FINAL REPORT

REMEDIAL ACTION REPORT
ORANGE AND ROCKLAND

HILLBURN AND LOVETT GENERATING STATIONS
HILLBURN AND TOMKINS COVE, NEW YORK

VOLUME I - TEXT

Prepared for

ORANGE AND ROCKLAND
One Blue Hill Plaza
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June 4, 1999

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1		PCB Cleanup Report for the Hillburn Generating Station, Hillburn, NY	June 4, 1999
1		Remedial Action Report for the Hillburn and Lovett Generating Stations, Hillburn and Tomkins Cove, New York	June 4, 1999

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APPENDICES

URS Greiner Woodward Clyde (URSGWC) was retained by Orange and Rockland Utilities, Inc. (ORU) to prepare Phase I Environmental Site Assessments (ESAs) for eight generating stations in Orange, Rockland, and Sullivan Counties. The ESAs identified several "recognized environmental conditions." ASTM Practice E 1527-97, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, defines recognized environmental conditions as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property."

Based on information in the Phase I ESAs, focused Phase II investigations were conducted at the eight stations in September 1998. Additional Phase II investigations were conducted at five of the eight stations in November 1998. The objective of the Phase II investigations was to confirm the presence of "recognized environmental conditions" associated with the sale of ORU electrical generating assets.

During the September 1998 sampling event, samples were collected from all of the areas of concern (AOCs) identified in the Phase I ESAs for the Hillburn and Lovett Generating Stations. During this initial Phase II investigation, sample locations were selected based on historical information or staining.

Based on the results of the September 1998 samples, additional Phase II sampling was conducted in selected AOCs in November 1998. Additional Phase II sample locations were selected with a bias toward high concentrations of chemical contaminants detected during the initial Phase II investigation.

Based on the potential source for each AOC, the September and November soil samples were analyzed for volatile organic compounds (VOCs), base neutral (BN) compounds, acid extractables, polychlorinated biphenyls (PCBs), and/or metals. The analytical results were compared to soil cleanup objectives in the following guidance documents, as applicable:

- NYSDEC Revised TAGM, HWR-94-4046 - Determination of Soil Cleanup Objectives and Cleanup Levels (January 24, 1994); and
- New York State Department of Environmental Conservation (NYSDEC) STARS Memo #1 Petroleum-Contaminated Soil Guidance (August 1992).

Based on the results of the Phase II investigations, further action was recommended at the Hillburn and Lovett Generating Stations located in Rockland County, New York (Figures 1 and 2). No further action was recommended for the other facilities which underwent the Phase II work. The Remedial Action Work Plan (RAWP), dated March 1999 (Appendix A), was developed to identify the areas of concern (AOCs) to be remediated and discuss self-implemented remediation of the selected AOCs.

This report summarizes the activities conducted in April 1999 to remediate the selected AOCs at the Hillburn and Lovett Generating Stations and dispose of remediation waste. The text portion of this report is divided into five sections. Section 1.0 is the introduction. Information regarding the site background and physical setting is presented in Section 2.0. Section 3.0 summarizes previous investigations associated with the areas selected for remediation. A discussion of field

procedures is presented in Section 4.0. Section 5.0 discusses the extent of the excavations and summarizes the post-excavation results. References are provided in Section 6.

The following subsections summarize the site features and environmental conditions at the Hillburn and Lovett Generating Stations.

2.1 HILLBURN GENERATING STATION

The Hillburn Generating Station is located on Fourth Street, Hillburn, Rockland County, New York (Figure 1) and occupies approximately 13 acres. The Hillburn Generating Station is bound by the Ramapo River to the west, the United Water Company to the north, Conrail Railroad tracks to the east, and Fourth Street to the south.

According to the USGS topographic map provided in Figure 1, the Property is at an elevation of approximately 290 feet above mean sea level (msl) and slopes gently southwest toward the Ramapo River. Groundwater and surface drainage at the site are assumed to mimic the topography and flow southwest toward the Ramapo River. According to the report provided by Environmental Data Research, Inc. (EDR), the depth to groundwater in the vicinity of the Property is 17 feet below ground surface (bgs).

The Hillburn Generating Station, a 43-megawatt gas turbine generating station, has been used historically as a coal-fired electric generating station since circa 1921. The Property's coal fired generating capabilities ceased approximately 20 years ago. The following structures are located at the Hillburn Generating Station:

- Gas Turbine Building housing the generator;
- 69 kilovolt (kV) and 138 kV Substations and the Control Building;
- Former 34.5 kV Substation;
- Former Gas Turbine Transformer Switching Substation;
- Aboveground Storage Tank (AST);
- Transmission and Distribution Systems; and
- Gas Regulator Station.

The site plan and relevant features are shown on Figure 3.

2.2 LOVETT GENERATING STATION

The Lovett Generating Station is located on the west bank of the Hudson River in Tomkins Cove, Rockland County, New York, approximately 40 miles north of New York City (Figure 2). The station occupies approximately 60 acres and is bound by the Hudson River to the north, east, and south, and Conrail and residential properties to the west.

According to the USGS topographic map provided in Figure 2, the Property is at an elevation of approximately seven feet above msl and slopes gently east toward the Hudson River. Groundwater and surface drainage at the site are assumed to mimic the topography and flow east toward the Hudson River. According to the report provided by EDR, the depth to groundwater in the vicinity of the Property is between 4 and 10 feet bgs.

The Lovett Generating Station has a maximum generating capability of 440 megawatts. The following structures are located at the Property:

- Main building and support buildings;

- 69 kV and 138 kV Substations;
- Marine terminal;
- 12-inch fill line for the tank farm;
- Tank farm;
- Pump house; and
- Day tanks.

The main building contains five coal, natural gas, and oil-fired generating units (three active and two retired). Transmission connections are located at 69 kV and 138 kV substations. These substations connect the generating units to the main grid. The site plan and relevant features are shown on Figure 4.

The following subsections provide a brief description of the AOCs selected for remedial action, as well as a summary of previous sampling conducted in each of them.

3.1 HILLBURN GENERATING STATION

Four AOCs were selected for remedial action at the Hillburn Generating Station on the basis of staining and chemical concentrations in soil samples in excess of NYSDEC soil cleanup objectives. The four AOCs include the following:

- 138 kV Substation (AOC-2A);
- 69 kV Substation (AOC-2B);
- Gas Turbine Switching Transformer Substation (AOC-2E); and
- Equipment Storage Area (AOC-5).

3.1.1 138 kV Substation (AOC-2A)

The 138 kV Substation (AOC-2A) contains transformers and associated equipment located on a concrete pad which is on gravel. During the Phase I site reconnaissance conducted in July 1998, the large transformer in this substation was leaking at the flanges and oil stains were present on the gravel.

During the September 1998 investigation of AOC-2A, two surface soil samples (SS-02a-1 and SS-02a-2) from 1 to 2 feet below ground surface (bgs) and one subsurface (SB-02a-1) soil sample from 2 to 4 feet bgs were collected. Four subsurface soil samples (HIL-SB-1198-02a-1 through HIL-SB-1198-02a-4) were collected from 2 to 4 feet bgs in November 1998. The samples from both events were analyzed for VOCs, BNs, and PCBs. No VOC or PCB exceedances of the soil cleanup objectives were identified; however, BN exceedances were identified in both sampling events.

3.1.2 69 kV Substation (AOC-2B)

Ground cover in the 69 kV Substation (AOC-2B) is primarily gravel with what appears to be slag/ash-like material. During the July 1998 site reconnaissance, evidence of leakage was observed around the Bank 917 transformer located inside the substation.

During the September 1998 investigation of AOC-2B, two surface soil samples (SS-02b-1 and SS-02b-2) were collected from 1 to 2 feet bgs, and one subsurface soil sample (SB-02b-1) was collected from 2 to 4 feet bgs in AOC-2B. Four subsurface soil samples (HIL-SB-1198-02b-1 through SB-1198-02b-4) were collected from 2 to 4 feet bgs in November 1998. The samples from both events were analyzed for VOCs, BNs and PCBs. No VOC or PCB exceedances of the soil cleanup objectives were identified; however, BN exceedances were identified in both sampling events.

3.1.3 Gas Turbine Switching Transformer Substation (AOC-2E)

Transformer Bank 617 is located in the Gas Turbine Switching Transformer Substation (AOC-2E) located directly north of the Gas Turbine Building. According to the faceplate located on the transformer, the date of manufacture was March 1971. The transformer contains a sticker

certifying that the fluid inside the transformer contains less than 50 ppm of PCBs. The transformer is located on crushed stone with a concrete curb around the unit. Staining was evident on the crushed stone during the July 1998 site reconnaissance.

During the September 1998 investigation of AOC-2E, two surface soil samples (SS-02e-1 and SS-02e-2) were collected from 1 to 2 feet bgs, and one subsurface soil sample (SB-02e-1) was collected from 2 to 4 feet bgs. The samples were analyzed for VOCs, BNs, and PCBs. No VOC exceedances of the soil cleanup objectives were identified; however, BN and PCB exceedances were identified.

3.1.4 Equipment Storage Yard (AOC-5)

Spare transformers, oil circuit breakers, and other miscellaneous electrical power equipment were stored in the Equipment Storage Yard (AOC-5) located behind the Substation Control Building. The ground cover in the yard is primarily crushed stone. During the July 1998 site reconnaissance, staining was observed on the ground beneath a set of three oil circuit breakers located in the Equipment Storage Yard.

During the September 1998 investigation of AOC-5, two surface soil samples (SS-05-1 and SS-05-2) were collected from 1 to 2 feet bgs, and three subsurface soil samples (SB-05-1, SB-05-2, and SB-05-2b) were collected from 2 to 10 feet bgs. In November 1998, four subsurface samples (HIL-SB-1198-05-1 through HIL-SB-1198-05-4) were collected from 2 to 10 feet bgs. The samples from both events were analyzed for VOCs, base neutral/acid extractable compounds (BNAs) and PCBs. The VOC, acid extractable, and PCB concentrations did not exceed soil cleanup objectives; however, BN exceedances were identified in both sampling events.

3.2 LOVETT GENERATING STATION

Five AOCs were selected for remedial action at the Lovett Generating Station due to staining and chemical concentrations in excess of NYSDEC soil cleanup objectives. The five AOCs include the following:

- AOC-1B: East Side of Shaker Building;
- AOC-2A: 138 kV Substation;
- AOC-2B: 69 kV Substation;
- AOC-5A: Unit 1 Transformer; and
- AOC-5C: Unit 3 Transformer.

3.2.1 East Side of Shaker Building (AOC-1B)

Unloaded coal is moved through a conveyor system located in the Shaker Building and then sent to the Crusher Building to be recrushed and sent either directly to the coal generating units or to the stockpile. The crusher house is separate from the Shaker Building. During the July 1998 site reconnaissance, a stain was observed along the East Side of the Shaker Building (AOC-1B). The stain was approximately 30 square feet in area and appeared to emanate from the Shaker Building.

During the September 1998 investigation of AOC-1B, one surface soil sample (SS-01b-1) was collected from 1 to 2 feet bgs, and two subsurface soil samples (SB-01b-1 and SB-01b-2) were collected from 2 to 10 feet bgs. In November 1998, four subsurface soil samples (LOV-SB-1198-01b-1 through LOV-SB-1198-01b-4) were collected from 2 to 10 feet bgs. The samples from both events were analyzed for VOCs, BNAs and metals. The VOC and acid extractable concentrations did not exceedance the soil cleanup objectives; however, BN and metal exceedances were identified in both sampling events.

3.2.2 138 kV Substation (AOC-2A)

The 138 kV electrical distribution substation (AOC-2A) is located north of the Tank Farm. Staining was observed around the large transformer located in the 138 kV substation during the July 1998 site reconnaissance.

During the September 1998 investigation of AOC-2A, two surface soil samples (SS-02a-1 and SS-02a-2) were collected from 1 to 2 feet bgs, and one subsurface soil sample (SB-02a-2) was collected from 2 to 4 feet bgs. In November 1998, three surface soil samples (LOV-SS-1198-02a-1 through LOV-SS-1198-02a-3) were collected from 1 to 2 feet bgs, and two subsurface soil samples (LOV-SB-1198-02a-1 and LOV-SB-1198-02a-2) were collected from 2 to 4 feet bgs. The samples were analyzed for VOCs, BNs and PCBs. No VOC or PCB exceedances of soil cleanup objectives were identified; however, BN exceedances were identified in both sampling events.

3.2.3 69 kV Substation (AOC-2B)

The 69 kV electric distribution substation (AOC-2B) is located south of the main building. During the July 1998 site reconnaissance, heavy staining was observed around the oil circuit breakers, voltage regulator #3324 and transformer banks 633 and 533.

During the September 1998 investigation of AOC-2B, two surface soil samples (SS-02b-1 and SS-02b-2) were collected from 1 to 2 feet bgs, and one subsurface soil sample (SB-02b-2) was collected from 2 to 4 feet bgs. In November 1998, ten subsurface soil samples (LOV-SB-1198-02b-1 through LOV-SB-1198-02b-10) were collected from 2 to 4 feet bgs. The samples were analyzed for VOCs, BNs and PCBs. No VOC or PCB exceedances of soil cleanup objectives were identified; however, BN exceedances were identified during both events.

3.2.4 Unit 1 Transformer (AOC-5A)

The transformer associated with Unit 1 (AOC-5A) is located west of the Powerhouse on crushed stone. During the July 1998 site reconnaissance, staining was observed around the transformer associated with Unit 1.

In September 1998, one surface soil sample (SS-05-1) was collected from AOC-5A and analyzed for VOCs, BNs, and PCBs. No VOC or PCB exceedances were identified; however, several BN concentrations exceeded soil cleanup objectives.

3.2.5 Unit 3 Transformer (AOC-5C)

The transformer associated with Unit 3 (AOC-5C) is located west of the Powerhouse on crushed stone. This transformer has a label indicating that the dielectric fluid contains 120 ppm of PCBs.

In September 1998, one surface soil sample (SS-05-3) was collected from AOC-5C and analyzed for VOCs, BNs, and PCBs. No VOC or PCB exceedances were identified; however, several BN concentrations exceeded soil cleanup objectives.

3.3 REMEDIAL ACTION OBJECTIVES

The objective of the remedial action was to remove areas of soil with staining to the extent possible without compromising the integrity of nearby structures. Post-excavation soil samples were laboratory analyzed, and results were compared to NYSDEC soil cleanup objectives. The purpose of the comparison was to document post-excavation conditions. The soil removal activities were evaluated in terms of concentrations of contaminants present throughout the site consistent with background conditions in similar industrial settings. Field procedures used to achieve these objectives are described in the Section 4.

In April 1999, stained materials were excavated from the areas selected for remedial action. Following excavation, post-excavation sampling was conducted. All of the composite samples were submitted for BN and metal analyses. Samples from AOC-2E were also analyzed for PCBs. All excavations were backfilled with certified clean fill.

The BN analytical results were compared to New York State Department of Conservation, Division of Technical and Administrative Guidance Memorandum (TAGM) on Determination of Soil Cleanup Objectives and Cleanup Levels dated January 24, 1994 (HWR-94-4046). Several cleanup criteria are listed in the TAGM document; the most stringent values were used to evaluate the soil results. Inorganic constituents were compared to Eastern USA background concentrations as presented in Table 4 of the NYSDEC TAGM.

4.1 EXCAVATION OF CONTAMINATED MATERIAL

Stained material was excavated from the areas selected for remediation by Miller Environmental Group Inc. (Miller), a New York State-licensed hazardous waste contractor, with oversight by URSGWC. The material was removed using either a track-hoe with a 1 yard bucket or a vacuum equipped truck designed for the removal of solids. The vacuum equipped truck was used in areas that were not accessible with a track-hoe.

Excavated materials were stockpiled on site pending waste characterization. Liquid waste was not encountered during excavation activities.

4.2 POST-EXCAVATION SAMPLING

Post excavation sampling was conducted to document the condition of the remaining soil. One composite sample was collected from each of the side walls, and one composite sample was collected from the bottom of the excavation. All samples were collected six inches below the exposed surface area.

The soil samples were collected and transferred to the appropriate laboratory-supplied containers using a decontaminated, stainless steel spoon. Composite samples were mixed in the field in disposable aluminum pans with dedicated stainless steel spoons. The sample containers were labeled and stored on ice in a sample shuttle.

4.3 QA/QC SAMPLING

Field blanks were collected to evaluate potential sample contamination due to sampling equipment. Field blanks were collected by pouring laboratory pure water over one of the decontaminated sampling devices to be used for sample collection that day. As the laboratory water cascaded off the sampling device, it was collected in the appropriate container for analysis.

Duplicate samples were analyzed to evaluate the representativeness of soil samples. Duplicate samples were collected in the same manner as the associated sample, and analyzed for the same analytical parameters.

4.4 LABORATORY ANALYSIS

All post-excavation samples were analyzed by Hampton-Clarke, Inc. of Wayne, New Jersey for an abbreviated list of BNs by Method 8270 and metals by Method 6010. An abbreviated list of BNs was selected for analysis since only a few BNs were identified in previous investigations. Selected PCB samples were analyzed by Method 8082.

The analytical results for the post-excavation samples are summarized in Tables 1 and 2. The analytical results for QA/QC samples are summarized in Tables 3 and 4. Analytical data sheets are presented in Appendix B. Complete data packages, which are available upon request, are on file with URSGWC and ORU.

4.5 SAMPLE HANDLING

The analytical laboratory provided pre-cleaned and prepared sample containers for this project. The laboratory also prepared and supplied the required field blank sample containers and reagent preservatives. Sample containers were placed into sample shuttles. The sample shuttles were filled with "blue ice" or natural ice to maintain an approximate temperature of 4°C.

4.6 CHAIN-OF-CUSTODY PROCEDURES

Information recorded on the chain-of-custody form includes the date, time, sample identification, analysis requested, and other relevant information (e.g., preservatives). The chain-of-custody form provides a continuous record of dates, places and all individuals who received and handled each sample. They ensure sample integrity and identity prior to delivery to the laboratory.

4.7 DECONTAMINATION PROCEDURES

Stainless steel sampling equipment was decontaminated prior to the sampling event, between sampling locations, and between sampling depths. Sampling equipment was cleaned using non-phosphate detergent and water.

All equipment used for intrusive activities was decontaminated prior to each sampling event and after field activities. Decontamination consisted of washing with a non-phosphate detergent and brushing to remove encrusted material. Non-disposable tools were cleaned between sampling locations to minimize the potential for cross contamination. Since the volume of decontamination water was minimal, it was combined with the excavated material and disposed off site.

4.8 BACKFILLING AND SITE RESTORATION

Once post-excavation sample results consistent with industrial site background (levels for coal-fired generating facilities where waste coal is present in surface and fill material) were obtained, the excavated areas were backfilled with certified clean fill. The excavated areas were restored to pre-remedial grades. The backfill material was clean granular fill with a permeability less than or equal to that of the existing material. The fill was free of deleterious materials, extraneous debris and any particles larger than six inches.

4.9 DISPOSAL OF EXCAVATED MATERIALS

The excavated material was stockpiled on site and sampled for waste characterization. The waste characterization results are presented in Tables 5 and 6. Based on the analytical results, the excavated material will be transported by Miller licensed disposal facilities. Oil contaminated soils which were tested and characterized as non-hazardous were transported to EMSI of Fort Edward, New York for disposal. PCB contaminated soils were transported to CWM Chemical Services of Model City, New York.

4.10 DOCUMENTATION OF FIELD ACTIVITIES

The field activities were documented to allow an accurate reconstruction of events. Information regarding sample collection, field measurements, and other field data was included in the daily field notes. The field notes also included date, name of sampler, and any other pertinent observations. Photographs were taken to document field conditions including site facilities, sample locations, excavation extent and location.

Specific details, including excavation depths, number and location of post-excavation samples collected, and field observations, are included in the following sections. The post-excavation samples are summarized in Table 1.

5.1 HILLBURN GENERATING STATION

The following subsections discuss the remedial activities at the Hillburn Generating Station.

5.1.1 138 kV Substation (AOC-2A)

Stained material was removed from the north and east side of Bank 317 which is located in the 138 kV substation (AOC-2A). Approximately 10 cubic yards of soil were removed. Along the northern side, the excavation was approximately 17 feet (west-east) by 3 feet (north-south). Along the eastern side, the excavation was approximately 4 feet (west-east) by 6 feet (north-south). The area was excavated to a depth of 3.5 feet.

BNs and metals were detected in post-excavation base (HIL-0499-2A-1-W, HIL-0499-2A-1-N, HIL-0499-2A-1-S, HIL-0499-2A-1-E) and sidewall (HIL-0499-2A-1-BN, HIL-0499-2A-1-BE, HIL-DUP-OM) samples at concentrations generally consistent with site industrial background concentrations. One exceedance of mercury was identified; removal of additional material would have compromised the stability of the transformer excavation. As the remedial action objectives were achieved, the excavation was backfilled with clean fill.

Mercury is not considered a common contaminant at former electrical generating facilities, because it is not used in the process. The mercury detected here is likely the result of a ruptured manometer at this location and is considered an isolated event.

5.1.2 69 kV Substation (AOC-2B)

Stained material was removed from the east side of Bank 917 which is located in the 69 kV substation (AOC-2B). Approximately 6 cubic yards of soil were removed. The excavation was approximately 7.5 feet (north-south) by 2.5 feet (west-east). The area was excavated to a depth of 3 feet. Since BNs and metals were detected in post-excavation base (HIL-0499-2B-E3, HIL-0499-2B-B) and sidewall (HIL-0499-2B-N, HIL-0499-2B-S, HIL-0499-2B-W, HIL-0499-2B-E) samples at concentrations generally consistent with site industrial background concentrations, the remedial action objectives had been achieved, and the excavation was backfilled with clean fill.

5.1.3 Gas Turbine Switching Transformer Substation (AOC-2E)

Stained material was removed from the north and east side of Bank 617 which is located in the Gas Turbine Switching Transformer Substation (AOC-2E). Approximately 4 cubic yards of soil were removed. Along the northern side, the excavation was approximately 6 feet (west-east) by 4 feet (north-south). Along the eastern side, the excavation was approximately 2 feet (north-south) by 3 feet (west-east). The areas were excavated to a depth of 3.5 feet. Since BNs and metals were detected in post-excavation base (0499AOC2END) and sidewall (0499AOC2EN, 0499AOC2ES, 0499AOC2EW, 0499AOC2EE) samples at concentrations

generally consistent with site industrial background concentrations, the remedial action objectives had been achieved, and the excavation was backfilled with clean fill.

This AOC was also sampled for polychlorinated biphenyls (PCBs). The PCB results are addressed in the PCB Cleanup Report dated May 1999.

5.1.4 Equipment Storage Area (AOC-5)

Stained material was excavated from the Equipment Storage Area (AOC-5). The area initially excavated measured approximately 8 feet (west-east) by 8 feet (north-south) and was excavated to a depth of 1.5 feet. Post-excavation samples (HIL-0499-5-1-E, HIL-0499-5-1-W, HIL-0499-5-1-N, HIL-0499-5-1-S, HIL-0499-5-1-B, HAOCBWS, HAOC5BNS, HAOC5BCOMP) identified BN and metal concentrations generally consistent with site industrial background except for mercury.

Additional material was removed to a depth of 3 feet at which refusal was encountered. The refusal was caused by what appeared to be an electrical conduit. The second round of post-excavation samples were consistent with industrial site background; the remedial action objectives had been achieved and, therefore, the excavation was backfilled with clean fill.

5.2 LOVETT GENERATING STATION

The following subsections discuss the remedial activities at the Lovett Generating Station.

5.2.1 East Side of Shaker Building (AOC-1B)

Approximately 4 cubic yards of stained material were excavated from the east side of the Shaker Building (AOC-1B). The material excavated included the following:

- stained material around the hydraulic unit located adjacent to the Shaker Building;
- stained material between the railroad tracks located approximately 5 feet east of the Shaker Building; and
- stained material extending east from the railroad tracks.

The area near and between the railroad track was excavated to a depth of 1.5 feet to prevent compromising the structural integrity of the railroad tracks. The area east of the railroad tracks was excavated to 2.5 feet bgs. Since BNs and metals were detected in the post-excavation base samples (LAOC1B1 through LAOC1B4) at concentrations generally consistent with site industrial background, the remedial action objectives had been achieved, and the area was backfilled.

5.2.2 138 kV Substation (AOC-2A)

Stained material was excavated beneath the north and west sides and southwest corner of Bank 447 and northeast corner of Bank 147. Bank 447 is located in the south end of the 138 kV Substation (AOC-2A), and Bank 147 is located in the north end. Approximately 4 cubic yards of soil were removed. Since BNs and metals were detected in post-excavation base

(LAOC2ANW2, LAOC2ASW1, LAOC2AB447) and sidewall (LAOC2ASS1, LAOC2ANS2) samples at concentration generally consistent with site industrial background, the remedial action objectives had been achieved, and the areas were backfilled.

5.2.3 69 kV Substation (AOC-2B)

Approximately 6 cubic yards of stained material was excavated from the 69 kV Substation. The material excavated included the following:

- stained soil beneath three leaking circuit breakers located immediately west inside the entrance;
- stained soil around Bank 663; and
- small stained area.

Since BNs and metals were detected in post-excavation base and sidewall samples associated with the circuit breakers (LAOC2BCB, LAOC2BCS), Bank 663 (LAOC2BBK663B, LAOC2BBK663) and the small stained area (LAOC2BSB) at concentrations generally consistent with site industrial background, the remedial action objectives had been achieved, and the areas were backfilled.

5.2.4 Unit 1 Transformer (AOC-5A)

Stained material was excavated from all four sides of Bank 147, the Unit #1 Transformer (AOC-5A). Approximately 10 cubic yards of soil were removed. Since BNs and metals in the post-excavation samples (LAOC5ASS, LAOC5AES, LAOC5AWS, LAOC5ANS, LAOC5AB) were detected at concentrations generally consistent with site industrial background, the remedial action objectives had been achieved, and the area was backfilled.

5.2.5 Unit 3 Transformer (AOC-5C)

Stained material was excavated around an elevated hydraulic tank located southwest of the Unit #3 Transformer (AOC-5C). Approximately 2 cubic yards of soil were removed. Since BNs and metals were detected in post-excavation base sample (LAOC5CB) at concentrations generally consistent with site industrial background, the remedial action objectives had been achieved, and the area was backfilled.

American Society for Testing and Materials (ASTM) Standard Practice for environmental Site Assessments, ASTM Practice E 1527-97 40 CFR parts 750 and 761.

New York State Department of Environmental Conservation (NYSDEC), Revised Technical and Administrative Guidance Memorandum (TAGM), HWR-94-4046, on Determination of Soil Cleanup Objectives and Cleanup Levels dated January 24, 1994.

USEPA Test Methods for Evaluating Solid Waste, Physical and Chemical Methods SW-846, 3rd Edition, Final Update 1.

NYSDEC STARS Memo #1 – Petroleum Contaminated Soil Guidance (August 1992).

TABLE 1
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
HILLBURN GENERATING STATION

AREA OF CONCERN	Recommended	AOC-2A/BANK 317			AOC-2A/BANK 317			AOC-2A/BANK 317			AOC-2A/BANK 317		
W-C SAMPLE NO.	Soil	**HIL-0499-2A-1-BN**			**HIL-0499-2A-1-BE**			**HIL-DUP-OM**			**HIL-0499-2A-1-N**		
LAB ID	Cleanup	AA82795			AA827800			AA82801			AA82797		
SAMPLE COLLECTION DATE	Objectives	04/09/99			04/09/99			04/09/99			04/09/99		
DEPTH		3' (BASE)			3' (BASE)			3' (BASE)			1.5' (N SIDEWALL)		
MATRIX		SOIL			SOIL			SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG			MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds													
Acenaphthene	50	3.9	--		3.9	--		9.7	--		0.37	--	
Acenaphthylene	41	3.9	--		3.9	--		9.7	--		0.37	--	
Anthracene	50	3.9	--		3.9	--		9.7	--		0.37	--	
Benzo(a)Anthracene	0.224 or MDL	3.9	--		3.9	--		9.7	--		0.37	--	
Benzo(a)Pyrene	0.061 or MDL	3.9	--		3.9	--		9.7	--		0.37	--	
Benzo(b)Fluoranthene	1.1	3.9	--		3.9	--		9.7	--		0.37	--	
Benzo(g,h,i)Perylene	50	3.9	--		3.9	--		9.7	--		0.37	--	
Benzo(k)Fluoranthene	1.1	3.9	--		3.9	--		9.7	--		0.37	--	
Chrysene	0.4	3.9	--		3.9	--		9.7	--		0.37	--	
Dibenzo(a,h)Anthracene	0.014 or MDL	3.9	--		3.9	--		9.7	--		0.37	--	
Fluoranthene	50	3.9	--		3.9	--		9.7	--		0.37	--	
Fluorene	50	3.9	--		3.9	--		9.7	--		0.37	--	
Indeno(1,2,3-cd)Pyrene	3.2	3.9	--		3.9	--		9.7	--		0.37	--	
Naphthalene	13	3.9	--		3.9	--		9.7	--		0.37	--	
Phenanthrene	50	3.9	--		3.9	--		9.7	--		0.37	--	
Pyrene	50	3.9	--		3.9	--		9.7	--		0.37	--	
Total Semi-Volatile Organic Compounds			0			0			0			0	
Metals (1)													
Aluminum	33000		11000			9600			11000			11000	
Antimony	-		1.7			1.7			1.5		1.1	--	
Arsenic	12 (2)		6.4			11			6.2			3	
Barium	600		54			41			44			25	
Beryllium	1.75	0.23	--		0.24	--		0.23	--		0.22	--	
Cadmium	1		**1.5**			0.37			**1.4**		0.22	--	
Calcium	35000 (2)		910			1300			1100			770	
Chromium	40 (2)		14			12			13			8.8	
Cobalt	60 (2)		8.1			7.7			6.8			4.6	
Copper	50		25			31			23			15	
Iron	550000		19000			21000			24000			18000	
Lead	500		37			28			31			15	
Magnesium	5000		2500			2300			2700			2800	
Manganese	5000		310			250			310			200	
Mercury	0.2		0.12			**0.22**			0.076		0.056	--	
Nickel	25		13			13			12			7	
Potassium	43000 (2)		530			510			520			630	
Selenium	3.9	12	--		12	--		12	--		11	--	
Silver	-	2.9	--		2.9	--		2.9	--		2.8	--	
Sodium	8000	230	--		230	--		230	--			530	
Thallium	-	0.87	--		0.88	--		0.87	--		0.83	--	
Vanadium	300		28			26			25			18	
Zinc	50		**370**			**380**			**430**			150	

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994
MDL Method Detection Limit
CONC Concentration
Q Qualifier
- No criteria established
(1) Eastern USA Background Criteria
(2) New York State Background
-- Not Detected
NA Not analyzed
J Estimated value
N North
S South
E East
W West

TABLE 1
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
HILLBURN GENERATING STATION

AREA OF CONCERN	Recommended	AOC-2A/BANK 317			AOC-2A/BANK 317			AOC-2A/BANK 317			AOC-2B/BANK 917		
W-C SAMPLE NO.	Soil	**HIL-0499-2A-1-S**			**HIL-0499-2A-1-W**			**HIL-0499-2A-1-E**			**HIL-0499-2B-E3**		
LAB ID	Cleanup	AA82798			AA82796			AA82799			AA82906		
SAMPLE COLLECTION DATE	Objectives	04/09/99			04/09/99			04/09/99			04/12/99		
DEPTH		1.5' (S SIDEWALL)			1.5' (W SIDEWALL)			1.5' (E SIDEWALL)			2.5' (BASE)		
MATRIX		SOIL			SOIL			SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG			MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds													
Acenaphthene	50	0.55	--		0.55	--		0.39	--		11	--	
Acenaphthylene	41		0.28	J	0.55	--			0.13	J	11	--	
Anthracene	50		0.2	J	0.55	--			0.11	J	11	--	
Benzo(a)Anthracene	0.224 or MDL		**0.51**	J		**0.15**	J		**0.58**		11	--	
Benzo(a)Pyrene	0.061 or MDL		**0.72**			**0.15**	J		**0.44**		11	--	
Benzo(b)Fluoranthene	1.1		0.73			0.2	J		0.44		11	--	
Benzo(g,h,i)Perylene	50		1.1			0.12	J		0.26	J	11	--	
Benzo(k)Fluoranthene	1.1		0.31	J	0.55	--			0.2	J	11	--	
Chrysene	0.4		**0.56**			0.17	J		**0.49**		11	--	
Dibenzo(a,h)Anthracene	0.014 or MDL		**0.18**	J	0.55	--		0.39	--		11	--	
Fluoranthene	50		0.84			0.26	J		0.76		11	--	
Fluorene	50	0.55	--		0.55	--		0.39	--		11	--	
Indeno(1,2,3-cd)Pyrene	3.2		0.72		0.55	--			0.19	J	11	--	
Naphthalene	13	0.55	--		0.55	--		0.39	--		11	--	
Phenanthrene	50		1.5			0.19	J		1		11	--	
Pyrene	50		1.3			0.31	J		1.6		11	--	
Total Semi-Volatile Organic Compounds			8.95			1.55			6.2			0	
Metals (1)													
Aluminum	33000		13000			8500			10000			8600	
Antimony	-		1.3			1.2			1.3			2.6	
Arsenic	12 (2)		10			2.5			8			4.8	
Barium	600		54			19			49			280	
Beryllium	1.75	0.22	--		0.22	--		0.24	--		0.26	--	
Cadmium	1		**3.4**			0.57			0.24			**2.3**	
Calcium	35000 (2)		4100			2000			1800			1200	
Chromium	40 (2)	4.4	--			5.6			14		5.1	--	
Cobalt	60 (2)		17			12			9.8			4.6	
Copper	50		**180**			**75**			49			**76**	
Iron	550000		33000			25000			21000			13000	
Lead	500		150			49			36			**510**	
Magnesium	5000		**6300**			**8400**			3200			1800	
Manganese	5000		550			370			370			130	
Mercury	0.2		0.1			0.066			0.078		0.064	--	
Nickel	25		19			10			13			11	
Potassium	43000 (2)		840			390			640			290	
Selenium	3.9	11	--		11	--		12	--		5.1	--	
Silver	-	2.7	--		2.7	--		2.9	--		3.2	--	
Sodium	8000		500		220	--		230	--		250	--	
Thallium	-	0.82	--		0.82	--		0.88	--		0.96	--	
Vanadium	300		70			43			40			21	
Zinc	50		**2800**			**600**			**420**			**1400**	

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994

MDL Method Detection Limit

CONC Concentration

Q Qualifier

\- No criteria established

(1) Eastern USA Background Criteria

(2) New York State Background

-- Not Detected

NA Not analyzed

J Estimated value

N North

S South

E East

W West

TABLE 1
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
HILLBURN GENERATING STATION

AREA OF CONCERN	Recommended	AOC-2B/BANK 917			AOC-2B/BANK 917			AOC-2B/BANK 917			AOC-2B/BANK 917		
W-C SAMPLE NO.	Soil	**HIL-0499-2B-B**			**HIL-0499-2B-N**			**HIL-0499-2B-S**			**HIL-0499-2B-W**		
LAB ID	Cleanup	AA82908			AA82910			AA82909			AA82907		
SAMPLE COLLECTION DATE	Objectives	04/12/99			04/12/99			04/12/99			04/12/99		
DEPTH		2.5' (BASE)			1.5' (SIDEWALL)			1.5' (SIDEWALL)			1.5' (SIDEWALL)		
MATRIX		SOIL			SOIL			SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG			MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds													
Acenaphthene	50	0.18	--		4.1	--		4.2	--		4.4	--	
Acenaphthylene	41	0.18	--		4.1	--		4.2	--		4.4	--	
Anthracene	50	0.18	--		4.1	--		4.2	--		4.4	--	
Benzo(a)Anthracene	0.224 or MDL	0.18	--		4.1	--		4.2	--		4.4	--	
Benzo(a)Pyrene	0.061 or MDL	0.18	--		4.1	--		4.2	--		4.4	--	
Benzo(b)Fluoranthene	1.1	0.18	--		4.1	--		4.2	--		4.4	--	
Benzo(g,h,i)Perylene	50	0.18	--		4.1	--		4.2	--		4.4	--	
Benzo(k)Fluoranthene	1.1	0.18	--		4.1	--		4.2	--		4.4	--	
Chrysene	0.4	0.18	--		4.1	--		4.2	--		4.4	--	
Dibenzo(a,h)Anthracene	0.014 or MDL	0.18	--		4.1	--		4.2	--		4.4	--	
Fluoranthene	50	0.18	--		4.1	--		4.2	--		4.4	--	
Fluorene	50	0.18	--		4.1	--		4.2	--		4.4	--	
Indeno(1,2,3-cd)Pyrene	3.2	0.18	--		4.1	--		4.2	--		4.4	--	
Naphthalene	13	0.18	--		4.1	--		4.2	--		4.4	--	
Phenanthrene	50	0.18	--		4.1	--		4.2	--		4.4	--	
Pyrene	50	0.18	--		4.1	--		4.2	--		4.4	--	
Total Semi-Volatile Organic Compounds			0			0			0			0	
Metals (1)													
Aluminum	33000		8800			2200			2600			5200	
Antimony	-	1.1	--			2.5			3			4.2	
Arsenic	12 (2)		2.6			**17**			**26**			**18**	
Barium	600		39			100			**750**			**1000**	
Beryllium	1.75	0.22	--		0.25	--		0.25	--		0.26	--	
Cadmium	1	0.22	--			**3**			**2.9**			**5.8**	
Calcium	35000 (2)		830			620			930			1700	
Chromium	40 (2)	5.3	13		4.9	--		5.1	--		5.3	--	
Cobalt	60 (2)		8.1		3.1	--			3.3			4.6	
Copper	50		10			**64**			**350**			**230**	
Iron	550000		20000			11000			15000			15000	
Lead	500		17			240			**3200**			**1700**	
Magnesium	5000		2900			180			300			1100	
Manganese	5000		300			16			25			120	
Mercury	0.2	0.055	--			0.12		0.063	--		0.066	--	
Nickel	25		9.7			5.1			9.4			9.9	
Potassium	43000 (2)		400			130			230			240	
Selenium	3.9	4.4	--		4.9	--		5.1	--		5.3	--	
Silver	-	2.7	--		3.1	--		3.2	--		3.3	--	
Sodium	8000	220	--		240	--		250	--		260	--	
Thallium	-	0.82	--		0.93	--		0.95	--		0.99	--	
Vanadium	300		23			10			14			20	
Zinc	50		**60**			**370**			**1500**			**1200**	

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994
MDL Method Detection Limit
CONC Concentration
Q Qualifier
- No criteria established
(1) Eastern USA Background Criteria
(2) New York State Background
-- Not Detected
NA Not analyzed
J Estimated value
N North
S South
E East
W West

TABLE 1
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
HILLBURN GENERATING STATION

AREA OF CONCERN	Recommended	AOC-2B/BANK 917			AOC-2E			AOC-2E			AOC-2E		
W-C SAMPLE NO.	Soil	**HIL-0499-2B-E**			**0499AOC2END**			**0499AOC2EN**			**0499AOC2ES**		
LAB ID	Cleanup	AA82911			AA82905			AA82901			AA82902		
SAMPLE COLLECTION DATE	Objectives	04/12/99			04/12/99			04/12/99			04/12/99		
DEPTH		1.5' (SIDEWALL)			3.5' (BASE)			1.5' (N SIDEWALL)			1.5' (S SIDEWALL)		
MATRIX		SOIL			SOIL			SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG			MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds													
Acenaphthene	50	4	--		3.5	--		3.5	--		0.19	--	
Acenaphthylene	41	4	--		3.5	--		3.5	--			0.06	J
Anthracene	50		1.2	J	3.5	--		3.5	--			0.06	J
Benzo(a)Anthracene	0.224 or MDL		**2.7**	J	3.5	--		3.5	--			**0.38**	
Benzo(a)Pyrene	0.061 or MDL		**1.9**	J	3.5	--		3.5	--			**0.35**	
Benzo(b)Fluoranthene	1.1		**2.5**	J	3.5	--		3.5	--			0.5	
Benzo(g,h,i)Perylene	50	4	--		3.5	--		3.5	--			0.18	J
Benzo(k)Fluoranthene	1.1		1.1	J	3.5	--		3.5	--			0.25	
Chrysene	0.4		**2.5**	J	3.5	--		3.5	--			0.35	
Dibenzo(a,h)Anthracene	0.014 or MDL	4	--		3.5	--		3.5	--		0.19	--	
Fluoranthene	50		5.2		3.5	--		3.5	--			0.66	
Fluorene	50	4	--		3.5	--		3.5	--		0.19	--	
Indeno(1,2,3-cd)Pyrene	3.2	4	--		3.5	--		3.5	--			0.19	
Naphthalene	13	4	--		3.5	--		3.5	--		0.19	--	
Phenanthrene	50		5.6			1.9	J		1.5	J		0.19	
Pyrene	50		4.5		3.5	--		3.5	--			0.48	
Total Semi-Volatile Organic Compounds			27.2			1.9			1.5			3.65	
Metals (1)													
Aluminum	33000		2900			6000			3800			13000	
Antimony	-		4.1		1.1	--			1.8			2	
Arsenic	12 (2)		**22**			3.5			3.4			9.8	
Barium	600		**1100**			31			27			54	
Beryllium	1.75	0.24	--		0.21	--		0.21	--		0.22	--	
Cadmium	1		**3.2**			0.29			0.66		0.22	--	
Calcium	35000 (2)		850			890			610			5100	
Chromium	40 (2)	4.8	--			11			9.8			20	
Cobalt	60 (2)	3.0	--			6.7			5.9			16	
Copper	50		**360**			15			14			36	
Iron	550000		17000			16000			10000			31000	
Lead	500		**1600**			8.3			5			18	
Magnesium	5000		470			3000			1800			**7100**	
Manganese	5000		45			490			270			950	
Mercury	0.2	0.06	--		0.053	--		0.053	--		0.056	--	
Nickel	25		8.3			15			14			**31**	
Potassium	43000 (2)		230			960			690			940	
Selenium	3.9	4.8	--		4.3	--		4.2	--		4.4	--	
Silver	-	3	--		2.7	--		2.6	--		2.8	--	
Sodium	8000	240	--		210	--		210	--		220	--	
Thallium	-	0.90	--		0.8	--		0.79	--		0.83	--	
Vanadium	300		14			13			12			22	
Zinc	50		**1300**			46			48			**100**	

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994
MDL Method Detection Limit
CONC Concentration
Q Qualifier
- No criteria established
(1) Eastern USA Background Criteria
(2) New York State Background
-- Not Detected
NA Not analyzed
J Estimated value
N North
S South
E East
W West

TABLE 1
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
HILLBURN GENERATING STATION

AREA OF CONCERN	Recommended	AOC-2E			AOC-2E			AOC-5			AOC-5		
W-C SAMPLE NO.	Soil	**0499AOC2EW**			**0499AOC2EE**			**HIL-0499-5-1-B**			**HIL-0499-5-1-N**		
LAB ID	Cleanup	AA82903			AA82904			AA82618			AA82616		
SAMPLE COLLECTION DATE	Objectives	04/12/99			04/12/99			04/07/99			04/07/99		
DEPTH		1.5' (W SIDEWALL)			1.5' (E SIDEWALL)			1.5' (BASE)			1' (N SIDEWALL)		
MATRIX		SOIL			SOIL			SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG			MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds													
Acenaphthene	50	0.18	--		0.18	--		0.91	--			0.08	J
Acenaphthylene	41	0.18	--		0.18	--		0.91	--		0.19	--	
Anthracene	50	0.18	--		0.18	--		0.91	--			0.22	
Benzo(a)Anthracene	0.224 or MDL	0.18	--		0.18	--		0.91	--			**0.84**	
Benzo(a)Pyrene	0.061 or MDL	0.18	--		0.18	--		0.91	--			**0.64**	
Benzo(b)Fluoranthene	1.1	0.18	--		0.18	--			0.2	J		0.94	
Benzo(g,h,i)Perylene	50	0.18	--		0.18	--		0.91	--			0.37	
Benzo(k)Fluoranthene	1.1	0.18	--		0.18	--		0.91	--			0.41	
Chrysene	0.4	0.18	--		0.18	--		0.91	--			**0.91**	
Dibenzo(a,h)Anthracene	0.014 or MDL	0.18	--		0.18	--		0.91	--			**0.11**	J
Fluoranthene	50	0.18	--		0.18	--			0.29	J		1.8	
Fluorene	50	0.18	--		0.18	--		0.91	--			0.071	J
Indeno(1,2,3-cd)Pyrene	3.2	0.18	--		0.18	--		0.91	--			0.36	
Naphthalene	13	0.18	--		0.18	--		0.91	--			0.048	J
Phenanthrene	50	0.18	--		0.18	--		0.91	--			0.95	
Pyrene	50	0.18	--		0.18	--			0.26	J		1.4	
Total Semi-Volatile Organic Compounds			0			0			0.75			9.15	
Metals (1)													
Aluminum	33000		12000			10000			15000			11000	
Antimony	-		1.9		1.1	--		1.1	--		1.1	--	
Arsenic	12 (2)		7.1			6.2			8.2			**29**	
Barium	600		55			45			44			57	
Beryllium	1.75	0.21	--		0.21	--			0.56			0.86	
Cadmium	1	0.21	--		0.21	--		0.22	--		0.22	--	
Calcium	35000 (2)		4500			3700			3200			3500	
Chromium	40 (2)		20			20			23			14	
Cobalt	60 (2)		17			14			12			8.9	
Copper	50		35			31			37			49	
Iron	550000		28000			22000			26000			26000	
Lead	500		16			12			19			68	
Magnesium	5000		**6600**			**5800**			**5700**			3600	
Manganese	5000		1100			920			450			290	
Mercury	0.2	0.053	--		0.053	--			0.076			**0.45**	
Nickel	25		**32**			30			**41**			23	
Potassium	43000 (2)		990			860			700			880	
Selenium	3.9	4.3	--		4.3	--		11	--		11	--	
Silver	-	2.7	--		2.7	--		2.7	--		2.8	--	
Sodium	8000	210	--		210	--			350			280	
Thallium	-	0.8	--		0.8	--		0.82	--		0.84	--	
Vanadium	300		23			22			36			24	
Zinc	50		**100**			**88**			49			**60**	

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994
MDL Method Detection Limit
CONC Concentration
Q Qualifier
- No criteria established
(1) Eastern USA Background Criteria
(2) New York State Background
-- Not Detected
NA Not analyzed
J Estimated value
N North
S South
E East
W West

TABLE 1
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
HILLBURN GENERATING STATION

AREA OF CONCERN	Recommended	AOC-5			AOC-5			AOC-5			AOC-5		
W-C SAMPLE NO.	Soil	**HIL-0499-5-1-S**			**HIL-0499-5-1-W**			**HIL-0499-5-1-E**			**HAOC5BCOMP**		
LAB ID	Cleanup	AA82617			AA82615			AA82614			AA83711		
SAMPLE COLLECTION DATE	Objectives	04/07/99			04/07/99			04/07/99			04/26/99		
DEPTH		1.5' (S SIDEWALL)			1.5' (W SIDEWALL)			1.5' (E SIDEWALL)			2.5' (BASE)		
MATRIX		SOIL			SOIL			SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG			MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds													
Acenaphthene	50		0.34			0.13	J	0.18	--		NA	NA	
Acenaphthylene	41	0.19	--		0.18	--		0.18	--		NA	NA	
Anthracene	50		0.77			0.25			0.066	J	NA	NA	
Benzo(a)Anthracene	0.224 or MDL		**1.7**			**0.67**			**0.28**		NA	NA	
Benzo(a)Pyrene	0.061 or MDL		**1.2**			**0.56**			**0.24**		NA	NA	
Benzo(b)Fluoranthene	1.1		**1.6**			0.79			0.39		NA	NA	
Benzo(g,h,i)Perylene	50		0.65			0.37	J		0.18	J	NA	NA	
Benzo(k)Fluoranthene	1.1		0.53			0.27	J		0.13	J	NA	NA	
Chrysene	0.4		**1.4**			**0.68**			0.33		NA	NA	
Dibenzo(a,h)Anthracene	0.014 or MDL		**0.063**	J	0.18	--		0.18	--		NA	NA	
Fluoranthene	50		3.2			1.5			0.58		NA	NA	
Fluorene	50		0.38			0.11	J	0.18	--		NA	NA	
Indeno(1,2,3-cd)Pyrene	3.2		0.59			0.34			0.17	J	NA	NA	
Naphthalene	13		0.12	J		0.074	J	0.18	--		NA	NA	
Phenanthrene	50		2.6			1.2			0.29		NA	NA	
Pyrene	50		2.8			1.2			0.51		NA	NA	
Total Semi-Volatile Organic Compounds			17.943			8.144			3.166			NA	
Metals (1)													
Aluminum	33000		13000			11000			14000			5700	
Antimony	-	1.1	--		1.1	--		1.1	--		1.2	--	
Arsenic	12 (2)		**19**			**24**			**23**			**33**	
Barium	600		220			48			40			32	
Beryllium	1.75		1.4			0.66			0.58		0.23	--	
Cadmium	1	0.22	--		0.22	--		0.22	--		0.23	--	
Calcium	35000 (2)		2700			2900			3100			2400	
Chromium	40 (2)		19			16			18			11	
Cobalt	60 (2)		24			9.1			9.6			5.6	
Copper	50		45			43			33			29	
Iron	550000		25000			18000			25000			16000	
Lead	500		39			53			38			180	
Magnesium	5000		4900			3300			**5600**			1700	
Manganese	5000		2600			360			370			350	
Mercury	0.2		0.2			**0.9**			0.15			**0.69**	
Nickel	25		**53**			24			**26**			10	
Potassium	43000 (2)		840			700			840			290	
Selenium	3.9	11	--		11	--		11	--		4.7	--	
Silver	-	2.8	--		2.7	--		2.7	--		2.9	--	
Sodium	8000		320			290			450		230	--	
Thallium	-	0.84	--		0.82	--		0.82	--		0.87	--	
Vanadium	300		30			26			31			17	
Zinc	50		**68**			**56**			50			**52**	

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994
MDL Method Detection Limit
CONC Concentration
Q Qualifier
- No criteria established
(1) Eastern USA Background Criteria
(2) New York State Background
-- Not Detected
NA Not analyzed
J Estimated value
N North
S South
E East
W West

TABLE 1
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
HILLBURN GENERATING STATION

AREA OF CONCERN	Recommended	AOC-5		AOC-5	
W-C SAMPLE NO.	Soil	**HAOC5BWS**		**HAOC5BNS**	
LAB ID	Cleanup	AA83709		AA83710	
SAMPLE COLLECTION DATE	Objectives	04/26/99		04/26/99	
DEPTH		1.5' (WS SIDEWALL)		1.5' (NS SIDEWALL)	
MATRIX		SOIL		SOIL	
UNITS	MG/KG	MG/KG		MG/KG	
		MDL	CONC Q	MDL	CONC Q
Semi-Volatile Organic Compounds					
Acenaphthene	50	NA	NA	NA	NA
Acenaphthylene	41	NA	NA	NA	NA
Anthracene	50	NA	NA	NA	NA
Benzo(a)Anthracene	0.224 or MDL	NA	NA	NA	NA
Benzo(a)Pyrene	0.061 or MDL	NA	NA	NA	NA
Benzo(b)Fluoranthene	1.1	NA	NA	NA	NA
Benzo(g,h,i)Perylene	50	NA	NA	NA	NA
Benzo(k)Fluoranthene	1.1	NA	NA	NA	NA
Chrysene	0.4	NA	NA	NA	NA
Dibenzo(a,h)Anthracene	0.014 or MDL	NA	NA	NA	NA
Fluoranthene	50	NA	NA	NA	NA
Fluorene	50	NA	NA	NA	NA
Indeno(1,2,3-cd)Pyrene	3.2	NA	NA	NA	NA
Naphthalene	13	NA	NA	NA	NA
Phenanthrene	50	NA	NA	NA	NA
Pyrene	50	NA	NA	NA	NA
Total Semi-Volatile Organic Compounds			NA		NA
Metals (1)					
Aluminum	33000		9800		17000
Antimony	-	1.1	--	1.1	--
Arsenic	12 (2)		**15**		6.3
Barium	600		38		47
Beryllium	1.75	0.22	--	0.23	--
Cadmium	1	0.22	--	0.23	--
Calcium	35000 (2)		2400		1900
Chromium	40 (2)		17		20
Cobalt	60 (2)		9.8		12
Copper	50		39		41
Iron	550000		20000		22000
Lead	500		65		16
Magnesium	5000		4400		**5600**
Manganese	5000		390		520
Mercury	0.2		0.160	0.057	--
Nickel	25		**30**		**56**
Potassium	43000 (2)		460		660
Selenium	3.9	4.5	--	4.5	--
Silver	-	2.8	--	2.8	--
Sodium	8000	220	--		230
Thallium	-	0.84	--	0.85	--
Vanadium	300		28		25
Zinc	50		46		50

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994

MDL Method Detection Limit

CONC Concentration

Q Qualifier

- No criteria established

(1) Eastern USA Background Criteria

(2) New York State Background

-- Not Detected

NA Not analyzed

J Estimated value

N North

S South

E East

W West

TABLE 2
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
LOVETT GENERATING STATION

AREA OF CONCERN	Recommended	AOC-1B			AOC-1B			AOC-1B			AOC-1B			AOC-2A/BANK 147		
W-C SAMPLE NO.	Soil	LAOC1B1			LAOC1B2			LAOC1B3			LAOC1B4			LAOC2AB447		
LAB ID	Cleanup	AA83290			AA83291			AA83292			AA83293			AA83152		
SAMPLE COLLECTION DATE	Objectives	04/19/99			04/19/99			04/19/99			04/19/99			04/15/99		
DEPTH		1.5' (BASE)			1.5' (BASE)			1.5' (BASE)			1.5' (BASE)			2' (BASE)		
MATRIX		SOIL			SOIL			SOIL			SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG			MG/KG			MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds																
Acenaphthene	50	0.17	--		0.17	--		0.17	--		0.18	--		0.18	--	
Acenaphthylene	41	0.17	--		0.17	--		0.17	--		0.18	--		0.18	--	
Anthracene	50	0.17	--		0.17	--		0.17	--		0.18	--		0.18	--	
Benzo(a)Anthracene	0.224 or MDL		**0.055**	J	0.17	--		0.17	--			**0.037**	J	0.18	--	
Benzo(a)Pyrene	0.061 or MDL		**0.052**	J	0.17	--		0.17	--			**0.053**	J	0.18	--	
Benzo(b)Fluoranthene	1.1		0.1	J		0.064	J	0.17	--			0.075	J	0.18	--	
Benzo(g,h,i)Perylene	50		0.047	J	0.17	--		0.17	--			0.082	J	0.18	--	
Benzo(k)Fluoranthene	1.1		0.044	J	0.17	--		0.17	--			0.04	J	0.18	--	
Chrysene	0.4		0.065	J		0.038	J	0.17	--			0.049	J	0.18	--	
Dibenzo(a,h)Anthracene	0.014 or MDL	0.17	--		0.17	--		0.17	--			**0.058**	J	0.18	--	
Fluoranthene	50		0.088	J		0.059	J	0.17	--			0.056	J	0.18	--	
Fluorene	50	0.17	--		0.17	--		0.17	--		0.18	--		0.18	--	
Indeno(1,2,3-cd)Pyrene	3.2		0.041	J	0.17	--		0.17	--			0.072	J	0.18	--	
Naphthalene	13		0.13	J	0.17	--		0.17	--			--		0.18	--	
Phenanthrene	50		0.13	J		0.038	J	0.17	--			0.04	J	0.18	--	
Pyrene	50		0.063	J		0.053	J	0.17	--			0.058	J	0.18	--	
Total Semi-Volatile Organic Compounds			0.815			0.252			0			0.62			0	
Metals (1)																
Aluminum	33000		1000			300			850			1100			400	
Antimony	-	1	--			12		1	--		1.1	--		1.1	--	
Arsenic	12 (2)	1	--			9			2.3		1.1	--			1.1	
Barium	600		7.8			2.9			16			50			8.7	
Beryllium	1.75		0.23		0.2	--			0.21			0.36		0.21	--	
Cadmium	1	0.2	--		0.2	--		0.2	--		0.21	--			0.38	
Calcium	35000 (2)		**140000**			**98000**			**360000**			**170000**			**180000**	
Chromium	40 (2)	4	--		4	--		4	--		4.2	--		4.2	--	
Cobalt	60 (2)		3.7		2.5	--		2.5	--			2.8		2.6	--	
Copper	50		6.6			4.3			4.3			25			7.2	
Iron	550000		8700			4700			4100			6600			4900	
Lead	500		3.1		2.5	--		2.5	--			7			8.4	
Magnesium	5000		**77000**			**53000**			4200			**95000**			**100000**	
Manganese	5000		170			180			88			210			220	
Mercury	0.2	0.051	--		0.051	--		0.051	--		0.053	--			**0.36**	
Nickel	25		7.9			3			4.3			9			3.9	
Potassium	43000 (2)		770			230			470			460			260	
Selenium	3.9	4	--		4	--		4	--		4.2	--		4.2	--	
Silver	-	2.5	--		2.5	--		2.5	--		2.6	--		2.6	--	
Sodium	8000	200	--		200	--			310		210	--		210	--	
Thallium	-	0.76	--		0.76	--		0.76	--		0.79	--		0.79	--	
Vanadium	300		3			4.1		2.5	--			6.4		2.6	--	
Zinc	50		13			9.4			12			60			20	

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994
MDL Method Detection Limit
CONC Concentration
Q Qualifier
- No criteria established
(1) Eastern USA Background Criteria
(2) New York State Background
-- Not Detected
NA Not analyzed
J Estimated value
N North
S South
E East
W West

TABLE 2
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
LOVETT GENERATING STATION

AREA OF CONCERN	Recommended	AOC-2A/BANK 447			AOC-2A/BANK 447			AOC-2A/BANK 447			AOC-2A/BANK 447		
W-C SAMPLE NO.	Soil	**LAOC2ANW2**			**LAOC2ASW1**			**LAOC2ASS1**			**LAOC2ANS2**		
LAB ID	Cleanup	AA83054			AA83052			AA83053			AA83055		
SAMPLE COLLECTION DATE	Objectives	04/13/99			04/13/99			04/13/99			04/13/99		
DEPTH		1.5' (NW BASE)			1.5' (SW BASE)			1' (S SIDEWALL)			1' (N SIDEWALL)		
MATRIX		SOIL			SOIL			SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG			MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds													
Acenaphthene	50	0.94	--		0.88	--		3.8	--		3.5	--	
Acenaphthylene	41		0.24	J	0.88	--		3.8	--		3.5	--	
Anthracene	50		0.28	J	0.88	--		3.8	--		3.5	--	
Benzo(a)Anthracene	0.224 or MDL		**0.62**	J	0.88	--		3.8	--		3.5	--	
Benzo(a)Pyrene	0.061 or MDL		**0.89**	J	0.88	--		3.8	--		3.5	--	
Benzo(b)Fluoranthene	1.1		1	J	0.88	--		3.8	--		3.5	--	
Benzo(g,h,i)Perylene	50		0.5	J	0.88	--		3.8	--		3.5	--	
Benzo(k)Fluoranthene	1.1		0.32	J	0.88	--		3.8	--		3.5	--	
Chrysene	0.4		**0.7**	J	0.88	--		3.8	--		3.5	--	
Dibenzo(a,h)Anthracene	0.014 or MDL	0.94	--		0.88	--		3.8	--		3.5	--	
Fluoranthene	50		1.4		0.88	--		3.8	--		3.5	--	
Fluorene	50	0.94	--		0.88	--		3.8	--		3.5	--	
Indeno(1,2,3-cd)Pyrene	3.2		0.33	J	0.88	--		3.8	--		3.5	--	
Naphthalene	13	0.94	--		0.88	--		3.8	--		3.5	--	
Phenanthrene	50		1		0.88	--		3.8	--		3.5	--	
Pyrene	50		1.6		0.88	--		3.8	--		3.5	--	
Total Semi-Volatile Organic Compounds			8.88			0			0			0	
Metals (1)													
Aluminum	33000		9400			4900			4200			16000	
Antimony	-	1.1	--		1.1	--		1.1	--		1.1	--	
Arsenic	12 (2)		5.1			1.5			1.9			3.8	
Barium	600		47			27			24			69	
Beryllium	1.75	0.22	--		0.21	--		0.23	--			0.28	
Cadmium	1	0.22	--		0.21	--		0.23	--			0.21	
Calcium	35000 (2)		720			730			410			710	
Chromium	40 (2)		7.2			7.9			8.2			16	
Cobalt	60 (2)		5.6			5.4			4.6			7	
Copper	50		7.8			8.2			7.3			6.9	
Iron	550000		10000			12000			13000			15000	
Lead	500		15			4.5			11			9.5	
Magnesium	5000		1200			1700			1100			2000	
Manganese	5000		170			120			100			140	
Mercury	0.2	0.056	--		0.053	--		0.057	--		0.053	--	
Nickel	25		9.2			6.3			6.6			11	
Potassium	43000 (2)		350			300			380			550	
Selenium	3.9	4.5	--		4.2	--		4.5	--		4.2	--	
Silver	-	2.8	--		2.6	--		2.8	--		2.6	--	
Sodium	8000	220	--		210	--		220	--		210	--	
Thallium	-	0.84	--		0.79	--		0.85	--		0.79	--	
Vanadium	300		15			15			16			30	
Zinc	50		**210**			18			22			40	

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994
MDL Method Detection Limit
CONC Concentration
Q Qualifier
- No criteria established
(1) Eastern USA Background Criteria
(2) New York State Background
-- Not Detected
NA Not analyzed
J Estimated value
N North
S South
E East
W West

TABLE 2
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
LOVETT GENERATING STATION

AREA OF CONCERN	Recommended	AOC-2B/Circuit Breakers			AOC-2B/Circuit Breakers			AOC-2B/BANK 663			AOC-2B/BANK 663		
W-C SAMPLE NO.	Soil	**LAOC2BCB**			**LAOC2BCS**			**LAOC2BBK663B**			**LAOC2BBK663**		
LAB ID	Cleanup	AA83287			AA83288			AA83154			AA83150		
SAMPLE COLLECTION DATE	Objectives	04/19/99			04/19/99			04/15/99			04/15/99		
DEPTH		2' (BASE)			1' (SIDEWALL)			3' (BASE)			1.5' (SIDEWALL)		
MATRIX		SOIL			SOIL			SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG			MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds													
Acenaphthene	50	0.93	--			0.039	J	3.8	--		0.18	--	
Acenaphthylene	41	0.93	--			0.26		3.8	--			0.47	
Anthracene	50	0.93	--			0.3		3.8	--			0.31	
Benzo(a)Anthracene	0.224 or MDL		**0.25**	J		**2.4**		3.8	--			**2.9**	
Benzo(a)Pyrene	0.061 or MDL		**0.28**	J		**2.4**		3.8	--			**2.6**	
Benzo(b)Fluoranthene	1.1		0.6	J		**3.1**		3.8	--			**2.7**	
Benzo(g,h,i)Perylene	50		0.24	J		1.2		3.8	--			0.84	
Benzo(k)Fluoranthene	1.1	0.93	--			0.86		3.8	--			**1.3**	
Chrysene	0.4		0.33	J		**2.3**		3.8	--			**2.3**	
Dibenzo(a,h)Anthracene	0.014 or MDL	0.93	--			**0.49**		3.8	--			**0.075**	J
Fluoranthene	50		0.77	J		3.4		3.8	--			3	
Fluorene	50	0.93	--			0.064	J	3.8	--			0.097	J
Indeno(1,2,3-cd)Pyrene	3.2		0.24	J		1.1		3.8	--			0.67	
Naphthalene	13	0.93	--			0.082	J	3.8	--			0.19	
Phenanthrene	50	0.93	--			1.2		3.8	--			1.4	
Pyrene	50		0.27	J		3.3		3.8	--			5.3	
Total Semi-Volatile Organic Compounds			2.98			22.495			0			24.152	
Metals (1)													
Aluminum	33000		3100			3700			960			1000	
Antimony	-	1.1	--			1.4			1.2			1.7	
Arsenic	12 (2)		9.9			**21**			**32**			7.3	
Barium	600		360			84			17			31	
Beryllium	1.75		0.25			0.52		0.23	--			0.27	
Cadmium	1	0.22	--			**4.7**			0.4			0.8	
Calcium	35000 (2)		**1200000**			**150000**			**160000**			**130000**	
Chromium	40 (2)	4.4	--		4.3	--		4.5	--		4.3	--	
Cobalt	60 (2)		3.8			4.6		2.8	--		2.7	--	
Copper	50		**59**			**320**			14			81	
Iron	550000		14000			13000			7400			6300	
Lead	500		**680**			240			69			82	
Magnesium	5000		**47000**			**82000**			**93000**			**74000**	
Manganese	5000		220			260			160			180	
Mercury	0.2		**1.3**			**0.8**			0.18			0.14	
Nickel	25		8.5			17			4.8			7.4	
Potassium	43000 (2)		600			850			230			240	
Selenium	3.9	4.4	--		4.3	--		4.5	--		4.3	--	
Silver	-	2.8	--		2.7	--		2.8	--		2.7	--	
Sodium	8000	220	--		210	--		220	--		210	--	
Thallium	-	0.83	--		0.81	--		0.85	--		0.82	--	
Vanadium	300		8			24			4.6			10	
Zinc	50		**350**			**2400**			**71**			**240**	

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994
MDL Method Detection Limit
CONC Concentration
Q Qualifier
- No criteria established
(1) Eastern USA Background Criteria
(2) New York State Background
-- Not Detected
NA Not analyzed
J Estimated value
N North
S South
E East
W West

TABLE 2
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
LOVETT GENERATING STATION

AREA OF CONCERN	Recommended	AOC-2B			AOC-5A			AOC-5A			AOC-5A			AOC-5A		
W-C SAMPLE NO.	Soil	LAOC2BSB			LAOC5AB			LAOC5ANS			LAOC5ASS			LAOC5AWS		
LAB ID	Cleanup	AA83289			AA83149			AA83148			AA83145			AA83147		
SAMPLE COLLECTION DATE	Objectives	04/19/99			04/15/99			04/15/99			04/15/99			04/15/99		
DEPTH		1' (BASE)			3' (BASE)			1.5' N SIDEWALL)			1.5' (S SIDEWALL)			1.5' (W SIDEWALL)		
MATRIX		SOIL			SOIL			SOIL			SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG			MG/KG			MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds																
Acenaphthene	50	0.18	--		0.19	--		0.37	--			0.3	J	0.19	--	
Acenaphthylene	41	0.18	--		0.19	--			0.075	J		0.22	J		0.061	J
Anthracene	50	0.18	--		0.19	--			0.11	J		0.69	J		0.042	J
Benzo(a)Anthracene	0.224 or MDL		**0.041**	J		**0.3**			**0.67**			**2.8**			**0.2**	
Benzo(a)Pyrene	0.061 or MDL		**0.051**	J		**0.27**			**0.65**			**3**			**0.22**	
Benzo(b)Fluoranthene	1.1		0.077	J		0.36			**1.2**			**5.7**			0.36	
Benzo(g,h,i)Perylene	50	0.18	--			0.097	J		0.26	J		0.97			0.11	J
Benzo(k)Fluoranthene	1.1	0.18	--			0.16	J		0.5			**2.3**			0.18	J
Chrysene	0.4		0.064	J		0.31			**0.95**			**3.7**			0.33	
Dibenzo(a,h)Anthracene	0.014 or MDL	0.18	--		0.19	--			**0.092**	J	0.93	0.35	J	0.19	--	
Fluoranthene	50		0.074	J		0.41			1.8			9.5			0.53	
Fluorene	50	0.18	--		0.19	--		0.37	--			0.26	J	0.19	--	
Indeno(1,2,3-cd)Pyrene	3.2	0.18	--			0.095	J		0.27	J		1.1			0.11	J
Naphthalene	13	0.18	--		0.19	--			0.15	J		0.42	J		0.17	J
Phenanthrene	50		0.074	J		0.17	J		1.1			5.5			0.37	
Pyrene	50		0.055	J		0.47	J		1.7			6.4			0.49	
Total Semi-Volatile Organic Compounds			0.436			2.642			9.527			43.21			3.173	
Metals (1)																
Aluminum	33000		2200			2700			6900			8300			3500	
Antimony	-	1.1	--			9.2			3			12			7.4	
Arsenic	12 (2)		**14**			**13**			**68**			**35**			**71**	
Barium	600		19			62			570			110			180	
Beryllium	1.75		0.22			0.48			0.75			0.97			0.72	
Cadmium	1	0.21	--			1			0.9			**1.7**			0.54	
Calcium	35000 (2)		**160000**			**200000**			**130000**			**44000**			**110000**	
Chromium	40 (2)	4.3	--		4.5	--			6.8			17			9.3	
Cobalt	60 (2)		2.9			4.1			7.8			10			5.2	
Copper	50		17			**82**			**130**			**210**			49	
Iron	550000		11000			9000			21000			26000			13000	
Lead	500		40			**550**			470			**800**			**560**	
Magnesium	5000		**87000**			**99000**			**75000**			**28000**			**52000**	
Manganese	5000		190			210			340			250			280	
Mercury	0.2	0.053	--			**0.37**			**0.32**			**0.66**			**0.83**	
Nickel	25		5.9			12			**27**			**80**			15	
Potassium	43000 (2)		600			400			460			680			360	
Selenium	3.9	4.3	--		4.5	--		4.5	--			4.6		4.7	--	
Silver	-	2.7	--		2.8	--		2.8	--		2.8	--		2.9	--	
Sodium	8000	210	--			250			360			400			230	
Thallium	-	0.8	--		0.85	--		0.84	--		0.83	--		0.87	--	
Vanadium	300		6.7			21			89			160			57	
Zinc	50		34			**390**			**280**			**1900**			**190**	

NOTES

bold Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994

MDL Method Detection Limit

CONC Concentration

Q Qualifier

\- No criteria established

(1) Eastern USA Background Criteria

(2) New York State Background

-- Not Detected

NA Not analyzed

J Estimated value

N North

S South

E East

W West

TABLE 2
ANALYTICAL RESULTS
POST-EXCAVATION SAMPLES
LOVETT GENERATING STATION

AREA OF CONCERN	Recommended	AOC-5A			AOC-5C		
W-C SAMPLE NO.	Soil	**LAOC5AES**			**LAOC5CB**		
LAB ID	Cleanup	AA83146			AA83151		
SAMPLE COLLECTION DATE	Objectives	04/15/99			04/15/99		
DEPTH		1.5' (E SIDEWALL)			2' (BASE)		
MATRIX		SOIL			SOIL		
UNITS	MG/KG	MG/KG			MG/KG		
		MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds							
Acenaphthene	50	0.96	--		0.91	--	
Acenaphthylene	41		1.6			0.87	J
Anthracene	50		0.59	J		0.4	J
Benzo(a)Anthracene	0.224 or MDL		**3.1**			**1.3**	
Benzo(a)Pyrene	0.061 or MDL		**5.7**			**2.5**	
Benzo(b)Fluoranthene	1.1		**6.7**			**2.6**	
Benzo(g,h,i)Perylene	50		2.4			1.2	
Benzo(k)Fluoranthene	1.1		**2.4**			0.75	J
Chrysene	0.4		**3.6**			**1.5**	
Dibenzo(a,h)Anthracene	0.014 or MDL		**0.67**	J		**0.26**	J
Fluoranthene	50		3.6			1.9	
Fluorene	50	0.96	--		0.91	--	
Indeno(1,2,3-cd)Pyrene	3.2		1.9			0.79	J
Naphthalene	13		0.56	J		0.2	J
Phenanthrene	50		1.6			1.2	
Pyrene	50		6.5			3.8	
Total Semi-Volatile Organic Compounds			40.92			19.27	
Metals (1)							
Aluminum	33000		4000			3900	
Antimony	-		4.3		1.1	--	
Arsenic	12 (2)		**38**			5.2	
Barium	600		92			68	
Beryllium	1.75		0.75			0.4	
Cadmium	1		0.96			0.36	
Calcium	35000 (2)		**91000**			**110000**	
Chromium	40 (2)		12		4.3	--	
Cobalt	60 (2)		5.5			4.2	
Copper	50		**71**			37	
Iron	550000		12000			12000	
Lead	500		240			140	
Magnesium	5000		**47000**			**61000**	
Manganese	5000		180			320	
Mercury	0.2		**0.41**			0.17	
Nickel	25		**33**			9.4	
Potassium	43000 (2)		440			700	
Selenium	3.9	4.6	--		4.3	--	
Silver	-	2.9	--		2.7	--	
Sodium	8000		230		210	--	
Thallium	-	0.86	--		0.82	--	
Vanadium	300		79			14	
Zinc	50		**230**			**320**	

NOTES

bold	Analyte exceeds Soil Cleanup Objectives provided in NYSDEC, TAGM Description of Soil Cleanup Objectives & Cleanup Levels dated January 24, 1994
MDL	Method Detection Limit
CONC	Concentration
Q	Qualifier
-	No criteria established
(1)	Eastern USA Background Criteria
(2)	New York State Background
--	Not Detected
NA	Not analyzed
J	Estimated value
N	North
S	South
E	East
W	West

TABLE 3
ANALYTICAL RESULTS
QA/QC SAMPLES
HILLBURN GENERATING STATION

W-C SAMPLE NO.	FB040899			FB041299			FB042699		
LAB ID	AA82794			AA82900			AA83706		
SAMPLE COLLECTION DATE	04/09/99			04/12/99			04/26/99		
MATRIX	WATER			WATER			WATER		
UNITS	UG/L			UG/L			UG/L		
	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds									
Acenaphthene	5	--		5	--			NA	
Acenaphthylene	5	--		5	--			NA	
Anthracene	5	--		5	--			NA	
Benzo(a)Anthracene	5	--		5	--			NA	
Benzo(a)Pyrene	5	--		5	--			NA	
Benzo(b)Fluoranthene	5	--		5	--			NA	
Benzo(g,h,i)Perylene	5	--		5	--			NA	
Benzo(k)Fluoranthene	5	--		5	--			NA	
Chrysene	5	--		5	--			NA	
Dibenzo(a,h)Anthracene	5	--		5	--			NA	
Fluoranthene	5	--		5	--			NA	
Fluorene	5	--		5	--			NA	
Indeno(1,2,3-cd)Pyrene	5	--		5	--			NA	
Naphthalene	5	--		5	--			NA	
Phenanthrene	5	--		5	--			NA	
Pyrene	5	--		5	--			NA	
Total Semi-Volatile Organic Compounds		0			0			NA	
Metals									
Aluminum	100	--		100	--		100	--	
Antimony	6	--		6	--		6	--	
Arsenic	7.5	--		7.5	--		7.5	--	
Barium	10	--		10	--		10	--	
Beryllium	2	--		2	--		2	--	
Cadmium	3	--		3	--		3	--	
Calcium	790	--		790	--		790	--	
Chromium	67	--		67	--		67	--	
Cobalt	5	--		5	--		5	--	
Copper	40	--		40	--		40	--	
Iron		280		200	--		200	--	
Lead	6	--		6	--		6	--	
Magnesium	340	--		340	--		340	--	
Manganese	26	--		26	--		26	--	
Mercury	0.45	--		0.45	--		0.45	--	
Nickel	35	--		35	--		35	--	
Potassium	490	--		490	--		490	--	
Selenium	40	--		40	--		40	--	
Silver	2	--		2	--		2	--	
Sodium	2000	--		2000	--		2000	--	
Thallium	7.5	--		7.5	--		7.5	--	
Vanadium	10	--		10	--		10	--	
Zinc	50	--		50	--		50	--	

NOTES

MDL Method Detection Limit
CONC Concentration
Q Qualifier
-- Not Detected
NA Not analyzed
J Estimated value

TABLE 4
ANALYTICAL RESULTS
QA/QC SAMPLES
LOVETT GENERATING STATION

W-C SAMPLE NO.	FB041399			FB041599			FB041999		
LAB ID	AA83051			AA83144			AA83286		
SAMPLE COLLECTION DATE	04/13/99			04/15/99			04/19/99		
MATRIX	WATER			WATER			WATER		
UNITS	UG/L			UG/L			UG/L		
	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Semi-Volatile Organic Compounds									
Acenaphthene	5	--		5	--		5	--	
Acenaphthylene	5	--		5	--		5	--	
Anthracene	5	--		5	--		5	--	
Benzo(a)Anthracene	5	--		5	--		5	--	
Benzo(a)Pyrene	5	--		5	--		5	--	
Benzo(b)Fluoranthene	5	--		5	--		5	--	
Benzo(g,h,i)Perylene	5	--		5	--		5	--	
Benzo(k)Fluoranthene	5	--		5	--		5	--	
Chrysene	5	--		5	--		5	--	
Dibenzo(a,h)Anthracene	5	--		5	--		5	--	
Fluoranthene	5	--		5	--		5	--	
Fluorene	5	--		5	--		5	--	
Indeno(1,2,3-cd)Pyrene	5	--		5	--		5	--	
Naphthalene	5	--		5	--		5	--	
Phenanthrene	5	--		5	--		5	--	
Pyrene	5	--		5	--		5	--	
Total Semi-Volatile Organic Compounds		0			0			0	
Metals									
Aluminum	100	--		150	--		100	--	
Antimony	6	--		6	--		6	--	
Arsenic	7.5	--		7.5	--		7.5	--	
Barium	10	--		10	--		10	--	
Beryllium	2	--		2	--		2	--	
Cadmium	3	--		3	--		3	--	
Calcium	790	--		790	--		790	--	
Chromium	67	--		67	--		67	--	
Cobalt	5	--		5	--		5	--	
Copper	4	--		4	--		4	--	
Iron	200	--		200	--		200	--	
Lead	6	--		6	--		6	--	
Magnesium	340	--		340	--		340	--	
Manganese	26	--		26	--		26	--	
Mercury	0.45	--		0.45	--		0.45	--	
Nickel	35	--		35	--		35	--	
Potassium	490	--		490	--		490	--	
Selenium	40	--		40	--		40	--	
Silver	2	--		2	--		2	--	
Sodium	2000	--		2000	--		2000	--	
Thallium	7.5	--		7.5	--		7.5	--	
Vanadium	10	--		10	--		10	--	
Zinc	50	--		50	--		50	--	

NOTES

MDL Method Detection Limit
CONC Concentration
Q Qualifier
-- Not Detected
NA Not analyzed
J Estimated value

TABLE 5
ANALYTICAL RESULTS
WASTE CHARACTERIZATION SAMPLES
HILLBURN GENERATING STATION

W-C SAMPLE NO.	HIL-WC-499-1			HIL-WC-499-2			WASTE PILE		
LAB ID	AA82802			AA82803			AA83708		
SAMPLE COLLECTION DATE	04/09/99			04/09/99			04/26/99		
MATRIX	SOIL			SOIL			SOIL		
UNITS	MG/KG [1]			MG/KG [1]			MG/KG [1]		
	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Volatile Organic Compounds									
1,1,1-Trichloroethane	0.028	--		0.028	--		0.0057	--	
1,1,2,2-Tetrachloroethane	0.028	--		0.028	--		0.0057	--	
1,1,2-Trichloroethane	0.028	--		0.028	--		0.0057	--	
1,1-Dichloroethane	0.028	--		0.028	--		0.0057	--	
1,1-Dichloroethene	0.028	--		0.028	--		0.0057	--	
1,2-Dichlorobenzene	0.028	--		0.028	--		0.0057	--	
1,2-Dichloroethane	0.028	--		0.028	--		0.0057	--	
1,2-Dichloropropane	0.028	--		0.028	--		0.0057	--	
1,3-Dichlorobenzene	0.028	--		0.028	--		0.0057	--	
1,4-Dichlorobenzene	0.028	--		0.028	--		0.0057	--	
2-Butanone	0.14	--		0.14	--		0.029	--	
2-Chloroethylvinylether	0.028	--		0.028	--		0.0057	--	
2-Hexanone	0.11	--		0.11	--		0.023	--	
4-Methyl-2-Pentanone	0.11	--		0.11	--		0.023	--	
Acetone	0.11	--		0.11	--		0.023	--	
Acrolein	0.085	--		0.083	--		0.017	--	
Acrylonitrile	0.057	--		0.056	--		0.011	--	
Benzene	0.0057	--		0.0056	--		0.0011	--	
Bromodichloromethane	0.028	--		0.028	--		0.0057	--	
Bromoform	0.028	--		0.028	--		0.0057	--	
Bromomethane	0.028	--		0.028	--		0.0057	--	
Carbon Disulfide	0.028	--		0.028	--		0.0057	--	
Carbon Tetrachloride	0.028	--		0.028	--		0.0057	--	
Chlorobenzene	0.028	--		0.028	--		0.0057	--	
Chloroethane	0.028	--		0.028	--		0.0057	--	
Chloroform	0.028	--		0.028	--		0.0057	--	
Chloromethane	0.028	--		0.028	--		0.0057	--	
Cis-1,2-Dichloroethene	0.028	--		0.028	--		0.0057	--	
Cis-1,3-Dichloropropene	0.028	--		0.028	--		0.0057	--	
Di-isopropyl-ether	0.028	--		0.028	--		0.0057	--	
Dibromochloromethane	0.028	--		0.028	--		0.0057	--	
Ethylbenzene	0.0057	--		0.0056	--		0.0011	--	
Methyl-t-butyl ether	0.0057	--		0.0056	--		0.0011	--	
Methylene Chloride	0.028	--		0.028	--		0.0057	--	
Styrene	0.0057	--		0.0056	--		0.0011	--	
T-Butyl Alcohol	0.057	--		0.056	--		0.011	--	
Tetrachloroethene	0.028	--		0.028	--		0.0057	--	
Toluene		0.0064			0.0058		0.0011	--	
Total Xylenes	0.0167	--		0.0166	--		0.0034	--	
Trans-1,2-Dichloroethene	0.028	--		0.028	--		0.0057	--	
Trans-1,3-Dichloropropene	0.028	--		0.028	--		0.0057	--	
Trichloroethene	0.028	--		0.028	--		0.0057	--	
Trichlorofluoromethane	0.028	--		0.028	--		0.0057	--	
Vinyl Acetate	0.057	--		0.056	--		0.011	--	
Vinyl Chloride	0.028	--		0.028	--		0.0057	--	
Total Non-Target VOCs		0.254	J		0.086	J		--	
Total Volatile Organic Compounds		0.2604			0.0918			0	

TABLE 5
ANALYTICAL RESULTS
WASTE CHARACTERIZATION SAMPLES
HILLBURN GENERATING STATION

W-C SAMPLE NO.	HIL-WC-499-1			HIL-WC-499-2			WASTE PILE		
LAB ID	AA82802			AA82803			AA83708		
SAMPLE COLLECTION DATE	04/09/99			04/09/99			04/26/99		
MATRIX	SOIL			SOIL			SOIL		
UNITS	MG/KG (1)			MG/KG (1)			MG/KG (1)		
	MDL	CONC	Q	MDL	CONC	Q	MDL	CONC	Q
Polychlorinated Biphenyls (PCBs)									
Aroclor-1016	0.019	--		0.019	--		0.019	--	
Aroclor-1221	0.019	--		0.019	--		0.019	--	
Aroclor-1232	0.019	--		0.019	--		0.019	--	
Aroclor-1242	0.019	--		0.019	--		0.019	--	
Aroclor-1248	0.019	--		0.019	--		0.019	--	
Aroclor-1254	0.019	--		0.019	--		0.019	--	
Aroclor-1260		0.029			0.033		0.019	--	
Total Polychlorinated Biphenyls		0.029			0.033			0	
Metals									
Arsenic		7			9.8			39	
Barium		46			36			47	
Cadmium		2.7			0.8		0.23	--	
Chromium		12			13			23	
Lead		91			49			140	
Mercury		0.24			0.26			0.44	
Selenium	11	--		11	--		4.6	--	
Silver	2.8	--		2.8	--		2.9	--	
TCLP Mercury	0.45 (2)	--		0.45 (2)	--		0.23 (2)	--	
TCLP Lead	290 (2)	--		290 (2)	--		310 (2)	--	
Total Petroleum Hydrocarbons		5000			10000			40	

NOTES

(1) All concentrations are presented in mg/kg unless otherwise noted.
(2) Concentration presented in ug/l.
MDL Method Detection Limit
CONC Concentration
Q Qualifier
-- Not Detected
J Estimated value

TABLE 6
ANALYTICAL RESULTS
WASTE CHARACTERIZATION SAMPLES
LOVETT GENERATING STATION

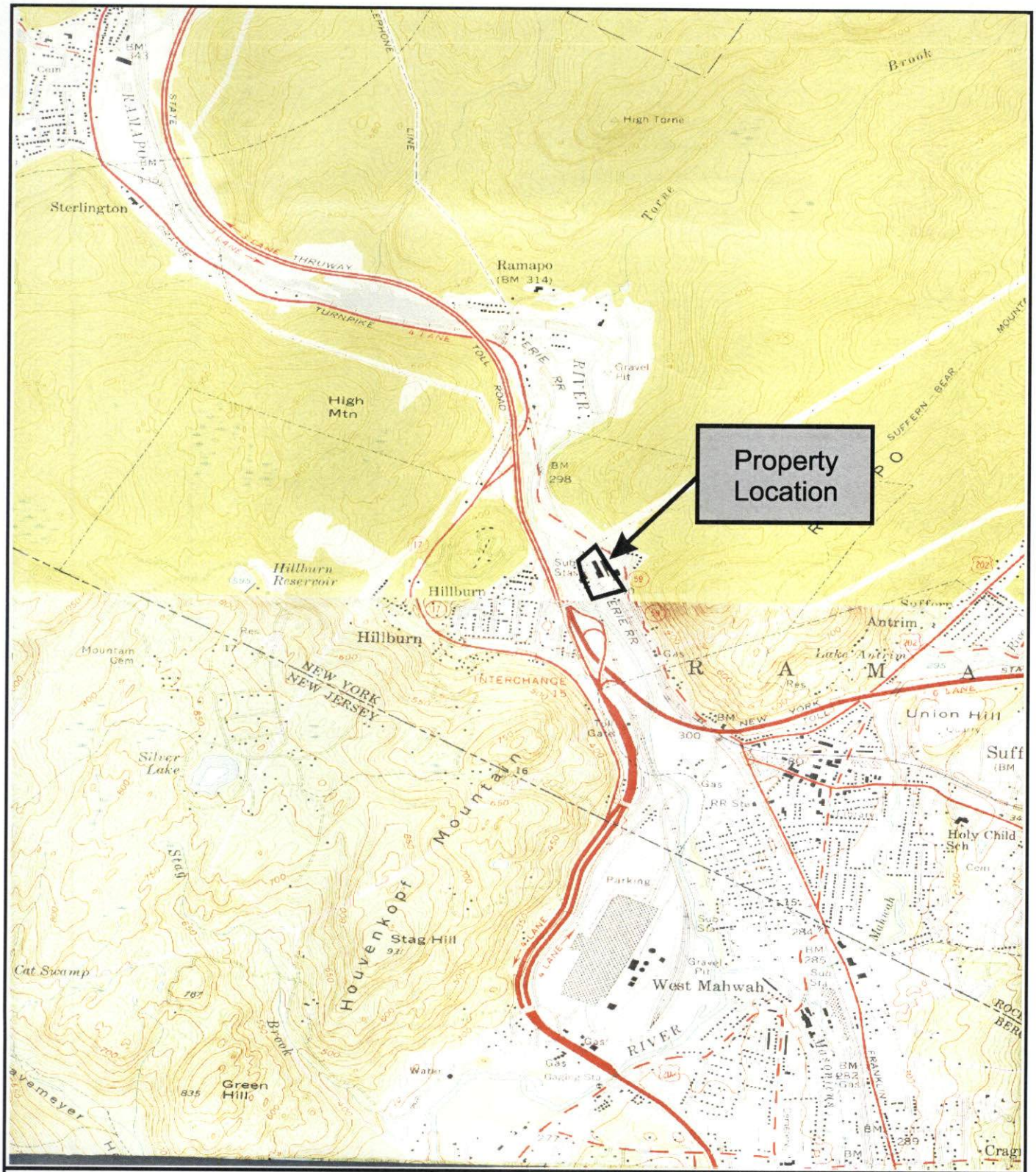
W-C SAMPLE NO.	WASTE1		
LAB ID	AA83153		
SAMPLE COLLECTION DATE	04/15/99		
MATRIX	SOIL		
UNITS	MG/KG [1]		
	MDL	CONC	Q
Volatile Organic Compounds			
1,1,1-Trichloroethane	0.0051	--	
1,1,2,2-Tetrachloroethane	0.0051	--	
1,1,2-Trichloroethane	0.0051	--	
1,1-Dichloroethane	0.0051	--	
1,1-Dichloroethene	0.0051	--	
1,2-Dichlorobenzene	0.0051	--	
1,2-Dichloroethane	0.0051	--	
1,2-Dichloropropane	0.0051	--	
1,3-Dichlorobenzene	0.0051	--	
1,4-Dichlorobenzene	0.0051	--	
2-Butanone	0.026	--	
2-Chloroethylvinylether	0.0051	--	
2-Hexanone	0.02	--	
4-Methyl-2-Pentanone	0.02	--	
Acetone	0.02	--	
Acrolein	0.015	--	
Acrylonitrile	0.01	--	
Benzene	0.001	--	
Bromodichloromethane	0.0051	--	
Bromoform	0.0051	--	
Bromomethane	0.0051	--	
Carbon Disulfide	0.0051	--	
Carbon Tetrachloride	0.0051	--	
Chlorobenzene	0.0051	--	
Chloroethane	0.0051	--	
Chloroform	0.0051	--	
Chloromethane	0.0051	--	
Cis-1,2-Dichloroethene	0.0051	--	
Cis-1,3-Dichloropropene	0.0051	--	
Di-isopropyl-ether	0.0051	--	
Dibromochloromethane	0.0051	--	
Ethylbenzene	0.001	--	
Methyl-t-butyl ether	0.001	--	
Methylene Chloride	0.0051	--	
Styrene	0.001	--	
T-Butyl Alcohol	0.01	--	
Tetrachloroethene	0.0051	--	
Toluene	0.001	--	
Total Xylenes	0.003	--	
Trans-1,2-Dichloroethene	0.0051	--	
Trans-1,3-Dichloropropene	0.0051	--	
Trichloroethene	0.0051	--	
Trichlorofluoromethane	0.0051	--	
Vinyl Acetate	0.01	--	
Vinyl Chloride	0.0051	--	
Tenatively Idntified Compounds		0.0509	J
Total Volatile Organic Compounds		0.0509	

TABLE 6
ANALYTICAL RESULTS
WASTE CHARACTERIZATION SAMPLES
LOVETT GENERATING STATION

W-C SAMPLE NO.	WASTE1		
LAB ID	AA83153		
SAMPLE COLLECTION DATE	04/15/99		
MATRIX	SOIL		
UNITS	MG/KG [1]		
	MDL	CONC	Q
Polychlorinated Biphenyls (PCBs)			
Aroclor-1016	0.017	--	
Aroclor-1221	0.017	--	
Aroclor-1232	0.017	--	
Aroclor-1242	0.017	--	
Aroclor-1248	0.017	--	
Aroclor-1254	0.017	--	
Aroclor-1260	0.017	0.63	
Total Polychlorinated Biphenyls		0.63	
Metals			
Arsenic		23	
Barium		89	
Cadmium		2.9	
Chromium		15	
Lead		970	
Mercury	0.051	--	
Selenium	4.1	--	
Silver	2.6	--	
TCLP Lead		3100 [2]	
Total Petroleum Hydrocarbons		9200	

NOTES

(1) All concentrations are presented in mg/kg unless otherwise noted.
(2) Concentration presented in ug/l.
MDL Method Detection Limit
CONC Concentration
Q Qualifier
-- Not Detected
J Estimated value



MAP SOURCE:
USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE MAP OF
SLOATSBURG, NY-NJ
1955
RAMSEY, NY-NJ
1955

SITE LOCATION MAP
HILLBURN GENERATING STATION
FOURTH STREET
HILLBURN, NEW YORK

URS GREINER WOODWARD-CLYDE
ENGINEERING & SCIENCES APPLIED TO THE EARTH & ITS ENVIRONMENT
WAYNE, NEW JERSEY

DR. BY:	LD	SCALE:	AS SHOWN	PROJ. NO.	8E04157
CH'D BY:	AR	DATE:	8/20/98	FIG. NO:	1

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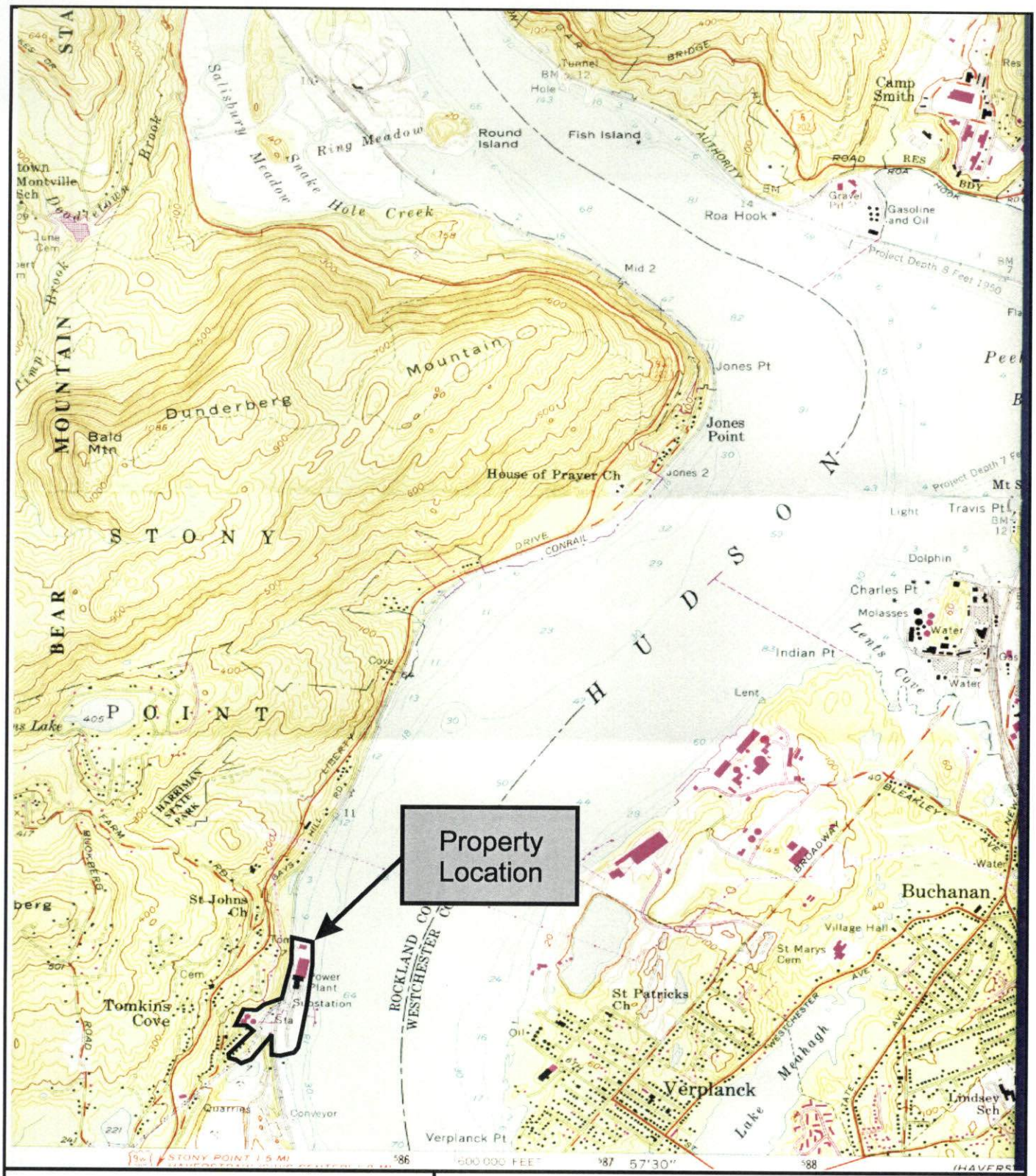

0 2000 4000

SCALE (FEET)

NORTH

MAP SOURCE:
USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE MAP OF
PEEKSKILL, NEW YORK
1981 PHOTOREVISION

SITE LOCATION MAP
LOVETT GENERATING STATION
ROUTE 9W/ELM STREET
TOMKINS COVE, NEW YORK

URS GREINER WOODWARD CLYDE
ENGINEERING & SCIENCES APPLIED TO THE EARTH & ITS ENVIRONMENT
WAYNE, NEW JERSEY

DR. BY:	LD	SCALE: AS SHOWN		PROJ. NO.	8E04157
CH'D BY:	AR	DATE: 8/4/98		FIG. NO:	2

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