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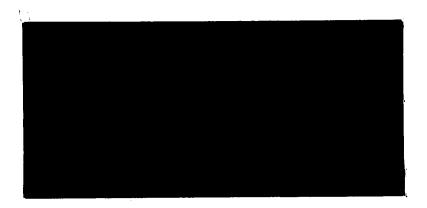
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#### TASK 2 - ADDITIONAL STUDIES REPORT FOR THE REMEDIAL DESIGN NIAGARA TRANSFORMER CORPORATION SITE

NYSDEC Site No. 9-15-146 Contract No. D002625-19

Issued September 1, 1994 Revised October 7, 1994

Prepared for:

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#### 1. PROJECT BACKGROUND, SUMMARY, AND GOALS

Ecology and Environment, P.C., (E & E) was retained by the New York State

Department of Environmental Conservation (NYSDEC) under the Standby Contract Work

Assignment D002625-19 to provide additional site characterization and investigation as a part
of the remedial design of the selected remedy for the Niagara Transformer Corporation (NTC)

Site (Site No. 9-15-146) in the Town of Cheektowaga, Erie County, New York.

Woodward-Clyde Consultants previously completed the Remedial Investigations and Feasibility Study (RI/FS) for this site in 1993 for the Niagara Transformer Corporation under a Consent Order.

The results of the previous RI/FS are intended to be used in conjunction with the additional studies program to verify and compare the extent and level of PCB contamination on and off the Niagara Transformer Corporation Site.

#### 1.1 SITE LOCATION AND DESCRIPTION

The 3.6-acre site is owned by NTC, a local manufacturer of electrical transformers. The site is located at 1747 Dale Road, between Harlem Road and Interstate 90, in the Town of Cheektowaga, Erie County, New York (latitude 42° 54' 15"N, longitude 78° 46' 00") (see Figure 1-1). On the site, there is an active main plant, or manufacturing/office facility, a storage building, and aboveground oil storage tanks at a tank farm to the south. An abandoned rail spur from the Conrail railyard to the south crosses an open field and paved parking lot and ends at a loading bay in the southwest corner of the manufacturing facility.

The topography of the site is characterized by a gentle slope to the south. Along the east perimeter of the site there is a drainage ditch that directs runoff south from the parking lot into another ditch that flows west, between the site's southern perimeter and the Conrail

yard. To the west of the site is a cemetery and to the east is an undeveloped parcel, purchased by NTC in 1983. The properties to the north along Dale Road are occupied primarily by light industries. While there are a few homes northwest of the site on Dale Road, the nearest residential area is located approximately 1,000 feet to the southwest.

The grade and subgrade at this site consist of a surface layer of fill material and as much as 3.5 feet of asphalt and gravel subgrade, miscellaneous shotrock, and silty clay. Beneath this surface is a 40- to 50-foot- thick layer of silty clay till and clay. This layer separates two groundwater aquifers. One aquifer is perched above the clay and the other beneath, in a 2- to 3-foot layer of gravel and sand overlying the bedrock. The depth of the perched groundwater varies from 6 inches to 3 feet below ground surface (BGS). Both aquifers flow southward. There are no private water wells identified within a 1 mile radius of the site. Residences and commercial properties in the area receive water from a municipal system.

There is no record of industrial activity prior to NTC purchase and construction of the manufacturing facility in 1958. Until 1980, oils containing polychlorinated biphenyls (PCBs) were stored or used on site as an insulating fluid in the manufacture of liquid-filled transformers. Currently, NTC uses only non-PCB mineral oils.

On April 10, 1990, Town of Cheektowaga Highway Department employees reported to NYSDEC that oil was seeping into the drainage ditch between the Conrail yard and the NTC property. A sample of this oily leachate was analyzed and found to contain approximately 57,000 parts per million (ppm) PCBs. In New York State, waste material containing more than 50 ppm PCBs is regulated as a listed hazardous waste. Sediments from the ditch near the seep area and west to a receiving culvert beneath the railyard contain PCBs in concentrations ranging from 44 ppm to 3,700 ppm. This culvert discharges into an open ditch approximately 2,150 feet to the south, near an industrial warehouse.

This lower ditch continues south and west, adjacent to several light industrial properties and the area immediately south of the residential neighborhood. In this area, the sediments contain levels of PCBs ranging from less than 1 ppm to approximately 32 ppm. Later investigations at two isolated locations in the lower ditch determined that the sediments contain up to 613 ppm PCBs. The remedial objective for PCBs in off-site surface soils has been established as 1 ppm. This lower ditch joins a subsurface storm sewer at Harlem Road

(Sloan Flume) which in turn runs through the Village of Sloan and the City of Buffalo and then discharges to the Buffalo River, approximately 3 miles to the southwest.

NTC has previously complied with NYSDEC instructions to fence and post warning signs along the drainage ditch north of the railyard. Siphons were also constructed in this upper ditch as an interim remedial measure to mitigate the continued release of PCB oil/sediment.

An RI/FS was conducted by NTC under a Consent Order. The RI/FS was finalized in September 1993. The Record of Decision (ROD) was signed on December 30, 1993.

#### 1.2 PROJECT SUMMARY

Based upon the results of the RI/FS for the site and the criteria identified for the evaluation of alternatives, NYSDEC has selected a remedy by its ROD to excavate on-site and off-site PCB-contaminated soils and sediments, to dispose of them in an appropriate off-site landfill, and to conduct long-term monitoring of groundwater.

After review of the existing RI/FS it was determined by NYSDEC and E & E that additional pre-design fieldwork was required to study and analyze on-site and off-site areas. The major elements required of the additional study for the pre-remedial design are:

- Additional horizontal and vertical characterization of PCB-contaminated soils at the NTC site in the front and back parking lots, as well as beneath the tank farm;
- Additional horizontal and vertical characterization to delineate PCBcontaminated soils in off-site ditches, the Thruway Mall retention basin and St. Adalbert's Cemetery;
- Property surveys, establishment of project horizontal and vertical controls, and survey of drainage inverts, ditch profiles, and physical features associated with the project;
- Interface with agencies, municipalities, and private owners of numerous properties to obtain site information regarding drainage and information regarding impacts of the project on nearby properties;
- Telespection of questionable storm sewer drainage outfalls, sediment buildup, and condition; characterize by performing additional sampling;
- Characterization of sediments from the Harlem Road storm sewer, which discharges from the retention basin; and

• Characterization of discharge sediments from the storm sewer into the Sloan Flume; if necessary, collection and analyses of additional sediment samples for characterization purposes.

The determination of volume estimates at the 1 ppm and 10 ppm concentrations of PCB-contaminated soils beneath the facility and the overall projects are intended to be performed under the 30% design submittal once the survey base maps are finalized.

#### 1.3 ADDITIONAL STUDIES GOALS

The major goals of this pre-remedial design fieldwork have been to obtain additional confirmatory information on the horizontal and vertical extent of contamination and to obtain necessary field support information to provide a basis for the remedial design of the project. The report is also intended to address additional issues that need further clarification or that impact the development of the design of the project.

A review of the initial work assignment and remedial action with NYSDEC for the proposed design determined that additional soil/sediment sampling, soil borings, telespection of storm sewers, establishment of project survey controls, and validation of analytical data were necessary.

Additional soil and sediment sampling and field screening was initiated to fill data gaps identified in the RI/FS report. On-site and off-site sampling was performed on the 0- to 10-inch, 10- to 18-inch, and 18- to 24-inch horizons, on soils and sediments as well as in storm sewers, the retention basin, manholes, and on-site boreholes. PCB screening kits were used to provide quick turnaround of data to determine whether additional depth or area samples were required. To obtain data that correlates with the cleanup levels required for the remediation, soil and sediment samples were collected from the 0- to 10-inches depth interval and were screened using 1.0 ppm PCB kits. Samples collected from the 10- to 18-inch and 18- to 24-inch depth intervals were screened using 10 ppm PCB kits. On-site borehole samples were screened using 10 ppm PCB kits. All other samples from manhole and storm sewers were screened using 1 ppm PCB kits.

E & E subcontractors performed the soil boring, telespection of storm sewers, project land surveying, and data validation of analytical results.

The scope of work for the soil boring subcontractor included augering to an initial predetermined depth, and in conjunction with E & E's screening effort, collecting samples at 1- or 2-foot intervals for screening until a concentration of less than 10 ppm was obtained.

The purpose of the storm sewer telespection was to obtain condition, size, sediment concentration, and length of the sewer south of Broadway Avenue.

The land surveyor provided E & E with sampling point locations, site controls, and contours, which will be plotted on project base maps.

Following the analysis of QA/QC field samples, the data validation subcontractor will review the analytical data and independently evaluate its consistency with the quality assurance project plan (QAPP). These QA results will be used as baseline data for obtaining cleanup levels associated with the project once construction is initiated.

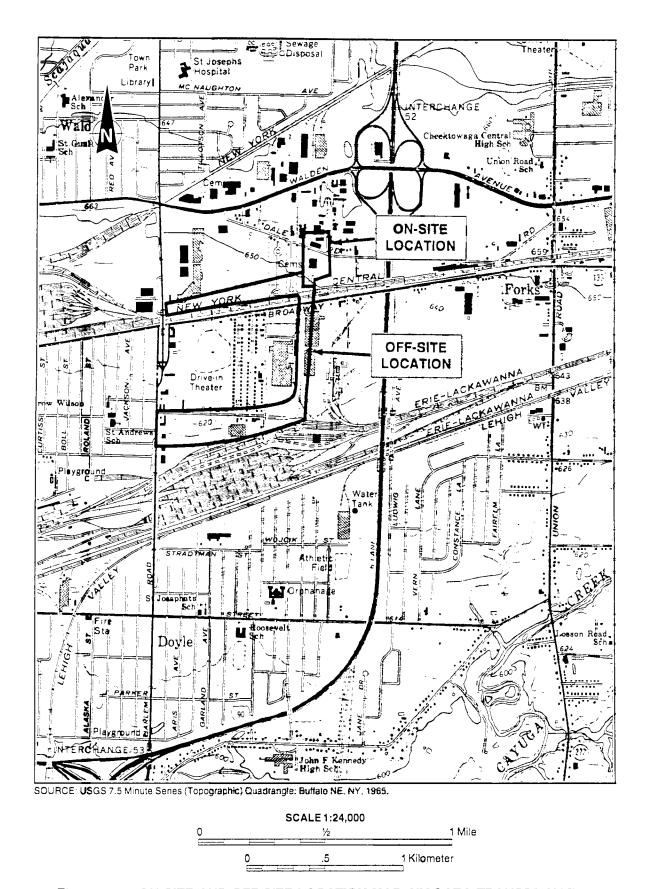


Figure 1-1 ON-SITE AND OFF-SITE LOCATION MAP, NIAGARA TRANSFORMER

#### 2. RESULTS OF PRE-DESIGN FIELD WORK AND STUDIES

### 2.1 ANALYTICAL RESULTS OF ON-SITE SOIL AND OFF-SITE SEDIMENT SAMPLING

E & E conducted additional sampling of both on-site soils and off-site sediments to better define the horizontal and vertical extent of PCB contamination and to compare with the Woodward-Clyde Remedial Investigation (RI) results, and incorporate additional sampling information into the remedial design. The scope of work for soil/sediment sampling activities was derived from E & E's Remedial Design Work Plan, Niagara Transformer Corporation (approved June 21, 1994). Off-site sediment samples specified under Task 2 Additional Studies were collected between July 5 and 8, 1994. On-site soil boring sampling was performed between July 11 and 14, 1994. Sampling and analyses were conducted in accordance with procedures outlined in the work plan and the QAPP.

#### 2.1.1 On-Site Soil Boring Sampling - Area 1

Ten subsurface boreholes were installed on site and 96 samples were collected and screened for PCBs at these boreholes. A total of 103 samples were proposed in the original work plan. Public and private underground utility locations were reviewed with NTC representatives and identified prior to drilling activities. Surface and shallow subsurface sampling depth intervals were modified slightly in the field because of the presence of an asphalt layer and limestone gravel underlain by a crushed stone subbase in the parking lots. A photographic log of the on-site boring and sampling is presented in Appendix A.

#### NTC Front Parking Lot

As specified in the work plan, one subsurface soil boring (BH1) was installed to a depth of 10 feet BGS in the front parking lot of the NTC facility (see Figure 2-1). Eight

samples were proposed to be collected from BH1; seven soil samples were actually collected. Sampling intervals varied slightly from those specified in the work plan, due primarily to the uneven thickness of the asphalt material and poor split-spoon recovery. Screening results are presented in Table 2-1.

Soil samples collected from BH1 were screened using 10 ppm test kits; screening results indicated that all seven samples contained fewer than 10 ppm of PCBs. Based on these results, no remediation is recommended for this area.

#### NTC Back Parking Lot

Eight subsurface soil borings were installed at various locations along the side and back parking lot of the NTC facility (see Figure 2-1). Boreholes BH2, BH3, BH8, and BH9 were augered to 10 feet BGS; boreholes BH4, BH5, BH6, and BH7 were augered to 20 feet BGS. A total of 90 samples were proposed to be collected from the NTC back parking lot; this number was reduced to 84 based on field conditions.

Boreholes BH2 and BH3 are located on the east side of the main building; of the 14 samples collected from the boreholes, nine samples were found to exceed the 10 ppm cleanup criterion. These areas of contamination were confined to 4 to 9 feet BGS at BH2 and 2 to 10 feet BGS at BH3 for the depth augered.

Boreholes BH4 through BH7 are located around existing monitoring well NTC-2S, behind and south of the main plant building. Fifty-six soil samples were collected from these boreholes, and 52 of these were screened using 10 ppm test kits. PCB concentrations were found to exceed 10 ppm in 30 of the 52 samples. The estimated zones of contamination for each of these boreholes are as follows:

- BH4: 4-10 feet, 11-12 feet, and 16-19 feet BGS;
- BH5: 0-11 feet, 12-15 feet, 16-17 feet, and 18-19 feet BGS;
- BH6: 0-6 feet, 14-15 feet, and 16-19 feet BGS; and
- BH7: 0-4 feet, 8-11 feet, and 16-17 feet BGS.

Based on the depth of the augering, contamination appears to extend to the level of 20 feet BGS.

Boreholes BH8 and BH9 are located further south of the main building. Fourteen soil samples were collected from these boreholes and screened with 10 ppm test kits. Five of the 14 samples screened were found to contain PCB concentrations that exceed 10 ppm. BH8 contained two zones of contamination: 0 to 4 feet and 8 to 10 feet BGS. Only one depth interval (8 to 8.5 feet BGS) exceeded 10 ppm at BH9. Based on the depth of the augering, contamination appears to extend to the level of 10 feet BGS.

#### NTC Tank Farm

One subsurface soil boring was augered in the aboveground tank farm northwest of the metal storage building. This borehole (BH10) was hand-driven and sampled only to 5 feet BGS due to the limited work area to perform augering. Five soil samples were collected from BH10 at one-foot depth intervals. All five samples were screened using 10 ppm test kits; PCB concentrations were found to exceed 10 ppm in all five samples. Stained soil material and an oily petroleum-like odor was encountered throughout the entire boring interval.

Based on these results, remediation will be recommended for this area; however, additional characterization may be required since the lowest vertical sample screening remained above the cleanup goal of 10 ppm.

#### 2.1.2 Off-Site Sediment Sampling - Areas 2-9

A total of 137 sediment samples were collected from off-site drainage areas during Task 2. Selected discretionary sediment samples were screened using EnSys® immunoassay PCB soil test kits. The kits were set up to detect for 1.0 parts per million (ppm) in the sediment samples and surface soil samples collected from the 0- to 10-inch depth interval. Subsurface soil samples (10- to 18-inch and 18- to 24-inch depth intervals) were screened using 10 ppm kits. Priorities for sample screening were set by the E & E project manager in discussions with the NYSDEC project officer. Sample locations were established by taking field measurements from known points and were pin-flagged for future land surveying operations under the same phase of work. Figure 2-2 and Table 2-2 list the locations and analytical results of all samples. Subsurface sediment samples were generally collected from a clay layer; it is suspected that because of impermeability PCBs had not migrated through this layer. Subsurface sediment samples were not submitted for screening unless surface

samples collected at the same locations and analyzed first indicated PCB concentrations exceeding 1.0 ppm. As a result, only 121 of the 137 samples collected were selected for screening for PCBs in the additional studies program. No new or additional samples were taken in Area 7, adjacent to and west of the NTC site.

#### Upper Ditch (North of Conrail Yard) - Area 2

A total of 12 samples was proposed to be collected from an area along the north surface ditch which carries overflow drainage from the NTC facility and drainage from the St. Adalbert's Cemetery to the retention basin. This area is located on St. Adalbert's Cemetery property in a flood-prone area. The sample locations were identified, sampled, and flagged on July 5, 1994 (see Figure 2-2). The results of the analyses are presented in Table 2-2. A grid pattern was established 10 feet west of the outfall from the storm sewer that crosses the Conrail yard and Broadway. The grid consisted of three transects, each 19 feet apart. The transects were set at 10-foot spacing, a distance of 10 feet from the ditch centerline. At each node, a surface sample was collected (0- to 10-inch depth interval). The three nodes nearest the ditch were also sampled at the 10- to 18-inch depth interval. Sample numbers OC-004-CEM through OC-015-CEM were used for this area.

Each of the nine 0- to 10-inch surface samples were screened using 1.0 ppm test kits; three 10- to 18-inch samples were screened using the 10 ppm test kits. Five of the samples were found to contain PCBs at concentrations exceeding 1.0 ppm. These samples were collected from the nodes nearest the ditch, and included both surface and shallow subsurface sample depths. Two subsurface samples exceeding 1.0 ppm were screened further using a 10 ppm test kit; both samples were shown to contain fewer than 10 ppm of PCBs. Based on Task 2 analytical results and previous RI data, PCBs are found to be present in the upper ditch, but are limited to within 10 feet of the centerline of the ditch at the 0- to 18-inch depth.

#### Thruway Mall Retention Basin - Area 3

A total of 38 samples were proposed to be collected from the stormwater retention basin located on the south side of the Thruway Mall; 62 samples were actually collected. All sample locations from the retention basin are shown on Figure 2-2. The analytical results of the screening are presented in Table 2-2. An E & E field team inspected the work area, conducted sampling, and flagged the locations in this area on July 6 and July 8, 1994. The

basin was surrounded by heavy brush and is fenced, which limits accessibility. A visual inspection revealed that only one outlet, on the west end of the basin, was present. One sediment sample was collected beneath the 10-inch basin outfall pipe on the west side of the gabion dam. This sample (OC-033-RET) was collected from the 0- to 10-inch depth interval.

At the request of NYSDEC representative Dave Locey, a surface sediment sample was collected from beneath the 6-inch outfall pipe that runs beneath the Conrail yard and empties into the basin. This pipe was covered with a metal screen and was clogged with debris at the time of sampling. The pipe appeared to be abandoned and is noted as being closed off by previous NYSDOT surveys. Sample OC-034-RET was collected from the 0- to 10-inch depth interval.

Sampling activities as specified in the work plan for the retention basin were modified based on field conditions and discussions between the E & E project manager, Mike Steffan, and Jim Moras, the NYSDEC project officer. Initially, four samples were proposed to be collected from the center of the basin bottom. Due to accessibility problems, only two samples from the center of the basin were collected. In addition, four locations along the perimeter had initially been specified as sampling points in the work plan. At these four locations (designated P1 through P4 on Figure 2-2), four discrete points were identified at evenly spaced intervals. Samples were collected from each point at the 0- to 10-inch and 10to 18-inch depth intervals and at 1-foot intervals up the bank, for a total of 32 samples. Samples for this area are numbered OC-025-RET through OC-032-RET and OC-091-RET through OC-114-RET. Two additional locations were added to better determine the presence and extent of PCBs along the banks. Two transects (P5 and P6) traversed the basin; seven nodes were located across each transect. Transect P5 was located approximately 100 feet west of the east end of the basin. Transect P6 was located in the middle of the pond length at the discharge of a 24-inch drainage pipe from the Thruway Mall parking lot. Samples were collected from each node at the 0- to 10-inch and 10- to 18-inch depth intervals, for a total of 28 samples. Sample numbers for this area are OC-116-RET through OC-143-RET.

Screening was conducted on 43 of the 62 sediment samples collected from the Thruway Mall retention basin to determine the presence of PCBs above or below the cleanup goal of 1.0 ppm and 10 ppm. As shown on Figure 2-2, 13 of the 34 samples only screened with 1.0 ppm test kits indicated a PCB concentration greater than 1.0 ppm. Twelve of these samples were collected from the 0- to 10-inch depth interval. Eleven samples were screened

were collected from the 10- to 18-inch depth interval. Most of the PCB contamination appears to be located in the center and eastern sections of the basin. These areas of the basin are generally more low-lying than the western side, and have more gradually sloped banks, providing an area where sediments have accumulated. Based on Task 2 analytical results and previous RI data, PCBs appear to have settled in the eastern portion or the basin and remain primarily at the surface (0 to 10 inch horizon).

#### Lower Ditches (East and West) - Areas 4 and 5

A total of 59 samples were proposed to be collected from the lower ditches, which run from the storm sewer beneath the Conrail yard south and west along Gruner Avenue to Harlem Road; 55 samples were actually collected and flagged. Sample locations and analytical results are shown on Figure 2-2, and analytical results are presented on Table 2-2.

The east lower ditch (Area 4) was sampled on July 7, 1994. This section of ditch was overgrown with weeds and brush, and the banks were fairly steep. Six transects (4-1 through 4-6) were identified beginning at Kennedy Road and running east, then north at 250-foot intervals. Twelve samples were collected from the 0- to 10-inch depth interval, 15 samples were collected from the 10- to 18-inch depth interval, and three samples were collected from the 18- to 24-inch depth interval, for a total of 30 samples. Sample numbers OC-054-LD4 through OC-073-LD4 and OC-080-LD4 through OC-089-LD4 were used for this area.

The west lower ditch (Area 5) was sampled on July 5 and 6, 1994. This section of ditch crossed several commercial/light industrial properties along Gruner Road. Ten transects (5-1 through 5-10) were identified beginning at Harlem Road and running east along Gruner Road at 250-foot intervals. Twenty samples were collected from the 0- to 10-inch depth interval, and five samples were collected from the 10- to 18-inch depth interval, for a total of 25 samples. Sample numbers OC-016-LD5 through OC-023-LD5 and OC-035-LD5 through OC-052-LD5 were used for this area.

All 55 samples collected from the lower ditch were screened using 1.0 ppm test kits. Screening results indicated that 49 of the 55 samples contained PCBs at concentrations greater than 1.0 ppm. Twenty-one samples were screened further using 10 ppm test kits, and 14 of these samples were found to also exceed 10 ppm. Based on the Task 2 analytical results and

previous RI data, PCBs have migrated throughout the lower ditch on both sides of Kennedy Road. The contamination appears to be limited to the top 10 inches in Area 5, but PCB concentrations have been found to exceed 10 ppm in Area 4 at depths up to and exceeding 24 inches.

#### Storm Sewer Beneath Conrail Yard and Broadway - Area 6

Three sediment samples were proposed to be collected from the storm sewer connecting the upper and lower drainage ditches; five samples were actually collected. This pipe runs north-south through an industrial parking lot and was also scheduled for telespection. Three access points were present in this area; one manhole (MH4) was inspected but not sampled because no sediment was present. Two receivers (REC1 and REC2) were inspected on July 7, 1994, and a sediment sample was collected from each (OC-075-REC1 and OC-079-REC2). At the time of sampling, unrelated excavation activities by the property owner (2727 Broadway, Inc.) were being conducted at three locations along the storm sewer pipe. One sediment sample was collected from each of these areas, adjacent to the pipe (OC-076-EXC through OC-078-EXC). Only the suspect outfall sample was analyzed (OC-078). This sample was selected over the other sample locations because storm water was flowing up and overland (south), indicating a possible blockage from silts and sediments. If this has occurred, the accumulated material would yield the highest probability for positive results for PCBs. Sample locations are shown on Figure 2-2, and analytical results are presented on Table 2-2.

Three of the five sediment samples collected from this area were screened using 1.0 ppm test kits. These included samples OC-075-REC1, OC-079-REC2, and OC-078-EXC. Two samples exceeded the cleanup criterion of 1.0 ppm: the sample from Receiver 1 and the sample from Excavation Area 3. Based on discussions between the E & E Project Manager and the NYSDEC project officer, two samples were not screened; these samples were collected from Excavation Areas 1 and 2. Based on the analytical results, PCBs are present in this area, but further characterization may be required to more accurately determine remediation boundaries.

#### Storm Sewer (Sloan Flume) - Area 8

Three samples were proposed to be collected from the Stoan Flume and its associated outfall and ditch. The suspected outfall area on the west side of Wagner Street in the Village of Sloan was surveyed by an E & E field team on July 5, 1994. There was no visible outfall. This was further confirmed with Mr. Anthony Sisti, Engineer in Charge, Village of Sloan Department of Public Works. Therefore, no samples were collected from the Sloan Flume.

#### Storm Sewer Downstream of the Retention Basin (Retention Basin Outfall) - Area 9

Three samples were proposed to be collected from access points to a 36-inch storm sewer pipe that runs along the east side of Harlem Road to Cayuga Creek. On July 5, 1994, three sediment samples were collected from downgradient manholes along this storm sewer pipe, as stated in the work plan. Sample OC-001-MH was collected from a manhole adjacent to the west end of the retention basin. Sample OC-002-MH was collected from a manhole in the center of Broadway below the Harlem Road overpass. The third sample (OC-003-MH) was located on the west side of east access road to Harlem Road located near Broadway, just south of the Conrail yard. Sample locations are shown on Figure 2-2 with screening result in Table 2-2.

Each of the three sediment samples were screened using 1.0 ppm test kits; all results were less than 1.0 ppm.

#### 2.1.3 Quality Assurance/Quality Control (QA/QC)

All sampling procedures used during Task 2 are consistent with United States Environmental Protection Agency (EPA) sampling procedures as outlined in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, Third Edition, September 1986.

QC samples consisted of confirmation samples and field equipment blanks. Confirmation analyses were performed on approximately 10% of all samples collected. Laboratory analytical results (Method 8080) were compared to the quantitative results from the EnSys<sup>®</sup> test kits to verify the screening method. A total of 21 confirmation samples were submitted for laboratory analysis. Screening results were found to be consistent with 17 of the 21 confirmation samples. Table 2-3 summarizes the screening results and corresponding confirmation sample results. The discrepancies in results are further discussed in Section 3.

#### 2.1.4 Field Equipment Blanks

A total of five field equipment blanks were prepared during sampling of the following areas: Lower Ditch Area 4, Lower Ditch Area 5, and the Retention Basin. The equipment blanks were prepared with washed silica sand. Screening results indicate that PCBs are not present at levels above 1.0 ppm in any of the field equipment blanks. Table 2-4 summarizes the screening results for the field equipment blanks.

#### 2.2 RESULTS OF TELESPECTION OF STORM SEWERS

Subsurface telespection of the downstream storm sewers from the NTC was performed to obtain additional information on the current condition of the sewers and debris build up in the system. During the initial RI, samples were taken from available access points, but the condition, debris, or the exact location of the outfall were never evaluated in detail.

Telespection activities were performed by Rust Industrial, Inc., of LeRoy, New York. The anticipated scope of work was to provide full video inspection of the various storm sewer lines and review them for structural integrity, size, material type, hydraulic capacity, and sediment accumulation. Flushing or cleaning of the storm sewer was restricted because flushing or cleaning would further spread PCB-contaminated sediments.

Although valuable subsurface data were provided on debris build-up and size and condition at entry points through the telespection, it did not provide the design information needed for the project. Due to the presence of excessive amounts of soil/sediment and water in the storm sewer, a camera could not run through the entire length of the storm sewers. As an option, the camera was placed in each manhole, receiver, inlet, and outfall traveling as far as it could in each direction, videotaping available information. Figure 2-3 provides information obtained from the telespection performed on July 7, 1994, and additional inspection visits performed by E & E.

A file copy of the video and chronology of the work was submitted to the NYSDEC project officer on July 25, 1994.

E & E investigated this storm sewer system further by obtaining information from the property owners, dye testing, and reviewing past aerial photos. The results of this review indicated that further exploratory work is necessary from the 2727 Broadway property to the beginning of the east lower ditch (Area 4).

#### 2.3 RESULTS OF LAND SURVEY

The field portion of the property and land surveying for this project has been completed by the subcontractor O.M. Popli. The survey base maps are still being prepared. When a draft copy of the map is submitted, E & E will review it for completeness and submit a copy to NYSDEC.

#### 2.4 DATA VALIDATION

At the time of submittal of this report, the independent data validation review had not been completed by ChemWorld Environmental. The data validation will have little effect on the results or the remediation recommendations of the additional studies report. The validated data will be used primarily in conjunction with E & E lab analyses as a basis for obtaining cleanup levels during construction.

The results of the data validation will be submitted along with the survey base maps once both have been completed.

Table 2-1

MAGNICA TILE ISLOCKINE CONTROL							
Field Sample Number	Laboratory Sample Number	1.0 ppm Kit Interpretation	10 ppm Kit Interpretation	Depth	Sample Location		
BH1-1	9601.01	-	<10	1-2'	Borehole 1, front parking lot		
BH1-2	9602.01		<10	2-2.5	Borehole 1, front parking lot		
BH1-3	9603.01	_	<10	3-4'	Borehole 1, front parking lot		
BH1-4	9604.01	-	<10	4-4.5	Berehole 1, front parking lot		
BH1-5	9605.01	-	<10	5-6'	Borehole 1, front parking lot		
ВН1-6	9606.01	-	<10	7-91	Borehole 1, front parking lot		
BH1-7	9607.01		<10	9-10'	Borchole 1, front parking lot		
ВН2-1	9481.01	<1.0		1-2'	Borehole 2, back parking lot		
BH2-2	9482.01	_	<10	2-4`	Borehole 2, back parking lot		
BH2-3	9483.01		>10	4-5'	Borehole 2, back parking lot		
BH2-4	9484.01		>10	7-81	Borehole 2, back parking lot		
BH2-5	9485.01	_	>10	8-9'	Borehole 2, back parking lot		
вн2-6	9486.01	<1.0		9-10'	Borchole 2, back parking lot		
ВН3-1	9473.01	>1.0		1-2'	Borchole 3, back parking lot		
ВН3-2	9474.01	_	>10	2-4'	Borehole 3, back parking lot		
ВН3-3	9475.01	_	>10	4-51	Borehole 3, back parking lot		
вн3-4	9476.01	-	>10	5-61	Borehole 3, back parking lot		
ВН3-5	9477.01	_	>10	6-7	Borehole 3, back parking lot		
ВН3-6	9478.01	_	>10	7-9	Borehole 3, back parking lot		
вн3-7	9479.01	_	>10	9-10'	Borehole 3, back parking lot		
ВН3-8	9480.01	<1.0		10-11	Borehole 3, back parking lot		
BH4-1	9503.01	>1.0	<10	0.5-1	Borehole 4, southwest corner of main building		
ВН4-2	9504.01	_	>10	4-6'	Borehole 4, southwest corner of main building		
ВН4-3	9505.01	_	>10	6-8	Borehole 4, southwest corner of main building		
BH4-4	9506.01	_	>10	8-10	Borehole 4, southwest corner of main building		
ВН4-5	9507.01	_	<10	10-11'	Borehole 4, southwest corner of main building		

Table 2-1

			40 751		
Field Sample Number	Laboratory Sample Number	1.0 ppm Kit Interpretation	10 ppm Kit Interpretation	Depth	Sample Location
BH4-6	9508.01		>10	11-12	Borehole 4, southwest corner of main building
BH4-7	9509.01	-	<10	12-13	Borehole 4, southwest corner of main building
BH4-8	9510.01	1	>10	16-17'	Borehole 4, southwest corner of main building
ВН4-9	9511.01	_	>10	17-18'	Borehole 4, southwest corner of main building
ВН4-10	9512.01	I	>10	18-19	Borehole 4, southwest corner of main building
BH4-11	9513.01	>1.0	-	19-20'	Borehole 4, southwest corner of main building
ВН5-1	9552.01		>10	0-2	Borehole 5, near western fenceline
ВН5-2	9553.01	-	>10	2-41	Borehole 5, near western fenceline
BH5-3	9554.01	_	>10	4-6`	Borehole 5, near western fenceline
BH5-4	9555.01	_	>10	6-8`	Borehole 5, near western fenceline
ВН5-5	9556.01	_	>10	8-10'	Borehole 5, near western fenceline
ВН5-6	9557.01		>10	10-11	Borehole 5, near western fenceline
ВН5-7	9558.01	_	<10	11-12	Borehole 5, near western fenceline
ВН5-8	9559.01	_	>10	12-13	Borehole 5, near western fenceline
ВН5-9	9560.01		>10	13-14	Borehole 5, near western fenceline
BH5-10	9561.01	_	> 10	14-15'	Borchole 5, near western fenceline
BH5-11	9562.01	_	< 10	15-16	Borehole 5, near western fenceline
вн5-12	9563.01	_	>10	16-17	Borehole 5, near western fenceline
ВН5-13	9564.01	_	< 10	17-18	Borehole 5, near western fenceline
BH5-14	9565.01	_	>10	18-19	Borehole 5, near western fenceline
вн5-1 <b>5</b>	9566.01		< 10	19-20	Borehole 5, near western fenceline
ВН6-1	9528.01	>1.0		0.5-2	Borehole 6, 40' west of Borehole 4
вн6-2	9529.01	>1.0		2-4'	Borehole 6, 40' west of Borchote 4
вн6-3	9530.01		>10	4-6`	Borehole 6, 40' west of Borehole 4
BH6-4	9531.01		< 10	6-8.	Borehole 6, 40' west of Borehole 4
ВН6-5	9532.01	_	< 10	8-10'	Borehole 6, 40' west of Borehole 4

Table 2-1

			ISTORNIER CO		
Field Sample Number	Laboratory Sample Number	1.0 ppm Kit Interpretation	10 ppm Kit Interpretation	Depth	Sample Location
вн6-6	9533.01		<10	10-11'	Borehole 6, 40' west of Borehole 4
вн6-7	9534.01	_	<10	11-12'	Borehole 6, 40' west of Borehole 4
вн6-8	9535.01	-	<10	12-13	Berehole 6, 40' west of Borehole 4
вн6-9	9536.01	_	<10	13-14'	Borehole 6, 40' west of Borehole 4
вн6-1 <b>0</b>	9537.01		>10	14-15	Borehole 6, 40' west of Borehole 4
вн6-11	9538.01	_	<10	15-16'	Borehole 6, 40' west of Borehole 4
BH6-12	9539.01	_	>10	16-17	Berehole 6, 40' west of Borehole 4
вн6-13	9540.01	_	>10	17-18'	Borehole 6, 40' west of Borehole 4
ВН6-14	9541.01		>10	18-19	Berehole 6, 40' west of Borchole 4
ВН6-1 <b>5</b>	9542.01		<10	19-20	Berehole 6, 40' west of Borehole 4
ВН7-1	9567.01	-	>10	0.5-2	Borehole 7, 40' south of Borehole 5
ВН7-2	9568.01		>10	2-4'	Borehole 7, 40' south of Borehole 5
ВН7-3	9569.01		<10	4-6'	Borehole 7, 40' south of Borehole 5
BH7-4	9570.01		<10	6-8'	Borehole 7, 40' south of Borehole 5
ВН7-5	9571.01		>10	8-10'	Borehole 7, 40' south of Borehole 5
ВН7-6	9572.01	_	>10	10-11'	Berchole 7, 40' south of Borchole 5
вн7-7	9573.01	_	<10	11-12	Berehole 7, 40' south of Borehole 5
ВН7-8	9574.01		<10	12-13	Berchole 7, 40' south of Borchole 5
ВН7-9	9575.01	_	<10	13-14'	Berehole 7, 40' south of Borehole 5
вн7-1 <b>0</b>	9576.01	_	<10	14-15'	Borehole 7, 40' south of Borehole 5
ВН7-11	9577.01		<10	15-16	Borchole 7, 40' south of Borchole 5
ВН7-1 <b>2</b>	9578.01		>10	16.5-17	Borchole 7, 40' south of Borchole 5
BH7-1 <b>3</b>	9579.01	_	<10	17-18	Borchole 7, 40' south of Borchole 5
BH7-1 <b>4</b>	9580.01	-	<10	18-19	Berchole 7, 40' south of Borchole 5
ВН7-1 <b>5</b>	9581.01		<10	19-20	Berehole 7, 40' south of Borehole 5
BH8-1	9587.01		>10	0.5-2	Borehole 8, ~60' north of Borehole 7
ВН8-2	9588.01	_	>10	2-4	Borehole 8, ~60' north of Borehole 7
BH8-3	9589.01	_	<10	4-6`	Borehole 8, ~60' north of Borehole 7
BH8-4	9590.01	_	<10	6-7'	Borehole 8, -60' north of Borehole 7

Table 2-1

Field Sample Number	Laboratory Sample Number	1.0 ppm Kit Int <b>erpretat</b> ion	10 ppm Kit Interpretation	Depth	Sample Location
вн8-5	9591.01	-	<10	7-8'	Borehole 8, ~60' north of Borehole 7
BH8-6	9592.01	1	>10	8-8.5	Borehole 8, ~60' north of Borehole 7
вн8-7	9593.01	-	>10	9-10'	Borehole 8, ~60° north of Borehole 7
ВН9-1	9594.01	-	<10	0.5-2	Borehole 9, ~70' east of Borehole 8
ВН9-2	9595.01	-	<10	2-4'	Borehole 9, ~70' east of Borehole 8
ВН9-3	9596.01	_	<10	4-6`	Borehole 9, ~70' east of Borehole 8
ВН9-4	9597.01		<10	6-7	Borehole 9, ~70' east of Borehole 8
вн9-5	9598.01	_	<10	7-81	Borehole 9, ~70' east of Borehole 8
ВН9-6	9599.01	_	>10	8-8.51	Borehole 9, ~70° east of Borehole 8
вн9-7	9600.01		<10	9-10'	Borehole 9, ~70' east of Borehole 8
ВН10-1	9617.01		>10	0-1	Borehole 10, NTC tank farm
BH10-2	9618.01		>10	1-2'	Borehole 10, NTC tank farm
ВН10-3	9619.01		>10	2-3'	Borehole 10, NTC tank farm
BH10-4	9620.01		>10	3-4`	Borehole 10, NTC tank farm
ВН10-5	9621.01	_	>10	4-5	Borehole 10, NTC tank farm

Table 2-2

Field Sa <b>mp</b> le Numb <b>er</b>	Laboratory Sample Number	1.0 ppm Kit Interpretation	10 ppm Kit Interpretation	Depth	Sample Location
OC-001-M <b>H</b>	9147.01	<1.0	_		MH1, north of Conrail Yard
OC-002-M <b>H</b>	9148.01	<1.0	_	_	MH2, center of Broadway near Harlem
OC-003-M <b>H</b>	9149.01	<1.0	_	_	MH3, access road off Broadway
OC-004-C <b>E</b> M	9150.01	>1.0	_	0-10"	10' west of culvert, 10' north of ditch center
OC-005-C <b>E</b> M	9151.01	>1.0	< 10	10-18"	10' west of culvert, 10' north of ditch center
OC-006-C <b>E</b> M	9152.01	<1.0	_	0-10"	10' north of OC-004-CEM
OC-007-C <b>E</b> M	9153.01	<1.0	_	0-10"	20' north of OC-004-CEM
OC-008-C <b>E</b> M	9154.01	>1.0	_	0-10"	19' west of OC-004-CEM
OC-009-C <b>E</b> M	9155.01	>1.0	< 10	10-18"	19' west of OC-004-CEM
OC-010-C <b>E</b> M	9156.01	<1.0		0-10"	19' west of OC-006-CEM
OC-011-C <b>E</b> M	9157.01	<1.0	-	0-10"	19' west of OC-007-CEM
OC-012-C <b>E</b> M	9158.01	>1.0	-	0-10"	38' west of OC-004-CEM
OC-013-C <b>E</b> M	9159.01	<1.0	_	10-18"	38' west of OC-004-CEM
OC-014-C <b>E</b> M	9160.01	<1.0	_	0-10"	19' west of OC-010-CEM
OC-015-C <b>E</b> M	9161.01	<1.0	_	0-10"	19' west of OC-011-CEM
OC-016-L <b>D</b> 5	9162.01	<1.0	_	10-18"	Transect 5-1, 15' east of Harlem, center
OC-017-L <b>D</b> 5	9163.01	>1.0	_	0-10"	Transect 5-1, 15' east of Harlem, north
OC-018-L <b>D</b> 5	9164.01	>1.0	_	0-10"	Transect 5-1, 15' east of Harlem, south
OC-019-L <b>D</b> 5	9165.01	<1.0	_	0-10"	Transect 5-2, 82' east of OC-017- LD5
OC-020-L <b>D</b> 5	9166.01	>1.0	_	0-10"	Transect 5-2, 82' east of OC-018- LD5
OC-021-L <b>D</b> 5	9167.01	>1.0	<10	10-18"	Transect 5-3, 250' east of OC-019- LD5, center

Table 2-2

	MAGAKA TRANSFORMER CORFORATION							
Field Sam <b>p</b> le Numbe <b>r</b>	Laboratory Sample Number	1.0 ppm Kit Int <b>erpretati</b> on	10 ppm Kit Interpretation	Depth	Sample Location			
OC-022-L <b>D5</b>	9168.01	>1.0	_	0-10"	Transect 5-3, 250' east of OC-019- LD5, north			
OC-023-L <b>D</b> 5	9169.01	>1.0	_	<b>0-</b> 10"	Transect 5-3, 250' east of OC-019- LD5, south			
OC-024-L <b>D</b> 5	9170.01	<1.0	_	_	Field blank			
OC-025-R <b>E</b> T	9171.01	<1.0	_	0-10"	Node P1-1, southwest comer			
OC-026-R <b>E</b> T	9172.01	<1.0	_	10-18"	Node P1-1, southwest comer			
OC-027-R <b>E</b> T	9173.01	<1.0		0-10"	Node P1-2, 1' above P1-1			
OC-028-R <b>E</b> T	9174.01	<1.0	_	10-18"	Node P1-2, 1' above P1-1			
OC-029-R <b>E</b> T	9175.01	<1.0	_	0-10"	Node P1-3, 2' above P1-1			
OC-030-RET	9176.01	<1.0	_	10-18"	Node P1-3, 2' above P1-1			
OC-031-R <b>E</b> T	9177.01	<1.0	_	0-10"	Node P1-4, 3' above P1-1			
OC-032-R <b>E</b> T	9178.01	< 1.0	_	10-18"	Node P1-4, 3' above P1-1			
OC-033-R <b>E</b> T	9179.01	<1.0	_	0-10"	West overflow discharge			
OC-034-R <b>E</b> T	9180.01	>1.0	_	0-10"	Outfall pipe from Conrail Yard			
OC-035-L <b>D5</b>	9181.01	>1.0		0-10"	Transect 5-4, north side			
OC-036-L <b>D5</b>	9182.01	>1.0	_	0-10"	Transect 5-4, south side			
OC-037-L <b>D</b> 5	9183.01	Not screened	Not screened	10-18"	Transect 5-4, center			
OC-038-L <b>D</b> 5	9184.01	>1.0	<10	10-18"	Transect 5-5, center			
OC-039-L <b>D5</b>	9185.01	>1.0	_	0-10"	Transect 5-5, north side			
OC-040-L <b>D5</b>	9186.01	>1.0		0-10"	Transect 5-5, south side			
OC-041-L <b>D</b> 5	9187.01	>1.0	_	0-10"	Transect 5-6, north side			
OC-042-L <b>D5</b>	9188.01	>1.0	_	0-10"	Transect 5-6, south side			
OC-043-L <b>D</b> 5	9189.01	<1.0	_	10-18"	Transect 5-7, center			
OC-044-L <b>D</b> 5	9190.01	>1.0	-	0-10"	Transect 5-7, north side			
OC-045-L <b>D</b> 5	9191.01	>1.0	_	0-10"	Transect 5-7, south side			
OC <b>-04</b> 6-L <b>D</b> 5	9192.01	>1.0	_	0-10"	Transect 5-8, north side			
OC-047-L <b>D</b> 5	9193.01	>1.0	_	0-10"	Transect 5-8, south side			

Table 2-2

		TOAKA TIKA			
Field Sample Number	Laboratory Sample Number	1.0 ppm Kit Interpretation	10 ppm Kit Interpretation	Depth	Sample Location
OC-048-L <b>D5</b>	9194.01	>1.0	<10	10-18"	Transect 5-9, center
OC-049-L <b>D</b> 5	9195.01	>1.0	-	0-10"	Transect 5-9, north side
OC-050-L <b>D</b> 5	9196.01	<1.0	_	0-10"	Transect 5-9, south side
OC-051-L <b>D</b> 5	9197.01	>1.0	_	0-10"	Transect 5-10, north side
OC-052-L <b>D</b> 5	9198.01	>1.0	_	0-10"	Transect 5-10, south side
OC-053-L <b>D</b> 4	9247.01	<1.0	_		Field blank
OC-054-L <b>D</b> 4	9248.01	>1.0	>10	10-18"	Transect 4-1, center
OC-055-L <b>D</b> 4	9249.01	>1.0	< 10	18-24"	Transect 4-1, center
OC-056-L <b>D</b> 4	9250.01	>1.0		0-10"	Transect 4-1, north side
OC-057-L <b>D</b> 4	9251.01	>1.0	< 10	10-18"	Transect 4-1, north side
OC-058-L <b>D</b> 4	9252.01	>1.0	_	0-10"	Transect 4-1, south side
OC-059-L <b>D</b> 4	9253.01	>1.0	< 10	10-18"	Transect 4-1, south side
OC-060-L <b>D</b> 4	9254.01	>1.0	_	0-10"	Transect 4-2, north side
OC-061-L <b>D</b> 4	9255.01	>1.0	>10	10-18"	Transect 4-2, north side
OC-062-L <b>D</b> 4	9256.01	>1.0		0-10"	Transect 4-2, south side
OC-063-L <b>D</b> 4	9257.01	>1.0	>10	10-18"	Transect 4-2, south side
OC-064-L <b>D</b> 4	9258.01	>1.0	<10	10-18"	Transect 4-3, center
OC-065-L <b>D</b> 4	9259.01	>1.0	>10	18-24"	Transect 4-3, center
OC-066-L <b>D</b> 4	9260.01	>1.0		0-10"	Transect 4-3, north side
OC-067-L <b>D</b> 4	9261.01	>1.0	>10	10-18"	Transect 4-3, north side
OC-068-L <b>D</b> 4	9262.01	>1.0	_	0-10"	Transect 4-3, south side
OC-069-L <b>D</b> 4	9263.01	>1.0	>10	10-18"	Transect 4-3, south side
OC-070-L <b>D</b> 4	9264.01	>1.0		0-10"	Transect 4-4, north side
OC-071-L <b>D</b> 4	9265.01	>1.0	< 10	10-18"	Transect 4-4, north side
OC-072-L <b>D</b> 4	9266.01	>1.0		0-10"	Transect 4-4, south side
OC-073-L <b>D</b> 4	9267.01	>1.0	>10	10-18"	Transect 4-4, south side
OC-074-M <b>H</b>	_	Not screened	Not screened		No sample taken, manhole dry

Table 2-2

Field Sam <b>pl</b> e Numbe <b>r</b>	Laboratory Sample Number	1.0 ppm Kit Int <b>erpretati</b> on	10 ppm Kit Interpretation	Depth	Sample Location
OC-075-REC1	9268.01	>1.0	_	_	Area 6 - Receiver 1
OC-076-E <b>XC</b>	9269.01	Not screened	Not screened	1	Area 6 - Excavation Area 1
OC-077-E <b>XC</b>	9270.01	Not screened	Not screened	ł	Area 6 - Excavation Area 2
OC-078-E <b>XC</b>	9271.01	>1.0	_	1	Area 6 - Excavation Area 3
OC-079-REC2	9272.01	<1.0	>10	_	Area 6 - Receiver 2
OC-080-L <b>D4</b>	9273.01	<1.0	_	0-10"	Transect 4-5, north side
OC-081-LD4	9274.01	<1.0	<10	10-18"	Transect 4-5, north side
OC-082-L <b>D4</b>	9275.01	>1.0	_	0-10"	Transect 4-5, south side
OC-083-L <b>D4</b>	9276.01	>1.0	>10	<b>10-</b> 18"	Transect 4-5, south side
OC <b>-08</b> 4-LD <b>4</b>	9277.01	>1.0	>10	<b>10-</b> 18"	Transect 4-6, center
OC-085-L <b>D4</b>	9278.01	>1.0	>10	18-24"	Transect 4-6, center
OC-086-L <b>D4</b>	9279.01	>1.0	_	0-10"	Transect 4-6, north side
OC-087-L <b>D4</b>	9280.01	>1.0	>10	10-18"	Transect 4-6, north side
OC-088-L <b>D4</b>	9281.01	>1.0	_	0-10"	Transect 4-6, south side
OC-089-L <b>D4</b>	9282.01	>1.0	>10	10-18"	Transect 4-6, south side
OC-090-L <b>D4</b>	9283.01	<1.0	_	_	Field blank
OC-091-RE <b>T</b>	9355.01	>1.0	_	0-10"	Node P2-1, south side
OC-092-RET	9356.01	<1.0	< 10	10-18"	Node P2-1, south side
OC-093-R <b>ET</b>	9357.01	<1.0	_	0-10"	Node P2-2, 1' above P2-1
OC-094-RE <b>T</b>	9358.01	Not screened	Not screened	10-18"	Node P2-2, 1' above P2-1
OC-095-R <b>ET</b>	9359.01	<1.0	_	0-10"	Node P2-3, 2' above P2-1
OC-096-RE <b>T</b>	9360.01	Not screened	Not screened	10-18"	Node P2-3, 2' above P2-1
OC-097-RET	9361.01	<1.0	_	0-10"	Node P2-4, 3' above P2-1
OC-098-RET	9362.01	Not screened	Not screened	10-18"	Node P2-4, 3' above P2-1
OC-099-RET	9363.01	<1.0	_	0-10"	Node P3-1, north side
OC-100-RET	9364.01	<1.0	<10	10-18"	Node P3-1, north side
OC-101-RE <b>T</b>	9365.01	< 1.0		0-10"	Node P3-2, 1' above P3-1

Table 2-2

Field Sa <b>mp</b> le Numb <b>er</b>	Laboratory Sample Number	I.0 ppm Kit Int <b>erpretati</b> on	10 ppm Kit Interpretation	Depth	Sample Location
OC-102-R <b>ET</b>	9366.01	Not screened	Not screened	10-18"	Node P3-2, 1' above P3-1
OC-103-R <b>ET</b>	9367.01	<1.0	_	0-10"	Node P3-3, 2' above P3-1
OC-104-R <b>ET</b>	9368.01	Not screened	Not screened	10-18"	Node P3-3, 2' above P3-1
OC-105-R <b>ET</b>	9369.01	<1.0	_	0-10"	Node P3-4, 3' above P3-1
OC-106-R <b>ET</b>	9370.01	Not screened	Not screened	10-18"	Node P3-4, 3' above P3-1
OC-107-R <b>ET</b>	9371.01	>1.0	_	0-10"	Node P4-1, north side
OC-108-R <b>ET</b>	9372.01	<10	_	10-18"	Node P4-1, north side
OC-109-R <b>ET</b>	9373.01	>1.0		0-10"	Node P4-2, 1' above P4-1
OC-110-R <b>ET</b>	9374.01	Not screened	Not screened	10-18"	Node P4-2, 1' above P4-1
OC-111-R <b>ET</b>	9375.01	>1.0		0-10"	Node P4-3, 2' above P4-1
OC-112-R <b>ET</b>	9376.01	Not screened	Not screened	10-18"	Node P4-3, 2' above P4-1
OC-113-R <b>ET</b>	9377.01	>1.0		0-10"	Node P4-4, 3' above P4-1
OC-114-R <b>ET</b>	9378.01	Not screened	Not screened	10-18"	Node P4-4, 3' above P4-1
OC-115-R <b>ET</b>	9379.01	<1.0	. –		Field błank
OC-116-R <b>ET</b>	9380.01	Not screened	Not screened	0-10"	Node P5-1, centerline
OC-117-R <b>ET</b>	9381.01		< 10	10-18"	Node P5-1, centerline
OC-118-R <b>ET</b>	9382.01	Not screened	Not sereened	0-10"	Node P5-2, 5' north of P5-1
OC-119-R <b>ET</b>	9383.01	+	< 10	10-18"	Node P5-2, 5' north of P5-1
OC-120-R <b>ET</b>	9384.01	Not screened	Not screened	0-10"	Node P5-3, 25' north of P5-2
OC-121-R <b>ET</b>	9385.01	1	< 10	10-18"	Node P5-3, 25' north of P5-2
OC-122-R <b>ET</b>	9386.01	>1.0	_	0-10"	Node P5-4, 10' north of P5-3
OC-123-R <b>ET</b>	9387.01	Not screened	Not sereened	10-18"	Node P5-4, 10' north of P5-3
OC-124-R <b>ET</b>	9388.01	Not screened	Not screened	0-10"	Node P5-1S, 5' south of P5-1
OC-125-R <b>ET</b>	9389.01	-	>10	10-18"	Node P5-1S, 5' south of P5-1
OC-126-R <b>ET</b>	9390.01	Not screened	Not screened	0-10"	Node P5-2S, 20' south of P5-1S
OC-127-R <b>ET</b>	9391.01	t	>10	10-18"	Node P5-2S, 20' south of P5-1S
OC-128-R <b>ET</b>	9392.01	>1.0	_	0-10"	Node P5-3S, 10' south of P5-2S

Table 2-2

Field Sample Number	Laboratory Sample Number	1.0 ppm Kit Interpretation	10 ppm Kit Interpretation	Depth	Sample Location
OC-129-R <b>ET</b>	9393.01	Not screened	Not screened	10-18"	Node P5-3S, 10' south of P5-2S
OC-130-R <b>ET</b>	9394.01	<1.0	Not screened	0-10"	Node P6-1, parking lot drainage
OC-131-R <b>ET</b>	9395.01	1	< 10	10-18"	Node P6-1, parking lot drainage
OC-132-R <b>ET</b>	9396.01	>1.0		0-10"	Node P6-2, 7' south of P6-1
OC-133-R <b>ET</b>	9397.01	Not screened	Not screened	10-18"	Node P6-2, 7' south of P6-1
OC-134-R <b>ET</b>	9398.01	>1.0		0-10"	Node P6-3, 7' south of P6-2
OC-135-R <b>ET</b>	9399.01	Not screened	Not screened	10-18"	Node P6-3, 7' south of P6-2
OC-136-R <b>ET</b>	9400.01	<1.0	_	0-10"	Node P6-4, 4' south of P6-3
OC-137-R <b>ET</b>	9401.01		< 10	10-18"	Node P6-4, 4' south of P6-3
OC-138-RET	9402.01	>1.0	_	0-10"	Node P6-5, 7' north of P6-1
OC-139-R <b>ET</b>	9403.01	-	< 10	10-18"	Node P6-5, 7' north of P6-1
OC-140-R <b>ET</b>	9404.01	< 1.0	_	0-10"	Node P6-6, 7' north of P6-5
OC-141-R <b>ET</b>	9405.01	>1.0		10-18"	Node P6-6, 7' north of P6-5
OC-142-R <b>ET</b>	9406.01	>1.0		0-10"	Node P6-7, 4' north of P6-6
OC-143-R <b>ET</b>	9407.01	Not screened	Not screened	10-18"	Node P6-7, 4' north of P6-6
OC-144-R <b>ET</b>	9408.01	<1.0		_	Field blank

Note: Some samples not screened as per E & E project manager based on previous data.

Table 2-3

## PCB SCREENING RESULTS FOR CONFIRMATION SAMPLES TASK 2: ADDITIONAL STUDIES NIAGARA TRANSFORMER CORPORATION

Field Sample Number	Laboratory Number	Sample Location	Screening Result (ppm)	Laboratory Result <sup>a</sup> (ppm)
OC-001-MH	9147.01	Area 9	<1.0	0.049 (1260)
OC-011-CEM	9157.01	Arca 2	<1.0	0.058 (1260)
OC-018-LD5	9164.01	Lower Ditch 5	>1.0	1.7 (1260)
OC-035-LD5	9181.0 <b>1</b>	Lower Ditch 5	>1.0	<b>15</b> (1260)
OC-064-LD4	9258.01	Lower Ditch 4	>1.0	1.5 (1260)
OC-079-REC2b	9272.01	Area 6	<1.0, >10	620 (1260)
OC-092-RET	9356.01	Area 3	<1.0, <10	0.066 (1260)
OC-101-RET	9365.01	Area 3	<1.0	0.36 (1260)
OC-108-RET	9372.01	Area 3	< 10	2.0 (1260)
OC-117-RET	9381.01	Area 3	<10	0.97 (1260)
OC-136-RET	9400.01	Area 3	<1.0	0.60 (1260)
OC-141-RET <sup>b</sup>	9405.01	Area 3	>1.0	0.027 (1242) 0.13 (1260)
BH6-10	9537.01	Borehole 6	>10	<b>5</b> 7 (1260)
BH6-15	9542.01	Borehole 6	< 10	0.20 (1260)
BH7-12 <sup>b</sup>	9578.01	Borehole 7	> 10	4.5 (1260)
BH8-1	9587.01	Borchole 8	> 10	94 (1260)
BH9-2	9595.01	Borchole 9	< 10	0.13 (1260)
ВН9-6 <sup>b</sup>	9599.01	Borehole 9	>10	1.3 (1260)
ВН9-7	9600.01	Borehole 9	< 10	0.28 (1260)
BH10-1	9617.0 <b>1</b>	Borchole 10	>10	65 (1254)
BH10-5	9621.01	Borehole 10	>10	210 (1260)

a Numbers in parentheses identify specific PCB Aroclor.

b Indicated differences from screening and analytical results.

#### Table 2-4

### PCB SCREENING RESULTS FOR FIELD EQUIPMENT BLANKS

### TASK 2: ADDITIONAL STUDIES NIAGARA TRANSFORMER CORPORATION

Field Sample Number	Laboratory Sample	Sample Location	Screening Result (ppm)
OC-024-LD5	9170.01	Lower Ditch Area 5	<1.0
OC-053-LD4	9247.01	Lower Ditch Area 4	<1.0
OC-090-LD4	9283.01	Lower Ditch Area 4	<1.0
OC-115-RET	9379.01	Arca 3	<1.0
OC-144-RET	9408.01	Area 3	<1.0

#### 3. CONCLUSIONS AND RECOMMENDATIONS

#### 3.1 CONCLUSIONS RESULTING FROM ADDITIONAL FIELD STUDIES

As a result of the additional studies performed on site and off site of the Niagara Transformer site the following conclusions have been reached.

#### NTC Site - Area 1 (On Site)

The cleanup goals for PCBs at Area 1 have been established as less than 1 ppm in soils from 0 to 1 foot BGS and less than 10 ppm for depths greater than 1 foot BGS.

The conclusions reached as a result of the additional on-site soil borings activity are fairly consistent with the RI conducted by Woodward-Clyde. None of the borehole samples screened from the front parking lot exceed the 10 ppm cleanup criterion. Excavation of soils for removal and disposal in this area will not be required.

The subsurface soils at the driveway east of the facility indicate contamination with PCBs exceeding 10 ppm to a depth of approximately 9 feet BGS; and PCB concentrations are less than 1 ppm at 10 feet BGS. This is consistent with the probable areas of oil application, as previously outlined in the RI/FS.

Six boreholes were installed on the south side of the building to 10-foot and 20-foot depths. The subsurface soil samples generally indicate contamination with PCBs greater than 10 ppm at the deep holes to 19 feet BGS and at the shallow holes to 10 feet BGS. The results of analysis at BH4 show PCB contamination near the building greater than 10 ppm to 19 feet BGS. This depth could be deeper because the bottom limit screening sample was greater than 1 ppm. Due to the difficulty in hand auguring, the screening samples at BN-10 only extended to 5 feet BGS. All screening results were greater than 10 ppm, indicating a deeper level of contamination at the tank farm beyond our sampling limit.

The soils in the south grassed area of the property were not sampled further due to adequate sampling information available from the RI.

Extensive remediation of surface and subsurface soils using excavation and screening techniques are recommended for the project on the east and south sides of the site.

#### North Conrail Ditch - Area 2 (Off Site) - Niagara Transformer Site to Thruway Mall

PCB contamination exceeding 1 ppm was found at the 0- to 18-inch depth interval 10 feet north from the center line of the north ditch (samples OC-004-CEM, OC-005-CEM, OC-008-CEM, OC-009-CEM, and OC-012-CEM). Sample collected 20 feet and 30 feet north of the ditch center line indicated contamination less than 1 ppm (samples OC-006-CEM, OC-007-CEM, OC-010-CEM, OC-011-CEM, OC-014-CEM, and OC-015-CEM) at 0- to 10-inches, but areas previously sampled under the RI (RI-10, RI-11, RI-12, RI-15, RI-18, RI-19, RI-20, RI-26, RI-27, and RI-28) were noted as contaminated with PCB concentrations greater than 1 ppm from 0 to 6 inches.

Remediation is still recommended for this area using screening techniques after excavation.

#### Thruway Mall Retention Basin - Area 3 (Off Site)

PCB contamination was found at the 0- to 18-inch depth interval at the east end and middle of the retention pond. Moving west from the east side of the basin, the depth of contamination ranges from 0- to 10-inches BGS. A few 3- to 4-foot deep marshy areas are also present, which could be used as low point sumps during the remediation. The area recommended for remediation includes excavation of sediments up to the wetted perimeter of the retention basin and 1 foot up the slopes of all embankments. The cleanup goals for the area have been established as 1.0 ppm or less at 0- to 1-foot BGS and 10 ppm at greater than 1 foot BGS.

#### Lower East Ditch - Area 4 (Off Site)

As a result of the samples taken, all screening results exceeded the 1 ppm limit. To meet cleanup goals of the ROD, the remedial action in this area will include excavation of centerline ditch sediments to a depth of 24 inches BGS and to the top of the banks of the drainage ditch to a depth of 10 inches BGS.

#### Lower West Ditch - Area 5 (Off Site)

The majority of the screened samples exceed the 1 ppm cleanup goal in the 0- to 10foot horizons at the centerline and top of bank locations. Centerline samples do not exceed
10 ppm levels at the centerline 10- to 18-inch depth. To meet cleanup goals, the remedial
action in this area includes excavation of centerline sediments to a depth of 10 inches BGS
and to the top of the banks of the drainage ditch to a depth of 10 inches BGS.

#### Storm Sewers from North Ditch to Lower East Ditch - Area 6 (Off Site)

PCB concentrations exceeding 1 ppm were found in the storm sewer sediment and excavations. The storm sewer should be flushed, dragged or vacuumed, and cleaned of sediments for the remediation action. The sewer should then be re-telespected at completion for review of efficiency of cleanup performed and assessment of pipe for stormwater flow.

#### St. Adalbert's Cemetery - West of NTC - Area 7 (Off Site)

PCB concentrations exceeding 1 ppm were found in this area during the initial RI from 0- to 6-inches BGS. Removal of selected surface soils is still anticipated under the remedial action to reach the cleanup goal of 1 ppm.

#### Sloan Flume Outfall - Area 8 (Off Site)

No remediation work will be required in this area.

#### NYSDOT Storm Sewer - West Retention Basin - Area 9 (Off Site)

PCBs were not detected in any samples collected from this area. No remediation or cleanout work will be required in this area.

#### 3.2 OUTSTANDING ISSUES RESULTING FROM ADDITIONAL FIELD STUDY

#### Storm Sewer Unknown - Area 6

Upon review of the available data about this storm sewer system from property owners and additional E & E-investigated work with dye testing, previous aerial photographs, and discussions with the property owners and NYSDOT, the path and outfall of this storm sewer drainage is still unknown from the south end of the property at 2727 Broadway to the

beginning of the east lower ditch (Area 4). Only part of the storm sewer system can be identified as a result of three recent excavations performed by the current property owner at 2727 Broadway. Subsurface information is incomplete from the south property line going south for approximately 486 feet.

Additional information should be obtained during the design phase to supplement existing data and minimize the possibility of construction extras or change orders being required during the remedial construction. Further subsurface exploratory work during the design phase is recommended to determine the extent of the work before the construction phase.

#### Structural/Substructural Analysis Needed at Niagara Transformer

Based on results from on-site subsurface soil boring activities, PCB contamination exceeding the cleanup level of 10 ppm possibly extends up to 10- to 20-feet below the south parking lot at the main NTC manufacturing building at the NTC Site, greater than 5 feet below the tank farm, and at 4- to 6-feet on the remaining south grassed area of the site.

Due to the depth of excavation activities around the buildings to achieve the cleanup goal, some structure or substructure instability is likely to occur. E & E recommends that a structural firm review and assess the foundations and recommend or design shoring needed during deep excavation remediation.

Additional discussions with NYSDEC are also recommended in order to review the cleanup goals and remediation alternatives from the FS to achieve the project goals (i.e., subsurface liners, slurry wall enclosures, etc.).

#### New Construction and Grading Activities Along Project Site

Since the discovery of PCBs in 1991, new construction activities and property regrading has taken place along the project drainage area. New construction activities include the Norfolk-Southern new auto transport area, Dinaire property improvements, the construction of Bison Parkway (Town road), and the most recent regrading of the back part of the Broadway Wholesale, Inc., property.

Aerial photographs were obtained from Erie County Division of Planning for the years 1951, 1960 and 1972. The results of reviewing those areas indicates that no minor

ditch or drainage pattern realignments have occurred. What has occurred is the installation of new drainage structures and pipes as site improvements to cover over existing ditches.

One issue that needs to be addressed under the design phase is whether contamination is still **pr**esent near these improvements and whether further characterization is required. Further definition of at least the four previously mentioned areas may assist NYSDEC in furthering the project cleanup goals.

#### Long Lead Items for the Project

Easements. The need to obtain permanent or temporary easements for the project may become a time-critical item. At a minimum, 16 properties need to be accessed during this project.

During the design phase, once the working areas are further defined to provide proper construction space, the initiation of easements will be discussed and reviewed further with the NYSDEC team.

Permits. During the design phase, pre-construction and post-construction permits that will impact the project will be reviewed.

#### Location of Cemetery Graves in Removal Action

Surface remediation is required along the south and east areas of the cemetery. It is anticipated that 0- to 6-inches of contaminated earth will be removed from the surface of the cemetery. St. Adalbert's Cemetery personnel reported that during past fires at the cemetery office records on graves on the east and south sides of the cemetery next to the Niagara Transformer property were lost. Previous aerial photos indicate graves in the remediation areas. A further survey of graves using electromagnetic survey equipment to detect subsurface anomalies (i.e., headstones, shallow graves) should be considered. This issue may be sensitive and should be discussed further during the design phase.

#### Future Schedule Constraints on other Major Public or Private Construction Projects

Broadway Reconstruction. At present, NYSDOT has scheduled reconstruction of the section of Broadway Avenue from Harlem to Union Road to begin in mid to late 1996. The remediation work is expected to be completed in late 1995, prior to this NYSDOT construction project.

Part of the reconstruction of Broadway by NYSDOT will include redirecting the drainage at the existing Conrail crossing and road drainage west on Broadway, connecting into either existing town drainage lines or drainage on NYSDOT-dedicated easements west of the existing storm sewer. The drainline running north and south along the 2727 Broadway Inc. property does not have any temporary or permanent easements for this storm sewer. This will be corrected as a result of the road reconstruction.

The early remediation of the NTC site is a concern of the NYSDOT Broadway reconstruction project because they do not wish to handle hazardous/toxic wastes under their contract.

Cheektowaga Drainage. The Town of Cheektowaga is reviewing reducing the amount of drainage into the Sioan Flume. The town is considering rerouting the drainage from Lower Ditch 4, which includes residential drainage in the area, to a new discharge to be constructed under the railroad at the end of Kennedy Road draining directly into Buffalo Creek. At this time there are no formalized plans for this drainage rerouting. The Niagara Transformer site cleanup project should not affect this project. Drainage improvements by NYSDOT as mentioned above may also lessen the drainage to this area.

#### Discrepancies Between EnSys® Analysis and Laboratory QA/QC

Laboratory confirmation sample analysis was performed on 21 soil and sediment samples collected and screened during Task 2. Of these 21 samples, 10 were screened using 1.0 ppm EnSys® test kits, and 11 were screened using the 10 ppm kits. Screening results were found to be consistent with the Method 8080 PCB analyses in 17 of the 21 samples, providing an accuracy of approximately 81%. The EnSys® test kits ordinarily provide an accuracy of 95% or better; reduction in the accuracy with this project may be the result of several factors.

Field experience has shown that the screening results can be affected by sample moisture and organic content, as well as soil composition. Water present in the soil can add to the weight of the samples; excessive moisture content (up to 30%) is likely to interfere with the extraction solvent and affect the results. Sample OC-079 contained 26% moisture, which may contribute to the fact that the laboratory result was 620 ppm despite the negative (less than 1.0 ppm) screening result. Incomplete homogenization of soils in the sample containers may also cause discrepancies. Sample OC-141 exhibited a false positive result with the 1 ppm screening kit; samples BH7-12 and BH9-6 both exhibited false positives with the 10 ppm screening kits. Excessive concentrations of organic compounds present in the samples may result in chemical cross-reactivity (false positives). Samples with mostly stone or clay-like composition or fines may present difficulty during sample extraction.

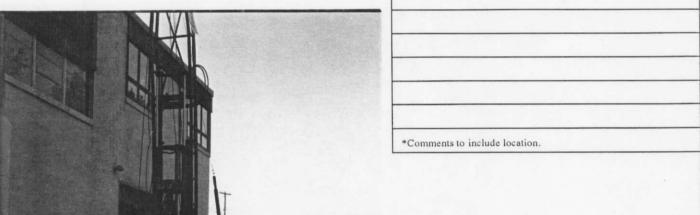
The results of E & E testing show a lower confidence level than previously stated. While the screening process is still valid in performing project cleanup, laboratory analysis should be required to accurately confirm that the cleanup levels have been achieved during remediation.

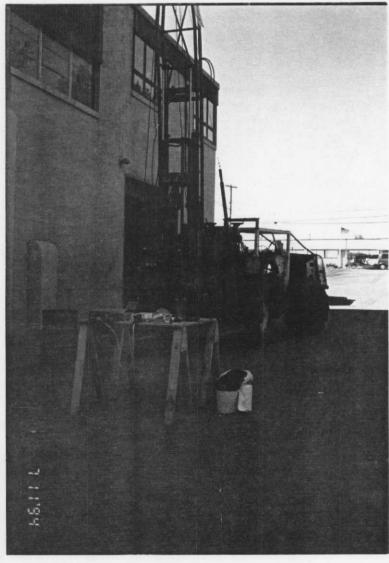
#### APPENDIX A

## PHOTOGRAPHIC LOG ON-SITE BORING AND DRILLING

ecology and environment, inc. PHOTOGRAPHIC RECORD		
Client: NYSDEC	E & E Job No.: OC5021	
Site: Niagara Transformer No. 9-15-146		
Camera: Make	SN	
Lens Type	SN	
	Photographer: Rick Watt Date: 7-11-94	
	Time: 1700 Frame No.: 1	

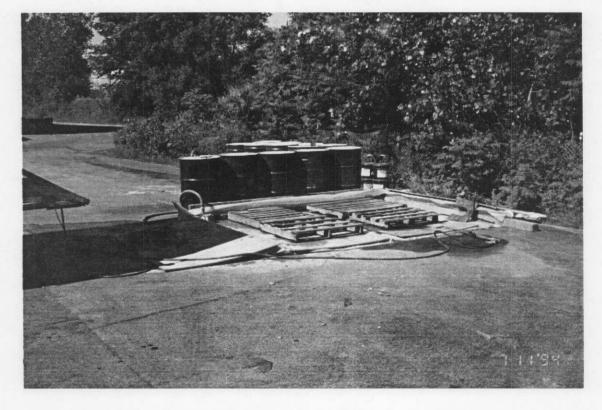
Comments\*: (facing north)



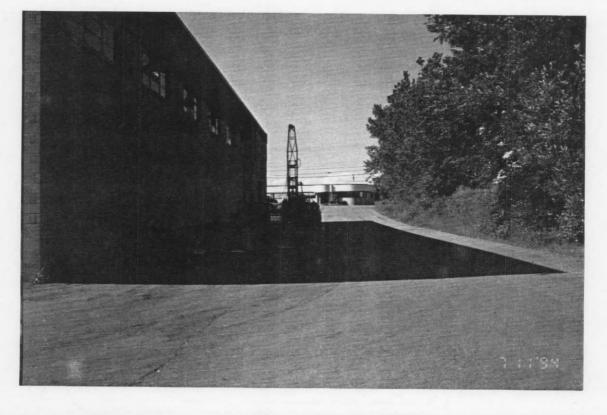


Drill rig set up at Borehole-2

ecology and environment, inc. PHOTOGRAPHIC RECORD	
Client: NYSDEC	E & E Job No.: OC5021
ite: Niagara Transformer Site No. 9-15-146	
Camera: Make	SN
Lens Type	SN
	Photographer: Rick Watt Date: 7-11-94
	Time: 1700 Frame No.: 2
	Comments*: Initial decontamination pad set up.
	(Decon. pad later upgraded.)
	*Comments to include location.



ecology and environment, inc. PHOTOGRAPHIC RECORD	
Client: NYSDEC	E & E Job No.: OC5021
Site: Niagara Transformer Site No. 9-15-146	
Camera: Make	SN
Lens Type	sn
	Photographer: Rick Watt Date: 7-11-94
	Time: 1700 Frame No.: 3
	Comments*: East side of main building (facing
	north).
	*Comments to include location.



Client: NYSDEC E & E Job No.: OC5021

Site: Niagara Transformer Site 9-15-146

Lens Type

Camera: Make SN

Photographer: Rick Watt Date: 7-12-94

Time: 0910 Frame No.: 4

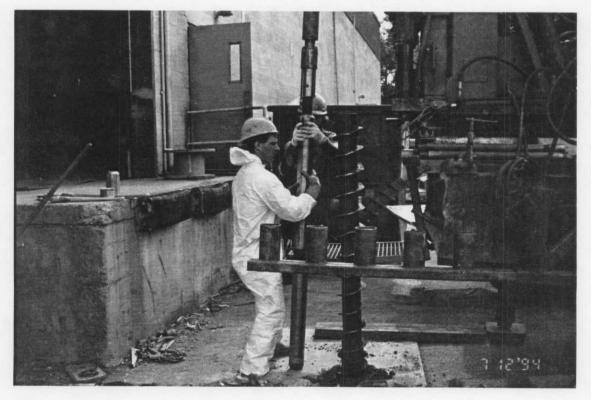
Comments\*: Borehole 4 subsurface soil; 4 to 6-foot

interval.

SN



ecology and environment, inc. PHOTOGRAPHIC RECORD	
Client: NYSDEC	E & E Job No.: OC5021
ite: Niagara Transformer Site No. 9-15-146	
Camera: Make	SN
Lens Type	SN
	Photographer: Rick Watt Date: 7-12-94
	Time: 0915 Frame No.: 5
	Comments*: Pulling laskey sampler from borehole 4
	(facing east).
	*Comments to include location.



SN

Client: NYSDEC E & E Job No.: OC5021

Site: Niagara Transformer Site No. 9-15-146

Camera: Make SN

Lens Type

Photographer: Rick Watt Date: 7-12-94

Time: 0945 Frame No.: 6

Comments\*: Borehole 4 subsurface soil; 6-foot

(bottom right) to 11-foot (top left) interval.



# ecology and environment, inc. PHOTOGRAPHIC RECORD Client: NYSDEC E & E Job No.: OC5021 Site: Niagara Transformer Site No. 9-15-146

Camera: Make SN

Lens Type SN

Photographer: Rick Watt Date: 7-13-94

Time: 0915 Frame No.: 7

Comments\*: Drill rig set up at Borehole 5 (facing north).



#### ecology and environment, inc. PHOTOGRAPHIC RECORD E & E Job No.: OC5021 NYSDEC Client: Niagara Transformer Site No. 9-15-146 Site: SN Camera: Make SN Lens Type Rick Watt Date: 7-13-94/1150 Photographer: 1150 Frame No.: Time: Drill rig set up at Borehole 7 (facing Comments\*: east).



Client: NYSDEC	E & E Job No.: OC5021	
Site: Niagara Transformer Site No. 9-15-146		
Camera: Make	SN	
Lens Type	SN	

Photographer: Rick Watt Date: 7-13-94

Time: 1152 Frame No.: 9

Comments\*: Borehole 7 subsurface soil; upper splitspoon is from the 2- to 4-foot interval (bottom to the right), and the lower split-spoon is from the 4- to 6-foot interval (bottom to the right).



Client: NYSDEC E & E Job No.: OC5021

Site: Niagara Transformer Site No. 9-15-146

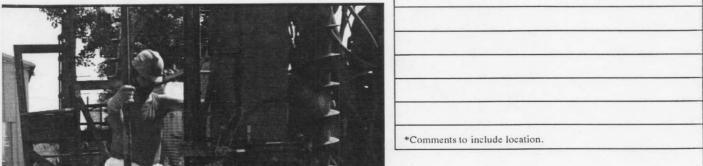
Camera: Make SN

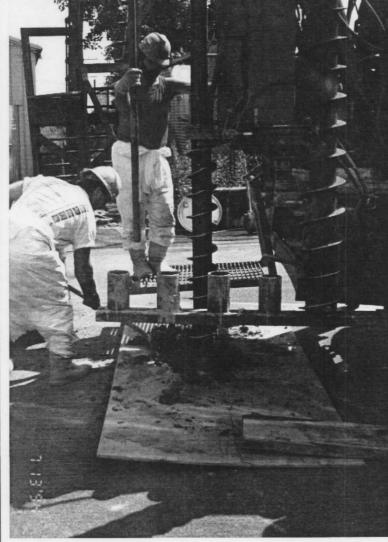
Lens Type SN

Photographer: Rick Watt Date: 7-13-94

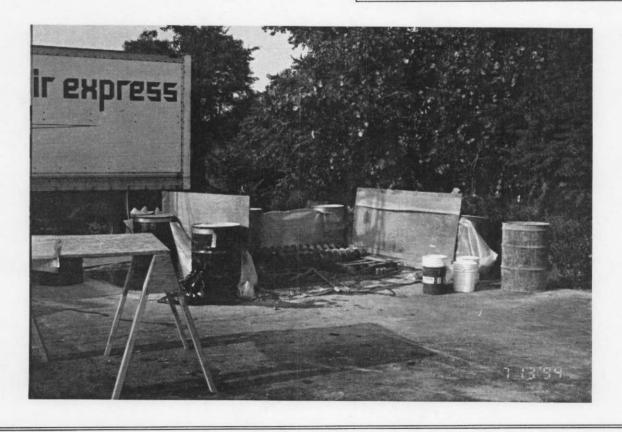
Time: 1540 Frame No.: 10

Comments\*: Drilling at Borehole 8 (facing south).





ecology and environment, inc. PHOTOGRAPHIC RECORD	
Client: NYSDEC	E & E Job No.: OC5021
Site: Niagara Transformer Site No. 9-15-146	
Camera: Make	SN
Lens Type	SN
	Photographer: Rick Watt Date: 7-13-94
	Time: 1700 Frame No.: 11
	Comments*: Upgraded decontamination pad (facing
	northeast).
	*Comments to include location.



ecology and environment, inc. PHOTOGRAPHIC RECORD	
Client: NYSDEC	E & E Job No.: OC5021
Site: Niagara Transformer Site No. 9-15-146	
Camera: Make	SN
Lens Type	SN
	Photographer: Rick Watt Date: 7-13-94
	Time: 1702 Frame No.: 12
	Comments*: Mobile drill rig used on site (facing
	north).
	*Comments to include location.



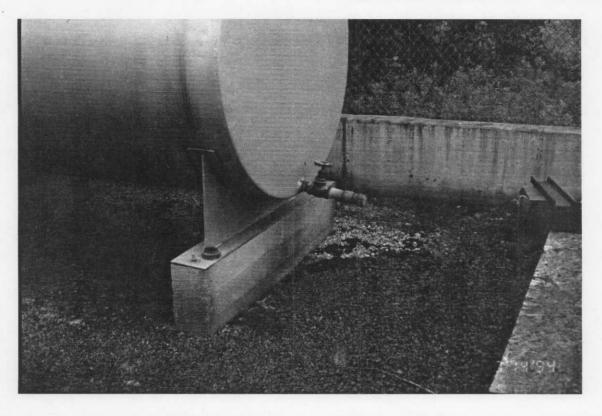
ecology and environment, inc. PHOTOGRAPHIC RECORD	
Client: NYSDEC	E & E Job No.: OC5021
Site: Niagara Transformer Site No. 9-15-146	
Camera: Make	SN
Lens Type	SN
	Photographer: Rick Watt Date: 7-13-94
	Time: 1900 Frame No.: 13
	Comments*: Drill rig set up at Borehole 1 (facing
	east).



ecology and environment, inc. PHOTOGRAPHIC RECORD	
Client: NYSDEC	E & E Job No.: OC5021
Site: Niagara Transformer Site No. 9-15-146	
Camera: Make	SN
Lens Type	SN
	Photographer: Rick Watt Date: 7-14-94
	Time: 0940 Frame No.: 14
	Comments*: Location of Borehole 10 after sampling
	in tank farm.
	*Comments to include location.
	*Comments to include location.



ecology and environment, inc. PHOTOGRAPHIC RECORD	
Client: NYSDEC	E & E Job No.: OC5021
Site: Niagara Transformer Site No. 9-15-146	
Camera: Make	SN
Lens Type	SN
	Photographer: Rick Watt Date: 7-14-94
	Time: 0941 Frame No.: 15
	Comments*: Oily gravel around south tank.
	Borehole 10 location is just off bottom left of photo.
	*Comments to include location.



Client: NYSDEC E & E Job No.: OC5021

Site: Niagara Transformer Site No. 9-15-146

Camera: Make SN

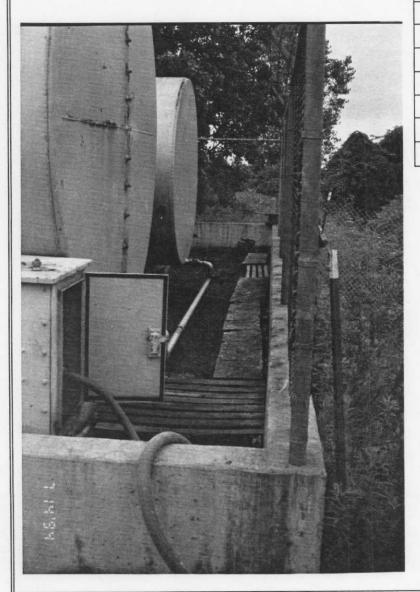
Lens Type SN

Photographer: Rick Watt Date: 7-14-94

Time: 0943 Frame No.: 16

Comments\*: West side of tanks. Cannot see third

small tank adjacent to Borehole 10 (facing south).



#### ecology and environment, inc. PHOTOGRAPHIC RECORD OC5021 E & E Job No.: NYSDEC Client: Niagara Transformer Site No. 9-15-146 Site: SN Camera: Make SN Lens Type 7-14-94 Photographer: Rick Watt Date: 1000 Frame No.: 17 Time: View facing east across parking lot, Comments\*: toward decontamination pad, after completion of drilling activities. \*Comments to include location.



Client: NYSDEC	
	E & E Job No.: OC5021
ite: Niagara Transformer Site No. 9-15-146	
Camera: Make	SN
Lens Type	SN
	Photographer: Rick Watt Date: 7-14-94
	Time: 1130 Frame No.: 18
	Comments*: View facing east; area formerly occupied
	by decontamination pad, after final clean up.
	*Comments to include location.



ecology and environment, inc. PHOTOGRAPHIC RECORD	
Client: NYSDEC	E & E Job No.: OC5021
Site: Niagara Transformer Site No. 9-15-146	
Camera: Make	SN
Lens Type	SN
	Photographer: Rick Watt Date: 7-14-94
	Time: 1135 Frame No.: 19
	Comments*: View facing west-southwest of parking
	lot after completion. Asphalt patch in foreground is
	Borehole 7 and patch in background is Borehole 6.
	*Comments to include location.

