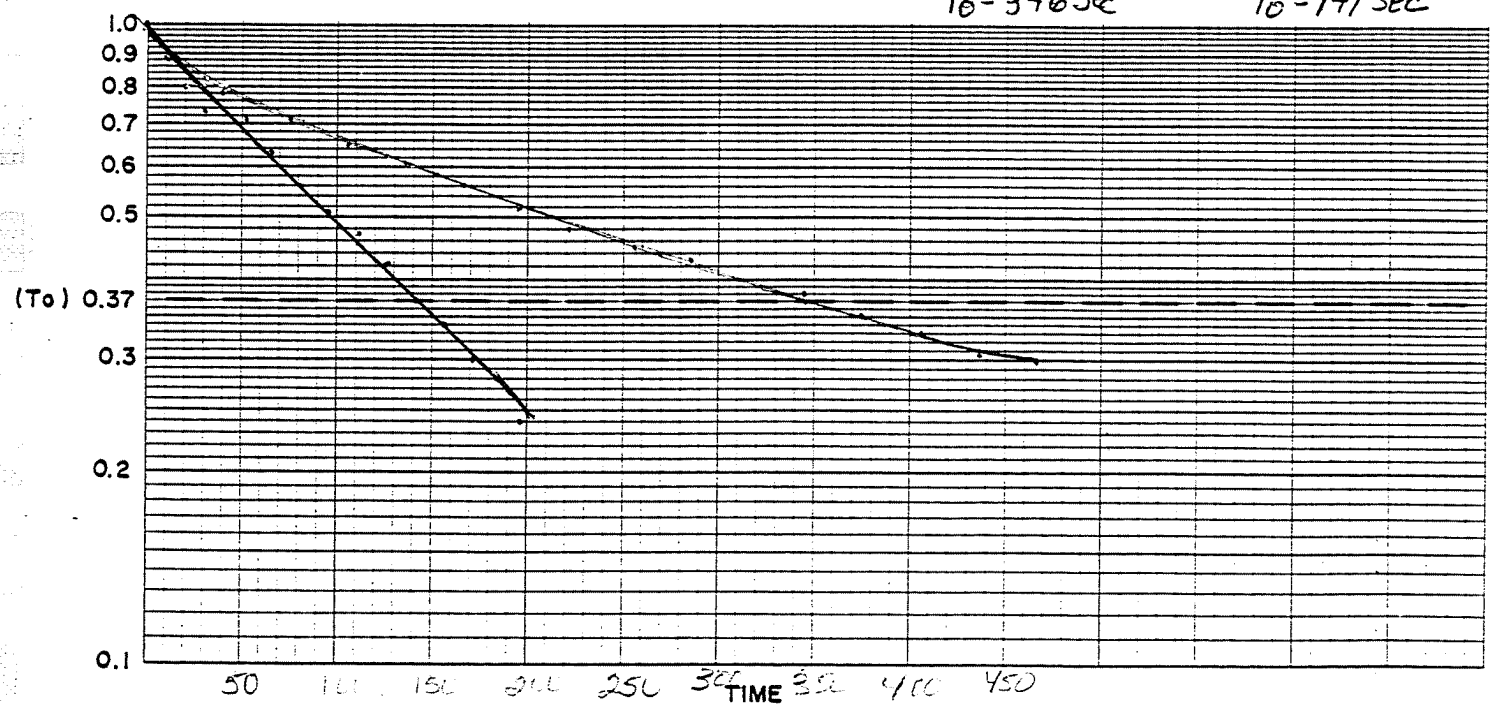
INITIAL HEAD (Ho) 8.24'/10.32'

HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$$K = \frac{4.6 \times 10^{-4} \text{ ft/sec}}{1.1 \times 10^{-5} \text{ ft/sec}}$$

	RECOVERY			SLUG	
TIME (sec)		h	$\frac{H-h}{H-Ho}$	h	$\frac{H-h}{H-Ho}$
0	0	8.24	1.0	10.32	1.00
10	10	8.38	.89	10.22	.88
20	20	8.44	.84	10.15	.80
30	30	8.48	.80	10.09	.73
40	51	8.51	.78	10.07	.71
76	66	8.60	.71	10.00	.63
106	81	8.67	.65	9.94	.56
136	96	8.72	.61	9.90	.51
166	111	8.78	.56	9.86	.47
196	126	8.83	.52	9.82	.42
221	141	8.87	.48	9.78	.37
256	156	8.91	.45	9.75	.34
286	171	8.94	.43	9.72	.30
346	186	9.00	.38	9.70	.28
376	197	9.03	.35	9.67	.24
406		9.06	.33		
436		9.08	.31		
466		9.10	.30		
		To = 346 sec		To = 141 sec	



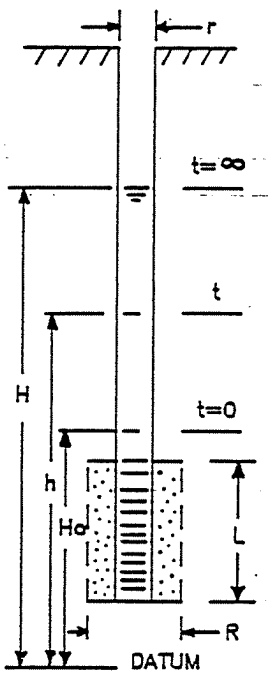
O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT 1118.046 LOCATION CHERRY FARM

WELL NUMBER MW 6 ELEVATION _____

DATE _____



STATIC HEAD (H) 10.35'

PIPE RADIUS (r) .08'

SCREEN RADIUS (R) .104'

SCREEN LENGTH (L) 10'

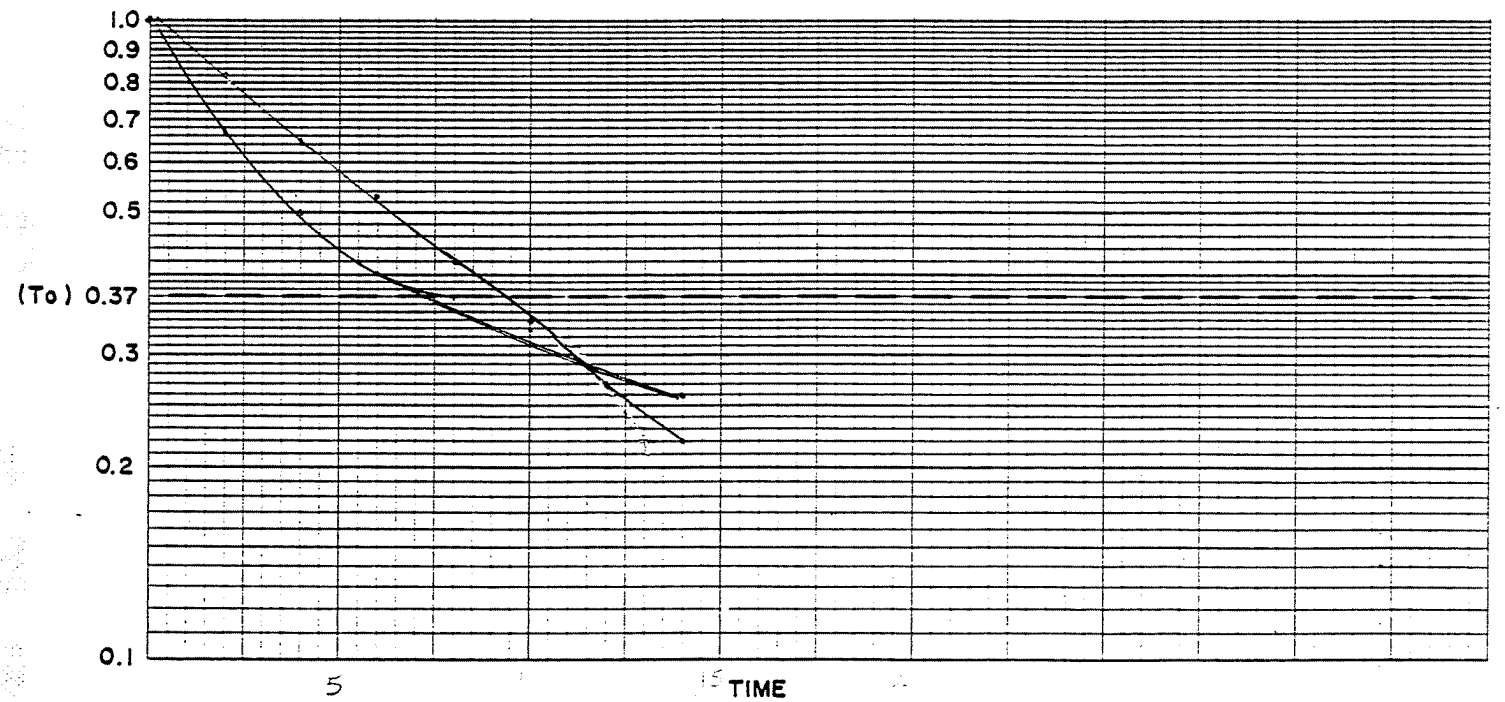
INITIAL HEAD (Ho) R 9.61 S 11.01

HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$$K = \frac{1.67 \times 10^{-4} \text{ ft/sec}}{2.26 \times 10^{-4} \text{ ft/sec}}$$

	RECOVERY		SLUG	
TIME	h	$\frac{H-h}{H-Ho}$	h	$\frac{H-h}{H-Ho}$
0	9.61	1.00	11.01	1.0
2	9.74	.82	10.80	.67
4	9.87	.65	10.68	.50
6	9.96	.53	10.63	.42
8	10.04	.42	10.60	.37
10	10.10	.34	10.57	.33
12	10.15	.27	10.53	.27
14	10.19	.22	10.52	.26
16			10.51	.24
.	T_o = 9.5 SEC		T_o =	7 SEC



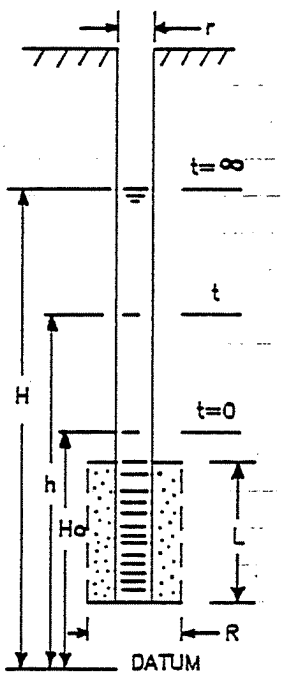
O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT 1118.046 LOCATION CHERRY FARM

WELL NUMBER MW7 ELEVATION _____

DATE _____



STATIC HEAD (H) 8.82'

PIPE RADIUS (r) .08'

SCREEN RADIUS (R) .104'

SCREEN LENGTH (L) 10'

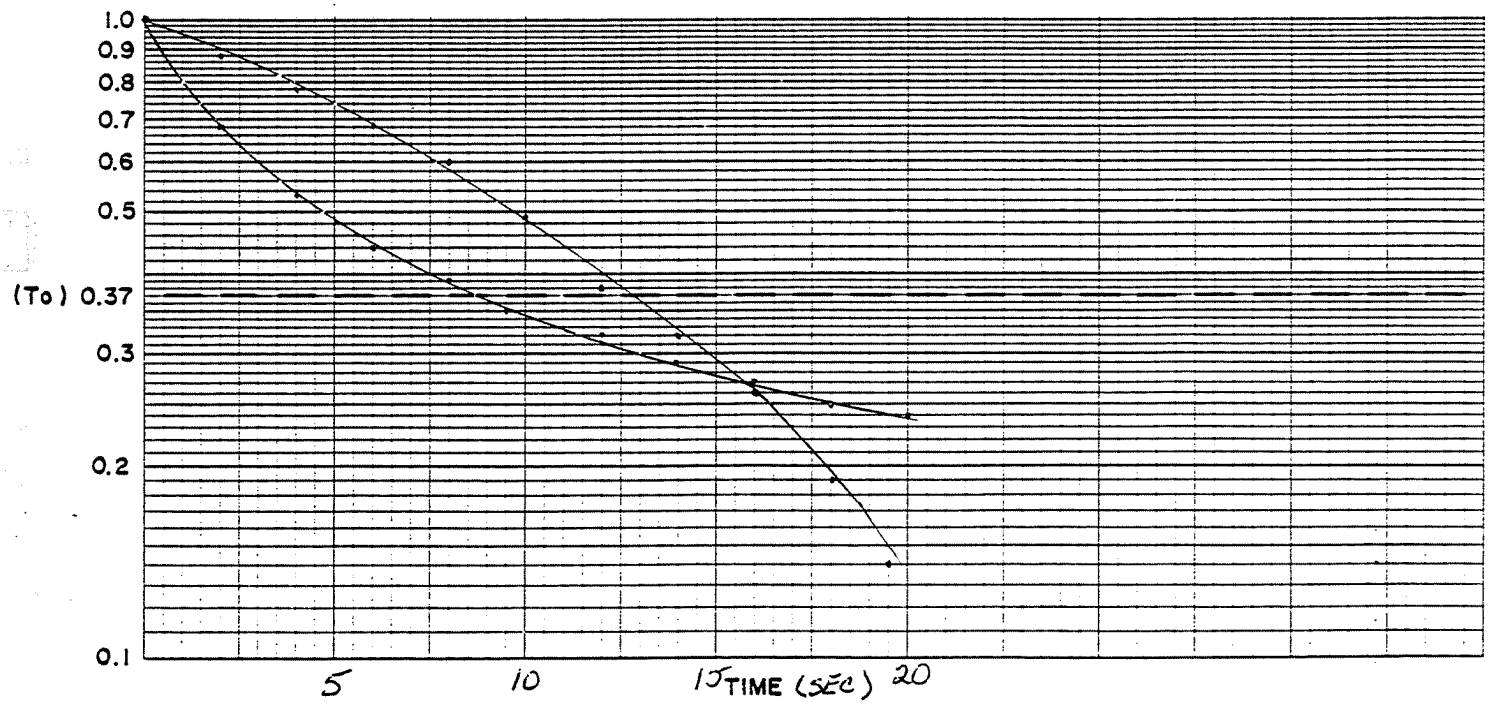
INITIAL HEAD (Ho) ____

HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LT_o}$$

$$K = \frac{1.2 \times 10^{-4} \text{ ft/sec}}{1.8 \times 10^{-4} \text{ ft/sec}}$$

	RECOVERY		SLUG	
TIME (SEC)	h	$\frac{H-h}{H-Ho}$	h	$\frac{H-h}{H-Ho}$
0	8.25	1.0	9.57	1.00
2	8.32	.88	9.34	.69
4	8.37	.79	9.22	.53
6	8.43	.68	9.15	.44
8	8.48	.60	9.11	.39
10	8.54	.49	9.08	.35
12	8.60	.38	9.06	.32
14	8.64	.32	9.04	.29
16	8.67	.26	9.02	.27
18	8.71	.19	9.01	.25
20	8.74	.14	9.00	.24
	T_o = 12.5 SEC		T_o = 8.5 SEC	



APPENDIX F

LABORATORY ANALYSIS DATA

O'BRIEN & GERE

Laboratory Report

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm

Field Blank = 3604

8-15-85 8-16-85

DESCRIPTION	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7
Sample No.	3597	3598	3599	3600	3601	3602	3603
Sb	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
As	0.01	0.04	0.04	<0.01	<0.01	0.03	0.02
Be	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cd	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cr	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cu	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pb	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hg	<0.0005	0.0009	<0.0005	0.0006	<0.0005	<0.0005	<0.0005
Ni	0.21	0.10	<0.01	0.28	<0.01	<0.01	<0.01
Se	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ag	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tl	<1.	<1.	<1.	<1.	<1.	<1.	<1.
Zn	0.03	0.02	0.02	0.18	0.03	0.15	0.02
Phenols	<0.001	<0.001	0.045	0.002	0.008	0.088	0.077
TOC	9.	20.	74.	80.	46.	83.	42.

Methodology: Federal Register — 40 CFR, Part 136 [redacted] Oct. 26, 1984

Units: mg/ℓ (ppm) unless otherwise noted

Comments:

Authorized: _____

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

Date: _____

O'BRIEN & GERE

Laboratory Report

NIAGARA MOHAWK POWER CORP. 1118.046.517

Priority Pollutants

9-4-85

DESCRIPTION	Sediments		Surface Water		Soil
Sample No.	2982 mg/kg wet wgt.	2983 mg/kg wet wgt.	2979	2980	29068 mg/kg wet wgt.
	Upstream North	Downstrm. North	Upstream South	Downstrm. South	B-5
Sb	30.	30.	< 0.1	< 0.1	<10.0
As	4.0	6.2	0.04	0.01	5.3
Be	< 1.	5.	< 0.01	< 0.01	7.
Cd	3.	< 1.	< 0.01	< 0.01	9.
Cr	19.	15.	< 0.01	< 0.01	66.
Cu	31.	21.	0.04	0.02	142.
Pb	92.	36.	< 0.01	< 0.01	441.
Hg	0.19	0.01	0.0012	< 0.0005	0.34
Ni	30.	52.	< 0.01	< 0.01	67.
Se	<1.	<1.	< 0.01	< 0.01	<1.
Ag	< 1.	< 1.	< 0.01	< 0.01	5.
Tl	<100.	<100.	< 1.	< 1.	<100.
Zn	180.	336.	0.35	0.10	1980.
Cn	< 5	< 5	< 0.05	< 0.05	< 5.
Phenol	0.091	0.091	5.32	0.580	4.13
AE, BN PCTS	66.7	44.1	--	--	79.3

Methodology: Federal Register — 40 CFR, Part 136 [redacted] Oct. 26, 1984

Units: mg/ℓ (ppm) unless otherwise noted

Comments:

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

Authorized: D. R. Brondous

Date: 11-21-85

O'BRIEN & GERE

Laboratory Report

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm

8-21-85

DESCRIPTION	Boring 1 7-31	Boring 3 8-1
Sample No.	29064	29066
Sb	< 10.	< 10.
As	4.3	18.
Be	<1.	5.
Cd	2.	5.
Cr	35.	117.
Cu	16.	67.
Pb	34.	80.
Hg	0.03	0.02
Ni	30.	44.
Se	<1.	<1.
Ag	1.	3.
Tl	<100.	<100.
Zn	74.	163.
Cn	< 5.	< 5.
Phenols	65.	1.05
AE, BN PCTS	89.9	88.4

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Units: mg/ℓ (ppm) unless otherwise noted

Comments:

Authorized: D. R. Brondou

Date: 11-21-85

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

Laboratory Report

NIAGARA MOHAWK POWER CORP. 1118.046.517
Cherry Farm

8-16-85

	Sample #	TOC	Sp Cond.	pH
Surface Water:				
Upstream, North	2977	11.	--	--
Downstream, North	2978	12.	--	--
Upstream, South	2979	30.	--	--
Downstream, South	2980	22.	--	--
Southeast Corner	2981	9.	--	--
Sediment:				
Upstream, North	2982	4500.	4340.	6.9
Downstream, North	2983	7700.	12500.	6.6
Soils:				
1	2984	9900.	590.	6.8
2	2985	4000.	820.	6.7
3	2986	6500.	1410.	7.1
4	2987	6200.	1610.	6.3
5	2988	14600.	2220.	7.1

Note:--Field Analysis

Methodology: Federal Register — 40 CFR, Part 136[redacted]Oct.26,1984

Units: mg/ℓ (ppm) unless otherwise noted

Comments:

Authorized: _____

Date: _____

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farms MW-1

3597 8-15-85 8-16-85 8-22-85

	ppb		ppb
α-BHC	< 0.05	Endosulfan II	< 0.1
γ-BHC	< 0.05	4,4'-DDT	< 0.1
β-BHC	< 0.05	Endosulfan Sulfate	< 0.5
Heptachlor	< 0.05	Endrin Aldehyde	< 0.1
δ-BHC	< 0.05	Chlordane	< 0.5
Aldrin	< 0.05	Toxaphene	< 1.0
Heptachlor Epoxide	< 0.05	PCB-1221	< 0.5
Endosulfan I	< 0.5	PCB-1232	< 0.5
4,4'-DDE	< 0.1	PCB-1016/1242	< 0.5
Dieldrin	< 0.1	PCB-1248	< 0.5
Endrin	< 0.1	PCB-1254	< 1.0
4,4'-DDD	< 0.1	PCB-1260	< 1.0

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

Methoxychlor < 0.5

Endrin Aldehyde < 0.1

O'Brien & Gere Engineers, Inc.
Box 4873 1304 Buckley Rd. Syracuse NY 13221 (315) 451-4700

Authorized: _____

Date: 10-14-85

Laboratory Name: _____

Case No: _____

Sample Number
3597

> SX066
MW-1

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ~~ug/Kg~~ (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	210
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	21
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Purgeable Priority Pollutants

CLIENT NIAGARA MOHAWK POWER CORP. JOB NO. 1118.046.517

DESCRIPTION Cherry Farm MW-1

SAMPLE NO. 3597 DATE COLLECTED 8-15-85 DATE REC'D. 8-16-85 DATE ANALYZED 9-3-85

	ppb		ppb
Chloromethane	<1	1,2-Dichloropropane	<1
Bromomethane	<1	t-1,3-Dichloropropene	<1
Dichlorodifluoromethane	<1	Trichloroethene	<1
Vinyl chloride	<1	Benzene	<1
Chloroethane	<1	Dibromochloromethane	<1
Methylene chloride	<1	1,1,2-Trichloroethane	<1
Trichlorofluoromethane	<1	c-1,3-Dichloropropene	<1
1,1-Dichloroethene	<1	2-Chloroethylvinyl ether	<10
1,1-Dichloroethane	<1	Bromoform	<10
t-1,2-Dichloroethene	<1	1,1,2,2-Tetrachloroethane	<1
Chloroform	<1	Tetrachloroethene	<1
1,2-Dichloroethane	<1	Toluene	<1
1,1,1-Trichloroethane	<1	Chlorobenzene	<1
Carbon tetrachloride	<1	Ethylbenzene	<1
Bromodichloromethane	<1		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct. 26, 1984

Comments:

ug/kg wet weight

Authorized: A. R. Martin

Date: 10-11-85

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517
Cherry Farm MW-2

3598	8-15-85	8-16-85	8-22-85
	ppb		ppb
α-BHC	< 0.05	Endosulfan II	< 0.1
γ-BHC	< 0.05	4,4'-DDT	< 0.1
β-BHC	< 0.05	Endosulfan Sulfate	< 0.5
Heptachlor	< 0.05	Endrin Aldehyde	< 0.1
δ-BHC	< 0.05	Chlordane	< 0.5
Aldrin	< 0.05	Toxaphene	< 1.0
Heptachlor Epoxide	< 0.05	PCB-1221	< 0.5
Endosulfan I	< 0.5	PCB-1232	< 0.5
4,4'-DDE	< 0.1	PCB-1016/1242	< 0.5
Dieldrin	< 0.1	PCB-1248	< 0.5
Endrin	< 0.1	PCB-1254	< 1.0
4,4'-DDD	< 0.1	PCB-1260	< 1.0

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

Methoxychor	< 0.5
Endrin Ketone	< 0.1

Approved: _____
Date: 10-14-85

O'BRIEN & GERE

Purgeable Priority Pollutants

CLIENT NIAGARA MOHAWK POWER CORP. JOB NO. 1118.046.517

DESCRIPTION Cherry Farm MW-2

SAMPLE NO. 3598 DATE COLLECTED 8-15-85 DATE REC'D. 8-16-85 DATE ANALYZED 9-3-85

	ppb		ppb
Chloromethane	<1	1,2-Dichloropropane	<1
Bromomethane	<1	t-1,3-Dichloropropene	<1
Dichlorodifluoromethane	<1	Trichloroethene	<1
Vinyl chloride	<1	Benzene	<1
Chloroethane	<1	Dibromochloromethane	<1
Methylene chloride	<1	1,1,2-Trichloroethane	<1
Trichlorofluoromethane	<1	c-1,3-Dichloropropene	<1
1,1-Dichloroethene	<1	2-Chloroethylvinyl ether	<10
1,1-Dichloroethane	<1	Bromoform	<10
t-1,2-Dichloroethene	<1	1,1,2,2-Tetrachloroethane	<1
Chloroform	<1	Tetrachloroethene	<1
1,2-Dichloroethane	<1	Toluene	<1
1,1,1-Trichloroethane	<1	Chlorobenzene	<1
Carbon tetrachloride	<1	Ethylbenzene	<1
Bromodichloromethane	<1		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct. 26, 1984

Comments:

ug/kg wet weight

Authorized: A. R. Martin

Date: 10-11-85

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

Laboratory Name: _____

Case No: _____

Sample Number
3598

>SX067
MW-2

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	1 J
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	1 J
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	32
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	1 J
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	10
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	7 J
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	5 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm MW-3

3599 8-15-85 8-16-85 8-22-85

	ppb		ppb
α-BHC	< 0.05	Endosulfan II	< 0.1
γ-BHC	< 0.05	4,4'-DDT	< 0.1
β-BHC	< 0.05	Endosulfan Sulfate	< 0.5
Heptachlor	< 0.05	Endrin Aldehyde	< 0.1
δ-BHC	< 0.05	Chlordane	< 0.5
Aldrin	< 0.05	Toxaphene	< 1.0
Heptachlor Epoxide	< 0.05	PCB-1221	< 0.5
Endosulfan I	< 0.5	PCB-1232	< 0.5
4,4'-DDE	< 0.1	PCB-1016/1242	< 0.5
Dieldrin	< 0.1	PCB-1248	< 0.5
Endrin	< 0.1	PCB-1254	< 1.0
4,4'-DDD	< 0.1	PCB-1260	< 1.0

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

Methoxychor < 0.5

Endrin Ketone < 0.1

O'Brien & Gere Engineers, Inc.
Box 4873 1304 Buckley Rd Syracuse NY 13221 315 451-4700

Authorized: ____________

Date: 10-14-85

O'BRIEN & GERE

Purgeable Priority Pollutants

CLIENT NIAGARA MOHAWK POWER CORP. JOB NO. 1118.046.517

DESCRIPTION Cherry Farm MW-3

SAMPLE NO. 3599 DATE COLLECTED 8-15-85 DATE REC'D. 8-16-85 DATE ANALYZED 9-3-85

	ppb		ppb
Chloromethane	<1	1,2-Dichloropropane	<1
Bromomethane	<1	t-1,3-Dichloropropene	<1
Dichlorodifluoromethane	<1	Trichloroethene	<1
Vinyl chloride	<1	Benzene	<1
Chloroethane	<1	Dibromochloromethane	<1
Methylene chloride	<1	1,1,2-Trichloroethane	<1
Trichlorofluoromethane	<1	c-1,3-Dichloropropene	<1
1,1-Dichloroethene	<1	2-Chloroethylvinyl ether	<10
1,1-Dichloroethane	<1	Bromoform	<10
t-1,2-Dichloroethene	<1	1,1,2,2-Tetrachloroethane	<1
Chloroform	<1	Tetrachloroethene	<1
1,2-Dichloroethane	<1	Toluene	<1
1,1,1-Trichloroethane	<1	Chlorobenzene	<1
Carbon tetrachloride	<1	Ethylbenzene	<1
Bromodichloromethane	<1		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct. 26, 1984

Comments:

ug/kg wet weight

Authorized: A. R. Martin

Date: 10-11-85

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

Laboratory Name: _____

Case No: _____

Sample Number
3599

> SX068
MW-3

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	1 J
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	2 J
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	3 J
65-85-0	Benzoic Acid	42
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	65
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	5 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517
Cherry Farm MW-4

3600	8-15-85	8-16-85	8-22-85
	ppb		ppb
α-BHC	< 0.05	Endosulfan II	< 0.1
γ-BHC	< 0.05	4,4'-DDT	< 0.1
β-BHC	< 0.05	Endosulfan Sulfate	< 0.5
Heptachlor	< 0.05	Endrin Aldehyde	< 0.1
δ-BHC	< 0.05	Chlordane	< 0.5
Aldrin	< 0.05	Toxaphene	< 1.0
Heptachlor Epoxide	< 0.05	PCB-1221	< 0.5
Endosulfan I	< 0.5	PCB-1232	< 0.5
4,4'-DDE	< 0.1	PCB-1016/1242	< 0.5
Dieldrin	< 0.1	PCB-1248	< 0.5
Endrin	< 0.1	PCB-1254	< 1.0
4,4'-DDD	< 0.1	PCB-1260	< 1.0

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

Methoxychlor	< 0.5
Endrin Ketone	< 0.1

O'Brien & Gere Engineers, Inc.
Box 4873 1304 Buckley Rd. Syracuse, NY 13221 (315) 457-6710

Authorized: _____

Date: 10-14-85

O'BRIEN & GERE

Purgeable Priority Pollutants

CLIENT NIAGARA MOHAWK POWER CORP. JOB NO. 1118.046.517

DESCRIPTION Cherry Farm MW-4

SAMPLE NO. 3600 DATE COLLECTED 8-15-85 DATE REC'D. 8-16-85 DATE ANALYZED 9-3-85

	ppb		ppb
Chloromethane	<1	1,2-Dichloropropane	<1
Bromomethane	<1	t-1,3-Dichloropropene	<1
Dichlorodifluoromethane	<1	Trichloroethene	<1
Vinyl chloride	<1	Benzene	<1
Chloroethane	<1	Dibromochloromethane	<1
Methylene chloride	<1	1,1,2-Trichloroethane	<1
Trichlorofluoromethane	<1	c-1,3-Dichloropropene	<1
1,1-Dichloroethene	<1	2-Chloroethylvinyl ether	<10
1,1-Dichloroethane	<1	Bromoform	<10
t-1,2-Dichloroethene	<1	1,1,2,2-Tetrachloroethane	<1
Chloroform	<1	Tetrachloroethene	<1
1,2-Dichloroethane	<1	Toluene	<1
1,1,1-Trichloroethane	<1	Chlorobenzene	<1
Carbon tetrachloride	<1	Ethylbenzene	<1
Bromodichloromethane	<1		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct. 26, 1984

Comments:

ug/kg wet weight

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

Authorized: A. R. Martin

Date: 10-11-85

Laboratory Name: _____

Case No: _____

Sample Number
3600

>SX069
MW-4

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	2 J
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	7 J
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	4 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm MW-5

3601	8-15-85	8-16-85	8-22-85
	ppb		ppb
α-BHC	< 0.05	Endosulfan II	< 0.1
γ-BHC	< 0.05	4,4'-DDT	< 0.1
β-BHC	< 0.05	Endosulfan Sulfate	< 0.5
Heptachlor	< 0.05	Endrin Aldehyde	< 0.1
δ-BHC	< 0.05	Chlordane	< 0.5
Aldrin	< 0.05	Toxaphene	< 1.0
Heptachlor Epoxide	< 0.05	PCB-1221	< 0.5
Endosulfan I	< 0.5	PCB-1232	< 0.5
4,4'-DDE	< 0.1	PCB-1016/1242	< 0.5
Dieldrin	< 0.1	PCB-1248	< 0.5
Endrin	< 0.1	PCB-1254	< 1.0
4,4'-DDD	< 0.1	PCB-1260	< 1.0

Methodology: Federal Register — 40 CFR, Part 136, December 3, 1979

Comments:

Methoxychlor < 0.5

Endrin Ketone < 0.1

Authorized: _____

Date: 10-14-85

O'Brien & Gere Engineers, Inc.
Box 4873 1304 Buckley Rd. Syracuse, NY 13221 (315) 451-4700

O'BRIEN & GERE

Purgeable Priority Pollutants

CLIENT NIAGARA MOHAWK POWER CORP. JOB NO. 1118.046.517

DESCRIPTION Cherry Farm MW-5

SAMPLE NO. 3601 DATE COLLECTED 8-15-85 DATE REC'D. 8-16-85 DATE ANALYZED 9-3-85

	ppb		ppb
Chloromethane	<1	1,2-Dichloropropane	<1
Bromomethane	<1	t-1,3-Dichloropropene	<1
Dichlorodifluoromethane	<1	Trichloroethene	<1
Vinyl chloride	<1	Benzene	<1
Chloroethane	<1	Dibromochloromethane	<1
Methylene chloride	<1	1,1,2-Trichloroethane	<1
Trichlorofluoromethane	<1	c-1,3-Dichloropropene	<1
1,1-Dichloroethene	<1	2-Chloroethylvinyl ether	<10
1,1-Dichloroethane	<1	Bromoform	<10
t-1,2-Dichloroethene	<1	1,1,2,2-Tetrachloroethane	<1
Chloroform	<1	Tetrachloroethene	<1
1,2-Dichloroethane	<1	Toluene	<1
1,1,1-Trichloroethane	<1	Chlorobenzene	<1
Carbon tetrachloride	<1	Ethylbenzene	<1
Bromodichloromethane	<1		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct. 26, 1984

Comments:

ug/kg wet weight

Authorized: A. R. Martin

Date: 10-11-85

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

Laboratory Name: _____

Case No: _____

Sample Number
3601

> SX070
MW-5

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	1 J
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	1 J
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	31
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	95
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	5 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm MW-6

3602	8-15-85	8-16-85	8-22-85
	ppb		ppb
α-BHC	< 0.05	Endosulfan II	< 0.1
γ-BHC	< 0.05	4,4'-DDT	< 0.1
β-BHC	< 0.05	Endosulfan Sulfate	< 0.5
Heptachlor	< 0.05	Endrin Aldehyde	< 0.1
δ-BHC	< 0.05	Chlordane	< 0.5
Aldrin	< 0.05	Toxaphene	< 1.0
Heptachlor Epoxide	< 0.05	PCB-1221	< 0.5
Endosulfan I	< 0.5	PCB-1232	< 0.5
4,4'-DDE	< 0.1	PCB-1016/1242	< 0.5
Dieldrin	< 0.1	PCB-1248	< 0.5
Endrin	< 0.1	PCB-1254	< 1.0
4,4'-DDD	< 0.1	PCB-1260	< 1.0

Methodology: Federal Register — 40 CFR, Part 136, December 3, 1979

Comments:

Methoxychlor	< 0.5
Endrin Ketone	< 0.1

O'Brien & Gere Engineers, Inc.
Box 4873 1304 Buckley Rd. Syracuse, NY 13221 (315) 451-4700

Authorized: _____

Date: 10-14-85

O'BRIEN & GERE

Purgeable Priority Pollutants

CLIENT NIAGARA MOHAWK POWER CORP. JOB NO. 1118.046.517

DESCRIPTION Cherry Farm MW-6

SAMPLE NO. 3602 DATE COLLECTED 8-15-85 DATE REC'D. 8-16-85 DATE ANALYZED 9-3-85

	ppb		ppb
Chloromethane	<1	1,2-Dichloropropane	<1
Bromomethane	<1	t-1,3-Dichloropropene	<1
Dichlorodifluoromethane	<1	Trichloroethene	<1
Vinyl chloride	<1	Benzene	<1
Chloroethane	<1	Dibromochloromethane	<1
Methylene chloride	<1	1,1,2-Trichloroethane	<1
Trichlorofluoromethane	<1	c-1,3-Dichloropropene	<1
1,1-Dichloroethene	<1	2-Chloroethylvinyl ether	<10
1,1-Dichloroethane	<1	Bromoform	<10
t-1,2-Dichloroethene	<1	1,1,2,2-Tetrachloroethane	<1
Chloroform	<1	Tetrachloroethene	<1
1,2-Dichloroethane	<1	Toluene	<1
1,1,1-Trichloroethane	<1	Chlorobenzene	<1
Carbon tetrachloride	<1	Ethylbenzene	<1
Bromodichloromethane	<1		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

ug/kg wet weight

Authorized: A. R. Martin

Date: 10-11-85

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

Laboratory Name: _____

Case No: _____

Sample Number
3602

> SX071
MW-6

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	3 J
65-85-0	Benzoic Acid	3 J
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	2 J
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	1 J
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	60
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	20
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	11
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm MW-7

3603	8-15-85	8-16-85	8-22-85
	ppb		ppb
α-BHC	< 0.05	Endosulfan II	< 0.1
γ-BHC	< 0.05	4,4'-DDT	< 0.1
β-BHC	< 0.05	Endosulfan Sulfate	< 0.5
Heptachlor	< 0.05	Endrin Aldehyde	< 0.1
δ-BHC	< 0.05	Chlordane	< 0.5
Aldrin	< 0.05	Toxaphene	< 1.0
Heptachlor Epoxide	< 0.05	PCB-1221	< 0.5
Endosulfan I	< 0.5	PCB-1232	< 0.5
4,4'-DDE	< 0.1	PCB-1016/1242	< 0.5
Dieldrin	< 0.1	PCB-1248	< 0.5
Endrin	< 0.1	PCB-1254	< 1.0
4,4'-DDD	< 0.1	PCB-1260	< 1.0

Methodology: Federal Register — 40 CFR, Part 136, December 3, 1979

Comments:

Methoxychlor	< 0.5
Endrin Ketone	< 0.1

O'Brien & Gere Engineers, Inc.
Box 4873 • 1304 Buckley Rd. • Syracuse, NY • 13221 • (315) 451-4700

Authorized: _____

Date: 10-14-85

O'BRIEN & GERE

Purgeable Priority Pollutants

CLIENT NIAGARA MOHAWK POWER CORP. JOB NO. 1118.046.517

DESCRIPTION Cherry Farm MW-7

SAMPLE NO. 3603 DATE COLLECTED 8-15-85 DATE REC'D. 8-16-85 DATE ANALYZED 9-3-85

	ppb		ppb
Chloromethane	<1	1,2-Dichloropropane	<1
Bromomethane	<1	t-1,3-Dichloropropene	<1
Dichlorodifluoromethane	<1	Trichloroethene	<1
Vinyl chloride	<1	Benzene	<1
Chloroethane	<1	Dibromochloromethane	<1
Methylene chloride	<1	1,1,2-Trichloroethane	<1
Trichlorofluoromethane	<1	c-1,3-Dichloropropene	<1
1,1-Dichloroethene	<1	2-Chloroethylvinyl ether	<10
1,1-Dichloroethane	<1	Bromoform	<10
t-1,2-Dichloroethene	<1	1,1,2,2-Tetrachloroethane	<1
Chloroform	<1	Tetrachloroethene	<1
1,2-Dichloroethane	<1	Toluene	<1
1,1,1-Trichloroethane	<1	Chlorobenzene	<1
Carbon tetrachloride	<1	Ethylbenzene	<1
Bromodichloromethane	<1		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct. 26, 1984

Comments:

ug/kg wet weight

Authorized: A. R. Martin

Date: 10-11-85

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 451-4700

Laboratory Name: _____

Case No: _____

Sample Number
3603

<>SX075
MW-7

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ~~ug/Kg~~ (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	43
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	11
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	11
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517
Cherry Farm Boring 1

29064	7-31-85	8-21-85	9-30-85
	ppb		ppb
α-BHC	< 1000	Endosulfan II	< 1000
γ-BHC	< 1000	4,4'-DDT	< 1000
β-BHC	< 1000	Endosulfan Sulfate	< 1000
Heptachlor	< 1000	Endrin Aldehyde	< 1000
δ-BHC	< 1000	Chlordane	< 1000
Aldrin	< 1000	Toxaphene	< 5000
Heptachlor Epoxide	< 1000	PCB-1221	< 2000
Endosulfan I	< 1000	PCB-1232	< 2000
4,4'-DDE	< 1000	PCB-1016/1242	< 2000
Dieldrin	< 1000	PCB-1248	7300
Endrin	< 1000	PCB-1254	< 4000
4,4'-DDD	< 1000	PCB-1260	< 4000

Methodology: Federal Register — 40 CFR, Part 136, December 3, 1979

Comments:

Methoxychlor < 1000
Endrin Ketone < 1000

ug/kg wet weight

O'Brien & Gere Engineers, Inc.
Box 4873 1304 Buckley Rd. Syracuse, NY 13221 (315) 451-4730

Authorized: _____

Date: 10-14-85

O'BRIEN & GERE

Purgeable Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Boring 1

29064	7-31-85	8-21-85	10-2-85
	ppb		ppb
Chloromethane	< 10	1,2-Dichloropropane	< 10
Bromomethane	< 10	t-1,3-Dichloropropene	< 10
Dichlorodifluoromethane	< 10	Trichloroethene	< 10
Vinyl chloride	< 10	Benzene	< 10
Chloroethane	< 10	Dibromochloromethane	< 10
Methylene chloride	< 10	1,1,2-Trichloroethane	< 10
Trichlorofluoromethane	< 10	c-1,3-Dichloropropene	< 10
1,1-Dichloroethene	< 10	2-Chloroethylvinyl ether	<100
1,1-Dichloroethane	< 10	Bromoform	<100
t-1,2-Dichloroethene	< 10	1,1,2,2-Tetrachloroethane	< 10
Chloroform	< 10	Tetrachloroethene	< 10
1,2-Dichloroethane	< 10	Toluene	< 10
1,1,1-Trichloroethane	< 10	Chlorobenzene	< 10
Carbon tetrachloride	< 10	Ethylbenzene	< 10
Bromodichloromethane	< 10		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

ug/kg wet weight

Laboratory Name: _____

Case No: _____

Sample Number
29064

>SX080
Boring 1 (composite)

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		~~ug/L~~ or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	7.3 J
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	862
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	6460
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	2934
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	1017
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	572
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	103 J
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		~~ug/L~~ or ug/Kg (Circle One)
83-32-9	Acenaphthene	115 J
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	107 J
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	114 J
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	662
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	605
120-12-7	Anthracene	101 J
84-74-2	Di-n-Butylphthalate	20 J
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	262 J
85-68-7	Butylbenzylphthalate	138 J
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	142 J
117-81-7	bis(2-Ethylhexyl)Phthalate	1661
218-01-9	Chrysene	210 J
117-84-0	Di-n-Octyl Phthalate	94 J
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	373
50-32-8	Benzo(a)Pyrene	141 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm Boring 3

29066 8-1-85 8-21-85 9-30-85

	ppb		ppb
α-BHC	< 10,000	Endosulfan II	< 10,000
γ-BHC	< 10,000	4,4'-DDT	< 10,000
β-BHC	< 10,000	Endosulfan Sulfate	< 10,000
Heptachlor	< 10,000	Endrin Aldehyde	< 10,000
δ-BHC	< 10,000	Chlordane	< 10,000
Aldrin	< 10,000	Toxaphene	< 50,000
Heptachlor Epoxide	< 10,000	PCB-1221	< 20,000
Endosulfan I	< 10,000	PCB-1232	< 20,000
4,4'-DDE	< 10,000	PCB-1016/1242	< 20,000
Dieldrin	< 10,000	PCB-1248	63,000
Endrin	< 10,000	PCB-1254	< 40,000
4,4'-DDD	< 10,000	PCB-1260	< 40,000

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

Methoxychor < 10,000

Endrin Ketone < 10,000

ug/kg wet weight

Reported:

Date: 10-14-85

O'BRIEN & GERE

Purgeable Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517
Cherry Farm Boring 3

29066	8-1-85	8-21-85	10-2-85
	ppb		ppb
Chloromethane	< 10	1,2-Dichloropropane	< 10
Bromomethane	< 10	t-1,3-Dichloropropene	< 10
Dichlorodifluoromethane	< 10	Trichloroethene	< 10
Vinyl chloride	< 10	Benzene	< 10
Chloroethane	< 10	Dibromochloromethane	< 10
Methylene chloride	< 10	1,1,2-Trichloroethane	< 10
Trichlorofluoromethane	< 10	c-1,3-Dichloropropene	< 10
1,1-Dichloroethene	< 10	2-Chloroethylvinyl ether	<100
1,1-Dichloroethane	< 10	Bromoform	<100
t-1,2-Dichloroethene	< 10	1,1,2,2-Tetrachloroethane	< 10
Chloroform	< 10	Tetrachloroethene	< 10
1,2-Dichloroethane	< 10	Toluene	< 10
1,1,1-Trichloroethane	< 10	Chlorobenzene	< 10
Carbon tetrachloride	< 10	Ethylbenzene	< 10
Bromodichloromethane	< 10		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

ug/kg wet weight

Laboratory Name: _____

Case No: _____

Sample Number
29066

>SX089
Boring 3 (composite)

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		~~ug/L~~ or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	208 J
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	319 J
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	232 J
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	17 J
91-20-3	Naphthalene	816
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	1142
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		~~ug/L~~ or ug/Kg (Circle One)
83-32-9	Acenaphthene	253 J
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	58 J
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	177 J
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	4798
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	2328
120-12-7	Anthracene	368
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	1009
92-87-5	Benzidine	
129-00-0	Pyrene	296 J
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	536
117-81-7	bis(2-Ethylhexyl)Phthalate	80 J
218-01-9	Chrysene	551
117-84-0	Di-n-Octyl Phthalate	69 J
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	729
50-32-8	Benzo(a)Pyrene	787
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	902

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Purgeable Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm Boring 5

29068 9-4-85 10-2-85

	ppb		ppb
Chloromethane	< 10	1,2-Dichloropropane	< 10
Bromomethane	< 10	t-1,3-Dichloropropene	< 10
Dichlorodifluoromethane	< 10	Trichloroethene	< 10
Vinyl chloride	< 10	Benzene	< 10
Chloroethane	< 10	Dibromochloromethane	< 10
Methylene chloride	< 10	1,1,2-Trichloroethane	< 10
Trichlorofluoromethane	< 10	c-1,3-Dichloropropene	< 10
1,1-Dichloroethene	< 10	2-Chloroethylvinyl ether	<100
1,1-Dichloroethane	< 10	Bromoform	<100
t-1,2-Dichloroethene	< 10	1,1,2,2-Tetrachloroethane	< 10
Chloroform	< 10	Tetrachloroethene	< 10
1,2-Dichloroethane	< 10	Toluene	< 10
1,1,1-Trichloroethane	< 10	Chlorobenzene	< 10
Carbon tetrachloride	< 10	Ethylbenzene	< 10
Bromodichloromethane	< 10		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

ug/kg wet weight

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm Boring 5

29068 9-4-85 9-30-85

	ppb		ppb
α-BHC	< 1000	Endosulfan II	< 1000
γ-BHC	< 1000	4,4'-DDT	< 1000
β-BHC	< 1000	Endosulfan Sulfate	< 1000
Heptachlor	< 1000	Endrin Aldehyde	< 1000
δ-BHC	< 1000	Chlordane	< 1000
Aldrin	< 1000	Toxaphene	< 5000
Heptachlor Epoxide	< 1000	PCB-1221	< 2000
Endosulfan I	< 1000	PCB-1232	< 2000
4,4'-DDE	< 1000	PCB-1016/1242	< 2000
Dieldrin	< 1000	PCB-1248	10000
Endrin	< 1000	PCB-1254	< 4000
4,4'-DDD	< 1000	PCB-1260	< 4000

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

Methoxychlor < 1000

Endrin Ketone < 1000

ug/kg wet weight

Laboratory Name: _____

Case No: _____

Sample Number
29068

>SX090
Boring 5 Composite

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	491
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	30 J
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	355
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	1675
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	1054
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	9 J
91-20-3	Naphthalene	854
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	807
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	71 J
99-09-2	3-Nitroaniline	

CAS Number		ug/Kg (Circle One)
83-32-9	Acenaphthene	94 J
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	197 J
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	165 J
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	787
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	15 J
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	1078
84-74-2	Di-n-Butylphthalate	57 J
206-44-0	Fluoranthene	229 J
92-87-5	Benzidine	
129-00-0	Pyrene	282 J
85-68-7	Butylbenzylphthalate	35 J
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	315 J
117-81-7	bis(2-Ethylhexyl)Phthalate	88 J
218-01-9	Chrysene	365
117-84-0	Di-n-Octyl Phthalate	585
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	250 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	31 J
191-24-2	Benzo(g, h, i)Perylene	274 J

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm Surface Water

Upstream South

2979 9-4-85 10-2-85

	ppb		ppb
α-BHC	< 0.05	Endosulfan II	< 0.1
γ-BHC	< 0.05	4,4'-DDT	< 0.1
β-BHC	< 0.05	Endosulfan Sulfate	< 0.5
Heptachlor	< 0.05	Endrin Aldehyde	< 0.1
δ-BHC	< 0.05	Chlordane	< 0.5
Aldrin	< 0.05	Toxaphene	< 1.0
Heptachlor Epoxide	< 0.05	PCB-1221	< 0.5
Endosulfan I	< 0.5	PCB-1232	< 0.5
4,4'-DDE	< 0.1	PCB-1016/1242	< 0.5
Dieldrin	< 0.1	PCB-1248	< 0.5
Endrin	< 0.1	PCB-1254	< 1.0
4,4'-DDD	< 0.1	PCB-1260	< 1.0

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

Methoxychlor	< 0.5
Endrin Ketone	< 0.1

Laboratory Name: _____

Case No: _____

Sample Number
2979

> SX076
Upstream South

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ~~ug/Kg~~ (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	2290
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	3 J
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	17
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	3 J
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	5 J
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	1 J
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ~~ug/Kg~~ (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	1 J
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	17
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	6 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Purgeable Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Surface Water

Downstream South

2980 9-4-85 10-2-85

	ppb		ppb
Chloromethane	< 1	1,2-Dichloropropane	< 1
Bromomethane	< 1	t-1,3-Dichloropropene	< 1
Dichlorodifluoromethane	< 1	Trichloroethene	< 1
Vinyl chloride	< 1	Benzene	< 1
Chloroethane	< 1	Dibromochloromethane	< 1
Methylene chloride	< 1	1,1,2-Trichloroethane	< 1
Trichlorofluoromethane	< 1	c-1,3-Dichloropropene	< 1
1,1-Dichloroethene	< 1	2-Chloroethylvinyl ether	<10
1,1-Dichloroethane	9	Bromoform	<10
t-1,2-Dichloroethene	< 1	1,1,2,2-Tetrachloroethane	< 1
Chloroform	< 1	Tetrachloroethene	2
1,2-Dichloroethane	< 1	Toluene	< 1
1,1,1-Trichloroethane	< 1	Chlorobenzene	< 1
Carbon tetrachloride	< 1	Ethylbenzene	< 1
Bromodichloromethane	< 1		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct. 26, 1984

Comments:

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm Surface Water

Downstream South

2980 9-4-85 10-2-85

	ppb		ppb
α-BHC	< 0.05	Endosulfan II	< 0.1
γ-BHC	< 0.05	4,4'-DDT	< 0.1
β-BHC	< 0.05	Endosulfan Sulfate	< 0.5
Heptachlor	< 0.05	Endrin Aldehyde	< 0.1
δ-BHC	< 0.05	Chlordane	< 0.5
Aldrin	< 0.05	Toxaphene	< 1.0
Heptachlor Epoxide	< 0.05	PCB-1221	< 0.5
Endosulfan I	< 0.5	PCB-1232	< 0.5
4,4'-DDE	< 0.1	PCB-1016/1242	< 0.5
Dieldrin	< 0.1	PCB-1248	< 0.5
Endrin	< 0.1	PCB-1254	< 1.0
4,4'-DDD	< 0.1	PCB-1260	< 1.0

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct. 26, 1984

Comments:

Methoxychlor < 0.5

Endrin Ketone < 0.1

Authorized: _____

Date: 10-14-85

Laboratory Name: _____

Case No: _____

Sample Number
2980

>SX077
Downstream South

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	19
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Purgeable Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm Sediment

Upstream North

2982 9-4-85 10-1-85

	ppb		ppb
Chloromethane	< 10	1,2-Dichloropropane	< 10
Bromomethane	< 10	t-1,3-Dichloropropene	< 10
Dichlorodifluoromethane	< 10	Trichloroethene	< 10
Vinyl chloride	< 10	Benzene	< 10
Chloroethane	< 10	Dibromochloromethane	< 10
Methylene chloride	< 10	1,1,2-Trichloroethane	< 10
Trichlorofluoromethane	< 10	c-1,3-Dichloropropene	< 10
1,1-Dichloroethene	< 10	2-Chloroethylvinyl ether	< 100
1,1-Dichloroethane	< 10	Bromoform	< 100
t-1,2-Dichloroethene	< 10	1,1,2,2-Tetrachloroethane	< 10
Chloroform	< 10	Tetrachloroethene	< 10
1,2-Dichloroethane	< 10	Toluene	< 10
1,1,1-Trichloroethane	< 10	Chlorobenzene	< 10
Carbon tetrachloride	< 10	Ethylbenzene	< 10
Bromodichloromethane	< 10		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct. 26, 1984

Comments:

ug/kg wet weight

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 118.046.517

Cherry Farm Sediments

Upstream North

2982 9-4-85 9-30-85

	ppb		ppb
α-BHC	< 200	Endosulfan II	< 400
γ-BHC	< 200	4,4'-DDT	< 400
β-BHC	< 200	Endosulfan Sulfate	< 400
Heptachlor	< 200	Endrin Aldehyde	< 400
δ-BHC	< 200	Chlordane	<2000
Aldrin	< 200	Toxaphene	<4000
Heptachlor Epoxide	< 200	PCB-1221	<2000
Endosulfan I	<1000	PCB-1232	<2000
4,4'-DDE	< 400	PCB-1016/1242	<2000
Dieldrin	< 400	PCB-1248	<2000
Endrin	< 400	PCB-1254	<4000
4,4'-DDD	< 400	PCB-1260	<4000

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct. 26, 1984

Comments:

Methoxychlor	<2000
Endrin Ketone	< 400

O'Brien & Gere Engineers, Inc.
Bellevue Woods Building, Bellevue Rd., Syracuse, NY 13221 (315) 451-4720

Approved

Date 10-14-85

Laboratory Name: _____

Case No: _____

Sample Number
2982

> SX088
Upstream North
(sediment)

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		~~ug/l~~ or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	36 J
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	16 J
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	6 J
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	85 J
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	60 J
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	38 J
99-09-2	3-Nitroaniline	

CAS Number		~~ug/l~~ or ug/Kg (Circle One)
83-32-9	Acenaphthene	30 J
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	52 J
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	64 J
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	631 J
120-12-7	Anthracene	114 J
84-74-2	Di-n-Butylphthalate	22 J
206-44-0	Fluoranthene	704
92-87-5	Benzidine	
129-00-0	Pyrene	1020
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	269 J
117-81-7	bis(2-Ethylhexyl)Phthalate	291 J
218-01-9	Chrysene	354
117-84-0	Di-n-Octyl Phthalate	177 J
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	192 J
50-32-8	Benzo(a)Pyrene	195 J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

Purgeable Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm Sediment

Downstream North

2983 9-4-85 10-1-85

	ppb		ppb
Chloromethane	< 10	1,2-Dichloropropane	< 10
Bromomethane	< 10	t-1,3-Dichloropropene	< 10
Dichlorodifluoromethane	< 10	Trichloroethene	< 10
Vinyl chloride	< 10	Benzene	< 10
Chloroethane	< 10	Dibromochloromethane	< 10
Methylene chloride	< 10	1,1,2-Trichloroethane	< 10
Trichlorofluoromethane	< 10	c-1,3-Dichloropropene	< 10
1,1-Dichloroethene	< 10	2-Chloroethylvinyl ether	<100
1,1-Dichloroethane	< 10	Bromoform	<100
t-1,2-Dichloroethene	< 10	1,1,2,2-Tetrachloroethane	< 10
Chloroform	< 10	Tetrachloroethene	< 10
1,2-Dichloroethane	< 10	Toluene	< 10
1,1,1-Trichloroethane	< 10	Chlorobenzene	< 10
Carbon tetrachloride	< 10	Ethylbenzene	< 10
Bromodichloromethane	< 10		

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

ug/kg wet weight

O'BRIEN & GERE

Pesticide/PCB Priority Pollutants

NIAGARA MOHAWK POWER CORP. 1118.046.517

Cherry Farm Sediment

Downstream North

2983 9-4-85 9-30-85

	ppb		ppb
α-BHC	< 200	Endosulfan II	< 400
γ-BHC	< 200	4,4'-DDT	< 400
β-BHC	< 200	Endosulfan Sulfate	< 400
Heptachlor	< 200	Endrin Aldehyde	< 400
δ-BHC	< 200	Chlordane	<2000
Aldrin	< 200	Toxaphene	<4000
Heptachlor Epoxide	< 200	PCB-1221	<2000
Endosulfan I	<1000	PCB-1232	<2000
4,4'-DDE	< 400	PCB-1016/1242	<2000
Dieldrin	< 400	PCB-1248	<2000
Endrin	< 400	PCB-1254	<4000
4,4'-DDD	< 400	PCB-1260	<4000

Methodology: Federal Register — 40 CFR, Part 136, [redacted] Oct.26,1984

Comments:

Methoxychlor < 2000

Endrin Ketone < 400

ug/kg wet weight

10-14-85

Laboratory Name: _____

Case No: _____

Sample Number
2983

> SX091
Downstream North
(sediment)

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		~~ug/l~~ or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	5.6 J
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	14 J
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	10 J
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	11 J
91-20-3	Naphthalene	15 J
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	17 J
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		~~ug/l~~ or ug/Kg (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	7 J
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	7 J
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	7 J
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	23 J
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	34 J
120-12-7	Anthracene	7 J
84-74-2	Di-n-Butylphthalate	14 J
206-44-0	Fluoranthene	25 J
92-87-5	Benzidine	
129-00-0	Pyrene	39 J
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	533
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name: _____

Case No: _____

Sample Number
6496

> SX065
Method Blank

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ~~ug/Kg~~ (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	29
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name: _____

Case No: _____

Sample Number
66524

>SX078
Method Blank

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	
108-95-2	Phenol	
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	
51-28-5	2, 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4, 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
92-87-5	Benzidine	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	12
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name: _____

Case No: _____

Sample Number

Organics Analysis Data Sheet
(Page 2)

DETECTION LIMITS - SOIL

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		~~ug/L or~~ ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	330
108-95-2	Phenol	330
62-53-3	Aniline	1600
111-44-4	bis(-2-Chloroethyl)Ether	330
95-57-8	2-Chlorophenol	330
541-73-1	1, 3-Dichlorobenzene	330
106-46-7	1, 4-Dichlorobenzene	330
100-51-6	Benzyl Alcohol	330
95-50-1	1, 2-Dichlorobenzene	330
95-48-7	2-Methylphenol	330
39638-32-9	bis(2-chloroisopropyl)Ether	330
106-44-5	4-Methylphenol	330
621-64-7	N-Nitroso-Di-n-Propylamine	330
67-72-1	Hexachloroethane	330
98-95-3	Nitrobenzene	330
78-59-1	Isophorone	330
88-75-5	2-Nitrophenol	330
105-67-9	2, 4-Dimethylphenol	330
65-85-0	Benzoic Acid	1600
111-91-1	bis(-2-Chloroethoxy)Methane	330
120-83-2	2, 4-Dichlorophenol	330
120-82-1	1, 2, 4-Trichlorobenzene	330
91-20-3	Naphthalene	330
106-47-8	4-Chloroaniline	330
87-68-3	Hexachlorobutadiene	330
59-50-7	4-Chloro-3-Methylphenol	330
91-57-6	2-Methylnaphthalene	330
77-47-4	Hexachlorocyclopentadiene	330
88-06-2	2, 4, 6-Trichlorophenol	330
95-95-4	2, 4, 5-Trichlorophenol	1600
91-58-7	2-Chloronaphthalene	330
88-74-4	2-Nitroaniline	1600
131-11-3	Dimethyl Phthalate	330
208-96-8	Acenaphthylene	330
99-09-2	3-Nitroaniline	1600

CAS Number		~~ug/L or~~ ug/Kg (Circle One)
83-32-9	Acenaphthene	330
51-28-5	2, 4-Dinitrophenol	1600
100-02-7	4-Nitrophenol	1600
132-64-9	Dibenzofuran	330
121-14-2	2, 4-Dinitrotoluene	330
606-20-2	2, 6-Dinitrotoluene	330
84-66-2	Diethylphthalate	330
7005-72-3	4-Chlorophenyl-phenylether	330
86-73-7	Fluorene	330
100-01-6	4-Nitroaniline	1600
534-52-1	4, 6-Dinitro-2-Methylphenol	1600
86-30-6	N-Nitrosodiphenylamine (1)	330
101-55-3	4-Bromophenyl-phenylether	330
118-74-1	Hexachlorobenzene	330
87-86-5	Pentachlorophenol	1600
85-01-8	Phenanthrene	330
120-12-7	Anthracene	330
84-74-2	Di-n-Butylphthalate	330
206-44-0	Fluoranthene	330
92-87-5	Benzidine	330
129-00-0	Pyrene	330
85-68-7	Butylbenzylphthalate	330
91-94-1	3, 3'-Dichlorobenzidine	660
56-55-3	Benzo(a)Anthracene	330
117-81-7	bis(2-Ethylhexyl)Phthalate	330
218-01-9	Chrysene	330
117-84-0	Di-n-Octyl Phthalate	330
205-99-2	Benzo(b)Fluoranthene	330
207-08-9	Benzo(k)Fluoranthene	330
50-32-8	Benzo(a)Pyrene	330
193-39-5	Indeno(1, 2, 3-cd)Pyrene	330
53-70-3	Dibenz(a, h)Anthracene	330
191-24-2	Benzo(g, h, i)Perylene	330

(1)-Cannot be separated from diphenylamine

Laboratory Name: _____

Case No: _____

Sample Number

Organics Analysis Data Sheet
(Page 2)

DETECTION LIMITS - WATER

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	8
108-95-2	Phenol	10
62-53-3	Aniline	
111-44-4	bis(-2-Chloroethyl)Ether	10
95-57-8	2-Chlorophenol	10
541-73-1	1, 3-Dichlorobenzene	10
106-46-7	1, 4-Dichlorobenzene	10
100-51-6	Benzyl Alcohol	10
95-50-1	1, 2-Dichlorobenzene	10
95-48-7	2-Methylphenol	10
39638-32-9	bis(2-chloroisopropyl)Ether	10
106-44-5	4-Methylphenol	10
621-64-7	N-Nitroso-Di-n-Propylamine	10
67-72-1	Hexachloroethane	10
98-95-3	Nitrobenzene	10
78-59-1	Isophorone	10
88-75-5	2-Nitrophenol	10
105-67-9	2, 4-Dimethylphenol	10
65-85-0	Benzoic Acid	50
111-91-1	bis(-2-Chloroethoxy)Methane	10
120-83-2	2, 4-Dichlorophenol	10
120-82-1	1, 2, 4-Trichlorobenzene	10
91-20-3	Naphthalene	10
106-47-8	4-Chloroaniline	10
87-68-3	Hexachlorobutadiene	10
59-50-7	4-Chloro-3-Methylphenol	10
91-57-6	2-Methylnaphthalene	10
77-47-4	Hexachlorocyclopentadiene	10
88-06-2	2, 4, 6-Trichlorophenol	10
95-95-4	2, 4, 5-Trichlorophenol	50
91-58-7	2-Chloronaphthalene	10
88-74-4	2-Nitroaniline	50
131-11-3	Dimethyl Phthalate	10
208-96-8	Acenaphthylene	10
99-09-2	3-Nitroaniline	50

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10
51-28-5	2, 4-Dinitrophenol	50
100-02-7	4-Nitrophenol	50
132-64-9	Dibenzofuran	10
121-14-2	2, 4-Dinitrotoluene	10
606-20-2	2, 6-Dinitrotoluene	10
84-66-2	Diethylphthalate	10
7005-72-3	4-Chlorophenyl-phenylether	10
86-73-7	Fluorene	10
100-01-6	4-Nitroaniline	50
534-52-1	4, 6-Dinitro-2-Methylphenol	50
86-30-6	N-Nitrosodiphenylamine (1)	10
101-55-3	4-Bromophenyl-phenylether	10
118-74-1	Hexachlorobenzene	10
87-86-5	Pentachlorophenol	50
85-01-8	Phenanthrene	10
120-12-7	Anthracene	10
84-74-2	Di-n-Butylphthalate	10
206-44-0	Fluoranthene	10
92-87-5	Benzidine	
129-00-0	Pyrene	10
85-68-7	Butylbenzylphthalate	10
91-94-1	3, 3'-Dichlorobenzidine	20
56-55-3	Benzo(a)Anthracene	10
117-81-7	bis(2-Ethylhexyl)Phthalate	10
218-01-9	Chrysene	10
117-84-0	Di-n-Octyl Phthalate	10
205-99-2	Benzo(b)Fluoranthene	10
207-08-9	Benzo(k)Fluoranthene	10
50-32-8	Benzo(a)Pyrene	10
193-39-5	Indeno(1, 2, 3-cd)Pyrene	10
53-70-3	Dibenz(a, h)Anthracene	10
191-24-2	Benzo(g, h, i)Perylene	10

(1)-Cannot be separated from diphenylamine

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

1115.046

SURVEY Niagara Mohawk Cherry Farms

SAMPLERS: (Signature) Deborah Wright

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water Comp.	SAMPLE TYPE: Water Grab.	SAMPLE TYPE: Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED	
	MW 1	8/15/85			X			8	P.P.	TOC
	MW 2	8/15/85			X			8	P.P.	TOC
	MW 3	8/15/85			X			8	P.P.	TOC
	MW 7	8/15/85			X			8	P.P.	TOC
	MW 6	8/15/85			X			8	P.P.	TOC
	MW 5	8/15/85			X			8	P.P.	TOC
	MW 4	8/15/85			X			8	P.P.	TOC

Relinquished by: (Signature) Deborah Wright	Received by: (Signature)	Date/Time 8/16/85 3:00PM
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) Date/Time	Received for Laboratory by: Barbara V. Vanding	Date/Time 8-16-85 3PM
Method of Shipment:		

O'Brien & Gere Engineers, Inc.
5000 Brittonfield Parkway / East Syracuse, NY 13057 / (315) 437-6100
Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY: Cherry Farms Niagara Mohawk

SAMPLERS: (Signature) Deborah J Wright

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: SOIL — Comp.	SAMPLE TYPE: SOIL — Grab	SAMPLE TYPE: Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
	MW2 6'-8'	8/6/85			X				HOLD
	MW3 8'-10'	8/7/85			X			(3) BPP	~~HOLD~~ SP COND TOC
	MW4 10'-12'	8/8/85			X				HOLD
	MW4 18'-20'	8/8/85			X				HOLD
	MW4 20'-22'	8/8/85			X				HOLD
	MW5 4'-6'	8/5/85			X				HOLD
	MW5 16'-18'	8/5/85			X				HOLD
	MW6 2'-4'	8/8/85			X			(2) BPP	~~HOLD~~ SP COND TOC
	MW6 8'-8.9'	8/8/85			X			~~(2) BPP~~	HOLD
	MW7 6'-8'	8/7/85			X				HOLD
	Boring 5 (comp)	8/9/85		X				(5) BPP 2	SP Cond TOC
	MW7 20'-22'	8/7/85			X			2	SP COND TOC

Relinquished by: (Signature) Deborah J Wright	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) / Date/Time	Received for Laboratory by: Barbara Vawling	Date/Time 8-21-85 0AM
Method of Shipment:		

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY Cherry Farms Niagara Mohawk

SAMPLERS: (Signature) Deborah G Wright

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: SOIL Comp.	SAMPLE TYPE: SOIL Grab.	SAMPLE TYPE: Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
	Boring 1	7/31/85		X			(3) DUP	2	TOC, PH Sp. Cond. *
	Boring 2	7/31/85		X			(3) DUP	2	TOC, PH Sp. Cond. *
	Boring 3	8/1/85		X				2	TOC PH Sp Cond. *
	Boring 4	8/1/85		X				2	TOC, PH Sp Cond *
	MW 1 10'-12'	8/2/85			X		(2) DUP	1	~~TOC~~ TOC SEE COMMENTS

Relinquished by: (Signature) Deborah G Wright	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) Date/Time	Received for Laboratory by: Barbara Fawling	Date/Time 8-21-85 10AM
Method of Shipment:		

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY: NIAGARA MOHAWK CHERRY FARMS SITE

SAMPLERS: (Signature) Deborah Y. Wright

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water Comp.	SAMPLE TYPE: Water Grab.	SAMPLE TYPE: Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
	NE Corner Surface Water	8/28/85	7:55p		X		8		TOC Hold remaining containers

Relinquished by: (Signature) Deborah Y. Wright	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) Date/Time	Received ~~for Laboratory~~ by: Barbara Fawling	Date/Time 8/29/85 8:30AM
Method of Shipment:		

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY Niagara Mohawk Cherry Farms

SAMPLERS: (Signature) Deborah Wright

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water Comp.	SAMPLE TYPE: Water Grab.	SAMPLE TYPE: Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
SW	Upstream - North	8/14/85			X			8	TOC
SW	Downstream North	8/14/85			X			8	TOC
SW	Upstream South	8/14/85			X			8	TOC
SW	Downstream South	8/14/85			X			8	TOC
SW	Southeast Corner	8/16/85			X			8	TOC
Sed.	Upstream - North	8/14/85			Sed.			2	TOC, SPCOND
Sed.	Downstream - North	8/14/85			Sed			2	TOC, SPCOND
~~Sed.~~	~~Upstream South~~	~~8/14/85~~			~~Sed~~			~~2~~	
~~Sed.~~	~~Downstream South~~	~~8/14/85~~			~~Sed~~			~~2~~	

Relinquished by: (Signature) Deborah Wright	Received by: (Signature)	Date/Time 8/16/85 - 3:00
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) Date/Time	Received for Laboratory by: Barbara T. Pauline	Date/Time 8-16-85 3PM
Method of Shipment:		

O'Brien & Gere Engineers, Inc.
P.O. Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY: Niagara Mohawk Cherry Farms

SAMPLERS: (Signature) Deborah J. Wright

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water Comp.	SAMPLE TYPE: Water Grab.	SAMPLE TYPE: Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
	Soil 1	8/14/85		Soil				2	TOC, SPCOND
	Soil 2	8/14/85		Soil				2	TOC
	Soil 3	8/14/85		Soil				2	TOC
	Soil 4	8/14/85		Soil				2	TOC
	Soil 5	8/14/85		Soil				2	TOC

Relinquished by: (Signature) Deborah J. Wright	Received by: (Signature)	Date/Time 8/16/85 3:00
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) Date/Time	Received ~~for Laboratory~~ by: Barbara Jo Fawling	Date/Time 8-16-85 3:00 PM
Method of Shipment:		

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA • Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

APPENDIX G

EPA FORM 2070-13

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Cherry Farm	River Road				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Tonawanda	NY		Niagara		

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
— — — — — —	— — — — — —	☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
7 / - / 85 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	1945 (BEGINNING YEAR) 1970 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☒ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Private Consultant (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
			( )

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Michael Sherman		300 Erie Blvd. East Syracuse, NY 13202	(315) 428-6624
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT		

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Michael Sherman	Niagara Mohawk Power Corporation	(315) 428-6624

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
				/ / (MONTH DAY YEAR)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [ ] C. SLUDGE
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS
- [ ] D. OTHER (Specify)

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS
CUBIC YARDS 1 x 10^6
NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

- [ ] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [X] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	N/A		
OLW	OILY WASTE	N/A		
SOL	SOLVENTS	N/A		
PSD	PESTICIDES	N/A		
OCC	OTHER ORGANIC CHEMICALS	20,000	cubic yds	Based upon 200 ppm of PCB found
IOC	INORGANIC CHEMICALS	80,000	cubic yds	Dif betw. Metal & Org.Chem.Est,& Tot.Est.
ACD	ACIDS	N/A		
BAS	BASES	N/A		
MES	HEAVY METALS	800,000	cubic yds	Based upon Iron Conc.found by NYSDEC.

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	Benzene	71-43-2	LF	320	ug/l
	Phenol	108-95-2	LF	3000	ug/l
	Toluene	108-88-3	LF	150	ug/l
	Polychlorinated Biphenols	1336-36-3	LF	200,000	ug/kg

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Cadmium	7440-43-9	FDS	Nickel	7440-02-0
FDS	Chromium	7440-47-3	FDS		
FDS	Arsenic	7440-38-2	FDS		
FDS	Mercury	7439-97-6	FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

1) O'Brien & Gere Corp. report titled: "Site Investigation - Cherry Farm Site, Tonawanda, New York"

2) USGS Niagara River Study; 1982 and 1983

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: 1985) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

Downgradient monitoring wells showed concentrations greater than background levels. Entire area is served by municipal water.

01 ☒ B. SURFACE WATER CONTAMINATION — 02 ☒ OBSERVED (DATE: 1983) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

Samples of surface waters, southeast corner, during USGS Niagara River Study have shown the contamination. Drinking water intakes are located more than 3 miles downstream of site.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

N/A

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

N/A

01 ☒ E. DIRECT CONTACT — 02 ☒ OBSERVED (DATE: 1985) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: <300
04 NARRATIVE DESCRIPTION

The sides of the site are exposed and represent a potential means of contact to area workers and people who use the site for softball games during the summer months.

01 ☒ F. CONTAMINATION OF SOIL — 02 ☒ OBSERVED (DATE: 1985) — ☒ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 55 (Acres)
04 NARRATIVE DESCRIPTION

Borings along the landfill face have shown contamination.

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

N/A

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

N/A

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED:
04 NARRATIVE DESCRIPTION

N/A

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

N/A

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☒ OBSERVED (DATE: 1985) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: <300 — 04 NARRATIVE DESCRIPTION

The sides of the landfill are exposed and subject to erosion.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

N/A

III. TOTAL POPULATION POTENTIALLY AFFECTED: <300

V. COMMENTS

The site is located in a heavy industrial area consisting of tank farms and trucking terminals. The population within the aera consists of employees, but not permanent households.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

O'Brien & Gere Reports: "Site Investigation, Cherry Farm Site, Tonawanda, New York" and "HRS Report"

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	55	Acres
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

☐ A. BUILDINGS ON SITE

None

06 AREA OF SITE

55 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☒ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Top capped with 6 inches of clay; sides have 25% slope, exposed and subject to erosion.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE. ☒ YES ☐ NO

02 COMMENTS

Landfill: Top capped with 6 inches of clay
Sidewalls: Exposed

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

O'Brien & Gere Report(s): Site Investigation, Cherry Farm Site, Tonawanda, New York and HRS Report

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☒	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. >3 (mi)

B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☒ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER None

03 DISTANCE TO NEAREST DRINKING WATER WELL N/A (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
15 (ft)	West	_____ (ft)	_____ (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

Clarence Redi-Mix, located on the southern side of the property, uses well water solely for truck cleaning.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☒ NO	COMMENTS	☒ YES ☐ NO	COMMENTS: Potential discharge to Niagara River

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Niagara River	☐	0 (mi)
	☐	_____ (mi)
	☐	_____ (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 2000 NO OF PERSONS	B. 6000 NO OF PERSONS	C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION

<0.25 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

2100

04 DISTANCE TO NEAREST OFF-SITE BUILDING

<0.25 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The site is located in a heavy industrial area consisting of tank farms and trucking terminals. The population within the area consists of employees but not permanent households.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
50 (ft)	15-20 (ft)		

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
37.52 (in)	2.33 (1985) (in)	3% 25 %	Unknown	3% %

09 FLOOD POTENTIAL

SITE IS IN 10 YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. _____ (mi)	B. 0 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. <1 (mi)	B. 1.5 (mi)	C. N/A (mi)	D. N/A (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is comprised of a surface landfill area 20 feet high which was placed on top of natural fine to medium sand and silt deposits. The landfill material consists of foundry sand, sandcasts slag and a black sandy material.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

O'Brien & Gere Engineers report titled: Site Investigation
Cherry Farm Site
Tonawanda, New York

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	7	OBG Laboratory	1985/1983
SURFACE WATER	6	2- OBG Laboratory/4-USGS	1985/1983
WASTE	26	13-OBG Laboratory/13-USGS	1985/1983
AIR	--		
RUNOFF	--		
SPILL	--		
SOIL	2	OBG Laboratory	1985
VEGETATION	--		
OTHER	--		

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
pH, Sp Cond	Water Samples
HNU Readings	Soil Samples

V. PHOTOGRAPHS AND MAPS

01 TYPE ☐ GROUND ☒ AERIAL

02 IN CUSTODY OF USDA
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS: O'Brien & Gere Engineers, Niagara Mohawk

VI. OTHER FIELD DATA COLLECTED (Provide narrative description)

EM Survey

Magnetometer Survey

VII. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Niagara Mohawk Corp.		300 Erie Blvd West		Syracuse	NY	13202

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
CFI Steel Corp.		P.O. Box 316		Pueblo	CO	81002

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

O'Brien & Gere Report titled: Site Investigation
Cherry Farm Site
Tonawanda, New York

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Non-Operational	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Non-Operational	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Non-Operational			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☒ S. CAPPING/COVERING — 02 DATE 1971 — 03 AGENCY _____
04 DESCRIPTION
To alleviate blowing sand, the top was capped with 6 inches of clay by Niagara Mohawk Corporation.

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Affidavit of Carmen M. Pariso dated July 3, 1985.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

APPENDIX H

ERRATA