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ASH PIT REMEDIAL ACTION WORK PLAN

FORMER KENT AVENUE GENERATING STATION

500 KENT AVENUE
BROOKLYN, NEW YORK

PROJECT NO. 126649

September 2009

Submitted to:

Consolidated Edison Company of New York, Inc.
31-01 20th Avenue
Long Island City, New York

Submitted by:

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GLOSSARY OF TERMS

AOC	Area of Concern
bgs	below ground surface
DRO	Diesel Range Organic compounds
ft.	feet
FSSR	Feasibility Study Summary Report
HASP	Health and Safety Plan
MGP	Manufactured Gas Plant
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
MDL	method detection limit
MSDS	Material Safety Data Sheet
mg/kg	milligrams per kilogram
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCBs	Polychlorinated Biphenyls
PID	photoionization detector
ppm	parts per million
psi	pounds per square inch
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RISR	Remedial Investigation Summary Report
Shaw	Shaw Environmental Inc.
SVOCs	Semi-Volatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

1.0 Site Location and Description

The former Con Edison Kent Avenue Generating Station (the "Site") is located at 500 Kent Avenue, Brooklyn, New York. As shown on **Figure 1**, the Site is bounded by Division Avenue to the north, the Brooklyn Navy Yard to the south, Kent Avenue to the east and Wallabout Channel to the west. The total area of the Site is approximately 4 acres; of which approximately 2.6 acres was the location of an electrical power generating station housed in a seven to nine story structure; the structure has recently been demolished. The remaining approximate 1.4 acres consists of a vacant lot on the southern portion of the property, a concrete walkway and bulkhead in the western portion, and a small concrete/unpaved side yard in the northern portion. The vacant lot is the site of a former electrical generating station that was dedicated to the generation of power for the local subway system. Although the lot is vacant, the foundation and basement of the subway generating station remain below grade.

The ash pit is located in the northwestern portion of the Site, between the former generating station building and Wallabout Channel, an inlet of the East River. **Figure 2** provides a site plan. The pit appears to have been constructed in the late 1920s or 1930s. It is constructed of poured concrete walls underlain by iron reinforcing bars. The dimensions of the pit are approximately 68 ft. by 27 ft.; available engineering drawings indicate that the pit is approximately 24 feet deep, and suggest the presence of a concrete bottom. It is currently filled with sludge, trash and debris, and standing water. According to Con Edison personnel, during the time the ash pit was in operation, ash from the station boilers was mixed with water and discharged to the pit through one or more sluice gates. A pump house was formerly located adjacent to the north side of the pit; the pump house location is currently a separate pit adjacent to the ash pit, and is filled with debris and weeds. Open-ended pipes are visible on the north, east, and south ash pit walls. Three additional open-ended pipes are visible on the Wallabout Channel (west) side of the former pump house location. **Figure 3** provides a scaled plan view, and a cross-sectional view of the south wall of the pit. Available construction plans indicate that the bottom of the pit is approximately 24 feet bgs; however only the top 10 feet are visible at the interior of the pit above the water and mud line.

1.1 Contemplated Redevelopment Plan

Con Edison currently has no plans to use the property for utility operations, but is considering marketing it for sale. Based on recent property developments in the Kent Avenue site area, it is anticipated that a buyer would redevelop the site for residential and/or commercial use.

1.2 Description of Surrounding Properties

Adjacent to the Site on the north is Division Avenue; beyond this dead-end street is a commercial lumber yard. Adjacent to the south is the former Brooklyn Navy Yard property, of which the portion adjacent to Con Edison's Kent Avenue site was the Nassau Gas Works, a former MGP site that is being addressed by National Grid. This adjacent property is currently occupied by the New York City Sanitation Department and is used for salt storage. To the east is Kent Avenue; beyond the avenue is a public park. To the west is Wallabout Channel, a tidal tributary to the East River. The neighborhood is currently a mix of commercial, industrial, and residential uses; however historical land use was primarily industrial.

2.0 Scope of Remedial Action

This RAWP summarizes the results of remedial investigations to date, summarizes the results of a feasibility study completed for a specific remedial technology, and outlines a proposed course of remedial action for the ash pit, considered a single Area of Concern (AOC), or operable unit at the Site. A second AOC consists of five locations of contaminated soil to the south, southeast, southwest, and north of the former generating station building. Plans for the remediation of this second operable unit will be outlined in a separate RAWP.

3.0 Description of Site Investigations to Date

3.1 December 1999 Initial Investigation

In December 1999 and February 2000, Lawler, Matusky, and Skelly (LMS) performed a limited-scope investigation of the ash pit. Using a Ponar dredge sampler, one surficial sludge sample "AP-1" was collected from the west side of the pit, and a (second) surficial sludge sample "AP-2" was collected from the pit's eastern side. The collected samples were analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. Laboratory analysis reported:

- Total VOC concentrations of 0.708 mg/kg and 0.134 mg/kg in AP-1 and AP-2, respectively;

- Total SVOC concentrations of 23.06 mg/kg and 52.92 mg/kg in AP-1 and AP-2, respectively. It should be noted that all SVOCs except one were reported at either below MDLs or at estimated values below the quantitation limit. Bis (2-Ethylhexyl) phthalate was reported at 13.4 mg/kg in AP-1 and at 8.44 mg/kg (estimated value) in AP-2. Shaw notes that this compound is frequently reported in environmental chemical analyses, and is often attributed to contamination introduced in the field or in the laboratory. One reference indicated that bis (2-Ethylhexyl) phthalate may leach from plastic products used in analytical laboratories (e.g. tubing, containers)[1].

- Lead was reported at 871 mg/kg and 599 mg/kg in AP-1 and AP-2, respectively.

- PCB concentrations of 68.5 mg/kg and 37.7 mg/kg were reported in AP-1 and AP-2, respectively. The 68.5 mg/kg concentration exceeds the TSCA threshold of 50 mg/kg for this compound.

During the December 1999 event, a sheen formed on the surface of the water of the ash pit during the sampling procedure. NYSDEC was notified of this observation, and NYSDEC Spill #9910993/Con Edison E2MIS #129308 was assigned to the incident.

LMS performed a follow-up investigation in March and April 2000, consisting of the collection of a water sample from the pit, and eight deeper sludge samples from four sampling locations points within the pit, collected using a Vibracore sampling string. The LMS report indicates that, prior to the use of Vibracore sampling, recovery of sludge samples below the top of the sludge surface was attempted using a geoprobe drilling string; however the attempt was not successful.

[1] Montgomery, 2007 (see References in Attachment 10)

Samples from four locations were submitted for analysis of:

- TCL VOCs
- TCL SVOCs
- TAL Metals
- TCLP VOCs
- TCLP SVOCs
- RCRA Characteristics
- Oil Fingerprinting

Laboratory analysis of the deeper sludge samples reported the following results:

- One VOC, chlorobenzene, was reported above MDLs by the TCL analysis at 9.8 mg/kg in sample KAP-02, and by the TCLP analysis in the same sample at 0.051 mg/L. Carbon disulfide was reported in five samples at two locations at concentrations ranging from 0.0032 mg/kg to 0.234 mg/kg.

- The SVOC analysis reported the detection of several compounds above MDLs in all samples. Total SVOCs, according to the LMS tabulated summary, ranged from 0.7926 mg/kg to 85.036 mg/kg; however these total concentrations include several estimated concentrations below the quantitation limit. One SVOC, 1,4-dichlorobenzene was reported by the TCLP analysis at 0.41 mg/L.

- Concentrations of all metals were below the RCRA toxicity threshold values as reported by the TCLP analysis. Several metals were reported above MDLs by the TAL Metals analysis, including arsenic, lead, nickel, and vanadium.

- RCRA characteristic results did not report any hazardous characteristics.

- PCB concentrations ranged from non-detect to 31.4 mg/kg.

- Lubricating Oil, Total Hydrocarbons, and #2 Fuel Oil/Diesel were detected in each of the samples. Lubricating oil concentrations ranged from 92 mg/kg to 8,420 mg/kg. Total Hydrocarbon concentrations ranged from 130 mg/kg to 25,300 mg/kg. #2 Fuel Oil/Diesel concentrations ranged from non-detect to 1,410 mg/kg.

One sample of ash pit water was collected in April 2000. The sample was analyzed for the same analytes listed above in addition to pesticides. Pertinent analytical results for the water sample include:

- Five SVOCs were detected above MDLs; the highest concentration was reported for the compound 1,4-dichlorobenzene at 0.43 µg/L. VOCs were reported as non-detect.

- The TCLP analysis for organic compounds reported one SVOC, 1,4-dichlorobenzene at 0.0023 mg/L; VOCs were below MDLs.

- TCLP Metals were all below toxicity threshold values. Several metals were reported above MDLs by the TAL Metals analysis, including arsenic, lead, and vanadium.

- One PCB, Aroclor 1260 was reported at 30 µg/L.

Figure 4 illustrates the location of samples collected by LMS in December 1999 and April 2000.

3.2 November 2006 Underwater Investigation

In November 2006, an underwater investigation and condition survey of the property bulkhead on Wallabout Channel was performed by M.G. McLaren, P.C., an engineering consultant to Con Edison. A report was provided to Con Edison in December 2006 and reviewed by Shaw to evaluate information pertinent to the ash pit. The inspection included an assessment of the physical condition of the ash pit. The condition of the ash pit was rated "poor"; severe scaling of the interior walls was noted, and severe scaling and some minor cracking were noted on the outboard wall of the pit facing Wallabout Channel. The report recommended the investigation of permit requirements for the filling of the ash pit and utilizing the area as a means of egress for vehicles.

3.3 2007 Remedial Investigation

In 2007, Shaw performed a two-part remedial investigation in accordance with the NYSDEC-approved Ash Pit Remedial Investigation Work Plan, submitted in April 2007. The RI consisted of an investigation of the chemical quality of water and sediment/sludge in the ash pit, and an evaluation of the structural integrity of the ash pit walls above the water line. Results of the 2007 Remedial Investigation were summarized in the March 2008 Remedial Investigation Summary Report (see Section 4.1 which provides further details on this report and its findings).

3.3.1 Water and Sediment Investigation

In April 2007, ash pit water samples APW-01 and APW-02 were collected along the eastern wall of the ash pit. APW-01 was collected in the southern portion and APW-02 was collected in the northern portion.

Six sediment cores, APS-01 through APS-06, were collected from below the water line by a Vibracore apparatus mounted on jack-up barge moored in Wallabout Channel. At each location, a continuous sediment core was collected from the top of the sediment

layer to the point of refusal. At locations where the sediment thickness exceeded five feet, a set of samples was collected for each five feet of sediment.

Following the collection of each core, the recovered sediment was examined and noted for texture, color, general classification, and any visual or olfactory evidence of contamination. A PID was used to screen each sediment core for the presence of organic vapors. Samples for submission to the laboratory for volatile organic compound (VOC) analysis were collected directly from the core based on any visual or olfactory evidence of potential contamination or based on elevated PID readings. The sediment samples were also submitted for analysis of PCBs, TPH, TCLP VOCs, TCLP SVOCs, TCLP Metals, and reactivity, ignitability, and corrosivity. **Figure 5** summarizes the ash pit sediment sampling locations, penetration depths, recovered core lengths, field observations during sample collection, and PCB and TPH concentrations. Analytical results are discussed below.

Analytical Results of Ash Pit Water Samples-April 2007

The analytical results for the ash pit water characterization samples (**Table 1 and Table 2**) indicate that the ash pit water meets disposal criteria for non-hazardous wastes. The pH of both samples was 7.5. Reactive cyanides and sulfides were not detected in either sample, and both were negative for ignitability. TPH was detected in one sample, APW-02 located in the northeast corner of the ash pit, at a concentration of 166 µg/L. The only PCB compound detected was Aroclor 1260, and reported concentrations were 0.76 µg/L and 1.3 µg/L for samples APW-01 and APW-02, respectively. These concentrations indicate that the water phase would not be a PCB waste under EPA's PCB regulations, but exceeds typical NYSDEC criteria for discharging wastewater to surface waters. TCLP SVOCs were below detection limits. Since TCLP analysis of a liquid sample consists solely of analysis of the extract of a filtered sample (to remove solids), these TCLP results could be considered equivalent to analytical results for totals analyses of the same samples. Only one TCLP VOC was detected (0.098 mg/L of 2-butanone at APW-02), but this was well below the 200 mg/L hazardous waste threshold for 2-butanone. The only TCLP metals detected were barium (0.0582 and 0.0712 mg/L), lead (0.0287 and 0.0375 mg/L), selenium (0.0525 and 0.0387 mg/L), and silver (0.0074 mg/L). All were well below their hazardous waste thresholds.

Analytical Results of Ash Pit Sediment Samples-April 2007

Analytical results of the sediment samples (**Table 3 and Table 4**) showed that the pH ranged from 8.5 to 9.8, meeting corrosivity requirements for non-hazardous wastes. All sediment samples were negative for ignitability. Reactive cyanides and sulfides were not detected in any samples. The TPH concentrations in the upper portion of the cores ranged from 586 mg/kg to 2,700 mg/kg. The lone TPH result for the lower portion of the

cores (155 mg/kg at APS-03B/APS-00) shows much lower TPH concentrations with depth. Although the TPH concentration of sample APS-06A, located in the northeastern portion of the ash pit, was originally reported as 629,000 mg/kg, this was the result of an incorrect analytical result on the part of the laboratory. The corrected analytical result was 2,700 mg/kg, and this corrected value was reported by Shaw and Con Edison to NYSDEC. Previous sediment analytical data (LMS, 2000) reported the highest TPH concentration of 25,300 mg/kg, also in the northeast corner of the ash pit.

Analyses for PCB concentrations reported detectable levels of Aroclor-1260 in most samples. In the upper portion of the cores, PCB concentrations did not exceed 12 mg/kg, with the exception of sample APS-04A (0-3.5 ft.), which had a concentration of 120 mg/kg. This concentration exceeds the concentration of PCBs reported in shallow sludge sample AP-1 collected in February 2000 by LMS. It should be noted that the estimated value of the undiluted sample APS-04A was 28 mg/kg. However, since this was outside the calibration range, the sample was diluted and resulted in the 120 mg/kg reported concentration. This was the only sediment sample result for PCBs above EPA's TSCA threshold of 50 mg/kg. PCB concentrations in the lower portions of the cores were less than 1 mg/kg (non-detect to 0.79 mg/kg), with the exception of a concentration of 15 mg/kg at APS-02B. TCLP VOCs were below detection limits. The only TCLP SVOC detected in the sediment samples was 4.0 ug/L of 1,4-dichlorobenzene in APS-02A. This is well below the hazardous waste threshold of 7,500 ug/L for 1,4-dichlorobenzene. TCLP metals detected in sediment samples at the following ranges were arsenic (ND to 84.4 ug/L), barium (317 to 1600 ug/L), cadmium (ND to 9.9 ug/L), chromium (ND to 92.4 ug/L), lead (ND to 470 ug/L), selenium (27.5 to 93.7 ug/L), and silver (ND to 30.7 ug/L). All were well below their hazardous waste thresholds.

A copy of the laboratory data report for both water and sediment samples is provided as **Attachment 1**.

3.3.2 Concrete Inspection and Compressive Strength Testing

On September 26 and 28, 2007, personnel from Shaw and its subcontractor, Testwell Laboratories Inc., took part in a structural evaluation of the ash pit. The pit walls were accessed by the inspection team on September 26 and on September 28 using manlifts. The focus of evaluation was the structural condition of the interior of the ash pit.

At each testing location, a Windsor pin driver was inserted into a hole created by the apparatus, and a probe was propelled into the concrete. A collection of measurements of seven tests at each location was averaged with the intention of providing consistent and statistically reliable results. The reported compressive strength test results were

derived from this average. According to NDT James Instruments Inc., manufacturers of the Windsor Pin System, this testing technique delivers an accuracy generally within 15%.

The following observations were made during the structural investigation:

- The interior face of the west wall (approximately 28 to 30 inches thick at grade level) exhibited the worst deterioration among all of the walls in the structure, highlighted by two large areas (approximately 100 square ft. each) of large spalls with exposed and rusted reinforcement accompanied by severe scaling, at either end of the wall. In many places, the reinforcement has detached from the wall on at least one end. In addition, the majority of the remainder of this wall exhibited hollow-sounding concrete and incipient spalls of varying size.

- The north interior wall (12 inches thick at grade level) also exhibited a large area (50 square feet) of spalling with exposed and rusted reinforcement, at the west end. In addition, several wide vertical, horizontal and diagonal cracks were noted, with a total length of 22 feet.

- At the east interior wall, the area of most severe deterioration was at the south end near grade level. Here, a 20 square feet area of hollow-sounding concrete was noted, next to a 10 square foot area of concrete that projected approximately 4 inches beyond the front face of the wall. This projection was most likely constructed this way.

- The south interior wall (approximately 18 inches thick at grade level) exhibited a wide horizontal crack, 14 feet in length, approximately 2 feet below grade. Also, several large incipient spalls were noted throughout the top of the wall.

- No significant deterioration was noted at the southeast diagonal wall, connecting the south and east walls.

- The majority of the exposed surface area at the north, east, south and southeast walls exhibited generally sound concrete.

Windsor pin tests were performed at a total of 12 locations throughout the interior walls of the ash pit: five at the west wall, two at the north wall, three at the east wall, one at the south wall, and one at the southeast diagonal wall. Test results for each location are provided in **Attachment 2.** In summary, concrete compressive strength values ranged from 3,974 psi to 4,252 psi at the west wall; 4,504 psi to 4,768 psi at the north wall; 4,252 psi to 4,374 psi at the east wall; 4,052 psi at the south wall; and 4,410 psi at the southeast wall. **Figures 6 and 7** illustrate the testing locations and summarize field

observations.

These values suggest relatively sound concrete at all walls, performing and resisting applied loading in conformance with its originally intended design for the retention of sediment load, in keeping with industry standards for a design of that vintage. These results are in line with visual and hammer-sounding observations for all walls, with the exception of the west wall. For the Windsor pin apparatus to function properly, and to obtain accurate results, a section of flat, even-surfaced, unspalled concrete was required. At the west wall, areas of concrete that met this criterion for Windsor pin testing also exhibited compressive strengths that were in relatively close range of the results at other walls. However, if it would have been possible to measure the compressive strength using the Windsor pin method at unsound or spalled areas, it is very likely that the compressive strengths would have been lower than the values obtained at the other walls. Taking the Windsor pin and sounding hammer results together, it was concluded that the remaining areas of sound concrete throughout the west wall are performing as intended; but the three areas of unsound concrete with severe spalls/scaling and exposed/rusted reinforcement (see **Figure 6**), are not.

3.4 December 2008 Feasibility Study

On December 3, 2008, technicians from Shaw collected two water samples, APW-03 and APW-04, from within the Ash Pit at the locations shown on **Figure 8**. The two water samples were sent to TestAmerica in Shelton, Connecticut and analyzed for TCLP VOCs, TCLP SVOCs, diesel range organics, PCBs, TCLP metals (including mercury), total suspended solids, flashpoint, reactive cyanide, reactive sulfide, and pH. The results from these samples were consistent with results from previous water sampling performed in 2007 and described in Section 3.1.3.1. Analytical results from both sampling events reported TCLP VOCs, TCLP SVOCs, and TCLP Metals at non-detect concentrations or at estimated concentrations below the laboratory reporting limits, and PCB (Aroclor-1260) concentrations ranged from non-detect in December 2008 to 1.3 µg/L in April 2007. DRO ranged from 166 µg/L in April 2007 to non-detect in December 2008[2]. Analytical results of the December 2008 water samples are summarized in **Tables 5 and 6**.

[2] TPH was initially analyzed in April 2007 using EPA Method 8100 with a reporting limit of 86 µg/L. In December 2008, it was analyzed using EPA Method 8015B with a reporting limit of approximately 550 µg/L. The initial analysis for TPH in December 2008 was accompanied by a surrogate that was determined to be outside of acceptable limits. The December 2008 samples were reanalyzed; however, the reanalysis was performed 1 day outside of the specified 7 day holding time. Since the holding time was not grossly exceeded, the values should be considered estimates.

Also on December 3, 2008, technicians from Shaw collected seven 5-gallon sludge samples within the Ash Pit from the locations shown on **Figure 8**. The depth of the collected samples ranged from approximately just below the surface of the sludge, to approximately three feet below the sludge surface. An eighth composite sample of sludge was also prepared by compositing and homogenizing sub samples collected at each of the seven locations. Samples were collected using a hand-operated Eckman dredge sampler; however sample collection was inhibited by a significant amount of trash and debris encountered in the pit. Although Shaw's September 2008 scope of work for bench-scale effluent polishing tests of Geotube® filtrate called for the collection of a sufficient volume of sludge to yield 60 gallons of water, the amount of debris present, in addition to a restricted duration of available sample collection time due to the ongoing demolition of the adjacent generating station building, resulted in the collection of 40 gallons of sludge. For purposes of materials handling under the existing field conditions, and to expedite transportation of the samples for Geotube® dewatering testing, the eight 5-gallon sludge samples and a 5-gallon free water sample were containerized in 5-gallon plastic buckets with sealed covers. The samples were delivered to Mineral Processing Services, LLC (MPS) in South Portland, Maine for subsequent Geotube® dewatering testing.

A portion of the homogenized sludge sample was also sent to TestAmerica in Shelton, Connecticut and analyzed for total solids, Total Suspended Solids (TSS), specific gravity, and bulk density. Analytical results of this sludge sample are summarized in **Table 7**.

3.4.1 Rapid Dewatering Test (RDT)

The sludge and water samples that were delivered to MPS were used to assess the use of Geotube® as a remedial technique. The eight sludge samples delivered to MPS were combined into one 40-gallon sample. The composited sample was characterized as 42.8% dry solids with a specific gravity of 1.82 and a wet bulk density of 10.2 pounds per gallon.

The 5-gallon bucket of water collected from the ash pit was used for the make-down of the polymer/flocculent chemicals. This make-down water[3] was then added to the sediment slurry as it was pumped into the Geotube®.

A bench-scale RDT was performed using the sludge and water sample to select the polymer and determine the optimum polymer dosage for sludge dewatering. Four polymers were selected for testing based on past performance and compliance with

[3] Water that has a pH of 5-9 and no salinity-water out of this range has a detrimental effect on the polymer solution prior to addition to the slurry being pumped from the holding basin during the dewatering test.

USEPA aquatic toxicity requirements. MPS determined that using (Water)Solve 9222, a water soluble polymer, at a volumetric dosage of 233 ppm would provide optimum dewatering characteristics. A Material Safety Data Sheet (MSDS) for the polymer is provided as **Attachment 3**.

3.4.2 Pressure Geotube® Dewatering Test (P-GDT)

After determining the optimum polymer and volumetric dosage, MPS performed a P-GDT to evaluate the polymer performance under full scale application pressure, confirm that the polymer dosage is representative of full scale application, create samples of filtrate and sludge cake, and to confirm the Geotube® filtration area required for full scale application. The P-GDT consisted of taking the sludge sample and diluting it with the water sample to simulate the expected characteristics of sludge during dredging/removal operations. In this test, the sludge was diluted to an average of 5% dry solids. The sludge was then injected into a 1 cubic foot capacity MiniTube™ at a pressure of 3 pounds per square inch (the full scale application pressure for a Geotube® with a 45 foot circumference).

The P-GDT confirmed that the selected polymer dosage will perform under full scale application at the specified dosage. Samples of filtrate and filter cake were collected and sent to Shaw's research center in Lawrenceville, New Jersey for testing of chemical characteristics. Analytical results are provided in **Table 8**. A report on Geotube® Dewatering Technology Testing was prepared by MPS (**Attachment 4**).

3.4.3 Filter Cake and Filtrate Sampling

Laboratory testing to evaluate the use of an organoclay for treatment of filtrate was performed at Shaw's research center in Lawrenceville, New Jersey. Testing was planned in two phases: an initial batch screening test, and a secondary column test. The methodology and results of the Phase I batch testing were presented in the FSSR. Based on the results of the Phase I testing, it was concluded that Phase II column testing was not needed and, therefore, it was not performed.

3.5 Tidal Exchange

In order to determine the potential effect of tidal water exchange between Wallabout Channel and the ash pit, water levels in the pit and in the channel were gauged. On May 1, 2009, depth to water at both locations was gauged at the time of the predicted high tide and low tides for that date. **Table 9** summarizes the data collected. As can be observed from the data, there was little, if any, difference in the water level within the ash pit when comparing the levels at the time of the two tidal extremes. However, this observed condition is unlikely to affect remediation of the ash pit, which is discussed in

Section 5.0 of this RAWP. Also on May 1, 2009, the dimensions of the ash pit were again measured. **Figure 9** illustrates the ash pit dimensions and resulting volume of sludge and water, based on the April 2007 sampling logs and the May 2009 measurements.

4.0 Summary Reports and NYSDEC Correspondence

4.1 Remedial Investigation Summary Report (RISR)

The March 2008 RISR concluded the following:

- Water samples APS-01 and APS-02 did not display evidence of contamination in the field. Laboratory analysis of the water samples by TCLP reported low-level concentrations of some metals and one VOC, all below USEPA and NYSDEC hazardous waste threshold values, as well as low concentrations of PCBs and TPH. However, the PCB results for the water samples exceeded typical NYSDEC criteria for discharging wastewater to surface waters, indicating that treatment would likely be required before surface water discharge.

- Several sediment cores displayed visual evidence of contamination as evidenced by the presence of a white-colored material with a greasy consistency, as well as an oily sheen. A petroleum-like odor was detected in at least one core. Laboratory analysis of the sediment samples by TCLP did not report any toxicity characteristics or concentrations exceeding hazardous waste thresholds; however, a PCB concentration of 120 mg/kg was reported for one sample, exceeding the TSCA threshold value of 50 ppm for PCB-contaminated media. TPH was detected in most of the samples at concentrations ranging from 155 mg/kg to 2,700 mg/kg.

The volume of stationary sediment within the ash pit was estimated by this investigation at between 480 to 660 cubic yards. (*Note: A May 2009 inspection of the ash pit has resulted in an estimate of 758 cubic yards of sediment). The 2008 RISR estimate is consistent with the previous estimate of between 550 and 700 cubic yards from an investigation of the ash pit performed by LMS in 2000[4].

- The integrity and compressive strength of concrete in the ash pit walls was determined by the performance of Windsor Pin tests and sounding by a hand-held hammer at 12 locations on the interior surfaces of the walls. Although portions of the

[4] Based on measurements taken during the investigation phase,(approximately 68 ft. by 24 ft.), the area of the ash pit equals approximately 1,632 square feet. The thickness of sludge penetrated during the April 2007 sampling event performed by Shaw was generally in the range of 8 to 9 feet, although sludge thickness was measured at 11 feet at one location. Using 9 feet as an estimated average thickness, the volume of sludge in the ash pit equals 14,688 cubic feet, or 544 cubic yards. This is very close to the estimate of 542 cubic yards developed by LMS and reported in their Site Investigation Report: Phase II Environmental Site Assessment, February 6, 2000, and is also within the range of the 480 to 660 cubic yards provided in Shaw's Ash Pit Investigation Summary Report of March 2008. Since sludge thickness was verified at 11 feet in at least one location, it would be beneficial to employ "conservative" estimation, and that total sludge volume is likely to be greater than 544 cubic yards. In May 2009, measurements taken resulted in the revised dimensions of approximately 68 ft. by 30 ft., resulting in a revised estimate of 758 cubic yards of sediment. Figure 9 provides details.

walls exhibit severe scaling and varying degrees of spalling, results of the Windsor Pin Tests suggest relatively sound concrete at all walls (with the possible exception of the west wall), performing and resisting applied loading in conformance with its originally intended design for the retention of sediment load. These values support the visual results and hammer-sounding evaluations, although areas of even-surfaced and unspalled concrete on the west wall are limited. It is concluded that with the exception of much of the west wall surface, the concrete is resisting applied loading in conformance with its originally intended design. Based on the concrete integrity and compressive strength testing results, Shaw considers the north, east, southeast and south walls of the ash pit to be in good condition. The removal of sediment and debris from the ash pit should not adversely affect the lateral load-carrying capacities of these walls.

The RISR offered the following recommendations:

1. The use of GeoTubes as a remedial technique should be evaluated by performing a treatability study. A small-scale field pilot test or a bench-scale should be performed using a small amount of ash pit sludge to determine polymer selection and dosage.
2. A mean bulk density test and percent solids of representative sludge samples should be performed, to determine the homogeneity of the waste stream for dewatering, and also to aid in the selection of a polymer for use in the GeoTubes.
3. Two – 3 to 5-gallon pails of "over-water" should be collected. The water would be needed for the make-down of the polymer/flocculent chemicals that would be fed into the sediment slurry as it is pumped into the GeoTube. A portion of the water should be analyzed for TCLP RCRA organics, hazardous waste characteristics, TCLP RCRA metals, and PCBs, and would serve as the final two water samples to be collected from the ash pit, as per the Ash Pit Remedial Investigation Work Plan.
4. The dewatered treatability sludge effluent should be sampled for turbidity, total suspended solids, pH, oil and grease, and dissolved chemicals of concern (see 3, above), in support of the acquisition of a SPDES permit for discharge.
5. Evaluate the potential for effluent polishing treatment (i.e. granular activated carbon) as this technology may be required. Effluent from the GeoTubes would be treated with GAC or organoclay, and the resulting post-polishing treatment effluent analyzed and compared to unpolished treatment.
6. Procedures and protocols for Tasks 1-5 should be detailed in a Feasibility Study (FS) Work Plan. Findings would be documented in an FS Report.

7. Perform a cost benefit analysis of the use of GeoTubes versus conventional transportation and disposal methods, i.e. barge mounted crane dredges. The analysis would be included in the FS Report.

8. Potential Con Edison approved waste disposal facilities for the acceptance of dewatered sludge should be identified. Facilities should be requested to review the analytical data collected to date and provide professional opinions on whether analytical data gaps exist. If additional sampling is required, this can be performed at the time sludge is collected for the GeoTube pilot test.

9. A Remedial Action Work Plan (RAWP) should be developed to detail recommended techniques for remediation prior to closure of the ash pit, as well as the basis for the recommended techniques. A process flow diagram detailing equipment, generic specifications, and treatment train details would be included in the RAWP. Following RAWP approval, bid specifications for the performance of the remediation field scope of work should be developed.

10. The remediation of the ash pit will likely involve dewatering of the pit. This task may result in a disturbance of the balance of hydrostatic pressure currently exerted on the wall by Wallabout Channel on the west side, and the ash pit water on the east side. Therefore, a preliminary recommendation is hereby made for the installation of temporary shoring or bracing on the west wall in order to provide additional rigidity and strength before the removal of sediment or water from the pit.

DEC Response to RI Summary Report

In a letter of April 14, 2008, NYSDEC concurred with the RISR recommendation to develop a FSWP and a RAWP. The letter also indicated that:

- the concentration of 120 mg/kg Aroclor 1260 reported for sludge sample APS-04A exceeded the hazardous waste threshold of 50 mg/kg, and that for disposal purposes this sediment would be subject to TSCA regulations;
- a copy of the gas chromatogram for sample APS-06A, for which TPH was reported at a concentration of 629,000 mg/kg (*based on a corrected analytical value, this is no longer an issue; see previous Section 3.1.3.1 of this RAWP); and
- details were requested on the function of the pipes depicted in photographs of the ash pit walls (Con Edison provided additional information on May 12, 2008).

4.2 March 2009 Feasibility Study Summary Report (FSSR)

The FSSR concluded the following:

- The small-scale pilot dewatering test demonstrated that Geotube® technology is a viable option for dewatering the sludge from the Ash Pit. Based upon the results obtained from the P-GDT, MPS estimated that two 100-foot long, 60-foot

circumference Geotube® units would be required to dewater the estimated 600 cubic yards of sludge in the Ash Pit. The resultant mass of dewatered sludge is estimated to be 460 tons Based on the May 2009 revised estimate of approximately 750 cubic yards of sludge in the Ash Pit, a third Geotube® unit would be required.

- The testing of the filtrate and filter cake also support the conclusion that Geotube® technology is a viable option for dewatering. The concentrations of all of the analytes of interest in the filtrate were below the respective reporting limits; therefore, the effectiveness of the organoclay as a treatment polishing step was not evaluated.

- Based upon the results of this dewatering test, Geotube® technology should be retained for consideration in the evaluation of remedial alternatives for the Ash Pit in the Remedial Action Work Plan to be prepared for the site. Cost effectiveness of Geotube® versus conventional technologies will also be presented in the Remedial Action Work Plan.

As of this writing, NYSDEC approval of the FSSR is pending.

5.0 Analysis of Remedial Action Alternatives and Development of Proposed Remedy

This section contains an evaluation of potentially applicable remedial alternatives/technologies that might be selected for implementation at the site, either as stand-alone technologies, or applied in conjunction with other technologies. For those alternatives/technologies which are retained, representative process options are identified and grouped into a proposed remedial action.

5.1 Technology Alternatives Evaluation

This section identifies and describes potentially applicable alternative technologies and presents the preliminary screening of each technology and process option. During this preliminary screening, certain process options and technologies are eliminated from further consideration on the basis of technical effectiveness (short- and long-term) or implementability. Three factors are specified in the USEPA guidance for conducting Remedial Investigations/Feasibility Studies (RI/FS) (USEPA, 1988) to evaluate and screen out technologies or process options. These three factors are:

- Nature of the contaminants;

- Specific media of concern at the site; and
- Physical characteristics of the site, including geology and hydrogeology.

In addition to these three factors, the following information was also considered when reviewing technologies and their specific applications to conditions at the site:

- Availability of technology;
- Current development of technology (e.g., bench/pilot/full scale demonstration of effectiveness);
- Space constraints for full scale implementation; and
- Impact to property owners and surrounding community.

The NYSDEC document Draft DER-10 Technical Guidance for Site Investigation and Remediation states that the selection of a remedy shall satisfy the following criteria:

1. Overall protection of public health and the environment
2. Compliance with Standards, Criteria, and Guidance
3. Long term effectiveness and permanence
4. Reduction of toxicity, mobility, or volume with treatment
5. Short-term effectiveness
6. Implementability
7. Cost
8. Community Acceptance

As of this writing, Con Edison is considering marketing the property for sale. If the property is sold, it is assumed that the site would be redeveloped for residential and/or commercial use. The impact of the technology application on the potential future land use will be considered as a primary screening factor for this evaluation.

Figure 10 provides plan and sectional views that can be referenced for the following sections of this RAWP, which discuss remedial alternatives.

5.1.1 Containment

Containment is an engineering control method that creates a physical barrier or passive mechanism to contain or stabilize contamination and/or eliminate potential exposure pathways from contaminated medium. Containment of the ash pit can be accomplished through the use of a covering/capping system consisting of a reinforced concrete slab. The sludge remaining in the ash pit would remain, and the ash pit would be filled with a

coarse aggregate. A reinforced concrete slab would then be placed over the top of the ash pit. Considering the potential future use of the site and that the bulkhead on Wallabout Channel will likely require reconstruction, containment of the sludge in the ash pit is not considered a viable option for remediation; therefore, containment will not be considered further.

5.1.2 In-Situ Treatment

In-situ treatment encompasses a variety of technologies that could be utilized to treat the sludge in the ash pit in place (i.e., without removal). The in-situ treatment technology that is most applicable to the ash pit is solidification/stabilization. Solidification/stabilization is a mobility-reducing technology. Its objective is to immobilize the contaminants through either encapsulation within a stabilized mass and/or addition of chemical binders. *In-situ* solidification/stabilization could reduce the mobility of contaminants in the sludge; however, in consideration of potential future use of the site and that the bulkhead will likely be reconstructed, this technology is not considered a viable option for remediation. *In-situ* treatment will not be considered further.

5.1.3 Removal/Dredging

Under this process, contaminated sludge would be removed by dredging from the ash pit for treatment and/or disposal and the ash pit would be backfilled with either a clean aggregate fill, or a lightweight concrete will be poured and the solidified concrete would act as a fill. Lightweight, coarse-grained aggregate fill would provide good drainage of the closed structure; however the use of aggregate would require the installation of shoring to provide structural stability during backfilling. The use of a lightweight concrete would form an impermeable fill thus eliminating any drainage concerns, and would also provide permanent reinforcement of the structure, thus eliminating the need for shoring. On-site treatment (see Section 5.1.4) of the sludge prior to transport may be necessary to control moisture content. Removal/dredging operations are considered to be proven and readily available; however, precautions might be needed to protect human health and the environment during removal/dredging operations including the installation of shoring. Two methods of dredging are applicable to this project: mechanical dredging and vacuum dredging.

Mechanical dredging can be performed using a crane equipped with a clamshell bucket. The crane would have to be stationed close to the ash pit. The ground adjacent to the ash pit on the east has been rated as a ”restricted loading” zone according to the November 2006 Underwater Investigation. Other areas slightly further away from the ash pit will likely support the weight of a large crane; however with increasing distance from the ash pit, the length of the crane boom will increase, and the angle of articulation

of the excavator setup during dredging will likely steepen. A steepened angle of articulation will reduce the effectiveness of the machine-powered dredging, because the excavating equipment will be unable to dredge sediment in the portion of the ash pit closest to the excavator. In addition, the permitting process for tall cranes has of late been complicated in New York City, due to a rash of recent accidents involving tall cranes. This is likely to result in delays as well as extra costs incurred by the project. Coarse debris can be removed by scalping of the excavated coarse fraction using a vibratory roller, or by manual removal by divers; however excavation will not completely remove all debris, thereby requiring manual cleanup of the remnant debris by divers.

For these reasons, mechanical dredging is not the preferred option for sediment removal from the ash pit.

Another option is vacuum dredging. This would be performed by pumping the sediment out of the ash pit, either by using a submersible pump, or using diver-operated hand-held vacuum dredging units. Coarse debris will require manual removal by divers.

This method of dredging is likely to be more efficient than mechanical dredging due to the presence of considerable amounts of coarse debris within the sludge, as well as the site-specific limitations on the efficiency of mechanical dredging described above in this section.

The sludge would ultimately be disposed of at a permitted facility, thereby eliminating the issues of on-site contaminant volume and toxicity of sludge in the ash pit.

Due to the observed poor structural condition of the Wallabout Channel bulkhead (west) wall, there is significant concern that any attempt to dewater the ash pit would remove the hydrostatic support provided by the water contained within the ash pit. Therefore, during removal/dredging operations, the water level within the ash pit must be maintained relative to the water level in the adjacent Wallabout Channel.

Following removal of the sludge from the ash pit, the pit walls and bottom would be inspected by divers. The pipes entering the pit would be sealed and the pit would be backfilled with clean fill material. If it is confirmed that a competent concrete bottom exists within the ash pit, concrete cores will be collected from the bottom and chipped and analyzed in a NYSDOH-certified lab for PCB content to confirm removal of the sludge, then backfilling of the pit by pumping of a lightweight, concrete fill into the pit would commence. Concrete pumping would proceed in such a manner as to prevent mixing of the water in the ash pit with the concrete fill. The ash pit water would be displaced during the backfilling process and would be collected for disposal.

If a concrete bottom does not exist or is in poor condition, sediment samples would be collected from the pit bottom to confirm acceptable chemical quality of the sediment at the bottom of the pit, Water would be allowed to remain within the ash pit during backfilling operations. The water would continue to provide hydrostatic pressure in equilibrium with the Wallabout Channel. It is anticipated that as backfill material is placed within the ash pit, water will be displaced. This displaced water will be collected and treated (as necessary) and discharged to a nearby sanitary sewer or to Wallabout Channel under applicable NYCDEP or NYSDEC approvals.

Removal/dredging of the sludge from within the ash pit will be retained for further consideration.

5.1.4 Ex-Situ Treatment

Ex-situ treatment encompasses a variety of technologies that can be utilized to treat sludge and water after it has been removed. Although ex-situ treatment has been utilized at sites to treat contaminated materials prior to reuse at the site, it is not expected that there will be any scenario for reuse of this material onsite. Therefore *ex-situ* treatment is being evaluated in this site-specific context of preparing the sludge for subsequent off-site transportation and disposal and for treatment of the water prior to discharge to a nearby sanitary sewer or to Wallabout Channel.

Ex-situ treatment technologies that have been considered to treat the sludge from the ash pit include separation of bulk solids (greater than 2 inches) and dewatering of material less than 2 inches.

The dredged sludge may be removed from the site in a semi-liquid state. A stabilization agent would have to be added to the sludge prior to disposal of the waste, resulting in a greater volume of waste compared to the dredged volume, and an increased cost of disposal per unit volume. It is estimated that stabilization additives would add at least 30% more volume to the waste sludge undergoing disposal. Unstabilized sludge will also require a greater degree of handling and containment than dewatered sludge. Unstabilized sludge will likely result in the presence of odors onsite until the time it is removed. For the above reasons, ex-situ treatment of the sludge dredged from the ash pit will not be considered further.

Dewatering operations can be accomplished actively using 30 cubic yard sludge dewatering bins or passively using geotextile filter tubes. Water separated by the dewatering bins would be collected and then discharged to a sanitary sewer or to Wallabout Channel. The water to be discharged would be required to meet applicable standards for chemical quality, for Total Suspended Solids and for Total Solids. Thus,

the water may have to be filtered in one stage or in several stages, in order to meet discharge criteria. In Shaw's experience, sediments or sludge dewatered in this manner generally requires the addition of bulking agents such as cement or kiln dust to increase the solid to liquid ratio of the waste. The addition of bulking agents will result in a greater volume of waste requiring disposal, and it will add cost due to the procurement and handling of the bulking agent, as well as the additional cost to dispose of the increased volume of waste.

In addition, the water in the collection bins may also generate odors. For this reason, and for the potential additional treatment of the sludge phase to enable transportation and disposal, and for the potential additional treatment of the water phase to meet discharge standards, the use of dewatering bins is not the preferred option.

The use of Geotube®s for dewatering and sludge containment is the second dewatering option evaluated in this section. A feasibility study was performed by Shaw in late 2008 to assess the efficacy of the dewatering of sludge in the ash pit using Geotube® and Smartfeed™ technology. The findings of the small-scale pilot dewatering test of ash pit sludge using Geotube® and Smartfeed™ technology are documented in the March 2009 FSSR. Each Geotube® contains polymer that will react with the dewatered sludge, agglomerating fine sludge particles and forming a flocculent by means of ionic charge. The tubes would be positioned on a ground enclosure with containment on the bottom and all sides of the enclosure. Sludge from the ash pit would be pumped directly into the opening of each Geotube®. The sludge will dewater by leaching of the water through the semi-permeable textile fabric of each Geotube® into a containment basin (see Figure 12, "recycled concrete aggregate berm").

Analysis of the filtrate of the 2008 bench-scale pilot test indicated that the filtrate will meet NYCDEP discharge standards without requiring secondary treatment. It should be noted however, that although the pilot test results indicated that the filtrate need not be treated, this finding from the bench-scale test may not necessarily be true for a field scale application of dewatering by Geotube®. If needed during remediation, treatment of filtrate by media such as organoclay or activated carbon can be employed to meet discharge standards. At the time of this writing, it appears that obtaining a permit to discharge to the sewer would be more expeditious than obtaining a SPDES discharge permit. The procedure for obtaining a permit from the NYCDEP for obtaining a (sewer) discharge permit is provided as **Attachment 5**.

Filter cake that was generated from the bench-scale pilot test and submitted by Shaw to TestAmerica on January 8, 2009 was analyzed for percent moisture, percent solids, and bulk density on January 13, 2009. Results reported by the laboratory were 68.9%, 31.1%, and 0.53 g/cm^3, respectively. The paint filter test showed a positive result (i.e.,

the sample failed the paint filter test). However, dewatering of sludge inside Geotube®s will continue with time, i.e. the longer the residence time of the filter cake, the ratio of percent solids to percent moisture of the filter cake will increase, thus reducing the potential for failing the paint filter test. MPS, in its report to Shaw summarizing its dewatering test, estimated that after 14 days of full scale operation, the percent dry solids in the Geotube® would be 58.3%, or the percent moisture will be 41.7%. Bulking (drying) agents can be added to the filter cake, if needed, however, MPS estimated that 20 days of onsite dewatering using Geotube®s would be appropriate to condition the filter cake for offsite disposal.

Ex-situ treatment of the sludge using Geotube® and Smartfeed™ technology and of the water using the appropriate technology required to meet the discharge requirements will be retained for further consideration.

5.1.5 Off-Site Disposal

Off-site shipment for treatment and disposal of non-dewatered sludge is not considered practicable due to excessive costs compared to other options. Therefore, this process option only addresses management of dewatered sludge and treated wastewater and includes the following:

1. The off-site disposal of the dewatered sludge as non-hazardous waste in a non-hazardous waste landfill.
2. The off-site disposal of the dewatered sludge as TSCA PCB waste and/or NYSDEC hazardous waste in a hazardous waste or PCB waste landfill.
3. The discharge of the water removed from the sludge and ash pit to a sanitary sewer or Wallabout Channel.

Off-site disposal of dewatered sludge and treated wastewater is considered to be technically and institutionally feasible and will, therefore, be retained for further consideration.

5.2 Development of Proposed Remedial Action

The selected remedial methods for this RAWP are:

- Removal of sludge and water from the ash pit by vacuum dredging;
- Onsite dewatering of the sludge using Geotube® technology;
- Disposal of filter cake at an offsite permitted facility;
- Disposal of filtrate to the municipal sanitary sewer or to Wallabout Channel; and

- Backfilling of the ash pit with lightweight concrete.

The proposed remedial action will consist of the removal and off-site disposal of the sludge contained within the ash pit, the removal of debris contained within the former pump house area and the subsequent backfilling of the ash pit and pump house area with lightweight concrete fill. The estimated total volume of sludge that will be removed and disposed off-site is approximately 750 cubic yards. In addition to the estimated volume of sludge, less than 100 cubic yards of mostly dry debris and sediment in the former pump house pit will also be disposed off-site. The wet portion of this material can be dewatered using Geotube®s.

Table 10 provides comparative cost estimates for mechanical dredging and dewatering using bins, and for vacuum dredging and dewatering using Geotube®s. (Note: the mechanical dredging estimate uses an estimated 800 tons of dewatered waste for disposal, versus 575 tons of dewatered waste for vacuum dredging; this is based on the probable need for the addition of bulking agents, if mechanical dredging is performed. Although vacuum dredging and Geotube® dewatering is estimated to cost slightly less than mechanical dredging combined with dewatering by bins, the former of these two technology combinations has been chosen as the most appropriate remedial technology for the following additional reasons:

Effectiveness of dewatering: Geotube® technology has been demonstrated to effectively dewater sludge collected from the ash pit for testing purposes, and it has produced a filtrate with chemical quality and clarity suitable for discharge to the municipal sewer, which appears to be the most expedient point of discharge. Geotube® technology has been used at other Con Edison sites for sediment/silt dewatering with results meeting expectations.

Control of Odors: Although odors from excavated waste created by a mechanical excavation and dewatering setup can be controlled to an extent by covering the dewatering bins, it will still allow odors to escape the waste to a greater degree than a vacuum dredging/Geotube® setup. The latter setup will approach “closed loop” status with waste entering the system by pumping; the waste will be discharged from the pump through hoses and will reside inside the Geotube®s. There is the potential for minor odors when the Geotube®s are cut open for loading of the dewatered sludge for transportation to a disposal facility.

Simplicity of Use: A Geotube® treatment is much simpler in design and operation than a system using mechanical dredging and dewatering bins: there would be less machinery and equipment. This reduces the amount of noise produced by the operation, as well as

creating a safer environment for workers by reducing the exposure to operating machinery.

Figure 11 illustrates a proposed lay-down area for Geotube® operations during remediation. **Figures 12 and 13** illustrate the Geotube® drainage pad layout and drainage pad construction details, respectively.

Removal of the sludge can be accomplished using submersible pumps, or by diver-operated hand-held vacuum dredging units. In either case, manual removal of coarse debris by divers will be a component of this task, and will be performed as a permit-required confined space entry. During removal/dredging operations, the water level within the ash pit will be maintained relative to the water level in the adjacent Wallabout Channel due to concerns regarding the structural conditions of the bulkhead wall. The dredger will maintain the water level in the pit by use of a pump. To restore the water elevation, water will be pumped into the pit from Wallabout Channel. The pump will remain in operation throughout the pit excavation and backfill period.

Post-removal visual inspection will be used to determine if all the sludge is removed from the ash pit. If a concrete bottom is present, representative core samples and/or chip samples will be collected from the walls and bottom. The pit will then be backfilled to the top of the pit walls with a lightweight concrete. The new concrete will encapsulate any residual contamination of existing concrete surfaces within the pit, it will provide structural reinforcement for the pit in its closed state, and will prevent the future entry of water into the pit after closure. If a concrete bottom is not present, the underlying sediments will be visually inspected to determine if all sludge has been removed. Samples of the sediment will be collected to determine if the chemical quality of the sediments has been impacted by the former contents of the ash pit. The pit would then be backfilled to the top of the pit walls with lightweight concrete.

The sampling grid will be biased towards portions of the ash pit in which sludge sampling results have reported elevated concentrations of PCBs. The samples will be analyzed for PCB concentration. A cleanup goal of one (1) ppm PCBs will be used as a measure of the effectiveness of the removal of the sludge.

The sludge will be pumped from the bottom of the ash pit into passive geotextile filter tubes (Geotubes®) as described in the FSSR. On-site dewatering of the sludge will be required to comply with transportation and disposal requirement as solid material. As such, bulking agents may be added to the dewatered sludge in order for it to pass the Paint Filter Liquid Test prior to loading into conventional on-highway transport vehicles. Post dewatering analysis of the sludge will be used to determine if the material is to be disposed of as non-hazardous solid waste or TSCA PCB and/or hazardous waste. The

dewatered material will then be transported by truck to a landfill that is permitted to accept the waste in compliance with State and Federal disposal regulations.

Following sludge removal and successful inspection or bottom sampling results, the ash pit and former pump house area will be backfilled with concrete as described above in the two scenarios (concrete bottom/soft bottom). Water will be allowed to remain within the ash pit during backfilling operations. The water will continue to provide hydrostatic pressure in equilibrium with the Wallabout Channel. It is anticipated that as backfill material is placed within the ash pit, water will be displaced. This displaced water will be collected by pumping it into tanks, and treated as necessary and discharged.

Lightweight concrete fill will be placed to the approximate level of the ash pit walls and the top of the concrete surface will be sloped to promote surface drainage toward the backfilled slab within the footprint of the former generating station building.

The water removed from the sludge during dewatering operations and from the ash pit during backfilling operations will be discharged to a sanitary sewer or Wallabout Channel. Although laboratory analysis of the water during the 2008 Feasibility Study determined that post-filtration treatment is not needed, the contractor will be responsible for ensuring that the discharge meets all standards specified by the NYCDEP for effluent discharge to its sewers, or by the NYSDEC for discharge to surface water.

Overall protection of human health and the environment will be achieved by eliminating the risk of contact, either human or ecological, with the sludge and by filling the ash pit to grade with clean coarse aggregate fill. Because the sludge will be completely removed from the ash pit, and the ash pit capped with a reinforced concrete slab, future development of the site can take place.

The proposed remedy will comply with all chemical-, location-, and action-specific standards, criteria and guidelines (SCGs). These regulations potentially include, but are not limited to:

- Resource Conservation and Recovery Act (RCRA), 40 CFR Part 261-265 – Identification and Listing of Hazardous Wastes
- RCRA, 40 CFR Part 268 – Land Disposal Regulations
- Toxic Substances Control Act, 40 CFR Part 761-Polychlorinated Biphenyls, Manufacturing, Processing, Distribution In Commerce, and Use Prohibitions
- 6 NYCRR Part 360 – Solid Waste Management Facilities
- 6 NYCRR Part 364 – Permits for Waste Transporters
- 6 NYCRR Part 371 – Identification and Listing of Hazardous Wastes
- 6 NYCRR Part 372 - Hazardous Waste Manifest System

- 6 NYCRR Part 376 – Land Disposal Restrictions
- 6 NYCRR Part 608 – Use and Protection of Waters
- 6 NYCRR Part 750 – SPDES Permits
- 19 NYCRR Part 600 – Waterfront Revitalization and Coastal Resources
- NYSDOH Generic Community Air Monitoring Plan
- TAGM HWR 89-4031 – Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites
- New York City Department of Environmental Protection – Limitations for Effluent to Sanitary or Combined Sewers, DEP WQ-D-001/Wastewater Quality Control Application/Revised 8/11/06

The implementation of the proposed remedy will result in short-term impacts that can be mitigated/managed. The number of truck trips through the adjacent community will be minimized by dewatering the sludge at the site. A conservative estimate of the number of truck trips results in an estimate of 30 trips. Health and safety issues associated with implementation of the proposed remedy can be addressed by adhering to standard construction health and safety protocol and by shoring the ash pit.

The long-term risks associated with exposure to the sludge are eliminated by removal of the sludge from the site, allowing for future site development.

The reduction of toxicity, mobility and volume at the site is achieved through the removal of the sludge contained within the ash pit. Implementation of the proposed remedy will result in the removal of approximately 750 cubic yards of sludge.

The proposed remedy is considered to be technically implementable, as all the necessary equipment and labor needed to implement the remedy are readily available. With regard to administrative implementability, the appropriate approvals and permits will need to be obtained; however, these are considered to be obtainable.

The cost of the proposed remedial action is estimated to be approximately $1,200,000. **Table 10** provides details on how the estimate was calculated.

A Quality Assurance Project Plan (QAPP) will be implemented in the event that post remediation sediment or substrate samples are collected. The QAPP is provided as **Attachment 6**. A Community Air Monitoring Plan (CAMP) is provided as **Attachment 7**. The CAMP was prepared as a guidance document for the monitoring of air quality onsite and in the immediate surrounding area during remediation. The CAMP specifies the analytes to be monitored (dusts and vapors), the procedures for monitoring, monitoring station locations, and recordkeeping. A Health and Safety Plan for the oversight of

remediation operations is provided as **Attachment 8**. A separate HASP for the performance of tasks by the remediation contractor will be prepared by the contractor.

6.0 Project Schedule

A project schedule is provided as **Attachment 9**. The schedule projects a timetable for the major tasks that are the components of the remedial actions proposed by this RAWP, including:

- submission of the RAWP to the NYSDEC,
- approval by the Department,
- preparation of a bid specification,
- issuance of a contract to the chosen contractor,
- performance of remediation
- collection of post-remediation samples, and
- preparation of a summary report and a request for no further action (NFA) for the ash pit.

Con Edison and Shaw will make every reasonable effort to adhere to the timetable outlined in the project schedule.

TABLES

TABLE 1
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
WASTE CHARACTERIZATION SAMPLES
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:			**APW-01A**		**APW-02A**		**Hazardous Waste Threshold***
Sample Depth (ft.):			**0.0'-3.0'**		**0.0'-3.0'**		
Sample Type:			**Grab**		**Grab**		
Sample Date:			**4/17/2007**		**4/17/2007**		
Analyte	**Analytical Method**	**Units**					
Ignitability	EPA 7.1	^{0}C	Not ignitable (1)		Not ignitable (1)		Flashpoint<140^{0}F
Mercury (TCLP)	EPA 7470A TCLP	mg/L	0.0011	U	0.0011	U	0.2
Arsenic (TCLP)	EPA 6010 TCLP	mg/L	0.031	U	0.031	U	5.0
Barium (TCLP)	EPA 6010 TCLP	mg/L	0.0582	J	0.0712	J	100.0
Cadmium (TCLP)	EPA 6010 TCLP	mg/L	0.0090	U	0.0090	U	1.0
Chromium (TCLP)	EPA 6010 TCLP	mg/L	0.0060	U	0.0060	U	5.0
Lead (TCLP)	EPA 6010 TCLP	mg/L	0.0287	J	0.0375	J	5.0
Selenium (TCLP)	EPA 6010 TCLP	mg/L	0.0525	J	0.0387	J	1.0
Silver (TCLP)	EPA 6010 TCLP	mg/L	0.0074	J	0.0060	U	1.0
pH	EPA 9045C	standard units	7.5		7.5		2<su<12.5
Releasable Cyanide	Reactive Cyanide	mg/L	10	U	10	U	**
Releasable Sulfide	Reactive Sulfide	mg/L	40	U	40	U	**
Pyridine	EPA 8270 TCLP	mg/L	0.00098	U	0.00098	U	5.0
1,4-Dichlorobenzene	EPA 8270 TCLP	mg/L	0.0012	U	0.0012	U	7.5
2-Methylphenol	EPA 8270 TCLP	mg/L	0.0015	U	0.0015	U	**
3+4-Methylphenols	EPA 8270 TCLP	mg/L	0.0013	U	0.0013	U	**
Hexachloroethane	EPA 8270 TCLP	mg/L	0.0012	U	0.0012	U	3.0
Nitrobenzene	EPA 8270 TCLP	mg/L	0.0016	U	0.0016	U	2.0
Hexachlorobutadiene	EPA 8270 TCLP	mg/L	0.0014	U	0.0014	U	0.5
2,4,5-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0012	U	0.0012	U	400.0
2,4,6-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0011	U	0.0011	U	2.0
2-4 Dinitrotoluene	EPA 8270 TCLP	mg/L	0.0012	U	0.0012	U	0.13
Hexachlorobenzene	EPA 8270 TCLP	mg/L	0.0012	U	0.0012	U	0.13
Pentachlorophenol	EPA 8270 TCLP	mg/L	0.0016	U	0.0016	U	100.0
		mg/L					
Vinyl Chloride	EPA 8260 TCLP	mg/L	0.0016	U	0.0016	U	0.2
1,1-Dichloroethene	EPA 8260 TCLP	mg/L	0.0021	U	0.0021	U	0.7
2-Butanone	EPA 8260 TCLP	mg/L	0.0057	U	0.098	J	200
Carbon Tetrachloride	EPA 8260 TCLP	mg/L	0.0057	U	0.0057	U	0.5
Chloroform	EPA 8260 TCLP	mg/L	0.0017	U	0.0017	U	6
Benzene	EPA 8260 TCLP	mg/L	0.0019	U	0.0019	U	0.5
1,2-Dichloroethane	EPA 8260 TCLP	mg/L	0.0017	U	0.0017	U	0.5
Trichloroethene	EPA 8260 TCLP	mg/L	0.0023	U	0.0023	U	0.5
Tetrachloroethene	EPA 8260 TCLP	mg/L	0.0024	U	0.0024	U	0.7
Chlorobenzene	EPA 8260 TCLP	mg/L	0.0023	U	0.0023	U	100

Notes:

* Regulatory Levels from 6 NYCRR Part 371

(1) Results indicate sample did not ignite at a temperature of 140 ^{0}F during laboratory test

**No guidance value published in this reference

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

TABLE 2
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:	APW-01		APW-02		TSCA* Threshold for PCBs	
Sample Depth (ft.):	0.0'-3.0'		0.0'-3.0'			
Sample Type:	Grab		Grab			
Sample Date:	4/17/2007		4/17/2007			
Concentration Unit:	µg/L		µg/L		µg/L	
PCBs						
by EPA Method 8082:						
AROCLOR 1016	0.146	U	0.146	U	50,000	(1)
AROCLOR 1221	0.172	U	0.172	U	50,000	(1)
AROCLOR 1232	0.110	U	0.110	U	50,000	(1)
AROCLOR 1242	0.084	U	0.084	U	50,000	(1)
AROCLOR 1248	0.042	U	0.042	U	50,000	(1)
AROCLOR 1254	0.037	U	0.037	U	50,000	(1)
AROCLOR 1260	0.76		1.3		50,000	(1)
Total Petroleum Hydrocarbons (TPH) by EPA Method 8100	86	U	166		**	

Notes:

* Toxic Substance Control Act PCB Regulations 40 CFR 761

(1)=Threshold value applies to sum of each Aroclor compound

**No guidance value published in this reference

U =The compound was not detected at the indicated concentration.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

TABLE 3
SUMMARY OF SEDIMENT ANALYTICAL RESULTS
WASTE CHARACTERIZATION SAMPLES
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:			APS-01A	APS-01B	APS-02A	APS-02B	APS-03A	APS-03B	APS-00 (APS-03B)	Hazardous Waste Threshold*
Sample Depth *** (ft.):			0.0'-4.0'	4.0'-8.0'	0.0'-3.0'	3.0'-6.0'	0.0'-3.0'	3.0'-6.0'	3.0'-6.0'	
Sample Type:			Grab	Grab	Grab	Grab	Grab	Grab	Grab	
Sample Date:			4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	
Analyte	Analytical Method	Units								
Ignitability	EPA 7.1	^{0}C	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Flashpoint<140^{0}F
Mercury (TCLP)	EPA 7470A TCLP	ppm	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.2
Arsenic (TCLP)	EPA 6010 TCLP	ppm	0.0844 J	0.0676 J	0.031 U	0.0706 J	0.031 U	0.031 U	0.031 U	5.0
Barium (TCLP)	EPA 6010 TCLP	ppm	0.787	1.6	0.91	1.11	0.322 J	1.19	0.901	100.0
Cadmium (TCLP)	EPA 6010 TCLP	ppm	0.0090 U	0.0090 U	0.0092 J	0.0098 J	0.0090 U	0.0099 J	0.0090 U	1.0
Chromium (TCLP)	EPA 6010 TCLP	ppm	0.0060 U	0.0262 J	0.0924	0.0177 J	0.0060 U	0.0213 J	0.0069 J	5.0
Lead (TCLP)	EPA 6010 TCLP	ppm	0.0843	0.0662	0.4700	0.0612	0.0190 U	0.1190	0.0593 J	5.0
Selenium (TCLP)	EPA 6010 TCLP	ppm	0.0433 J	0.0527 J	0.0612 J	0.0468 J	0.0937 J	0.0275 J	0.0604 J	1.0
Silver (TCLP)	EPA 6010 TCLP	ppm	0.0060 U	0.0174 J	0.0118 J	0.0179 J	0.0060 U	0.0063 J	0.0060 U	1.0
pH	EPA 9045C	standard units	8.8	8.5	9.0	8.8	9.8	9.2	9.2	2<su<12.5
Releasable Cyanide	Reactive Cyanide	mg/Kg	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**
Releasable Sulfide	Reactive Sulfide	mg/Kg	40 U	40 U	40 U	40 U	40 U	40 U	40 U	**
Pyridine	EPA 8270 TCLP	ppm	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	5.0
1,4-Dichlorobenzene	EPA 8270 TCLP	ppm	0.0012 U	0.0012 U	0.0040 J	0.0012 U	0.0012 U	0.0012 U	0.0012 U	7.5
2-Methylphenol	EPA 8270 TCLP	ppm	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	**
3+4-Methylphenols	EPA 8270 TCLP	ppm	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	**
Hexachloroethane	EPA 8270 TCLP	ppm	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	3.0
Nitrobenzene	EPA 8270 TCLP	ppm	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	2.0
Hexachlorobutadiene	EPA 8270 TCLP	ppm	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.5
2,4,5-Trichlorophenol	EPA 8270 TCLP	ppm	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	400.0
2,4,6-Trichlorophenol	EPA 8270 TCLP	ppm	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	2.0
2-4 Dinitrotoluene	EPA 8270 TCLP	ppm	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.13
Hexachlorobenzene	EPA 8270 TCLP	ppm	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.13
Pentachlorophenol	EPA 8270 TCLP	ppm	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	100.0
Vinyl Chloride	EPA 8260 TCLP	ppm	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.2
1,1-Dichloroethene	EPA 8260 TCLP	ppm	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.7
2-Butanone	EPA 8260 TCLP	ppm	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	200
Carbon Tetrachloride	EPA 8260 TCLP	ppm	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.5
Chloroform	EPA 8260 TCLP	ppm	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	6
Benzene	EPA 8260 TCLP	ppm	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.5
1,2-Dichloroethane	EPA 8260 TCLP	ppm	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.5
Trichloroethene	EPA 8260 TCLP	ppm	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.5
Tetrachloroethene	EPA 8260 TCLP	ppm	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.7
Chlorobenzene	EPA 8260 TCLP	ppm	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	100

Notes:

* Regulatory Levels from 6 NYCRR Part 371

(1) Results indicate sample did not ignite at a temperature of 140^{0}F during laboratory test

**No guidance value published in this reference

*** Depth is based on extracted core length

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

TABLE 3 (CONTINUED)
SUMMARY OF SEDIMENT ANALYTICAL RESULTS
WASTE CHARACTERIZATION SAMPLES
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:			APS-04A	APS-04B	APS-05A	APS-05B	APS-06A	APS-06B	APS-06C	Hazardous Waste Threshold*
Sample Depth * (ft.):**			**0.0'-3.5'**	**3.5'-7.0'**	**0.0'-4.0'**	**4.0'-8.0'**	**0.0'-2.6'**	**2.6'-5.3'**	**5.3'-8.0'**	
Sample Type:			**Grab**	**Grab**	**Grab**	**Grab**	**Grab**	**Grab**	**Grab**	
Sample Date:			**4/17/2007**	**4/17/2007**	**4/17/2007**	**4/17/2007**	**4/17/2007**	**4/17/2007**	**4/17/2007**	
Analyte	**Analytical Method**	**Units**								
Ignitability	EPA 7.1	°C	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Flashpoint<140°F
Mercury (TCLP)	EPA 7470A TCLP	mg/L	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.2
Arsenic (TCLP)	EPA 6010 TCLP	mg/L	0.031 U	0.078 J	0.031 U	0.0646 J	0.0358 J	0.071 J	0.0685 J	5.0
Barium (TCLP)	EPA 6010 TCLP	mg/L	0.424 J	0.778	0.317 J	1.11	0.322 J	1.2	0.94	100.0
Cadmium (TCLP)	EPA 6010 TCLP	mg/L	0.0090 U	0.0090 U	0.0090 U	0.0090 U	0.0090 U	0.0090 U	0.0090 U	1.0
Chromium (TCLP)	EPA 6010 TCLP	mg/L	0.0119 J	0.0168 J	0.0291 J	0.0095 J	0.0060 U	0.0163 J	0.0174 J	5.0
Lead (TCLP)	EPA 6010 TCLP	mg/L	0.0190 J	0.0487 J	0.0254 J	0.0382 J	0.0417 J	0.0458 J	0.0532 J	5.0
Selenium (TCLP)	EPA 6010 TCLP	mg/L	0.0406 J	0.0311 J	0.061 J	0.0689 J	0.0676 J	0.0534 J	0.0326 J	1.0
Silver (TCLP)	EPA 6010 TCLP	mg/L	0.0089 J	0.0102 J	0.0307 J	0.0060 U	0.0149 J	0.0094 J	0.0060 U	1.0
pH	EPA 9045C	standard units	9.7	8.5	9.7	8.5	9.8	8.9	9.4	2<su<12.5
Releasable Cyanide	Reactive Cyanide	mg/Kg	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**
Releasable Sulfide	Reactive Sulfide	mg/Kg	40 U	40 U	40 U	40 U	40 U	40 U	40 U	**
Pyridine	EPA 8270 TCLP	mg/L	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	5.0
1,4-Dichlorobenzene	EPA 8270 TCLP	mg/L	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	7.5
2-Methylphenol	EPA 8270 TCLP	mg/L	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	**
3+4-Methylphenols	EPA 8270 TCLP	mg/L	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	**
Hexachloroethane	EPA 8270 TCLP	mg/L	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	3.0
Nitrobenzene	EPA 8270 TCLP	mg/L	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	2.0
Hexachlorobutadiene	EPA 8270 TCLP	mg/L	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.5
2,4,5-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	400.0
2,4,6-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	2.0
2-4 Dinitrotoluene	EPA 8270 TCLP	mg/L	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.13
Hexachlorobenzene	EPA 8270 TCLP	mg/L	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.13
Pentachlorophenol	EPA 8270 TCLP	mg/L	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	100.0
Vinyl Chloride	EPA 8260 TCLP	mg/L	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.2
1,1-Dichloroethene	EPA 8260 TCLP	mg/L	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.7
2-Butanone	EPA 8260 TCLP	mg/L	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	200
Carbon Tetrachloride	EPA 8260 TCLP	mg/L	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.5
Chloroform	EPA 8260 TCLP	mg/L	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	6
Benzene	EPA 8260 TCLP	mg/L	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.5
1,2-Dichloroethane	EPA 8260 TCLP	mg/L	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.5
Trichloroethene	EPA 8260 TCLP	mg/L	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.5
Tetrachloroethene	EPA 8260 TCLP	mg/L	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.7
Chlorobenzene	EPA 8260 TCLP	mg/L	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	100

Notes:

* Toxicity Regulatory Levels from EPA 40 CFR Subpart C

(1) Results indicate sample did not ignite at a temperature of 140°F during laboratory test

**No guidance value published in this reference

*** Depth is based on extracted core length

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

TABLE 4
SUMMARY OF SEDIMENT ANALYTICAL RESULTS
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:	APS-01A	APS-01B	APS-02A	APS-02B	APS-03A	APS-03B	APS-00 (APS-03B)	TSCA* Threshold for PCBs
Sample Depth *** (ft.):	0.0'-4.0'	4.0'-8.0'	0.0'-3.0'	3.0'-6.0'	0.0'-3.0'	3.0'-6.0'	3.0'-6.0'	
Sample Type:	Grab	Grab	Grab	Grab	Grab	Grab	Grab	
Sample Date:	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	
Concentration Unit:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCBs by EPA Method 8082:								
AROCLOR 1016	0.0041 U	0.0036 U	0.0046 U	0.0039 U	0.0057 U	0.0043 U	0.0049 U	50(1)
AROCLOR 1221	0.0064 U	0.0056 U	0.0071 U	0.0061 U	0.0089 U	0.0067 U	0.0075 U	50(1)
AROCLOR 1232	0.0095 U	0.0084 U	0.011 U	0.0092 U	0.0130 U	0.010 U	0.011 U	50(1)
AROCLOR 1242	0.0085 U	0.0074 U	0.0095 U	0.0082 U	0.0120 U	0.009 U	0.010 U	50(1)
AROCLOR 1248	0.0041 U	0.0036 U	0.0046 U	0.040 U	0.0058 U	0.0044 U	0.0049 U	50(1)
AROCLOR 1254	0.0027 U	0.0024 U	0.0030 U	0.0026 U	0.0038 U	0.0028 U	0.0032 U	50(1)
AROCLOR 1260	2.1 D	0.033	12 D	15 D	4.7 D	0.045	0.073	50(1)
Total Petroleum Hydrocarbons (TPH) by EPA Method 8100	1,950	NA	586	NA	1,290	NA	155	**

Notes:

* Toxic Substance Control Act PCB Regulations 40 CFR 761

(1)=Threshold value applies to sum of each Aroclor compound

**No guidance value published in this reference

*** Depth is based on extracted core length

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

D= Sample result from diluted sample; result of undiluted sample exceeded calibration range.

TABLE 4 (CONTINUED)
SUMMARY OF SEDIMENT ANALYTICAL RESULTS
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:	APS-04A	APS-04B	APS-05A	APS-05B	APS-06A	APS-06B	APS-06C	TSCA* Threshold for PCBs
Sample Depth *** (ft.):	0.0'-3.5'	3.5'-7.0'	0.0'-4.0'	4.0'-8.0'	0.0'-2.6'	2.6'-5.3'	5.3'-8.0'	
Sample Type:	Grab	Grab	Grab	Grab	Grab	Grab	Grab	
Sample Date:	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	
Concentration Unit:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCBs by EPA Method 8082:								
AROCLOR 1016	0.0059 U	0.0043 U	0.0084 U	0.0044 U	0.016 U	0.0050 U	0.0044 U	50(1)
AROCLOR 1221	0.0092 U	0.0067 U	0.013 U	0.0069 U	0.024 U	0.0077 U	0.0068 U	50(1)
AROCLOR 1232	0.014 U	0.010 U	0.019 U	0.010 U	0.036 U	0.012 U	0.01 U	50(1)
AROCLOR 1242	0.012 U	0.0089 U	0.017 U	0.0091 U	0.032 U	0.010 U	0.0091 U	50(1)
AROCLOR 1248	0.0059 U	0.0044 U	0.0084 U	0.0044 U	0.016 U	0.005 U	0.0044 U	50(1)
AROCLOR 1254	0.0039 U	0.0028 U	0.0055 U	0.0029 U	0.010 U	0.0032 U	0.0029 U	50(1)
AROCLOR 1260	120 D	0.79 D	0.76	0.0073 U	0.36	0.043	0.0073 U	50(1)
Total Petroleum Hydrocarbons (TPH) by EPA Method 8100	2,430	NA	2,270	NA	2,700	NA	NA	**

Notes:

* Toxic Substance Control Act PCB Regulations 40 CFR 761

(1)=Threshold value applies to sum of each Aroclor compound

**No guidance value published in this reference

*** Depth is based on extracted core length

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

D= Sample result from diluted sample; result of undiluted sample exceeded calibration range.

TABLE 5
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
ASH PIT FREE WATER SAMPLES COLLECTED DECEMBER 2008: WASTE CHARACTERIZATION
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:			**APW-03**		**APW-04**		**Hazardous Waste Threshold***	**NYCDEP Sewer Influent Level**
Sample Depth (ft.):			**0.0'-3.0'**		**0.0'-3.0'**			
Sample Type:			**Grab**		**Grab**			
Sample Date:			**12/3/2008**		**12/3/2008**			
Analyte	**Analytical Method**	**Units**						
Mercury (TCLP)	EPA 7470A TCLP	mg/L	0.0020	U	0.0020	U	0.2	0.05
Arsenic (TCLP)	EPA 6010 TCLP	mg/L	0.40	U	0.40	U	5.0	**
Barium (TCLP)	EPA 6010 TCLP	mg/L	0.20	U	0.20	U	100.0	**
Cadmium (TCLP)	EPA 6010 TCLP	mg/L	0.20	U	0.20	U	1.0	2.0
Chromium (TCLP)	EPA 6010 TCLP	mg/L	0.20	U	0.20	U	5.0	5.0
Lead (TCLP)	EPA 6010 TCLP	mg/L	0.20	U	0.20	U	5.0	2.0
Selenium (TCLP)	EPA 6010 TCLP	mg/L	0.60	U	0.60	U	1.0	**
Silver (TCLP)	EPA 6010 TCLP	mg/L	0.20	U	0.20	U	1.0	**
pH	EPA 9045C	standard units	7.56	HF	7.94	HF	2<su<12.5	5<pH<11
Reactive Cyanide	Reactive Cyanide	mg/Kg	0.50	U	0.50	U	**	**
Reactive Sulfide	Reactive Sulfide	mg/Kg	20.00	U	20.00	U	**	**
Total Suspended Solids	SM 2540D	mg/L	31.00		21.00			350
Flashpoint	1020A	Degrees F	>200		>200		Flashpoint<140^{0}F	>140° F
Pyridine	EPA 8270 TCLP	mg/L	0.0200	U	0.0200	U	5.0	**
1,4-Dichlorobenzene	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	7.5	**
2-Methylphenol	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	**	**
4-Methylphenol	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	**	**
Hexachloroethane	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	3.0	**
Nitrobenzene	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	2.0	**
Hexachlorobutadiene	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	0.5	**
2,4,5-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0500	U	0.0500	U	400.0	**
2,4,6-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	2.0	**
2-4 Dinitrotoluene	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	0.13	**
Hexachlorobenzene	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	0.13	**
Pentachlorophenol	EPA 8270 TCLP	mg/L	0.0500	U	0.0500	U	100.0	**
Vinyl Chloride	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.2	**
1,1-Dichloroethene	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.7	**
Methyl Ethyl Ketone	EPA 8260 TCLP	mg/L	0.0100	U	0.0100	U	200	**
Carbon Tetrachloride	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.5	**
Chloroform	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	6	**
Benzene	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.5	0.134
1,2-Dichloroethane	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.5	**
Chlorobenzene	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	100	**
Trichloroethene	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.5	**
Tetrachloroethene	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.7	**

Notes:

* Regulatory Levels from 6 NYCRR Part 371

(1) Results indicate sample did not ignite at a temperature of 140^{0}F during laboratory test

**No guidance value published in this reference

**laboratory control sample (LCS)or laboratory control sample duplicate (LCSD) exceeds the control limits

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

HF= Field parameter with a holding time of 15 minutes

TABLE 6
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
ASH PIT FREE WATER SAMPLES COLLECTED DECEMBER 2008: PCBs AND TPH
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:	**APW-03**		**APW-04**		**TSCA* Threshold for PCBs**	**NYCDEP Sewer Influent Level**
Sample Depth (ft.):	**0.0'-3.0'**		**0.0'-3.0'**			
Sample Type:	**Grab**		**Grab**			
Sample Date:	**12/3/2008**		**12/3/2008**			
Concentration Unit:	**µg/L**		**µg/L**		**µg/L**	**µg/L**
PCBs						
by EPA Method 8082:						
AROCLOR 1016	0.59	U	0.55	U	50,000	1
AROCLOR 1221	1.20	U	1.10	U	50,000	1
AROCLOR 1232	0.59	U	0.55	U	50,000	1
AROCLOR 1242	0.59	U	0.55	U	50,000	1
AROCLOR 1248	0.59	U	0.55	U	50,000	1
AROCLOR 1254	0.59	U	0.55	U	50,000	1
AROCLOR 1260	0.59	U	0.55	U	50,000	1
Diesel Range Organics as per Method 8015B ***	550/530[(1)]	U/H	560/530[(1)]	U/H		

Notes:

* Toxic Substance Control Act PCB Regulations 40 CFR 761

**No guidance value published in this reference

***Initial analysis had surrogate sample outside of acceptable limit; sample reanalyzed oustside holding time.

H = Sample was prepped or analyzed beyond the specified holding time

U =The compound was not detected at the indicated concentration.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

(1)=A second sample run was performed after holding time limit due to an out of limit surrogate result in initial run

TABLE 7
SUMMARY OF ASH PIT SLUDGE SAMPLE ANALYTICAL RESULTS
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:			**SL-1**
Sample Date: **Analyte**	**Analytical Method**	**Units**	**12/3/2008**
Total Solids	SM 2540B	mg/L	144000
Total Suspended Solids	SM 2540D	mg/L	125000
Bulk Density	ASTM D2937	g/cm^3	0.15
Specific Gravity	SM 2710F	g/mL	1.06197
Percent Solids *	N/A	%	13.6

Notes:

* Percent Solids calculated using Total Solids and Specific Gravity

TABLE 8
SUMMARY OF ASH PIT FILTER CAKE SAMPLE ANALYTICAL RESULTS
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID: **Sample Date:** **Analyte**	**Analytical Method**	**Units**	**FILTER CAKE 1/8/2009**
Paint Filter Liquid	EPA 9095A	N/A	Present
Percent Moisture	Percent Moisture	%	68.9
Percent Solids	Percent Moisture	%	31.1
Bulk Density	ASTM D2937	g/cm^3	0.53

TABLE 9
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK
WATER LEVELS IN ASH PIT AND WALLABOUT CHANNEL

Date of Gauging: May 1, 2009				
	15 mins. before 0847 hrs.	**Low Tide 0902 hrs.**	**15 mins. after 0917 hrs.**	
Ash Pit - DTW	9.52	9.51	9.57	
Channel - DTW	11.85	11.85	11.76	
	15 mins. before 1459 hrs.	**High Tide 1514 hrs.**	**15 mins. after 1529 hrs.**	**1 hr. after 1614 hrs.**
Ash Pit - DTW	9.55	9.53	9.52	9.52
Channel - DTW	8.10	8.02	8.08	8.32

Notes:

All measurements are in feet below grade

Note: Grade level at the ash pit gauging station is approximately one foot higher than the channel gauging station

Low tide of 0902 hours and high tide of 1514 hours for 5/1/09 was per tide predictions for Wallabout Bay, Brooklyn Navy Yard.

mins. = minutes

hrs. = hours

DTW = depth to water

TABLE 10A
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK
REMEDIAL ACTION ALTERNATIVE COST ESTIMATE
REMEDIATION ALTERNATIVES - VACUUM DREDGING VS CLAMSHELL
COST COMPARISON SUMMARY

	TOTAL COST
REMEDIATION ESTIMATE: ALT. 1 - VACUUM DREDGING AND LTWT CONC FILL	**1,290,000**
REMEDIATION ESTIMATE: ALT. 2 - VACUUM DREDGING AND LTWT GRAVEL FILL	**1,230,000**
REMEDIATION ESTIMATE: ALT. 3 - CLAMSHELL DREDGING AND LTWT GRAVEL FILL	**1,310,000**

EXCLUSIONS:

OWNER PROJECT MANAGEMENT
COST OF MONEY

TABLE 10B
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK
REMEDIAL ACTION ALTERNATIVE COST ESTIMATE

REMEDIATION ESTIMATE: ALT. 1 - VACUUM DREDGING AND LTWT CONC FILL

BASED ON 750 CU YDS OF EXCAVATED SEDIMENTS

ITEM DESCRIPTION	QTY	UM	UNIT TOTAL	TOTAL COST
CONSTRUCTION				
GEOTUBES				
MOBILIZATION AND SUBMITTALS	1	LS	58,000	58,000
PROCESSING PAD, LINER AND SUMP	1	LS	41,200	41,200
TEMPORARY WATER AND 75 KVA POWER	1	LS	11,500	11,500
CRANE, OPERATORS AND OILER	13	DAYS	2,700	35,100
GEOTUBES, POLYMER, SMARTFEED AND TECHNICIAN	25	DAYS	3,100	77,500
DREDGE ASH PIT SEDIMENTS	25	DAYS	4,200	105,000
DE-WATERED FILTER CAKE - TRANSPORT AND DISPOSE	575	TON	110	63,250
SUBTOTAL				**$ 391,550**
CIVIL WORK				
MOBILIZATION	1	LS	30,000	30,000
EXCAVATE PUMP HOUSE PIT ABOVE WATER	80	CY	110	8,800
FILL PITS WITH PUMPED LIGHTWEIGHT CONCRETE FILL	1,600	CY	190	304,000
SUBTOTAL				**$ 342,800**
TOTAL DIRECTS				**$ 734,350**
CONSTRUCTION INDIRECTS				
GENERAL CONDITIONS	1	LS	58,748	58,748
INSURANCES AND BONDS @ 5%	1	LS	36,718	36,718
OVERHEAD AND PROFIT @ 15%	1	LS	124,472	124,472
SUBTOTAL				**$ 219,938**
				$ 954,288
CONTINGENCY @ 10%	1	LS	95,429	95,429
TOTAL CONSTRUCTION (ROUNDED)				**$ 1,050,000**
ENGINEERING AND CM				
PREPARE ENGINEERING REMEDIAL COST ESTIMATE	1	LS	8,000	8,000
PRE-BID MEETING SUPPORT	1	LS	10,100	10,100
PREPARE RAWP & BID SPECIFICATION	1	LS	31,000	31,000
PERFORM REVIEW OF CONTRACTOR DELIVERABLES	1	LS	9,900	9,900
FIELD OVERSIGHT AND PROJECT CLOSEOUT	1	LS	158,600	158,600
PERMITS	1	LS	20,000	20,000
ENGINEERING AND CM (ROUNDED)				**$ 237,600**
GRAND TOTAL (ROUNDED)				**$ 1,290,000**

EXCLUSIONS

SEE SUMMARY SHEET

TABLE 10C
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK
REMEDIAL ACTION ALTERNATIVE COST ESTIMATE

REMEDIATION ESTIMATE: ALT. 2 - VACUUM DREDGING AND LTWT GRAVEL FILL

BASED ON 750 CU YDS OF EXCAVATED SEDIMENTS

ITEM DESCRIPTION	QTY	UM	UNIT TOTAL	TOTAL COST
CONSTRUCTION				
GEOTUBES				
MOBILIZATION AND SUBMITTALS	1	LS	58,000	58,000
PROCESSING PAD, LINER AND SUMP	1	LS	41,200	41,200
TEMPORARY WATER AND 75 KVA POWER	1	LS	11,500	11,500
CRANE, OPERATORS AND OILER	13	DAYS	2,700	35,100
GEOTUBES, POLYMER, SMARTFEED AND TECHNICIAN	25	DAYS	3,100	77,500
DREDGE ASH PIT SEDIMENTS	25	DAYS	4,200	105,000
DE-WATERED FILTER CAKE - TRANSPORT AND DISPOSE	575	TON	110	63,250
SUBTOTAL				**$ 391,550**
CIVIL WORK				
MOBILIZATION	1	LS	30,000	30,000
EXCAVATE PUMP HOUSE PIT ABOVE WATER	80	CY	110	8,800
W14X132 BRACING LONGITUDINAL MEMBERS	130	FT	390	50,700
BRACING LATERAL STRUTS	6	EA	5,400	32,400
STRUCTURAL SLAB	1,755	SF	35	61,425
FILL PITS WITH GRAVEL	1,600	CY	65	104,000
SCAFFOLDS AND TEMPORARY STRUCTURES	1	LS	13,800	13,800
SUBTOTAL				**$ 301,125**
TOTAL DIRECTS				**$ 692,675**
CONSTRUCTION INDIRECTS				
GENERAL CONDITIONS	1	LS	55,414	55,414
INSURANCES AND BONDS @ 5%	1	LS	34,634	34,634
OVERHEAD AND PROFIT @ 15%	1	LS	117,408	117,408
SUBTOTAL				**$ 207,456**
				$ 900,131
CONTINGENCY @ 10%	1	LS	90,013	90,013
TOTAL CONSTRUCTION (ROUNDED)				**$ 990,000**
PREPARE RAWP & BID SPECIFICATION	1	LS	31,000	31,000
ENGINEERING AND CM				
PREPARE ENGINEERING REMEDIAL COST ESTIMATE	1	LS	8,000	8,000
PRE-BID MEETING SUPPORT	1	LS	10,100	10,100
PREPARE RAWP & BID SPECIFICATION	1	LS	31,000	31,000
PERFORM REVIEW OF CONTRACTOR DELIVERABLES	1	LS	9,900	9,900
FIELD OVERSIGHT AND PROJECT CLOSEOUT	1	LS	158,600	158,600
PERMITS	1	LS	20,000	20,000
ENGINEERING AND CM (ROUNDED)				**$ 237,600**
GRAND TOTAL (ROUNDED)				**$ 1,230,000**

EXCLUSIONS

SEE SUMMARY SHEET

TABLE 10D
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK
REMEDIAL ACTION ALTERNATIVE COST ESTIMATE

REMEDIATION ESTIMATE: ALT. 3 - CLAMSHELL DREDGING AND LTWT GRAVEL FILL

BASED ON 750 CU YDS OF EXCAVATED SEDIMENTS

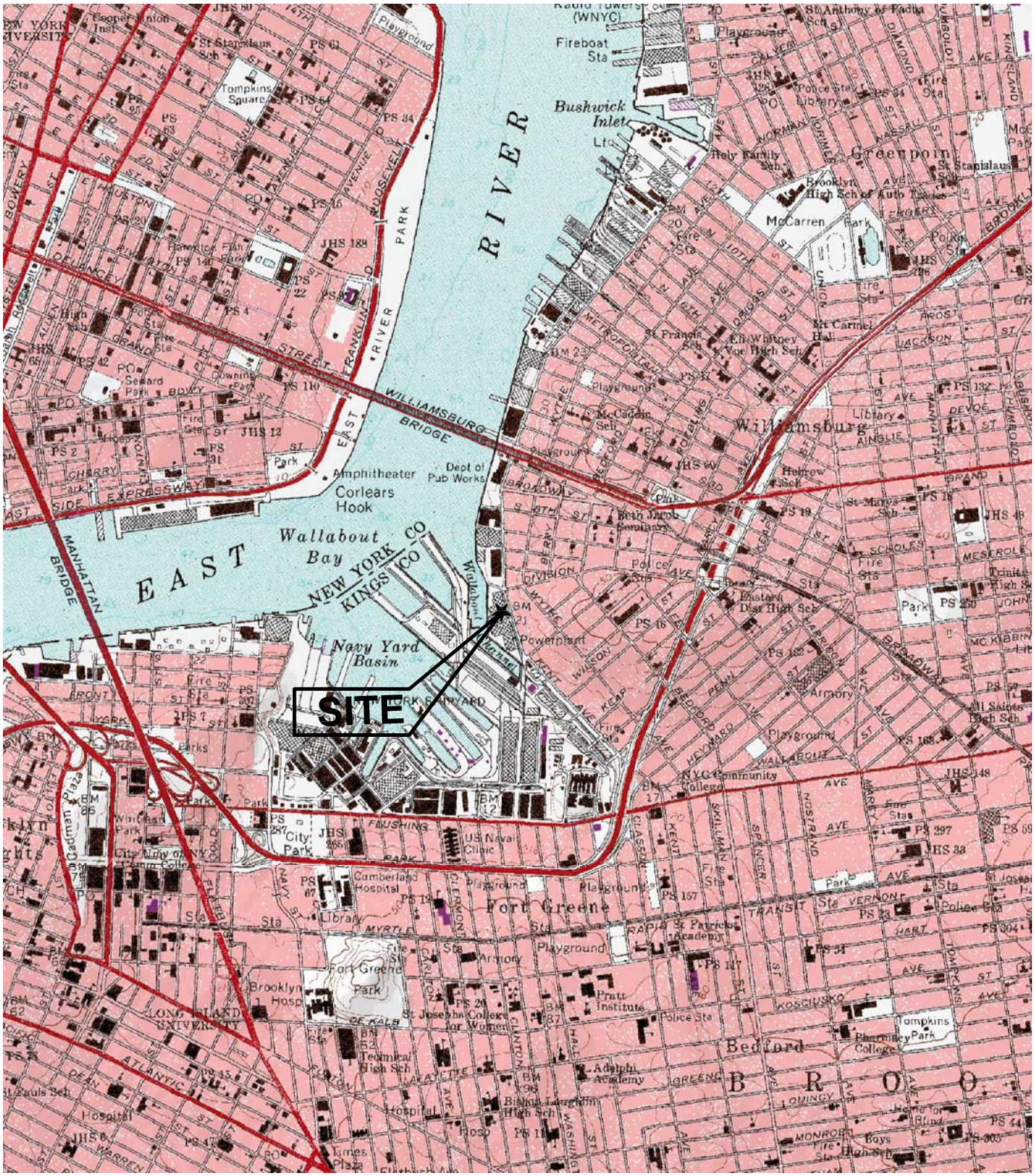
ITEM DESCRIPTION	QTY	UM	UNIT TOTAL	TOTAL COST
CONSTRUCTION				
CLAMSHELL DREDGING				
EQUIPMENT AND CONSUMMABLES FOR TREATMENT OPERATION	1	LS	152,000	152,000
FIELD SETUP	3	DAYS	31,200	93,600
CLAMSHELL EXCAVATION, DEWATERING, WATER TREATMENT	10	DAYS	7,800	78,000
HAND TOOL EXCAVATION BY DIVERS	6	DAYS	6,700	40,200
HAZMAT TRANSPORTATION AND DISPOSAL	800	TON	110	88,000
SUBTOTAL				**$ 451,800**
CIVIL WORK				
MOBILIZATION	1	LS	30,000	30,000
EXCAVATE PUMP HOUSE PIT ABOVE WATER	80	CY	110	8,800
W14X132 BRACING LONGITUDINAL MEMBERS	130	FT	390	50,700
BRACING LATERAL STRUTS	6	EA	5,400	32,400
STRUCTURAL SLAB	1,755	SF	35	61,425
FILL PITS WITH GRAVEL	1,600	CY	65	104,000
SCAFFOLDS AND TEMPORARY STRUCTURES	1	LS	13,800	13,800
SUBTOTAL				**$ 301,125**
TOTAL DIRECTS				**$ 752,925**
CONSTRUCTION INDIRECTS				
GENERAL CONDITIONS	1	LS	60,234	60,234
INSURANCES AND BONDS @ 5%	1	LS	37,646	37,646
OVERHEAD AND PROFIT @ 15%	1	LS	127,621	127,621
SUBTOTAL				**$ 225,501**
				$ 978,426
CONTINGENCY @ 10%	1	LS	97,843	97,843
TOTAL CONSTRUCTION (ROUNDED)				**$ 1,076,000**
ENGINEERING AND CM				
PREPARE ENGINEERING REMEDIAL COST ESTIMATE	1	LS	8,000	8,000
PRE-BID MEETING SUPPORT	1	LS	10,100	10,100
PREPARE RAWP & BID SPECIFICATION	1	LS	31,000	31,000
PERFORM REVIEW OF CONTRACTOR DELIVERABLES	1	LS	9,900	9,900
FIELD OVERSIGHT AND PROJECT CLOSEOUT	1	LS	158,600	158,600
PERMITS	1	LS	20,000	20,000
ENGINEERING AND CM (ROUNDED)				**$ 237,600**
GRAND TOTAL (ROUNDED)				**$ 1,310,000**

EXCLUSIONS

SEE SUMMARY SHEET

FIGURES

OFFICE	DRAWING NUMBER
Holbrook, NY	KENT–FIG1



APPROXIMATE SCALE

0 2000 4000 6000 FEET

N

REFERENCE:
7.5 MINUTE SERIES TOPOGRAPHIC MAP OF BROOKLYN, NY
USGS GEOLOGICAL SURVEY, 1966, 1927 NORTH AMERICAN DATUM

Shaw Environmental & Infrastructure
Engineering of New York, P.C.

SITE LOCATION MAP

CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	S. Ash	4/25/06	CHECKED BY	S. Ash	4/25/06
DRAWN BY	R. Tagoff	4/25/06	APPROVED BY	S. Ash	4/25/06

SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
AS SHOWN	KENT-FIG1	-	FIGURE 1	--

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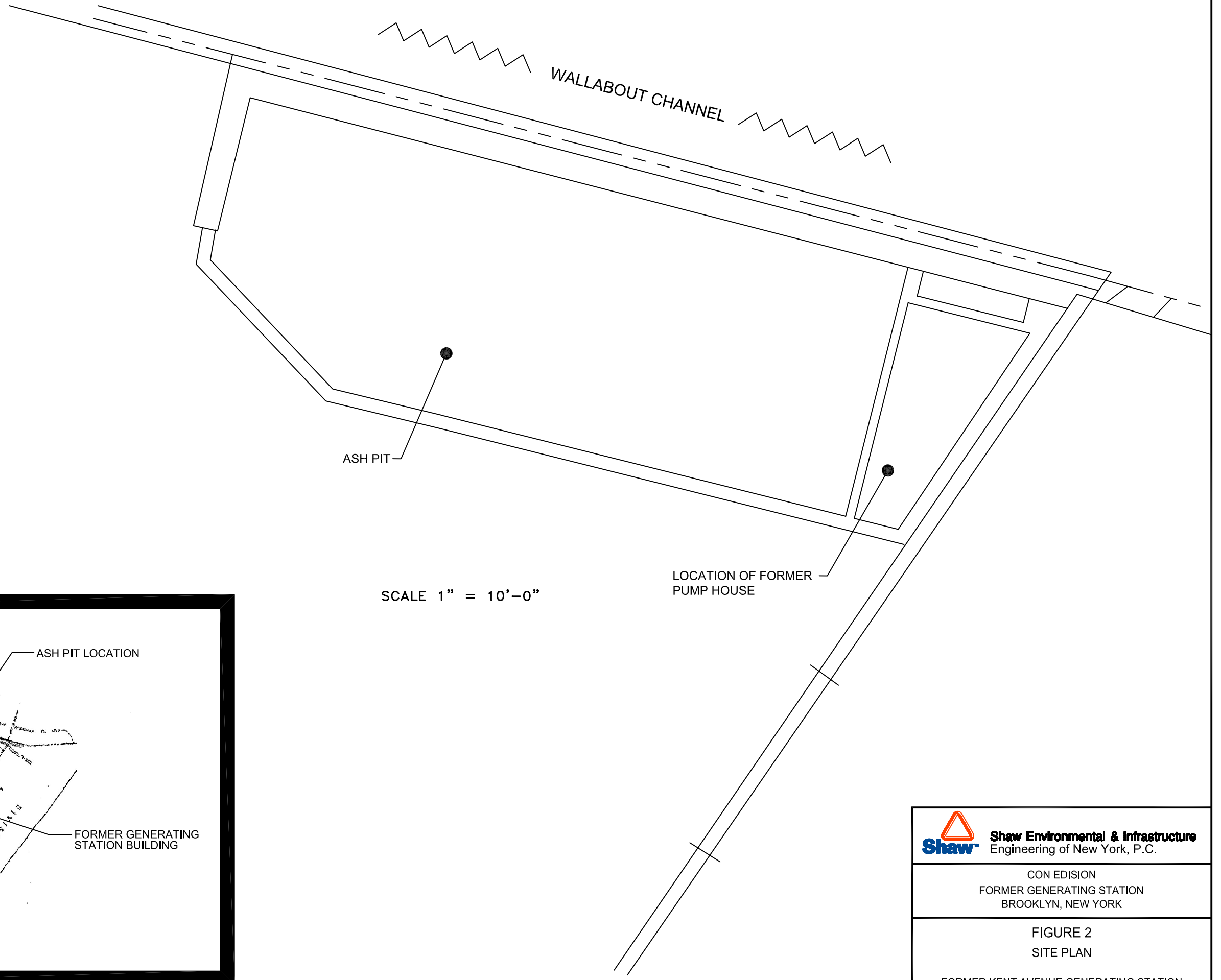
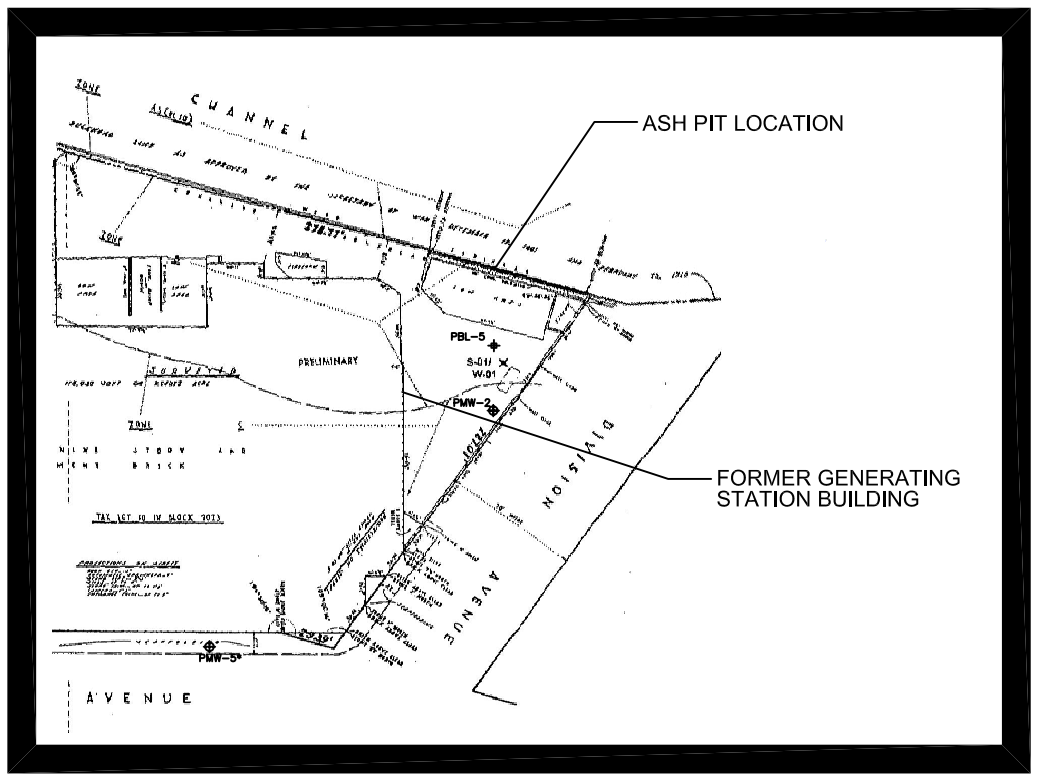
Plot Date/Time: Apr 25, 2006 - 5:06pm
Plotted By: randy.tagoff



SCALE 1" = 10'-0"



OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
HOLBROOK, NY	G.PASSARELLI 6/17/2009	S.ASH 6/17/2009	S.ASH 6/17/2009	FIGURE 2

Shaw Environmental & Infrastructure
Engineering of New York, P.C.

CON EDISION
FORMER GENERATING STATION
BROOKLYN, NEW YORK

FIGURE 2
SITE PLAN

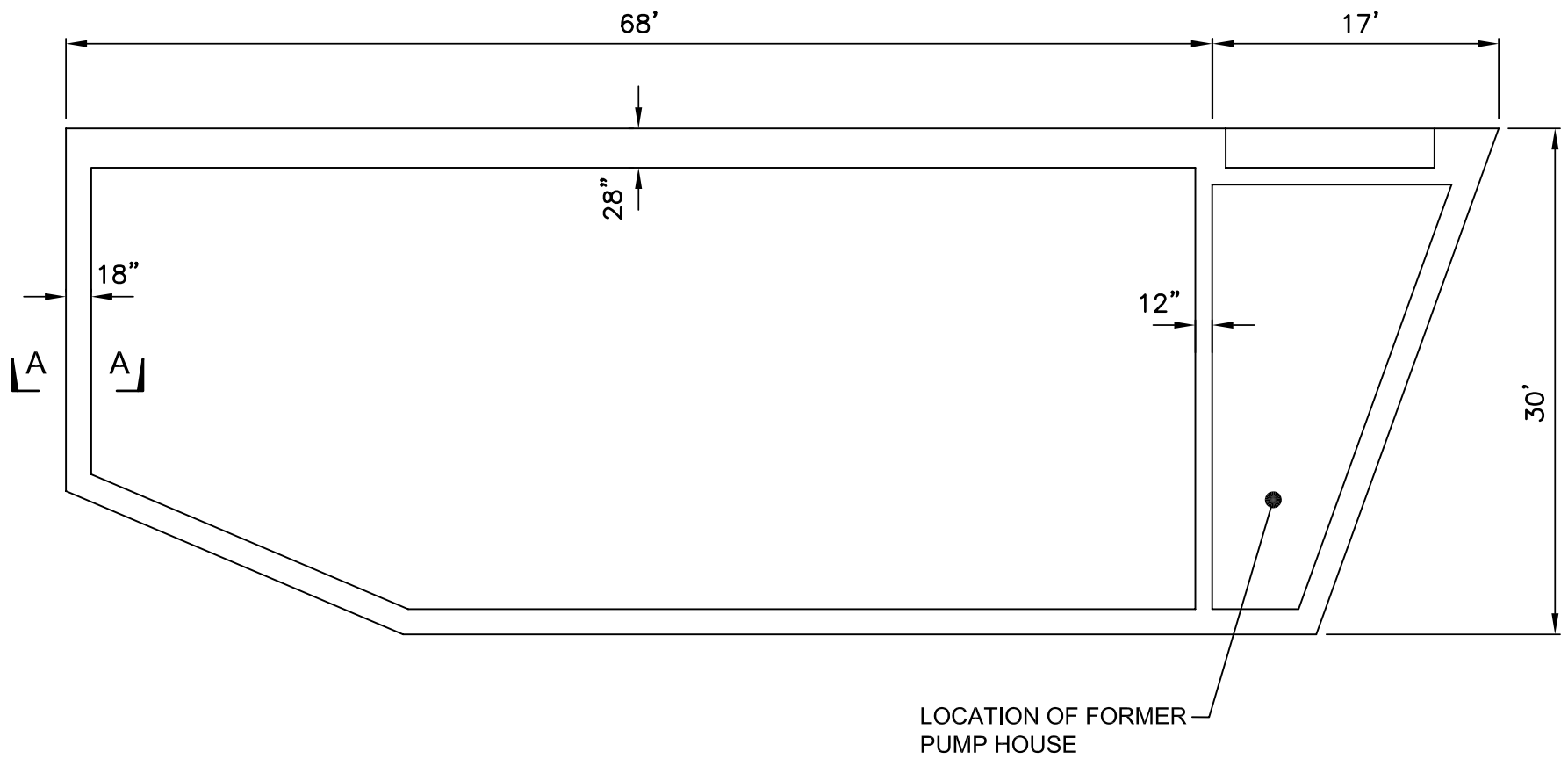
FORMER KENT AVENUE GENERATING STATION
BROOKLYN, NEW YORK

File: P:\Con Ed\Kent Avenue\Ash pit\RAWP\Draft to CE 5-5-09\From CE 5-20-09\To CE 6-25-09\Revised Drawings\FIGURE 2.dwg
XREF Files: IMAGE Files: ASH PIT SAMPLING LOCATIONS LMS.bmp
Plot Date/Time: Jun 25, 2009 - 5:27pm
Plotted By: svetlana.tumaian

OFFICE Holbrook, NY | DRAWING NUMBER 121153-FIG3

(APPROX.)

WALLABOUT CHANNEL



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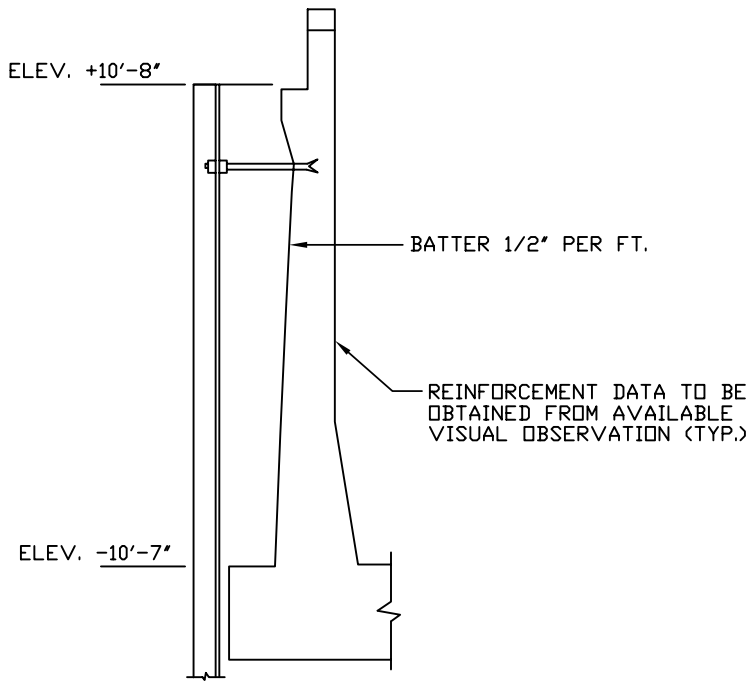


SECTION A–A
SCALE 1/8” = 1’–0”

SOURCE OF CROSS-SECTION:
NEW YORK CITY TRANSIT AUTHORITY
NEW YORK CITY TRANSIT SYSTEM
SHEET PILING PLAN
DRAWING # KAW - 103

Shaw Environmental & Infrastructure
Engineering of New York, P.C.

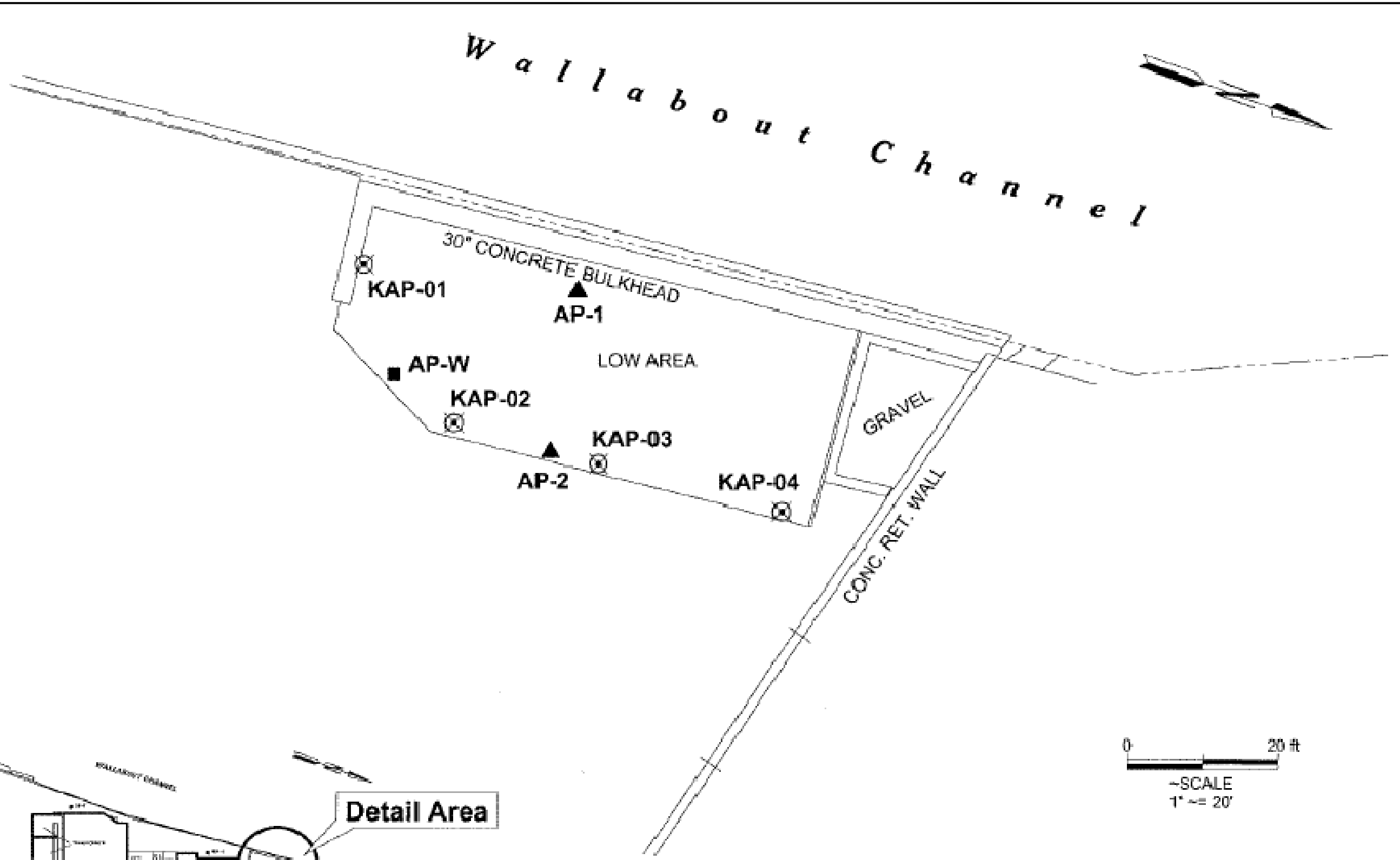
PLAN AND SECTION OF ASH PIT

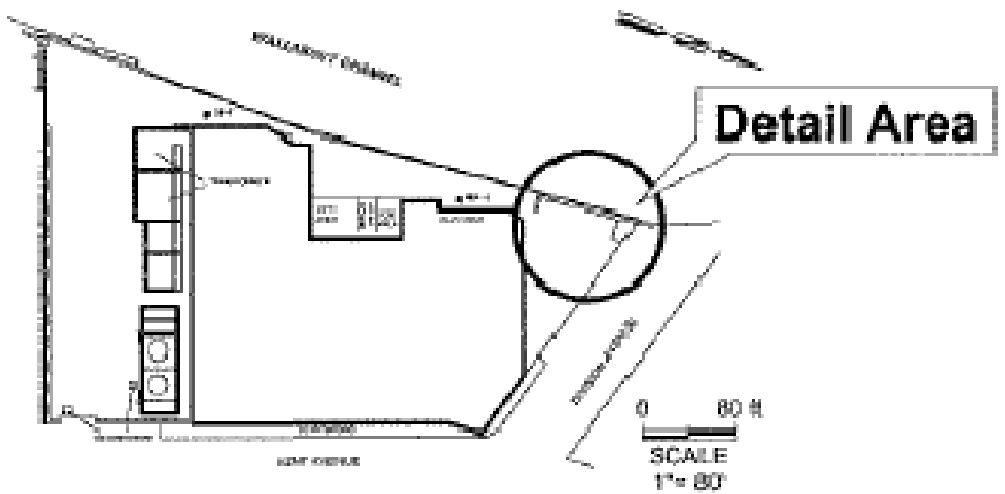
CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	S. Ash	4/23/09	CHECKED BY	S. Ash	4/23/09
DRAWN BY	S. Tumaian	4/23/09	APPROVED BY	S. Ash	4/23/09

SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
AS SHOWN	121153-FIG3	121153	FIGURE 3	1

P:\Con Ed\Kent Avenue\Ash pit\RAWP\Drawings\FIGURE 3.dwg, 6/25/2009 2:57:16 PM, svetlana.tumaian





LEGEND

- ⊗ Ash pit sludge sampling location (April 2000)
- ▲ Ash pit sludge sampling location (December 1999)
- ■ Ash pit water sample (March 2000)

REFERENCE:

FIGURE 1 FROM THE LAWLER MATUSKY AND SKELLY ENGINEERS LLP REPORT DATED JUNE 1, 2000 FOR THE ASH PIT INVESTIGATION FORMER KENT AVENUE GENERATING STATION

Shaw Environmental & Infrastructure
Engineering of New York, P.C.

CON EDISION
FORMER GENERATING STATION
BROOKLYN, NEW YORK

FIGURE 4
ASH PIT SAMPLING LOCATIONS, LMS, 1999-2000

FORMER KENT AVENUE GENERATING STATION
BROOKLYN, NEW YORK

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
HOLBROOK, NY	G.PASSARELLI 6/17/2009	SASH 6/17/2009	SASH 6/17/2009	706556-FIGURE 4

File: P:\Con Ed\Kent Avenue\Ash pit\RAWP\Drawings\FIGURE 2.dwg
XREF Files: IMAGE Files: ASH PIT SAMPLING LOCATIONS LMS.bmp
Plot Date/Time: Jun 19, 2009 - 9:00am
Plotted By: svetlana.tumaian

OFFICE Holbrook, NY | DRAWING NUMBER 126649-F-FIG5

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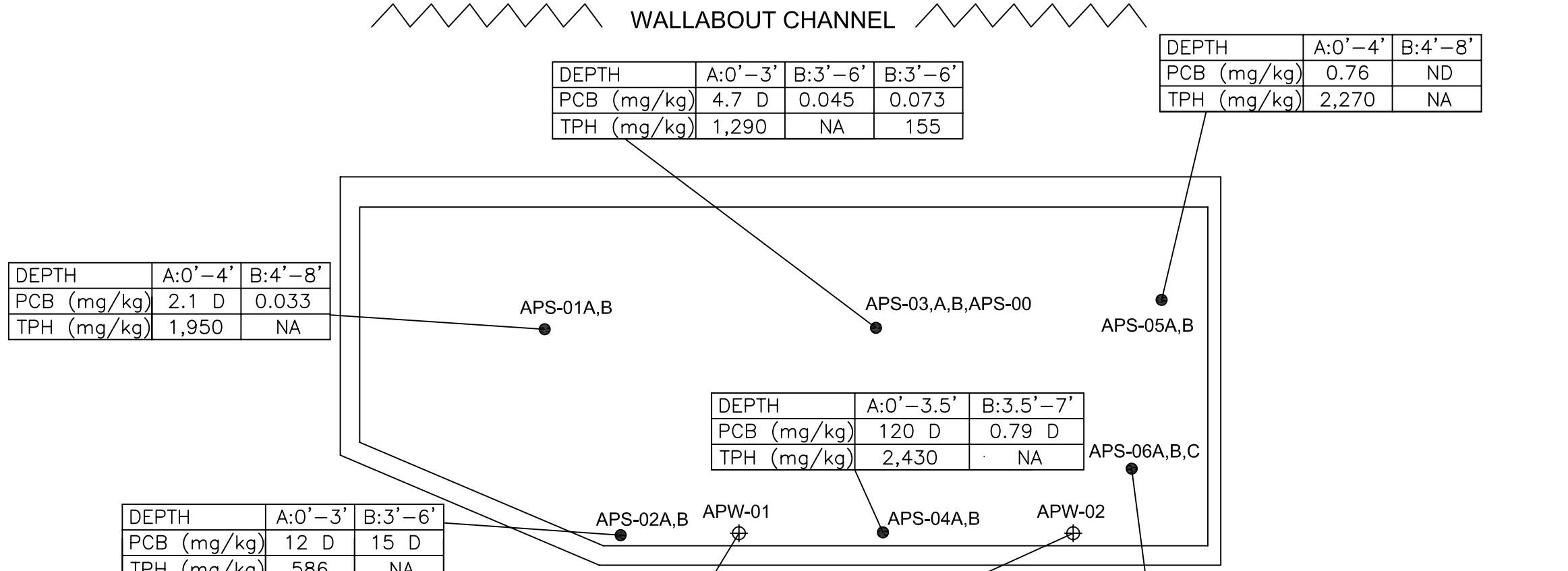

LEGEND

APS-04 ●	ASH PIT SEDIMENT SAMPLE
APW-02 ⊕	SAMPLE ASH PIT WATER SAMPLE
PCB	POLY CHLORINATED BIPHENYLS
TPH	TOTAL PETROLEUM HYDROCARBONS
D	SAMPLE RESULT FROM DILUTED SAMPLE - RESULT OF UNDILUTED SAMPLE EXCEEDED CALIBRATION RANGE
NA	NOT ANALYZED
ND	NOT DETECTED
ug/L	MICROGRAMS PER LITER
mg/kg	MILLIGRAMS PER KILOGRAM

NOTE:

SAMPLE LOCATIONS SHOWN ARE APPROXIMATE AND WILL BE FINALIZED BY LAND SURVEY FOR USE IN FUTURE DOCUMENTS.

SLUDGE SAMPLES: PHYSICAL CHARACTERISTICS

Sample ID	Peneteration Depth (feet)	Length of Recovery (feet)	Observations
APS-01	8	8	Black sand, dark brown silt and garvel, dark brown and sand
			PID responses < 1 ppm
APS-02	8	6	Black silt. Slight oily sheen. PID responses < 1 ppm
APS-03	8	6	Top 1/2:Dark black silt, sheen visible and white greasy material.
			Slight petroleum odor
			Bottom 1/2: Dark brown sand. Oily sheen observed.
			PID responses < 1 ppm
APS-04	9	7	Top 1/2: Dark black silt; slight oily sheen. White greasy
			material present.
			Bottom 1/2: Brown silt, some sand. Oily sheen observed.
			PID responses < 1 ppm
APS-05	8	8	Top 1/2: Dark black silt; slight sheen noticeable.
			Bottom 1/2: Dark brown silt; slight sheen noticeable.
			PID responses < 1 ppm
APS-06	11	8	Silt. White greasy material present. Slight sheen at 6 ft.
			PID responses < 1 ppm

SCALE : 1" = 10'–0"

SCALE
0 10 20 30 FEET

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Engineering of New York, P.C.

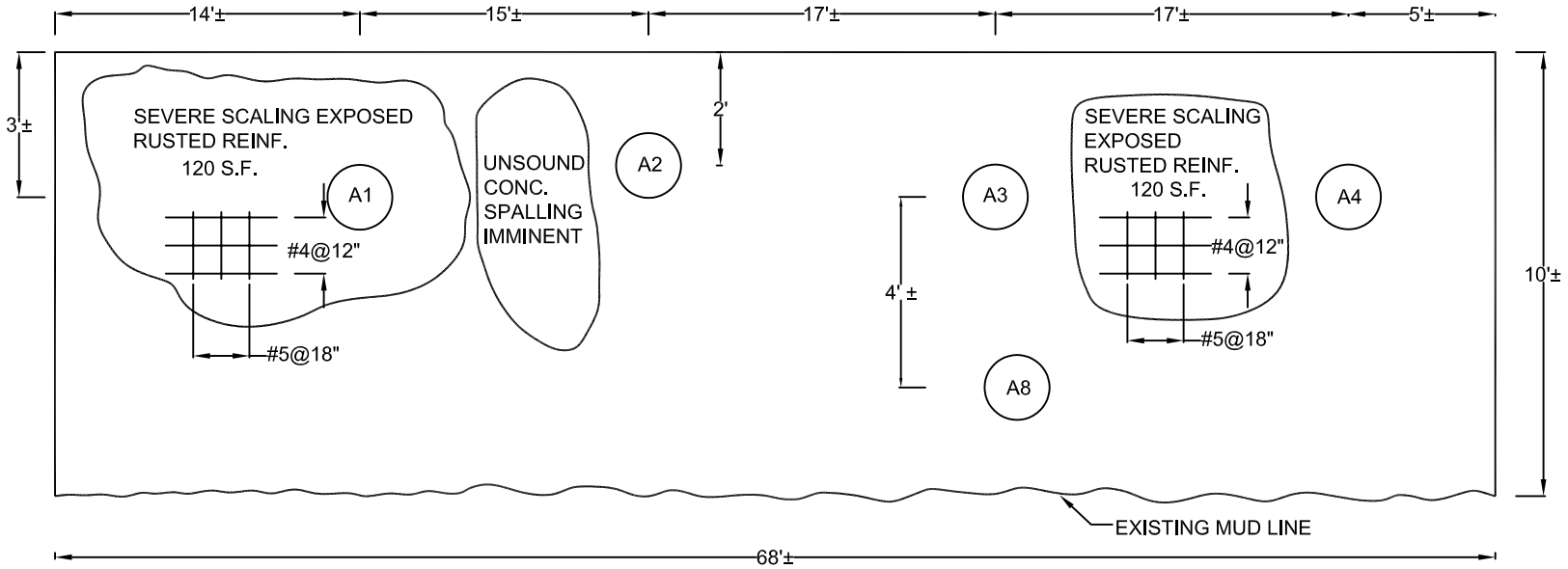
PCB AND TPH CONCENTRATIONS IN ASH PIT WATER AND SEDIMENT SAMPLES

CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

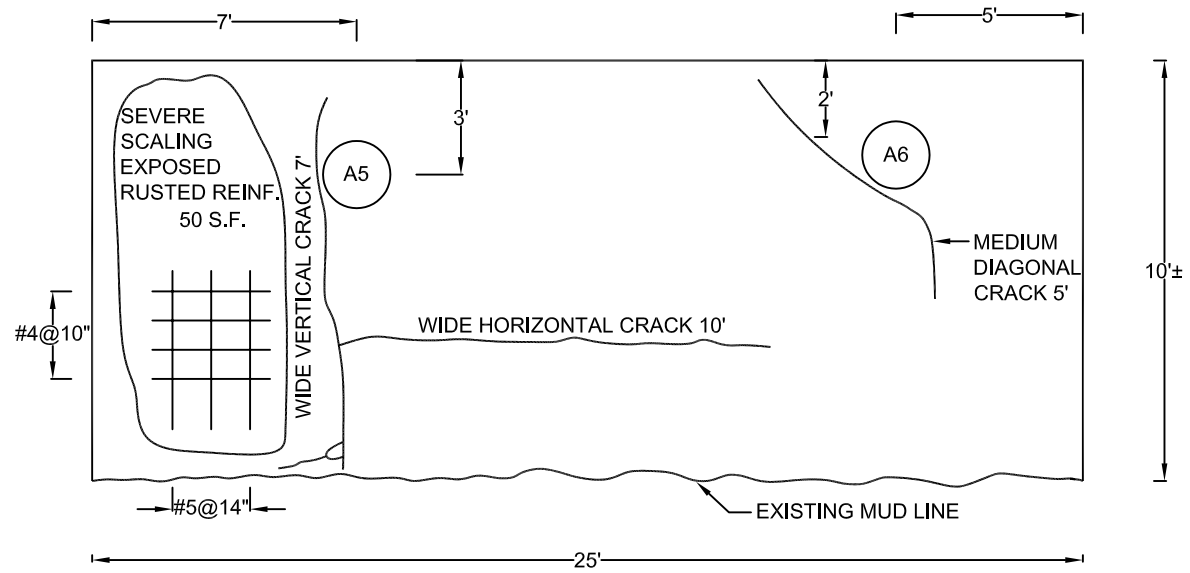
DESIGNED BY	S. Ash	4/23/09	CHECKED BY	S. Ash	4/23/09
DRAWN BY	S. Tumaian	4/23/09	APPROVED BY	S. Ash	4/23/09

SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
AS SHOWN	126649-F-FIG4	126649	FIGURE 5	1

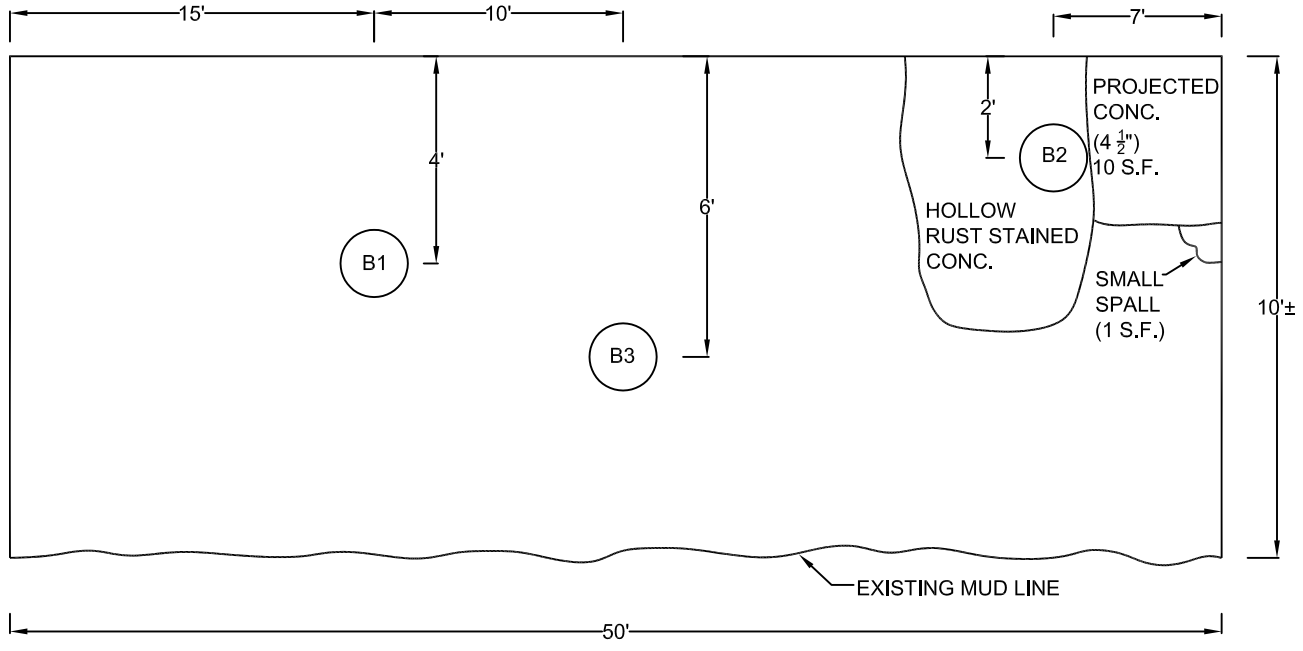
OFFICE Holbrook, NY | DRAWING NUMBER 126649-FIG6



WEST WALL



NORTH WALL



EAST WALL

WINDSOR PIN DESIGNATIONS (TYP.)

A_:TAKEN ON 9/26/07
B_:TAKEN ON 9/28/07

SCALE : N.T.S.

Shaw™ **Shaw Environmental & Infrastructure**
Engineering of New York, P.C.

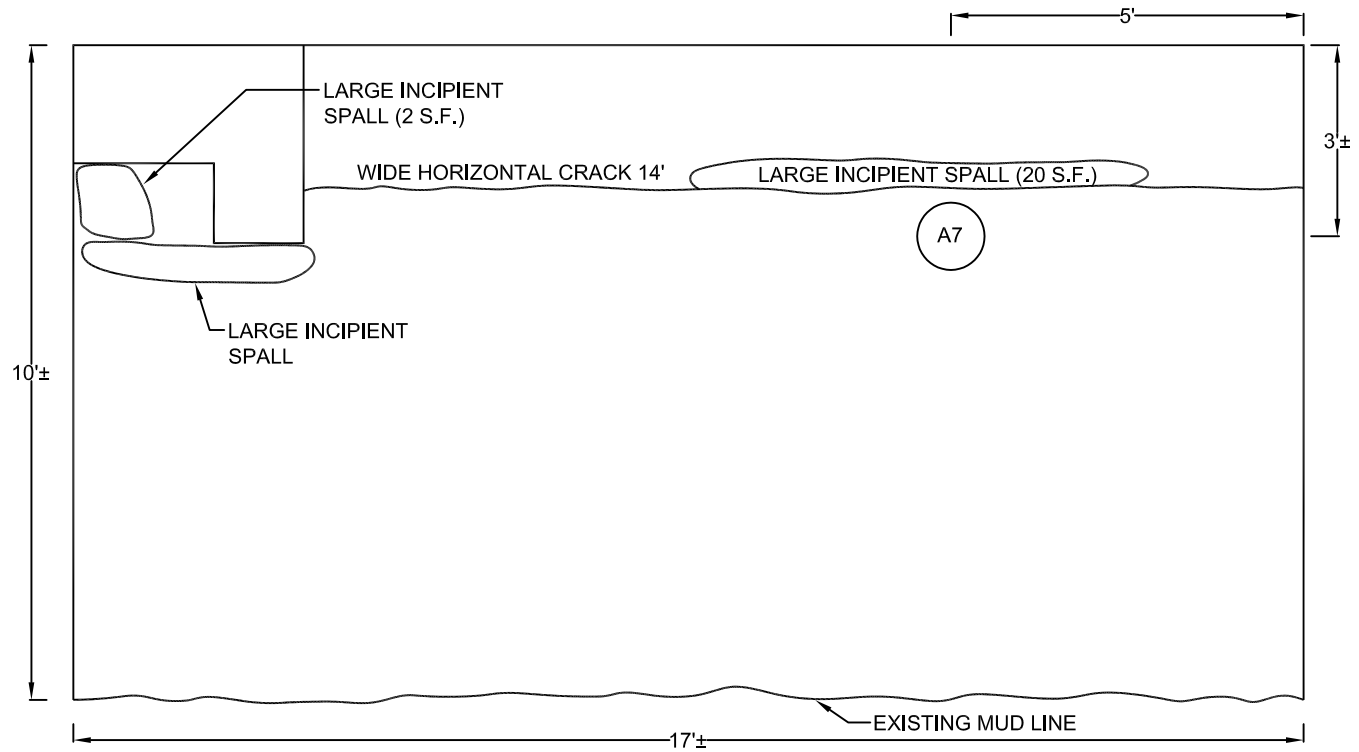
CONDITION OF ASH PIT WALLS AND
LOCATIONS OF WINDSOR PIN TESTS
NORTH, WEST, AND EAST WALLS
CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	A. Chuliver	10/19/07	CHECKED BY	A. Chuliver	10/19/07
DRAWN BY	R. Tagoff	10/19/07	APPROVED BY	S. Ash	10/19/07

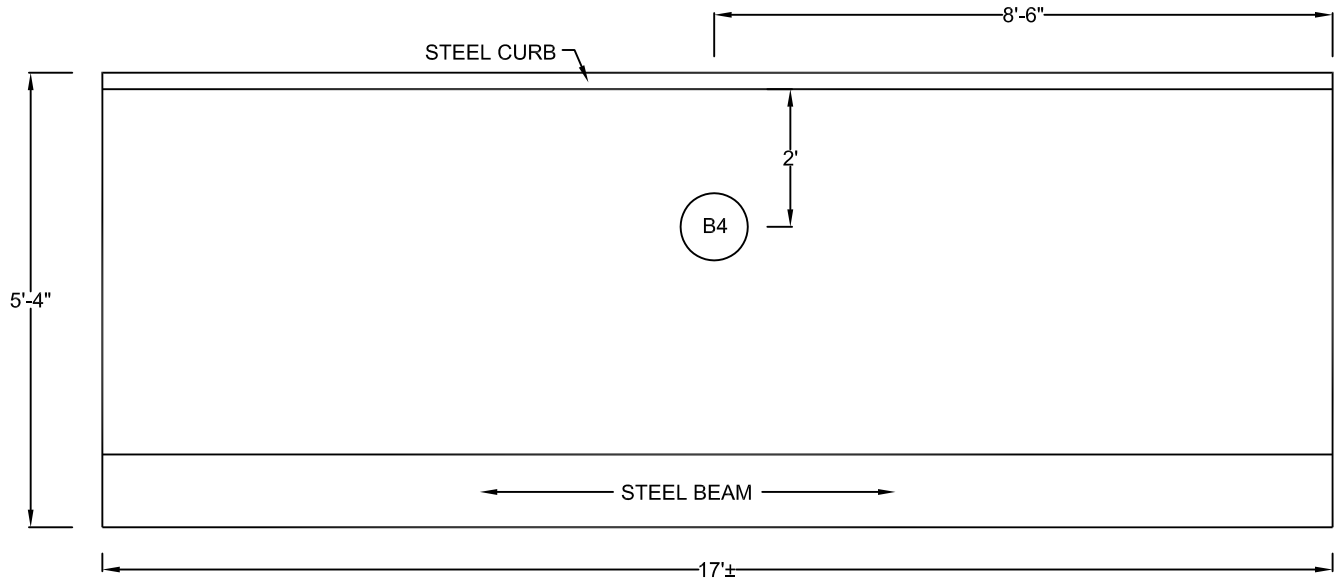
SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
N.T.S.	126649-FIG5	126649	FIGURE 6	1

File: P:\Con Ed\Kent Avenue\Ash pit\RAWP\Draft to CE 5-5-09\From CE 5-20-09\To CE 6-15-09\Revised Drawings\FIGURES 6.dwg
Plot Date/Time: Jun 19, 2009 - 10:02am
Plotted By: svetlana.tumaian

OFFICE Holbrook, NY | DRAWING NUMBER 126649-FIG7



SOUTH WALL



SOUTHEAST WALL

WINDSOR PIN DESIGNATIONS (TYP.)

A_:TAKEN ON 9/26/07
B_:TAKEN ON 9/28/07

# X BAR @ Y"
X = REINFORCEMENT DIAMETER IN EIGHTHS OF AN INCH
Y = CENTER-TO-CENTER SPACING OF REBAR

SCALE : N.T.S.

Shaw Environmental & Infrastructure
Engineering of New York, P.C.

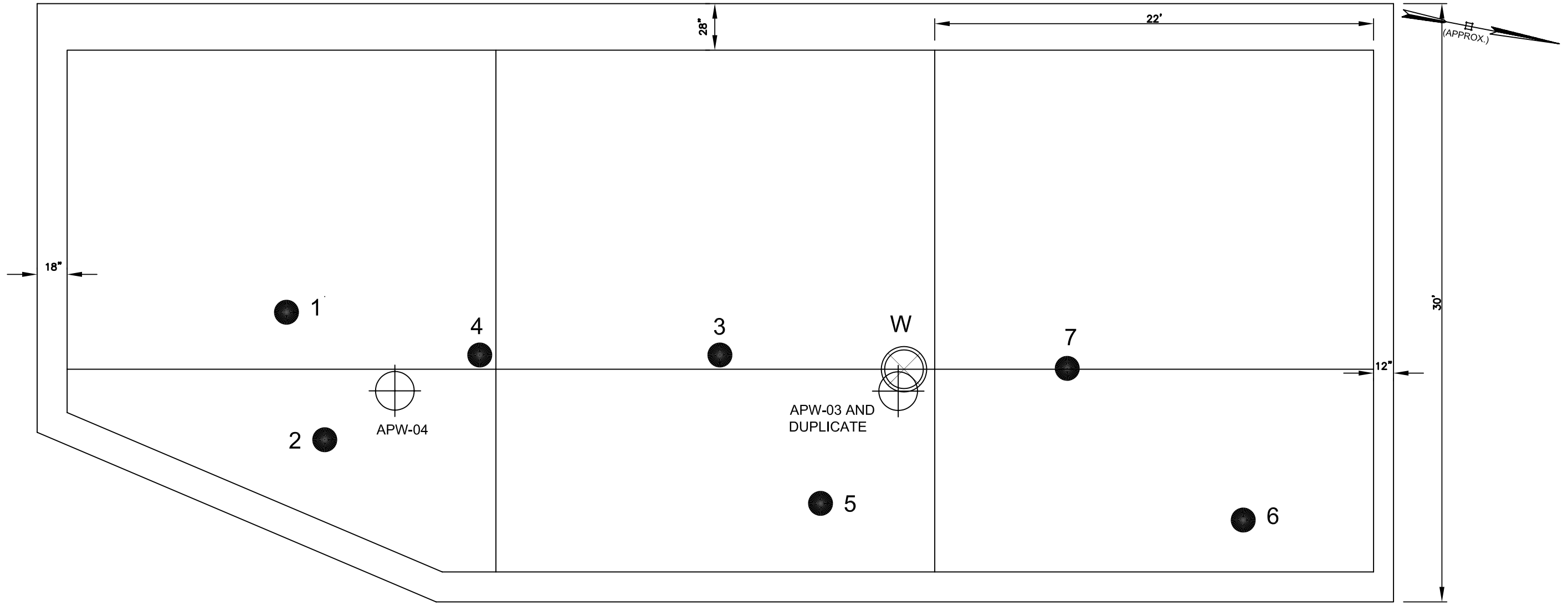
CONDITION OF ASH PIT WALLS AND
LOCATIONS OF WINDSOR PIN TESTS
SOUTH AND SOUTHEAST WALLS
CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	A. Chuliver	10/19/07	CHECKED BY	A. Chuliver	10/19/07
DRAWN BY	R. Tagoff	10/19/07	APPROVED BY	S. Ash	10/19/07

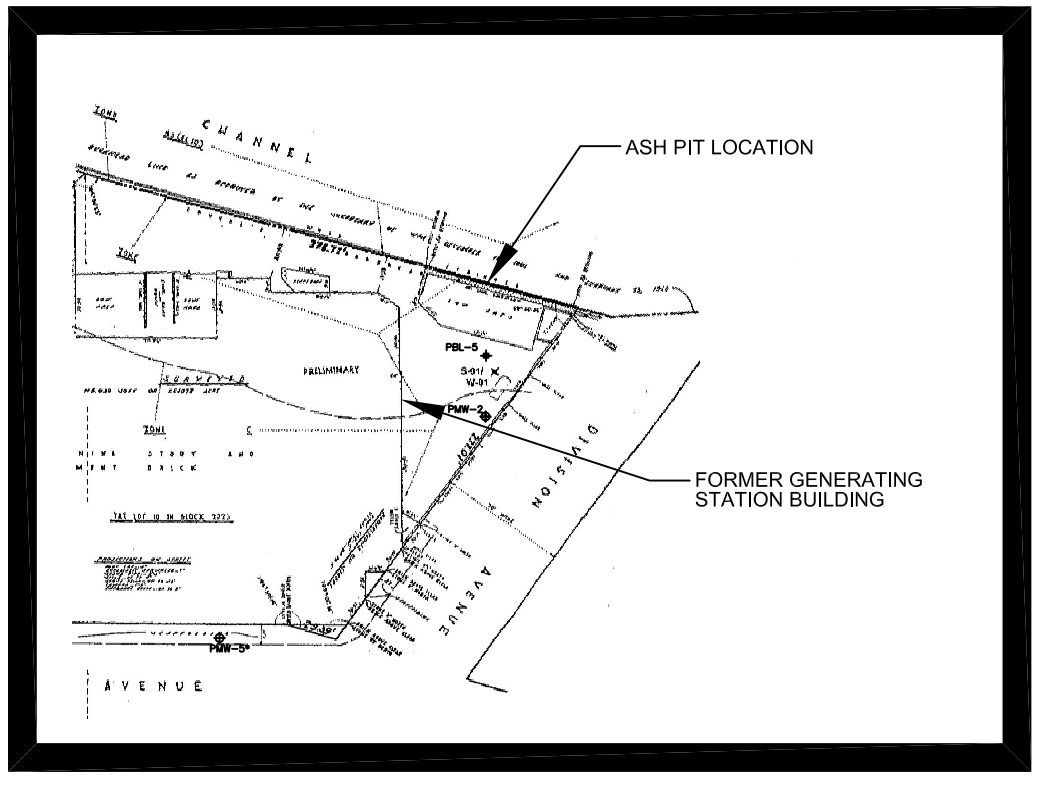
SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
N.T.S.	126649-FIG7	126649	FIGURE 7	— —

File: N:\Projects\Con Ed\Kent Ave\from Svetlana\6-19-09\FIGURES 7-Location of Ash Pit S and SE Walls.dwg
Plot Date/Time: Jun 22, 2009 - 9:51am
Plotted By: svetlana.tumaian

OFFICE Holbrook, NY | DRAWING NUMBER 126649-FIG8



SCALE 3/16" = 1'-0"



LEGENDS:

1 — SLUDGE SAMPLE LOCATION

W — 5 GALLON "OVERWATER" SAMPLE LOCATION

APW-03 — WATER FIELD SAMPLE LOCATION

SYSTEMATIC COMPOSITE SAMPLING:

EACH FIELD SAMPLE COLLECTED AT THE LOCATIONS WAS POOLED AND MIXED INTO ONE COMPOSITE SAMPLE. THE RELATIVE LOCATION OF EACH INDIVIDUAL SAMPLE WAS THE SAME WITHIN EACH BLOCK.

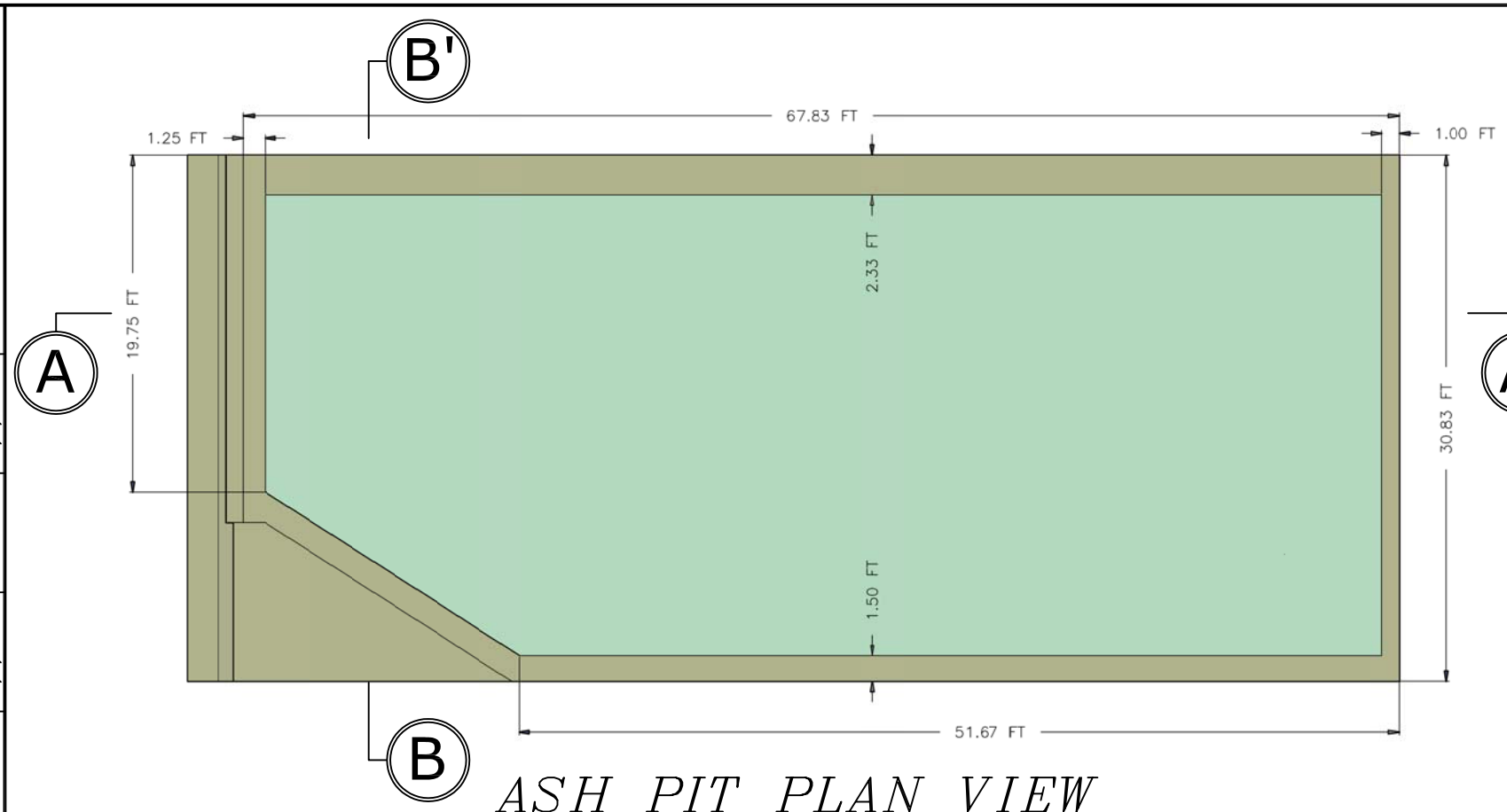
Shaw Environmental & Infrastructure
Engineering of New York, P.C.

LOCATION OF ASH PIT
FEASIBILITY STUDY SEDIMENT AND WATER SAMPLES
CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	Y. Kunukcu	6/10/08	CHECKED BY	Y. Kunukcu	6/16/08
DRAWN BY	S. Tumaian	6/10/09	APPROVED BY	S. Ash	6/16/08

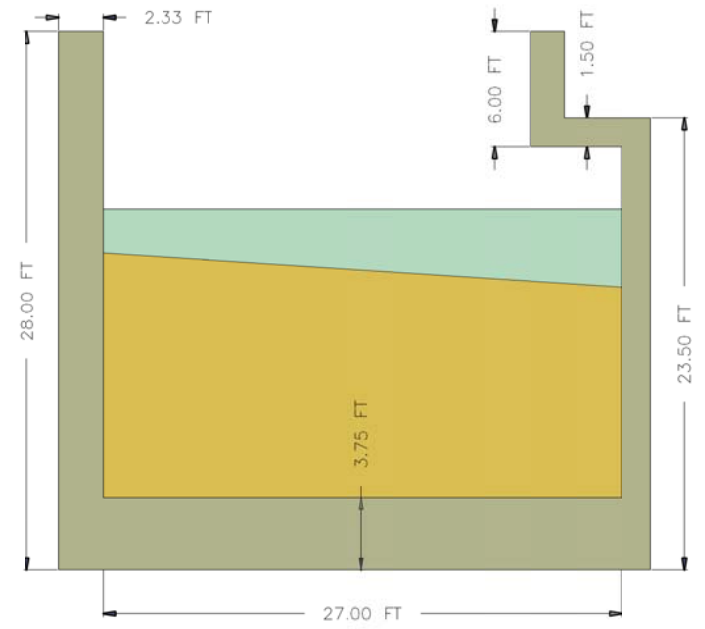
SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
AS SHOWN	126649-FIG7	126649	FIGURE 8	1

P:\Con Ed\Kent Avenue\Ash pit\RAWP\Drawings\126649-FIG7.dwg, 6/18/2009 1:47:38 PM, svetlana.tumaian



ASH PIT PLAN VIEW

SCALE 1 in = 10 ft



CROSS SECTION B–B'

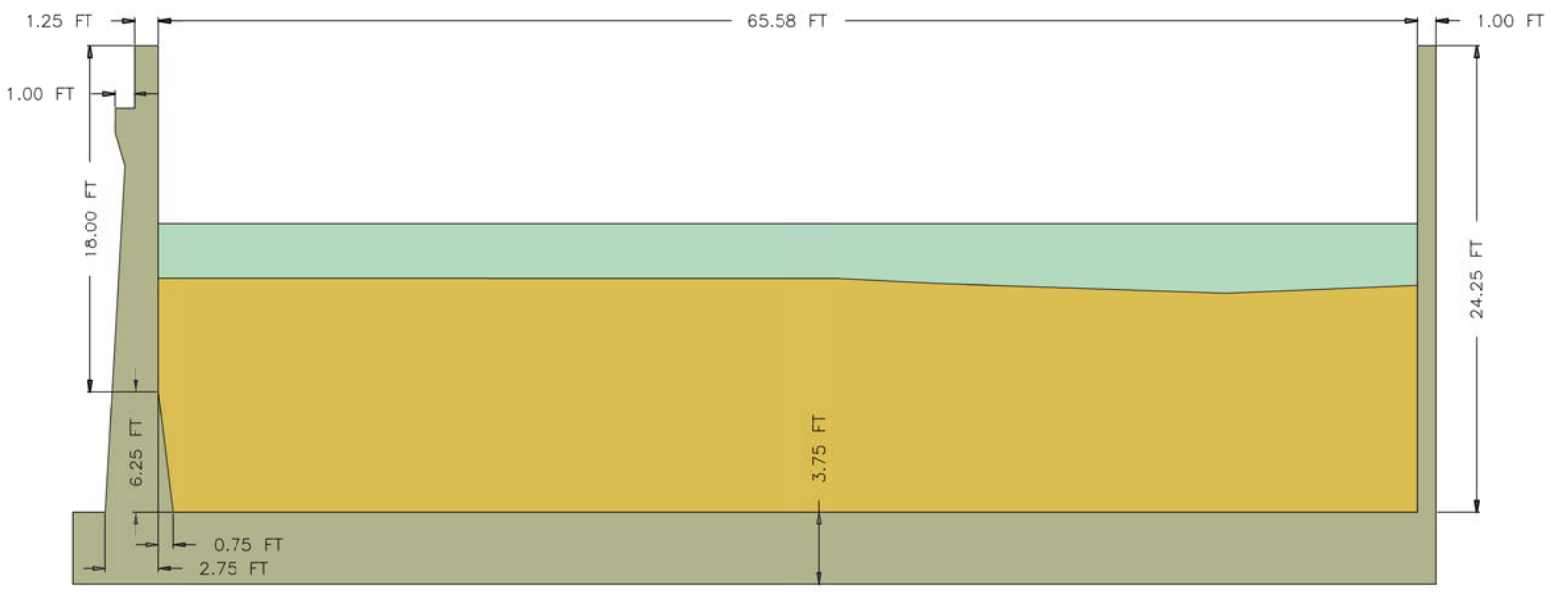
SCALE 1 in = 10 ft

LEGEND

SURFACE WATER

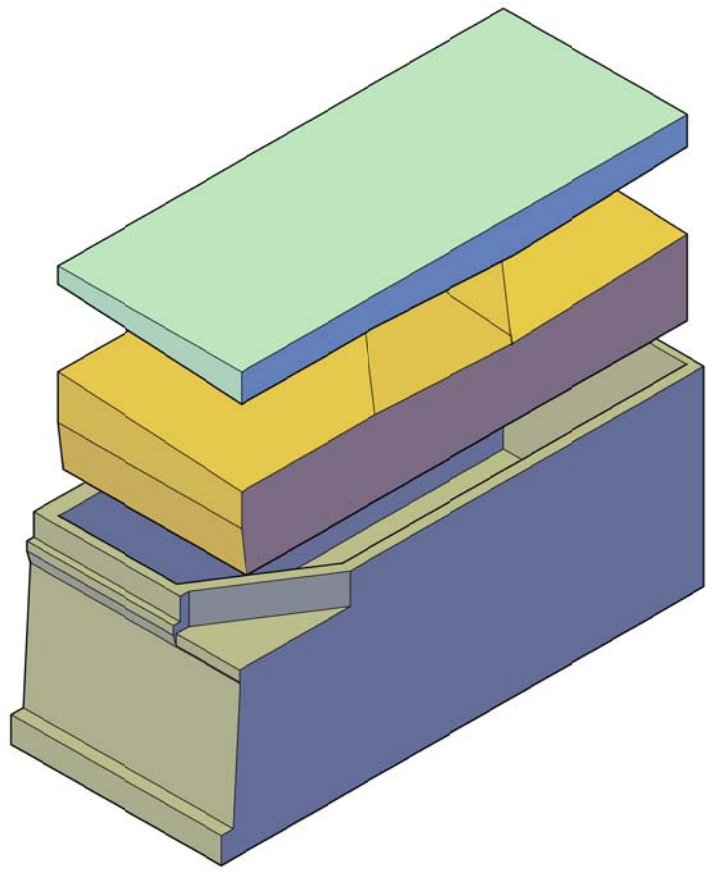
SLUDGE IN PLACE

Description	Volume (yds3)
Sludge In Place	758
Surface Water	224
Void	591
Ash Pit	1573



CROSS SECTION A–A'

SCALE 1 in = 10 ft



EXPLODED VIEW

SCALE 1 in = 20 ft

NOTES

1. ASH PIT DIMENSIONS WERE TAKEN FROM A CROSS–SECTIONAL DRAWING BY THE NEW YORK CITY TRANSIT AUTHORITY, NEW YORK CITY TRANSIT SYSTEM TITLED "1955 BOILER HOUSE EXTENSION & TOWER "C" PILING, SHEET PILING, & FOUNDATIONS PLAN & SECTIONS", DRAWING No. KAW–103. AREAL DIMENSIONS ARE TAKEN FROM FIELD MEASUREMENTS

2. MEASUREMENTS OF SLUDGE THICKNESS AND HEIGHT OF STANDING WATER WERE MADE DURING A 4.5 HOUR SAMPLING EVENT. A NORMAL TIDAL CYCLE DURATION IS SIX HOURS. WATER HEIGHT SHOWN IS THEREFORE APPROXIMATE. SLUDGE THICKNESS WAS MEASURED AT SIX LOCATIONS AND DIMENSIONS AND SURFACE CONTOUR ARE APPROXIMATE.

Shaw Environmental, Inc.

CON EDISON
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 9
ASH PIT SEDIMENT AND WATER DEPICTION

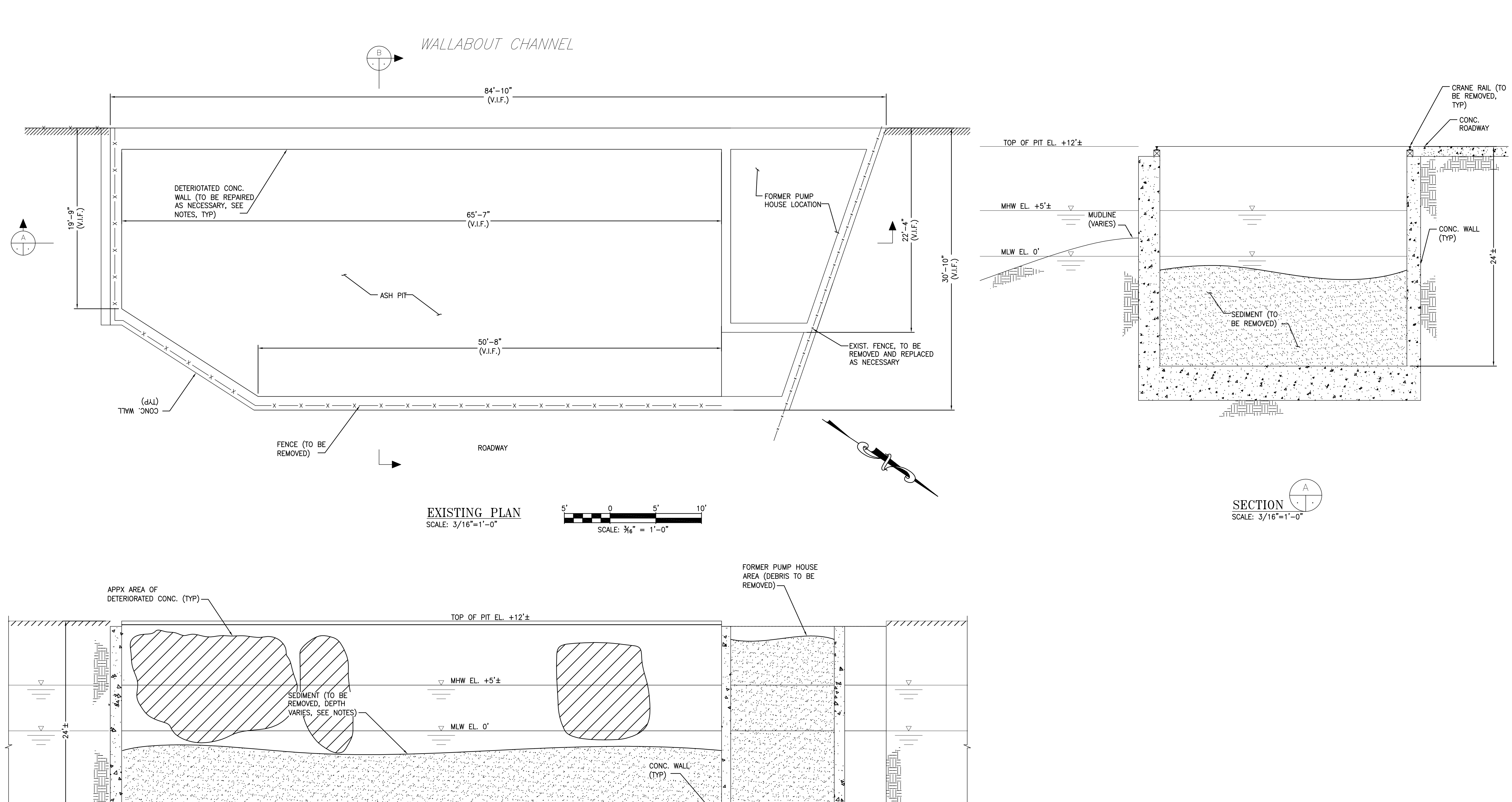
OFFICE	DRAWN BY	CHECKED BY	APPROVED BY
HOLBROOK, NY	G.PASSARELLI 5/5/2009	S.ASH 5/5/2009	S.ASH 5/5/2009

DRAWING NUMBER FIGURE 9

File: P:\Con Ed\Kent Avenue\Ash pit\RAWP\Drawings\ash pit depiction.dwg
XREF Files: IMAGE Files:
Plot Date/Time: Jun 05, 2009 - 9:10am
Plotted By: svetlana.tumaian

File: V:\Projects\Con Ed\Kent Ave\CAD\Structural\Sheet Files\2009 08 19- concrete fill.dwg
XREF Files: IMAGE Files: black-on-white map.bmp
Plot Date/Time: Sep 17, 2009 - 11:45am
Plotted By: (s) shatz

OFFICE	DRAWN BY		CHECKED BY		APPROVED BY	DRAWING NUMBER
NEW YORK, NY	S. SHATZ	8/19/2009	J. FRANCESCON	8/19/2009	S.ASH	FIGURE 10



LEGEND
V.I.F. VERIFY IN FIELD
MHW MEAN HIGH WATER
MLW MEAN LOW WATER

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CON EDISON
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 10
ASH PIT REMEDIATION:
EXISTING PLAN AND SECTIONS

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
HOLBROOK, NY	G.PASSARELLI 6/8/2009	SASH 6/8/2009	SASH 6/8/2009	FIGURE 11

30' X 50' SMARTFEED TRAILER

ASH PIT

GEOTUBE DRAINAGE AREA

KENT AVENUE

LEGEND

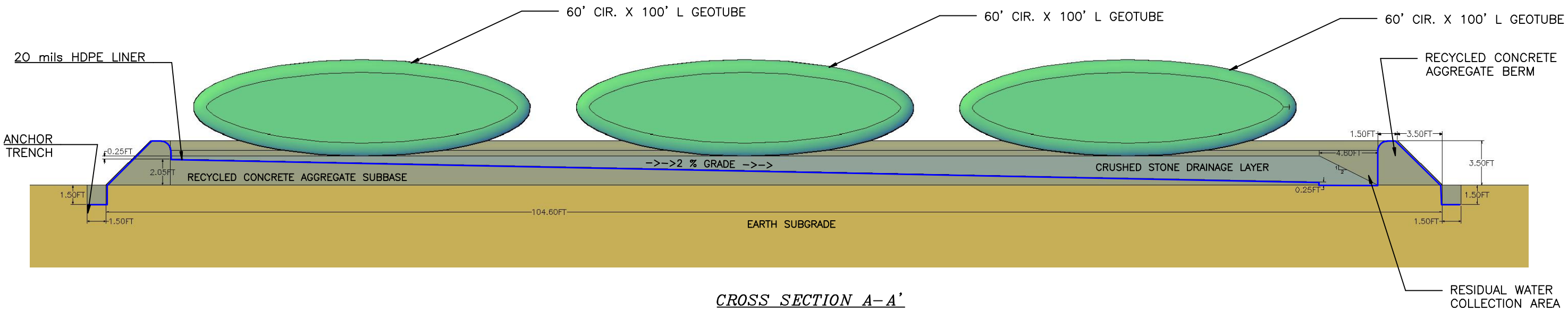
SMARTFEED TRAILER

FOOTPRINT OF DEMOLISHED BUILDING

Shaw Shaw Environmental, Inc.

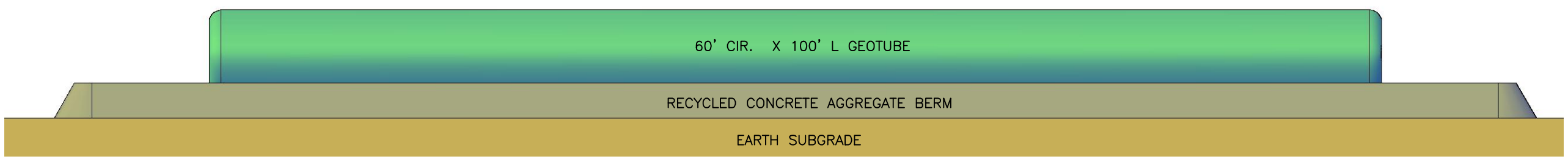
CON ED
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 11
GEOTUBE DRAINAGE PAD
AND SMARTFEED TRAILER LOCATION
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK



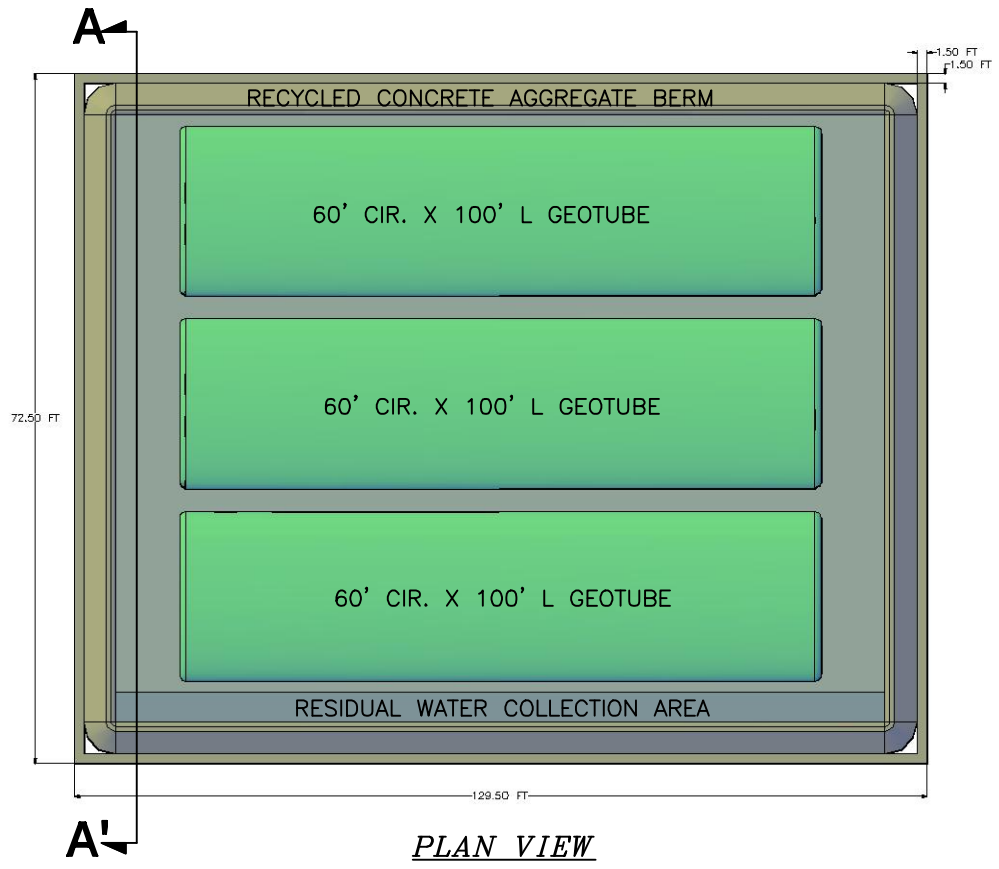
CROSS SECTION A–A'

SCALE: 1" = 8'



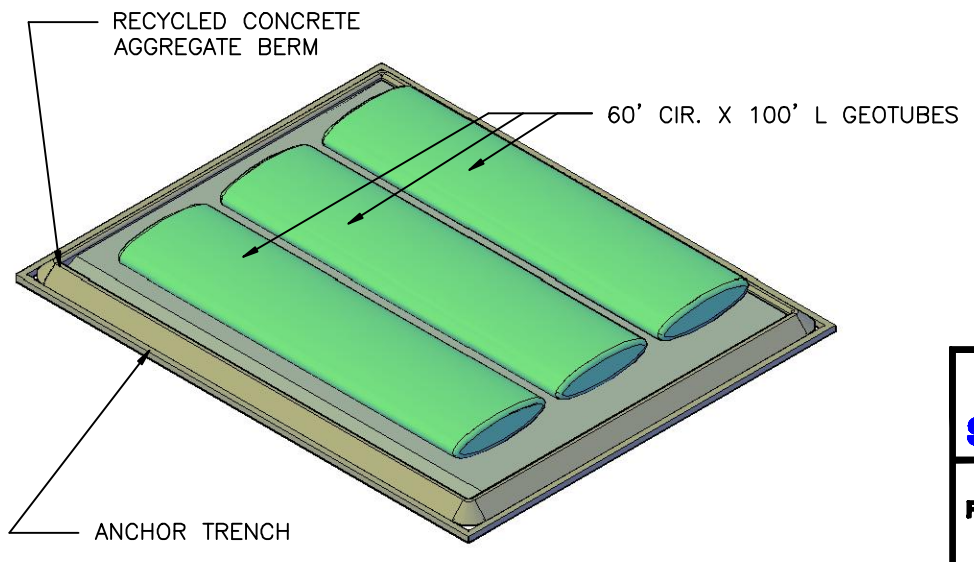
PROFILE

SCALE: 1" = 10'



PLAN VIEW

SCALE: 1" = 20'



ISOMETRIC VIEW

SCALE = 1" = 40'

SOIL LEGEND

- RECYCLED CONCRETE AGGREGATE
- CRUSHED STONE
- EARTH

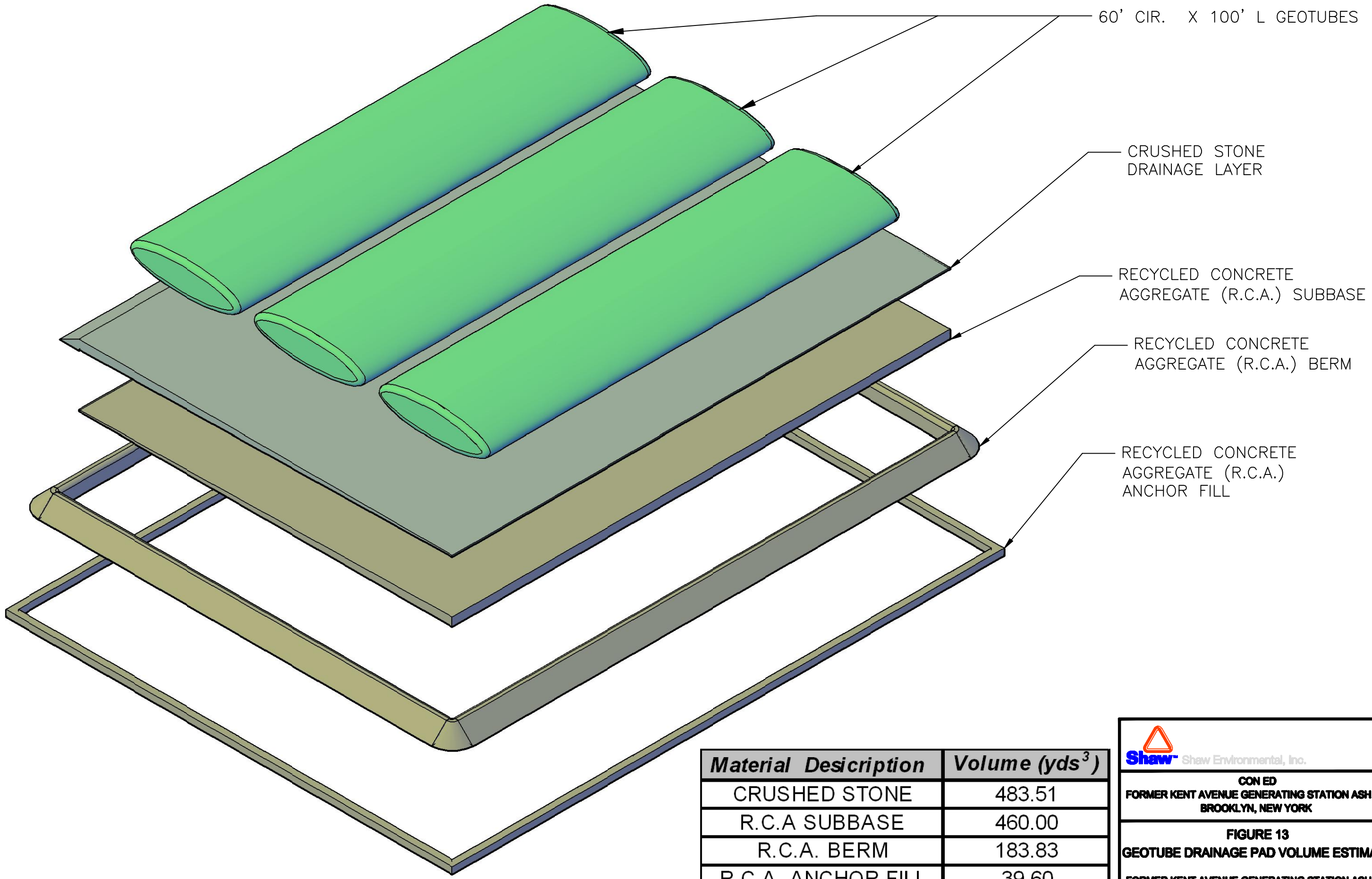
Shaw Environmental, Inc.

CON ED
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 12
GEOTUBE DRAINAGE PAD LAYOUT

FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
HOLBROOK, NY	G.PASSARELLI 6/8/2009	S.ASH 6/8/2009	S.ASH 6/8/2009	FIGURE 12



Material Desicription	Volume (yds^3)
CRUSHED STONE	483.51
R.C.A SUBBASE	460.00
R.C.A. BERM	183.83
R.C.A. ANCHOR FILL	39.60

Shaw Environmental, Inc.

CON ED
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 13
GEOTUBE DRAINAGE PAD VOLUME ESTIMATE

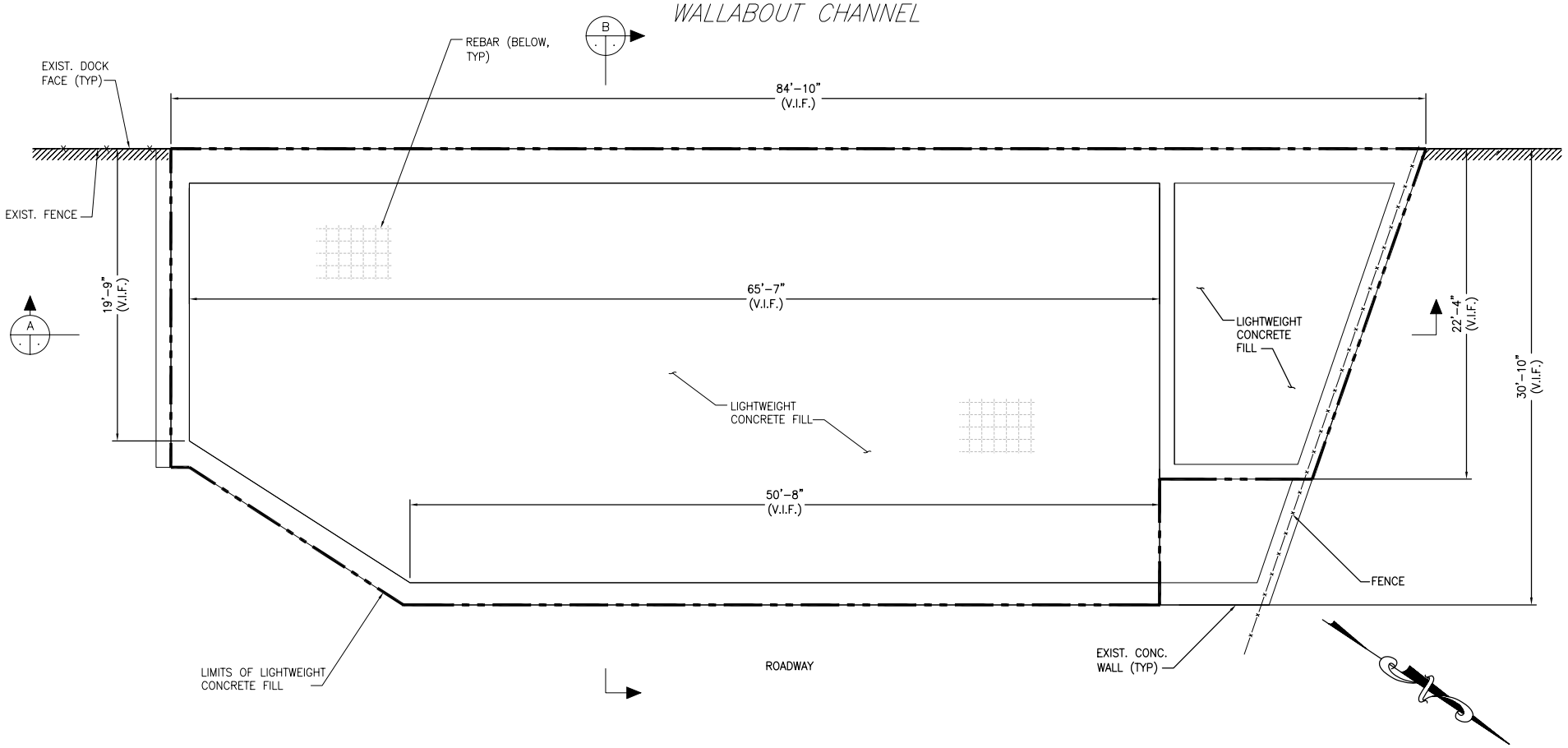
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

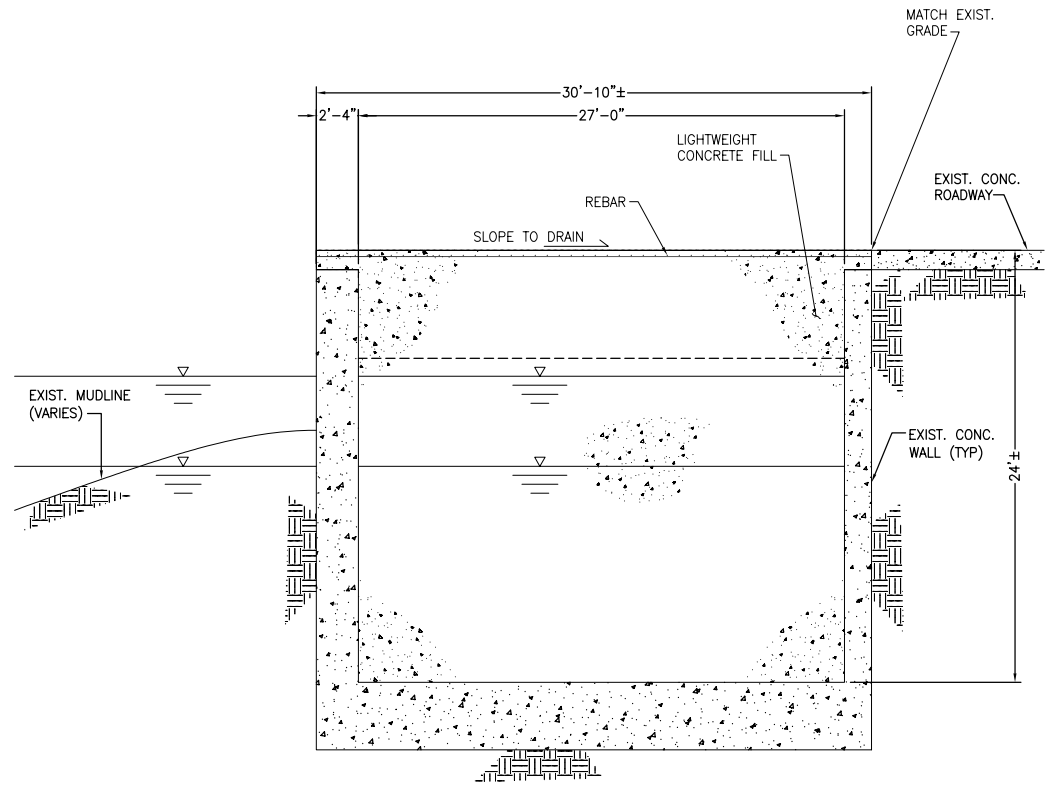
OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
HOLBROOK, NY	G.PASSARELLI 6/8/2009	S.ASH 6/8/2009	S.ASH 6/8/2009	FIGURE 13

DRAWING NUMBER FIGURE 14
APPROVED BY S.ASH
CHECKED BY J. FRANCESCONI 8/19/2009
DRAWN BY S. SHATZ 8/19/2009
OFFICE NEW YORK, NY

File: V:\Projects\Con Ed\Kent Ave\CAD\Structural\Sheet Files\2009 08 19- concrete fill.dwg
XREF Files: IMAGE Files: black-on-white map.bmp
Plotted: Sep 17, 2009 - 11:45am
Plotted By: (33.00) shatz

WALLABOUT CHANNEL

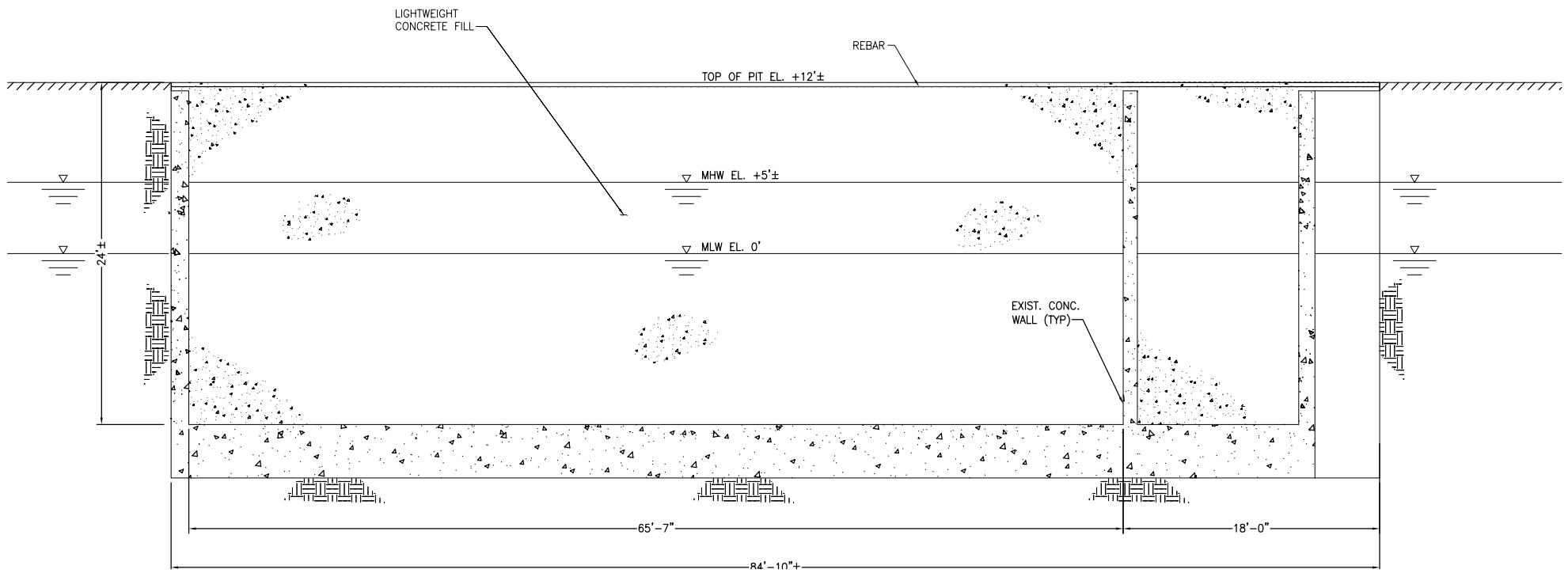




SECTION B
SCALE: 3/16"=1'-0"

PLAN
SCALE: 3/16"=1'-0"

5' 0 5' 10'
SCALE: 3/16" = 1'-0"



SECTION A
SCALE: 3/16"=1'-0"

LEGEND
V.I.F. VERIFY IN FIELD
MHW MEAN HIGH WATER
MLW MEAN LOW WATER

Shaw™ Shaw Environmental, Inc.

CON EDISON
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 14
ASH PIT REMEDIATION:
PLAN AND SECTIONS

ATTACHMENTS

CHEMTECH

284 Sheffield Street, Mountainside NJ 07092
Tel: 908-789-8900 Fax 908-789-8922

COVER PAGE

ProjectID: Ash Pit Charact-Kent Ave

OrderID: Y2385 **CustomerName:** Shaw E & I, Inc.

LAB SAMPLE NO.	CLIENT SAMPLE NO
Y2385-01	APW-01
Y2385-02	APW-02
Y2385-03	TB
Y2385-04	APS-01A
Y2385-05	APS-02A
Y2385-06	APS-03A
Y2385-07	APS-04A
Y2385-08	APS-05A
Y2385-09	APS-06A
Y2385-10	APS-00
Y2385-11	APS-01B
Y2385-12	APS-02B
Y2385-13	APS-03B
Y2385-14	APS-04B
Y2385-15	APS-05B
Y2385-16	APS-06B
Y2385-17	APS-06C

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature: Mildred V Reyes Name: Mildred V Reyes

Date: 5/2/07 Title: QA/QC

NYDOH CERTIFICATION NO.11376

NJDEP CERTIFICATION NO. 20012

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. Y2385

COC Number 064629

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Shaw E&I

ADDRESS: 101-1 Colin Drive

CITY: Holbrook STATE: NY ZIP: 11741

ATTENTION: Saul Ash

PHONE: 631-472-4000x239 FAX: 631-472-4077

CLIENT PROJECT INFORMATION

PROJECT NAME: ConEd- Kent Ave. Ash Pit

PROJECT NO.: LOCATION: Brooklyn NY

PROJECT MANAGER: Saul Ash

e-mail: saul.ash@shawgrp.com

PHONE: 631-472-4000 X 239 FAX: 631-472-4077

CLIENT BILLING INFORMATION

BILL TO: Shaw E&I PO#:

ADDRESS: 101-1 Colin Drive

CITY: Holbrook STATE: NY ZIP: 11741

ATTENTION: Saul Ash PHONE: 631-472-4000 X 239

DATA TURNAROUND INFORMATION

FAX: 10 DAYS *

HARD COPY: 10 DAYS *

EDD: 10 DAYS *

* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- [x] RESULTS ONLY
- [ ] RESULTS + QC
- [ ] New Jersey REDUCED
- [ ] New Jersey CLP
- [ ] USEPA CLP
- [ ] New York State ASP "B"
- [ ] New York State ASP "A"
- [ ] Other

EDD FORMAT EXCEL NOCLEANUP

ANALYSIS

1 TPH
2 TCLP VOA
3 TCLP ICP Metals + Hg
4 Reactive Sulfide + Cyanide
5 Corrosivity, Ignitability
6 PCB
7 TCLP BNA
8 TPH
9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1. 1	APW-01	W		X	4/17/07	1110	8	X	X	X	X	X	X	X			
2. 2	APW-02	W		X	4/17/07	1120	8	X	X	X	X	X	X	X			
3. 3	TB	W			–	–	3		X								
4. 4	APS-01A	S		X	4/17/07	1545	3		X	X	X	X	X	X	X		
5. 5	APS-02A	S		X	4/17/07	1520	3		X	X	X	X	X	X	X		
6. 6	APS-03A	S		X	4/17/07	1420	3		X	X	X	X	X	X	X		
7. 7	APS-04A	S		X	4/17/07	1355	3		X	X	X	X	X	X	X		
8. 8	APS-05A	S		X	4/17/07	1310	3		X	X	X	X	X	X	X		
9. 9	APS-06A	S		X	4/17/07	1230	3		X	X	X	X	X	X	X		
10. 10	APS-00	S		X	4/17/07	0000	3		X	X	X	X	X	X	X		

PRESERVATIVES: CE | E | E | E | E | E | E | E

COMMENTS: ← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	4/18/07 1100	1.
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
2.		2.
RELINQUISHED BY:	DATE/TIME: 12:30 4-18-07	RECEIVED FOR LAB BY:
3.		3. SNEHAL MEHTA

Conditions of bottles or coolers at receipt: [x] Compliant [ ] Non Compliant

MeOH extraction requires an additional 4 oz jar for percent solid.

Comments:

Cooler Temp. 4°C

Ice in Cooler?: YES

Page 1 of 2

SHIPPED VIA: CLIENT: [ ] HAND DELIVERED [ ] OVERNIGHT
CHEMTECH: [x] PICKED UP [ ] OVERNIGHT

Shipment Complete: [x] YES [ ] NO

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. 4238T

COC Number 064630

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Shaw E&I

ADDRESS: 101-1 Colin Drive

CITY: Holbrook STATE: NY ZIP: 11741

ATTENTION: Saul Ash

PHONE: 631-472-4000 x239 FAX: 631-472-4077

CLIENT PROJECT INFORMATION

PROJECT NAME: Con Ed-Kent Ave Ash Pit

PROJECT NO.: LOCATION: Brooklyn NY

PROJECT MANAGER: Saul Ash

e-mail: saul.ash@shawgrp.com

PHONE: 631-472-4000 x239 FAX: 631-472-4077

CLIENT BILLING INFORMATION

BILL TO: Shaw E&I PO#:

ADDRESS: 101-1 Colin Drive

CITY: Holbrook STATE: NY ZIP: 11741

ATTENTION: Saul Ash PHONE: 631-472-4000 x239

DATA TURNAROUND INFORMATION

FAX: 10 DAYS *

HARD COPY: 10 DAYS *

EDD: 10 DAYS *

* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ EDD FORMAT
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☐ Other

ANALYSIS

1 TCLP ICP Metals + Hg
2 TCLP VOA
3 Reactive Sulfide + Cyanide
4 Corrosivity + Ignitability
5 PCB
6 TCLP BNA
7
8
9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1. 11	APS-01B	S		X	4/17/07	1545	3	X	X	X	X	X	X				
2. 12	APS-02B	S		X	4/17/07	1520	3	X	X	X	X	X	X				
3. 13	APS-03B	S		X	4/17/07	1410	3	X	X	X	X	X	X				
4. 14	APS-04B	S		X	4/17/07	1355	3	X	X	X	X	X	X				
5. 15	APS-05B	S		X	4/17/07	1310	3	X	X	X	X	X	X				
6. 16	APS-06B	S		X	4/17/07	1230	3	X	X	X	X	X	X				
7. 17	APS-06C	S		X	4/17/07	1230	3	X	X	X	X	X	X				
8.																	
9.																	
10.																	

DI Out 4/17/07

← Specify Preservatives
A—HCl B—HNO_3
C—H_2SO_4 D—NaOH
E—ICE F—Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. [signature]	4/18/07 1105	1. [signature]
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
2.		2.
RELINQUISHED BY:	DATE/TIME: 12:30 4-18-07	RECEIVED FOR LAB BY:
3. [signature]		3. [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant Cooler Temp. 4°C

MeOH extraction requires an additional 4 oz jar for percent solid.

Comments:

Ice in Cooler?: YES

Page 2 of 2

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT CHEMTECH: ☒ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 4/2005

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

Snehal Mehta

From: Snehal Mehta
Sent: Wednesday, April 18, 2007 4:12 PM
To: Joseph Carabillo; Deepak Patel
Subject: RE: Samples from Con Ed Kent Ave Ash Pit

FOR TWO WATER SAMPLES (**APW-01 & APW-02**) LAB Received PTH w/ H2SO4 preserved & one Amber unpreserved w/o any test can be used for 8100.

-----Original Message-----
From: Joseph Carabillo
Sent: Wednesday, April 18, 2007 3:41 PM
To: Snehal Mehta
Subject: FW: Samples from Con Ed Kent Ave Ash Pit

See client ROC below...use method 8100 for TPH.

Joseph Carabillo
Project Manager
Direct Line: (908) 789-1545
Phone: (908) 789 8900 x 109
Fax: (908) 789 8922
jcarabillo@chemtech.net

CHEMTECH
284 Sheffield Street
Mountainside, NJ 07092
www.chemtech.net

==========

From: Ash, Saul [mailto:S
Sent: Wednesd April 18, 2007 10:29 AM
To: Joseph Carabillo
Cc: Duh,

Dan
Subject: Samples from Con Ed Kent Ave Ash Pit

Joe,

For the above referenced batch of samples scheduled to arrive today: we are changing the TPH analysis to Oil Fingerprinting by Method 8100. This applies to all samples.

Please confirm that this will be changed.

Also, the TCLP analyses for VOAs, SVOCs, and Metals require the standard RCRA list of compounds.

Thanks,

Saul

Saul Ash
Project Manager
Shaw Environmental and Infrastructure
101-1 Colin Drive
Holbrook, NY 11741
631 472-4000 x 239 direct

516 987-8338 cell
631 472-4077 fax
www.shawgrp.com

CHEMTECH 284 Sheffield Street Mountainside NJ 07092 Tel. 908-789-8900

Laboratory Certification

State	License No.
New Jersey	20012
New York	11376
Arizona	AZ0653
Connecticut	PH-0649
Florida	E87935
Kansas	E-10355
Maryland	296
Massachusetts	M-NJ503
Maine	NJ0503
North Carolina	630
Oklahoma	9705
Pennsylvania	68-548
Rhode Island	LAO00259

QA Control Code: A2070148

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284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as "12 B".
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.

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Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

J	If the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	If the analyte was analyzed for, but not detected.
E	The reported value is estimated because of the presence of interference
M	Duplicate injection precision not met.
N	Spiked sample recovery not within control limits.
S	The reported value was determined by the Method of Standard Addition (MSA).
W	Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while absorbance is less that 50% of spike absorbance.
*	Duplicate analysis not within control limits.
+	Correlation coefficient for the MSA is less than 0.995.
***	Entering "S", "W " or " +" is mutually exclusive. NO combination of these qualifiers can appear in the same field for an analyte.
D	The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers "P" for ICP instrument "A" for Flame AA "PM" for ICP when Microwave Digestion is used "AM" for flame AA when Microwave Digestion is used "FM" for furnace AA when Microwave Digestion is used "CV" for Manual Cold Vapor AA "AV" for automated Cold Vapor AA "CA" for MIDI-Distillation Spectrophotometric "AS" for Semi -Automated Spectrophotometric "C" for Manual Spectrophotometric "T" for Titrimetric "NR" for analyte not required to be analyzed

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: 72385

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication, airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody and on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	
All runlogs reviewed for manual integration requirements	

1st Level QA Review Signature: P. C. Pomdya Date: 05/02/07

2nd Level QA Review Signature: Mildred Mays Date: 5/2/07

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APW-01	SDG No.:	Y2385
Lab Sample ID:	Y2385-01	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Wol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002916.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	45.53	91 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	52.27	105 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	50.81	102 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	50.61	101 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	737665	4.05			
540-36-3	1,4-Difluorobenzene	1114956	4.54			
3114-55-4	Chlorobenzene-d5	1139990	8.08			
3855-82-1	1,4-Dichlorobenzene-d4	636772	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APW-02	SDG No.:	Y2385
Lab Sample ID:	Y2385-02	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002917.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	98	J	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.9	98 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	56.75	114 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	51.96	104 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	51.09	102 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	722419	4.04			
540-36-3	1,4-Difluorobenzene	1115028	4.53			
3114-55-4	Chlorobenzene-d5	1178970	8.07			
3855-82-1	1,4-Dichlorobenzene-d4	631903	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	TB	SDG No.:	Y2385
Lab Sample ID:	Y2385-03	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002932.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51	102 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	57.01	114 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	51.76	104 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	52.9	106 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	616492	4.04			
540-36-3	1,4-Difluorobenzene	906717	4.53			
3114-55-4	Chlorobenzene-d5	945799	8.07			
3855-82-1	1,4-Dichlorobenzene-d4	529603	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-01A	SDG No.:	Y2385
Lab Sample ID:	Y2385-04	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002918.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	46.51	93 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	53.35	107 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	51.34	103 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	49.93	100 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	716657	4.04			
540-36-3	1,4-Difluorobenzene	1077328	4.53			
3114-55-4	Chlorobenzene-d5	1082917	8.07			
3855-82-1	1,4-Dichlorobenzene-d4	581162	10.92			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-02A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-05	**Matrix:**	TCLP
Analytical Method:	8260	**% Moisture:**	100
Sample Wt/Vol:	5.0 Units: mL	**Soil Extract Vol:**	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002919.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.76	98 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	55.99	112 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	49.47	99 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	49.13	98 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	733086	4.04			
540-36-3	1,4-Difluorobenzene	1139311	4.53			
3114-55-4	Chlorobenzene-d5	1134019	8.07			
3855-82-1	1,4-Dichlorobenzene-d4	639136	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-03A	SDG No.:	Y2385
Lab Sample ID:	Y2385-06	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002920.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.11	102 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	54.22	108 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	49.09	98 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	46.68	93 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	699525	4.05			
540-36-3	1,4-Difluorobenzene	1105624	4.54			
3114-55-4	Chlorobenzene-d5	1101603	8.08			
3855-82-1	1,4-Dichlorobenzene-d4	609532	10.92			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-04A	SDG No.:	Y2385
Lab Sample ID:	Y2385-07	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Wol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002921.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50	100 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	55.15	110 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	49.05	98 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	49.11	98 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	704670	4.04			
540-36-3	1,4-Difluorobenzene	1083832	4.53			
3114-55-4	Chlorobenzene-d5	1055692	8.07			
3855-82-1	1,4-Dichlorobenzene-d4	587688	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-05A	SDG No.:	Y2385
Lab Sample ID:	Y2385-08	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002922.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.54	97 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	54.75	110 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	50.06	100 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	50.75	102 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	685634	4.04			
540-36-3	1,4-Difluorobenzene	1056965	4.53			
3114-55-4	Chlorobenzene-d5	1067288	8.07			
3855-82-1	1,4-Dichlorobenzene-d4	569735	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-06A	SDG No.:	Y2385
Lab Sample ID:	Y2385-09	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VD010230.D	5	4/23/2007	VD041607

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	45.33	91 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	50.58	101 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	49.89	100 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	48.01	96 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	688515	4.22			
540-36-3	1,4-Difluorobenzene	963821	4.91			
3114-55-4	Chlorobenzene-d5	1099936	9.29			
3855-82-1	1,4-Dichlorobenzene-d4	684178	11.68			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-00	SDG No.:	Y2385
Lab Sample ID:	Y2385-10	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002924.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.87	102 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	54.25	109 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	49.14	98 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	50.01	100 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	694352	4.04			
540-36-3	1,4-Difluorobenzene	1061599	4.53			
3114-55-4	Chlorobenzene-d5	1052906	8.07			
3855-82-1	1,4-Dichlorobenzene-d4	571444	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-01B	SDG No.:	Y2385
Lab Sample ID:	Y2385-11	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Wol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002925.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.12	102 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	57.16	114 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	50.44	101 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	50.09	100 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	687009	4.04			
540-36-3	1,4-Difluorobenzene	1049894	4.53			
3114-55-4	Chlorobenzene-d5	1085799	8.08			
3855-82-1	1,4-Dichlorobenzene-d4	579117	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-02B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-12	**Matrix:**	TCLP
Analytical Method:	8260	**% Moisture:**	100
Sample Wt/Vol:	5.0 Units: mL	**Soil Extract Vol:**	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002926.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	49.98	100 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	54.38	109 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	51.32	103 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	50.11	100 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	691720	4.05			
540-36-3	1,4-Difluorobenzene	1045582	4.54			
3114-55-4	Chlorobenzene-d5	1058898	8.08			
3855-82-1	1,4-Dichlorobenzene-d4	593189	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-03B	SDG No.:	Y2385
Lab Sample ID:	Y2385-13	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002927.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.37	111 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	53.87	108 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	49.44	99 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	42.33	85 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	633263	4.03			
540-36-3	1,4-Difluorobenzene	1039541	4.53			
3114-55-4	Chlorobenzene-d5	1028589	8.08			
3855-82-1	1,4-Dichlorobenzene-d4	474164	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-04B	SDG No.:	Y2385
Lab Sample ID:	Y2385-14	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002928.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.94	108 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	55.51	111 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	47.63	95 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	44.38	89 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	598291	4.02			
540-36-3	1,4-Difluorobenzene	951289	4.53			
3114-55-4	Chlorobenzene-d5	917979	8.07			
3855-82-1	1,4-Dichlorobenzene-d4	456748	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-05B	SDG No.:	Y2385
Lab Sample ID:	Y2385-15	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002929.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	49.51	99 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	53.8	108 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	49.82	100 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	47.16	94 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	633318	4.03			
540-36-3	1,4-Difluorobenzene	985190	4.52			
3114-55-4	Chlorobenzene-d5	954294	8.07			
3855-82-1	1,4-Dichlorobenzene-d4	452605	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-06B	SDG No.:	Y2385
Lab Sample ID:	Y2385-16	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002930.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	49.93	100 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	53.61	107 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	48.24	96 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	44.81	90 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	643873	4.03			
540-36-3	1,4-Difluorobenzene	1045738	4.54			
3114-55-4	Chlorobenzene-d5	994390	8.08			
3855-82-1	1,4-Dichlorobenzene-d4	444843	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-06C	SDG No.:	Y2385
Lab Sample ID:	Y2385-17	Matrix:	TCLP
Analytical Method:	8260	% Moisture:	100
Sample Wt/Vol:	5.0 Units: mL	Soil Extract Vol:	uL
Soil Aliquot Vol:	uL		

File ID:	Dilution:	Date Analyzed	Analytical Batch ID
VE002931.D	5	4/21/2007	VE041907

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
75-01-4	Vinyl chloride	1.6	U	25	1.6	ug/L
75-35-4	1,1-Dichloroethene	2.1	U	25	2.1	ug/L
78-93-3	2-Butanone	5.7	U	120	5.7	ug/L
56-23-5	Carbon Tetrachloride	5.7	U	25	5.7	ug/L
67-66-3	Chloroform	1.7	U	25	1.7	ug/L
71-43-2	Benzene	1.9	U	25	1.9	ug/L
107-06-2	1,2-Dichloroethane	1.7	U	25	1.7	ug/L
79-01-6	Trichloroethene	2.3	U	25	2.3	ug/L
127-18-4	Tetrachloroethene	2.4	U	25	2.4	ug/L
108-90-7	Chlorobenzene	2.3	U	25	2.3	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.67	101 %	72 - 119		SPK: 50
1868-53-7	Dibromofluoromethane	54.36	109 %	85 - 115		SPK: 50
2037-26-5	Toluene-d8	48.09	96 %	81 - 120		SPK: 50
460-00-4	4-Bromofluorobenzene	45.69	91 %	76 - 119		SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	613141	4.02			
540-36-3	1,4-Difluorobenzene	942034	4.52			
3114-55-4	Chlorobenzene-d5	908713	8.08			
3855-82-1	1,4-Dichlorobenzene-d4	451512	10.93			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound

Chemtech

Summary Sheet
SW-846

SDG No.: Y2385 Order ID: Y2385

Client: Shaw E & I, Inc. Project ID: SHAW03

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	APW-02							
Y2385-02	APW-02	TCLP	2-Butanone	98	J	120	5.7	ug/L
			Total VOC's:	98.00				
			Total TIC's:	0.00				
			Total VOC's and TIC's:	98.00				

Note: The asterisk "*" flag next to a parameter signifies a TIC parameter.

CHEMTECH

Lab Chronicle

Order ID:	Y2385	Order Date:	4/18/2007 3:24:10 PM
Client:	Shaw E & I, Inc.	Project:	Ash Pit Charact-Kent Ave
Contact:	Daniel Duh	Location	C31

Lab ID	Client ID	Matrix	Test	Method	Sample Date	PrepDate	AnalDate	Received
Y2385-01	**APW-01**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/21/07	
Y2385-02	**APW-02**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/21/07	
Y2385-03	**TB**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/21/07	
Y2385-04	**APS-01A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/21/07	
Y2385-05	**APS-02A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/21/07	
Y2385-06	**APS-03A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/21/07	
Y2385-07	**APS-04A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/21/07	
Y2385-08	**APS-05A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/21/07	
Y2385-09	**APS-06A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/23/07	
Y2385-10	**APS-00**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/21/07	
Y2385-11	**APS-01B**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP VOA	8260			04/21/07	

Y2385-12	**APS-02B**	**TCLP**			**04/17/07**		**04/18/07**
			TCLP VOA	8260		04/21/07	
Y2385-13	**APS-03B**	**TCLP**			**04/17/07**		**04/18/07**
			TCLP VOA	8260		04/21/07	
Y2385-14	**APS-04B**	**TCLP**			**04/17/07**		**04/18/07**
			TCLP VOA	8260		04/21/07	
Y2385-15	**APS-05B**	**TCLP**			**04/17/07**		**04/18/07**
			TCLP VOA	8260		04/21/07	
Y2385-16	**APS-06B**	**TCLP**			**04/17/07**		**04/18/07**
			TCLP VOA	8260		04/21/07	
Y2385-17	**APS-06C**	**TCLP**			**04/17/07**		**04/18/07**
			TCLP VOA	8260		04/21/07	

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APW-01	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-01	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031537.D	1	4/20/2007	4/21/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	98.84	66 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	104.54	70 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	65.56	66 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	59.87	60 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	90	60 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	77.47	77 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	256057	5.59			
1146-65-2	Naphthalene-d8	893355	7.49			
15067-26-2	Acenaphthene-d10	481741	10.30			
1517-22-2	Phenanthrene-d10	767057	12.73			
1719-03-5	Chrysene-d12	935101	17.09			
1520-96-3	Perylene-d12	674701	19.84			

U = Not Detected
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E = Value Exceeds Calibration Range

J = Estimated Value
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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APW-02	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-02	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031536.D	1	4/20/2007	4/21/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	98.12	65 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	103.36	69 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	60.3	60 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	62.34	62 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	86.79	58 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	73.38	73 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	254793	5.59			
1146-65-2	Naphthalene-d8	933822	7.49			
15067-26-2	Acenaphthene-d10	483262	10.31			
1517-22-2	Phenanthrene-d10	783211	12.74			
1719-03-5	Chrysene-d12	954487	17.08			
1520-96-3	Perylene-d12	670863	19.84			

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CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-01A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-04	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031535.D	1	4/20/2007	4/21/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	96.22	64 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	98.11	65 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	60	60 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	56.4	56 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	83.79	56 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	73.39	73 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	265161	5.59			
1146-65-2	Naphthalene-d8	977446	7.49			
15067-26-2	Acenaphthene-d10	517476	10.30			
1517-22-2	Phenanthrene-d10	831183	12.73			
1719-03-5	Chrysene-d12	969612	17.09			
1520-96-3	Perylene-d12	732967	19.84			

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-02A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-05**	**Matrix:**	**WATER**
Analytical Method:	**8270**	**% Moisture:**	**100**
Sample Wt/Vol:	**500.0 mL**	**Extract Vol:**	**500 uL**

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031534.D	1	4/20/2007	4/21/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	4.0	J	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	97.63	65 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	96.2	64 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	60.43	60 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	57.49	57 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	86.81	58 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	72.51	73 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	269764	5.59			
1146-65-2	Naphthalene-d8	962000	7.48			
15067-26-2	Acenaphthene-d10	503011	10.31			
1517-22-2	Phenanthrene-d10	814870	12.73			
1719-03-5	Chrysene-d12	996717	17.08			
1520-96-3	Perylene-d12	725524	19.83			

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-03A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-06	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031533.D	1	4/20/2007	4/21/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	101.51	68 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	100.13	67 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	61.47	61 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	60.53	61 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	96.84	65 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	76.6	77 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	244289	5.59			
1146-65-2	Naphthalene-d8	893779	7.48			
15067-26-2	Acenaphthene-d10	465964	10.31			
1517-22-2	Phenanthrene-d10	769373	12.73			
1719-03-5	Chrysene-d12	893876	17.09			
1520-96-3	Perylene-d12	582525	19.83			

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-04A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-07	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031532.D	1	4/20/2007	4/21/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	105.64	70 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	98	65 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	64.53	65 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	61.55	62 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	98.79	66 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	83.88	84 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	238649	5.59			
1146-65-2	Naphthalene-d8	851231	7.49			
15067-26-2	Acenaphthene-d10	457717	10.30			
1517-22-2	Phenanthrene-d10	704827	12.73			
1719-03-5	Chrysene-d12	808266	17.08			
1520-96-3	Perylene-d12	535919	19.84			

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N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-05A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-08**	**Matrix:**	**WATER**
Analytical Method:	**8270**	**% Moisture:**	**100**
Sample Wt/Vol:	**500.0 mL**	**Extract Vol:**	**500 uL**

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031531.D	1	4/20/2007	4/21/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units	
TARGETS							
110-86-1	Pyridine	0.980	U	10	0.980	ug/L	
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L	
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L	
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L	
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L	
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L	
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L	
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L	
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L	
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L	
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L	
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L	
SURROGATES							
367-12-4	2-Fluorophenol	96.99	65 %	21 - 100		SPK: 15	
13127-88-3	Phenol-d5	96.87	65 %	10 - 94		SPK: 15	
4165-60-0	Nitrobenzene-d5	59.95	60 %	35 - 114		SPK: 10	
321-60-8	2-Fluorobiphenyl	62.2	62 %	43 - 116		SPK: 10	
118-79-6	2,4,6-Tribromophenol	100.1	67 %	10 - 123		SPK: 15	
1718-51-0	Terphenyl-d14	76.89	77 %	33 - 141		SPK: 10	
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	247526	5.59				
1146-65-2	Naphthalene-d8	880071	7.48				
15067-26-2	Acenaphthene-d10	454890	10.30				
1517-22-2	Phenanthrene-d10	746589	12.73				
1719-03-5	Chrysene-d12	917304	17.08				
1520-96-3	Perylene-d12	680888	19.83				

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-06A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-09	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031530.D	1	4/20/2007	4/20/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	100.28	67 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	93.15	62 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	61.18	61 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	60.72	61 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	101.68	68 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	76.25	76 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	260109	5.58			
1146-65-2	Naphthalene-d8	918218	7.49			
15067-26-2	Acenaphthene-d10	481391	10.30			
1517-22-2	Phenanthrene-d10	811707	12.73			
1719-03-5	Chrysene-d12	964358	17.08			
1520-96-3	Perylene-d12	732200	19.83			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-00	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-10	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031529.D	1	4/20/2007	4/20/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	94.59	63 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	98.28	66 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	57.9	58 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	57.8	58 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	91.37	61 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	72.78	73 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	243908	5.59			
1146-65-2	Naphthalene-d8	909735	7.48			
15067-26-2	Acenaphthene-d10	473988	10.30			
1517-22-2	Phenanthrene-d10	793275	12.73			
1719-03-5	Chrysene-d12	979934	17.08			
1520-96-3	Perylene-d12	738397	19.83			

U = Not Detected
RL = Reporting Limit
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CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-01B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-11	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031528.D	1	4/20/2007	4/20/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	98.73	66 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	94.53	63 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	59.69	60 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	57.85	58 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	95.89	64 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	71.82	72 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	256709	5.58			
1146-65-2	Naphthalene-d8	938105	7.48			
15067-26-2	Acenaphthene-d10	498952	10.30			
1517-22-2	Phenanthrene-d10	831125	12.73			
1719-03-5	Chrysene-d12	1033983	17.08			
1520-96-3	Perylene-d12	762446	19.83			

U = Not Detected
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CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-02B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-12	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031527.D	1	4/20/2007	4/20/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	94.23	63 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	90.88	61 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	57.09	57 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	59.57	60 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	95.87	64 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	74.89	75 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	250704	5.58			
1146-65-2	Naphthalene-d8	941921	7.48			
15067-26-2	Acenaphthene-d10	474476	10.30			
1517-22-2	Phenanthrene-d10	792522	12.73			
1719-03-5	Chrysene-d12	986627	17.08			
1520-96-3	Perylene-d12	730795	19.82			

U = Not Detected
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MDL = Method Detection Limit
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J = Estimated Value
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N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-03B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-13	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031526.D	1	4/20/2007	4/20/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	101.91	68 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	96.89	65 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	62.62	63 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	63.27	63 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	102.64	68 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	79.44	79 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	255115	5.58			
1146-65-2	Naphthalene-d8	917456	7.48			
15067-26-2	Acenaphthene-d10	485507	10.30			
1517-22-2	Phenanthrene-d10	838930	12.73			
1719-03-5	Chrysene-d12	1012432	17.09			
1520-96-3	Perylene-d12	768316	19.83			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
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N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-04B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-14	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031549.D	1	4/20/2007	4/23/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	100.51	67 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	103.68	69 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	60.6	61 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	63.48	63 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	101.83	68 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	78.14	78 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	234496	5.59			
1146-65-2	Naphthalene-d8	848106	7.49			
15067-26-2	Acenaphthene-d10	446067	10.31			
1517-22-2	Phenanthrene-d10	730640	12.73			
1719-03-5	Chrysene-d12	881162	17.08			
1520-96-3	Perylene-d12	649845	19.84			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
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N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-05B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-15	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031548.D	1	4/20/2007	4/23/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	98.29	66 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	100.46	67 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	62.53	63 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	59.69	60 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	99.51	66 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	74.07	74 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	245824	5.59			
1146-65-2	Naphthalene-d8	870176	7.48			
15067-26-2	Acenaphthene-d10	464236	10.30			
1517-22-2	Phenanthrene-d10	785259	12.73			
1719-03-5	Chrysene-d12	993301	17.08			
1520-96-3	Perylene-d12	751828	19.83			

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-06B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-16	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031546.D	1	4/20/2007	4/23/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	90.47	60 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	88.33	59 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	56.47	56 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	56.71	57 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	99.26	66 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	73.66	74 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	268533	5.59			
1146-65-2	Naphthalene-d8	958659	7.49			
15067-26-2	Acenaphthene-d10	487331	10.30			
1517-22-2	Phenanthrene-d10	806946	12.73			
1719-03-5	Chrysene-d12	1010520	17.08			
1520-96-3	Perylene-d12	737672	19.83			

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CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-06C	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-17	**Matrix:**	WATER
Analytical Method:	8270	**% Moisture:**	100
Sample Wt/Vol:	500.0 mL	**Extract Vol:**	500 uL

File ID	Dilution	Date Extracted	Date Analyzed	Analytical Batch ID
BA031547.D	1	4/20/2007	4/23/2007	BA040407

CAS Number	Parameter	Conc.	Qualifier	RL	MDL	Units
TARGETS						
110-86-1	Pyridine	0.980	U	10	0.980	ug/L
106-46-7	1,4-Dichlorobenzene	1.2	U	10	1.2	ug/L
95-48-7	2-Methylphenol	1.5	U	10	1.5	ug/L
106-44-5	3+4-Methylphenols	1.3	U	10	1.3	ug/L
67-72-1	Hexachloroethane	1.2	U	10	1.2	ug/L
98-95-3	Nitrobenzene	1.6	U	10	1.6	ug/L
87-68-3	Hexachlorobutadiene	1.4	U	10	1.4	ug/L
95-95-4	2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L
88-06-2	2,4,6-Trichlorophenol	1.1	U	10	1.1	ug/L
121-14-2	2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L
118-74-1	Hexachlorobenzene	1.2	U	10	1.2	ug/L
87-86-5	Pentachlorophenol	1.6	U	10	1.6	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	98.12	65 %	21 - 100		SPK: 15
13127-88-3	Phenol-d5	104.77	70 %	10 - 94		SPK: 15
4165-60-0	Nitrobenzene-d5	64.46	64 %	35 - 114		SPK: 10
321-60-8	2-Fluorobiphenyl	63.63	64 %	43 - 116		SPK: 10
118-79-6	2,4,6-Tribromophenol	108.01	72 %	10 - 123		SPK: 15
1718-51-0	Terphenyl-d14	92.62	93 %	33 - 141		SPK: 10
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	248925	5.59			
1146-65-2	Naphthalene-d8	869982	7.49			
15067-26-2	Acenaphthene-d10	450104	10.30			
1517-22-2	Phenanthrene-d10	752443	12.73			
1719-03-5	Chrysene-d12	800621	17.08			
1520-96-3	Perylene-d12	831027	19.83			

U = Not Detected
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N = Presumptive Evidence of a Compound

Chemtech

Hit Summary Report

SDG No.: Y2385 Order ID: Y2385

Client: Shaw E & I, Inc. Project ID: Ash Pit Charact-Kent Ave

Test: TCLP BNA

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	APS-02A							
Y2385-05	APS-02A	WATER	1,4-Dichlorobenzene	4.0	J	10	1.2	ug/L
			Total SVOC's:	4.00				
			Total TIC's:	0.00				
			Total SVOC's and TIC's:	4.00				

Note: The asterisk "*" flag next to a parameter signifies a TIC parameter.

CHEMTECH

Lab Chronicle

Order ID: Y2385
Client: Shaw E & I, Inc.
Contact: Daniel Duh

Order Date: 4/18/2007 3:24:10 PM
Project: Ash Pit Charact-Kent Ave
Location C31

Lab ID	Client ID	Matrix	Test	Method	Sample Date	PrepDate	AnalDate	Received
Y2385-01	**APW-01**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/21/07	
Y2385-02	**APW-02**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/21/07	
Y2385-04	**APS-01A**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/21/07	
Y2385-05	**APS-02A**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/21/07	
Y2385-06	**APS-03A**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/21/07	
Y2385-07	**APS-04A**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/21/07	
Y2385-08	**APS-05A**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/21/07	
Y2385-09	**APS-06A**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/20/07	
Y2385-10	**APS-00**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/20/07	
Y2385-11	**APS-01B**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/20/07	
Y2385-12	**APS-02B**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/20/07	
Y2385-13	**APS-03B**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/20/07	
Y2385-14	**APS-04B**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/23/07	
Y2385-15	**APS-05B**	**WATER**			**04/17/07**			**04/18/07**

			TCLP BNA	8270		04/20/07	04/23/07	
Y2385-16	**APS-06B**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/23/07	
Y2385-17	**APS-06C**	**WATER**			**04/17/07**			**04/18/07**
			TCLP BNA	8270		04/20/07	04/23/07	

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APW-01	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-01	**Matrix:**	WATER
Analytical Method:	8082	**% Moisture:**	100
Sample Wt/Vol:	990 mL	**Extract Vol:**	10000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603447.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	0.146	U	0.51	0.146	ug/L
11104-28-2	AROCLOR 1221	0.172	U	0.51	0.172	ug/L
11141-16-5	AROCLOR 1232	0.110	U	0.51	0.110	ug/L
53469-21-9	AROCLOR 1242	0.084	U	0.51	0.084	ug/L
12672-29-6	AROCLOR 1248	0.042	U	0.51	0.042	ug/L
11097-69-1	AROCLOR 1254	0.037	U	0.51	0.037	ug/L
11096-82-5	AROCLOR 1260	0.76		0.51	0.1600	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	18.92	95 %	40 - 135		SPK: 20
2051-24-3	Decachlorobiphenyl	19.57	98 %	42 - 133		SPK: 20

U = Not Detected
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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APW-02	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-02	**Matrix:**	WATER
Analytical Method:	8082	**% Moisture:**	100
Sample Wt/Vol:	990 mL	**Extract Vol:**	10000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603448.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	0.146	U	0.51	0.146	ug/L
11104-28-2	AROCLOR 1221	0.172	U	0.51	0.172	ug/L
11141-16-5	AROCLOR 1232	0.110	U	0.51	0.110	ug/L
53469-21-9	AROCLOR 1242	0.084	U	0.51	0.084	ug/L
12672-29-6	AROCLOR 1248	0.042	U	0.51	0.042	ug/L
11097-69-1	AROCLOR 1254	0.037	U	0.51	0.037	ug/L
11096-82-5	AROCLOR 1260	1.3		0.51	0.1600	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	19.42	97 %	40 - 135		SPK: 20
2051-24-3	Decachlorobiphenyl	19.71	99 %	42 - 133		SPK: 20

U = Not Detected
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MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-01A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-04	**Matrix:**	SOIL
Analytical Method:	8082	**% Moisture:**	39
Sample Wt/Vol:	15 g	**Extract Vol:**	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603424.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	4.1	U	27	4.1	ug/Kg
11104-28-2	AROCLOR 1221	6.4	U	27	6.4	ug/Kg
11141-16-5	AROCLOR 1232	9.5	U	27	9.5	ug/Kg
53469-21-9	AROCLOR 1242	8.5	U	27	8.5	ug/Kg
12672-29-6	AROCLOR 1248	4.1	U	27	4.1	ug/Kg
11097-69-1	AROCLOR 1254	2.7	U	27	2.7	ug/Kg
11096-82-5	AROCLOR 1260	1400	E	27	6.8	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	14.46	72 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	12.24	61 %	58 - 125		SPK: 20

U = Not Detected
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E = Value Exceeds Calibration Range

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-01ADL	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-04DL	**Matrix:**	SOIL
Analytical Method:	8082	**% Moisture:**	39
Sample Wt/Vol:	15 g	**Extract Vol:**	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603485.D	5	4/19/2007	4/23/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	21	UD	140	21	ug/Kg
11104-28-2	AROCLOR 1221	32	UD	140	32	ug/Kg
11141-16-5	AROCLOR 1232	48	UD	140	48	ug/Kg
53469-21-9	AROCLOR 1242	42	UD	140	42	ug/Kg
12672-29-6	AROCLOR 1248	21	UD	140	21	ug/Kg
11097-69-1	AROCLOR 1254	13	UD	140	13	ug/Kg
11096-82-5	AROCLOR 1260	2100	D	140	34	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	17.4	87 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	18.85	94 %	58 - 125		SPK: 20

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Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-02A	SDG No.:	Y2385
Lab Sample ID:	Y2385-05	Matrix:	SOIL
Analytical Method:	8082	% Moisture:	45
Sample Wt/Vol:	15 g	Extract Vol:	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603426.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	4.6	U	31	4.6	ug/Kg
11104-28-2	AROCLOR 1221	7.1	U	31	7.1	ug/Kg
11141-16-5	AROCLOR 1232	11	U	31	11	ug/Kg
53469-21-9	AROCLOR 1242	9.5	U	31	9.5	ug/Kg
12672-29-6	AROCLOR 1248	4.6	U	31	4.6	ug/Kg
11097-69-1	AROCLOR 1254	3.0	U	31	3.0	ug/Kg
11096-82-5	AROCLOR 1260	12000	E	31	7.6	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	15.49	77 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	26.08	130 %	58 - 125		SPK: 20

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MDL = Method Detection Limit
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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-02ADL	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-05DL	**Matrix:**	SOIL
Analytical Method:	8082	**% Moisture:**	45
Sample Wt/Vol:	15 g	**Extract Vol:**	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603462.D	100	4/19/2007	4/20/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	460	UD	3100	460	ug/Kg
11104-28-2	AROCLOR 1221	710	UD	3100	710	ug/Kg
11141-16-5	AROCLOR 1232	1100	UD	3100	1100	ug/Kg
53469-21-9	AROCLOR 1242	950	UD	3100	950	ug/Kg
12672-29-6	AROCLOR 1248	460	UD	3100	460	ug/Kg
11097-69-1	AROCLOR 1254	300	UD	3100	300	ug/Kg
11096-82-5	AROCLOR 1260	36000	D	3100	760	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	0	0 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	0	0 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-03A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-06**	**Matrix:**	**SOIL**
Analytical Method:	**8082**	**% Moisture:**	**56**
Sample Wt/Vol:	**15 g**	**Extract Vol:**	**5000 uL**

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603427.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	5.7	U	38	5.7	ug/Kg
11104-28-2	AROCLOR 1221	8.9	U	38	8.9	ug/Kg
11141-16-5	AROCLOR 1232	13	U	38	13	ug/Kg
53469-21-9	AROCLOR 1242	12	U	38	12	ug/Kg
12672-29-6	AROCLOR 1248	5.8	U	38	5.8	ug/Kg
11097-69-1	AROCLOR 1254	3.8	U	38	3.8	ug/Kg
11096-82-5	AROCLOR 1260	3200	E	38	9.5	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	15.43	77 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	16.04	80 %	58 - 125		SPK: 20

U = Not Detected
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CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-03ADL	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-06DL	**Matrix:**	SOIL
Analytical Method:	8082	**% Moisture:**	56
Sample Wt/Vol:	15 g	**Extract Vol:**	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603458.D	10	4/19/2007	4/20/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	57	UD	380	57	ug/Kg
11104-28-2	AROCLOR 1221	89	UD	380	89	ug/Kg
11141-16-5	AROCLOR 1232	130	UD	380	130	ug/Kg
53469-21-9	AROCLOR 1242	120	UD	380	120	ug/Kg
12672-29-6	AROCLOR 1248	58	UD	380	58	ug/Kg
11097-69-1	AROCLOR 1254	38	UD	380	38	ug/Kg
11096-82-5	AROCLOR 1260	4700	D	380	95	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	16	80 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	21.9	110 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-04A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-07	**Matrix:**	SOIL
Analytical Method:	8082	**% Moisture:**	58
Sample Wt/Vol:	15 g	**Extract Vol:**	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603428.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	5.9	U	40	5.9	ug/Kg
11104-28-2	AROCLOR 1221	9.2	U	40	9.2	ug/Kg
11141-16-5	AROCLOR 1232	14	U	40	14	ug/Kg
53469-21-9	AROCLOR 1242	12	U	40	12	ug/Kg
12672-29-6	AROCLOR 1248	5.9	U	40	5.9	ug/Kg
11097-69-1	AROCLOR 1254	3.9	U	40	3.9	ug/Kg
11096-82-5	AROCLOR 1260	28000	E	40	9.8	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	16.71	84 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	45.21	226 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-04ADL	SDG No.:	Y2385
Lab Sample ID:	Y2385-07DL	Matrix:	SOIL
Analytical Method:	8082	% Moisture:	58
Sample Wt/Vol:	15 g	Extract Vol:	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603463.D	200	4/19/2007	4/20/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	1200	UD	7900	1200	ug/Kg
11104-28-2	AROCLOR 1221	1800	UD	7900	1800	ug/Kg
11141-16-5	AROCLOR 1232	2700	UD	7900	2700	ug/Kg
53469-21-9	AROCLOR 1242	2400	UD	7900	2400	ug/Kg
12672-29-6	AROCLOR 1248	1200	UD	7900	1200	ug/Kg
11097-69-1	AROCLOR 1254	770	UD	7900	770	ug/Kg
11096-82-5	AROCLOR 1260	120000	D	7900	2000	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	0	0 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	0	0 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-05A	SDG No.:	Y2385
Lab Sample ID:	Y2385-08	Matrix:	SOIL
Analytical Method:	8082	% Moisture:	70
Sample Wt/Vol:	15 g	Extract Vol:	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603429.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	8.4	U	56	8.4	ug/Kg
11104-28-2	AROCLOR 1221	13	U	56	13	ug/Kg
11141-16-5	AROCLOR 1232	19	U	56	19	ug/Kg
53469-21-9	AROCLOR 1242	17	U	56	17	ug/Kg
12672-29-6	AROCLOR 1248	8.4	U	56	8.4	ug/Kg
11097-69-1	AROCLOR 1254	5.5	U	56	5.5	ug/Kg
11096-82-5	AROCLOR 1260	760		56	14	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	15.37	77 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	17.04	85 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-06A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-09	**Matrix:**	SOIL
Analytical Method:	8082	**% Moisture:**	84
Sample Wt/Vol:	15 g	**Extract Vol:**	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603430.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	16	U	110	16	ug/Kg
11104-28-2	AROCLOR 1221	24	U	110	24	ug/Kg
11141-16-5	AROCLOR 1232	36	U	110	36	ug/Kg
53469-21-9	AROCLOR 1242	32	U	110	32	ug/Kg
12672-29-6	AROCLOR 1248	16	U	110	16	ug/Kg
11097-69-1	AROCLOR 1254	10	U	110	10	ug/Kg
11096-82-5	AROCLOR 1260	360		110	26	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	14.01	70 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	14.26	71 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-00	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-10	**Matrix:**	SOIL
Analytical Method:	8082	**% Moisture:**	48
Sample Wt/Vol:	15 g	**Extract Vol:**	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603431.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	4.9	U	33	4.9	ug/Kg
11104-28-2	AROCLOR 1221	7.5	U	33	7.5	ug/Kg
11141-16-5	AROCLOR 1232	11	U	33	11	ug/Kg
53469-21-9	AROCLOR 1242	10	U	33	10	ug/Kg
12672-29-6	AROCLOR 1248	4.9	U	33	4.9	ug/Kg
11097-69-1	AROCLOR 1254	3.2	U	33	3.2	ug/Kg
11096-82-5	AROCLOR 1260	73		33	8.1	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	16	80 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	15.91	80 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-01B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-11**	**Matrix:**	**SOIL**
Analytical Method:	**8082**	**% Moisture:**	**31**
Sample Wt/Vol:	**15 g**	**Extract Vol:**	**5000 uL**

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603432.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	3.6	U	24	3.6	ug/Kg
11104-28-2	AROCLOR 1221	5.6	U	24	5.6	ug/Kg
11141-16-5	AROCLOR 1232	8.4	U	24	8.4	ug/Kg
53469-21-9	AROCLOR 1242	7.4	U	24	7.4	ug/Kg
12672-29-6	AROCLOR 1248	3.6	U	24	3.6	ug/Kg
11097-69-1	AROCLOR 1254	2.4	U	24	2.4	ug/Kg
11096-82-5	AROCLOR 1260	33		24	6.0	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	16.88	84 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	16.15	81 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-02B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-12	**Matrix:**	SOIL
Analytical Method:	8082	**% Moisture:**	36
Sample Wt/Vol:	15 g	**Extract Vol:**	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603433.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	3.9	U	26	3.9	ug/Kg
11104-28-2	AROCLOR 1221	6.1	U	26	6.1	ug/Kg
11141-16-5	AROCLOR 1232	9.2	U	26	9.2	ug/Kg
53469-21-9	AROCLOR 1242	8.2	U	26	8.2	ug/Kg
12672-29-6	AROCLOR 1248	4.0	U	26	4.0	ug/Kg
11097-69-1	AROCLOR 1254	2.6	U	26	2.6	ug/Kg
11096-82-5	AROCLOR 1260	6200	E	26	6.6	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	17.09	85 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	23.59	118 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-02BDL**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-12DL**	**Matrix:**	**SOIL**
Analytical Method:	**8082**	**% Moisture:**	**36**
Sample Wt/Vol:	**15 g**	**Extract Vol:**	**5000 uL**

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603464.D	50	4/19/2007	4/20/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	200	UD	1300	200	ug/Kg
11104-28-2	AROCLOR 1221	310	UD	1300	310	ug/Kg
11141-16-5	AROCLOR 1232	460	UD	1300	460	ug/Kg
53469-21-9	AROCLOR 1242	410	UD	1300	410	ug/Kg
12672-29-6	AROCLOR 1248	200	UD	1300	200	ug/Kg
11097-69-1	AROCLOR 1254	130	UD	1300	130	ug/Kg
11096-82-5	AROCLOR 1260	15000	D	1300	330	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	0	0 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	0	0 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-03B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-13	**Matrix:**	SOIL
Analytical Method:	8082	**% Moisture:**	42
Sample Wt/Vol:	15 g	**Extract Vol:**	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603439.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	4.3	U	29	4.3	ug/Kg
11104-28-2	AROCLOR 1221	6.7	U	29	6.7	ug/Kg
11141-16-5	AROCLOR 1232	10	U	29	10	ug/Kg
53469-21-9	AROCLOR 1242	9.0	U	29	9.0	ug/Kg
12672-29-6	AROCLOR 1248	4.4	U	29	4.4	ug/Kg
11097-69-1	AROCLOR 1254	2.8	U	29	2.8	ug/Kg
11096-82-5	AROCLOR 1260	45		29	7.2	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	16.43	82 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	16.86	84 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-04B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-14**	**Matrix:**	**SOIL**
Analytical Method:	**8082**	**% Moisture:**	**42**
Sample Wt/Vol:	**15 g**	**Extract Vol:**	**5000 uL**

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603440.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	4.3	U	29	4.3	ug/Kg
11104-28-2	AROCLOR 1221	6.7	U	29	6.7	ug/Kg
11141-16-5	AROCLOR 1232	10	U	29	10	ug/Kg
53469-21-9	AROCLOR 1242	8.9	U	29	8.9	ug/Kg
12672-29-6	AROCLOR 1248	4.4	U	29	4.4	ug/Kg
11097-69-1	AROCLOR 1254	2.8	U	29	2.8	ug/Kg
11096-82-5	AROCLOR 1260	700	E	29	7.2	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	17.91	90 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	19.27	96 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent Ave	**Date Received:**	4/18/2007
Client Sample ID:	APS-04BDL	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-14DL	**Matrix:**	SOIL
Analytical Method:	8082	**% Moisture:**	42
Sample Wt/Vol:	15 g	**Extract Vol:**	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603461.D	2	4/19/2007	4/20/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	8.7	UD	58	8.7	ug/Kg
11104-28-2	AROCLOR 1221	13	UD	58	13	ug/Kg
11141-16-5	AROCLOR 1232	20	UD	58	20	ug/Kg
53469-21-9	AROCLOR 1242	18	UD	58	18	ug/Kg
12672-29-6	AROCLOR 1248	8.7	UD	58	8.7	ug/Kg
11097-69-1	AROCLOR 1254	5.7	UD	58	5.7	ug/Kg
11096-82-5	AROCLOR 1260	790	D	58	14	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	18.72	94 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	21.18	106 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-05B	SDG No.:	Y2385
Lab Sample ID:	Y2385-15	Matrix:	SOIL
Analytical Method:	8082	% Moisture:	43
Sample Wt/Vol:	15 g	Extract Vol:	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603441.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	4.4	U	30	4.4	ug/Kg
11104-28-2	AROCLOR 1221	6.9	U	30	6.9	ug/Kg
11141-16-5	AROCLOR 1232	10	U	30	10	ug/Kg
53469-21-9	AROCLOR 1242	9.1	U	30	9.1	ug/Kg
12672-29-6	AROCLOR 1248	4.4	U	30	4.4	ug/Kg
11097-69-1	AROCLOR 1254	2.9	U	30	2.9	ug/Kg
11096-82-5	AROCLOR 1260	7.3	U	30	7.3	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	16.64	83 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	13.83	69 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

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Report of Analysis

Client:	Shaw E & I, Inc.	Date Collected:	4/17/2007
Project:	Ash Pit Charact-Kent Ave	Date Received:	4/18/2007
Client Sample ID:	APS-06B	SDG No.:	Y2385
Lab Sample ID:	Y2385-16	Matrix:	SOIL
Analytical Method:	8082	% Moisture:	49
Sample Wt/Vol:	15 g	Extract Vol:	5000 uL

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603442.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	5.0	U	33	5.0	ug/Kg
11104-28-2	AROCLOR 1221	7.7	U	33	7.7	ug/Kg
11141-16-5	AROCLOR 1232	12	U	33	12	ug/Kg
53469-21-9	AROCLOR 1242	10	U	33	10	ug/Kg
12672-29-6	AROCLOR 1248	5.0	U	33	5.0	ug/Kg
11097-69-1	AROCLOR 1254	3.2	U	33	3.2	ug/Kg
11096-82-5	AROCLOR 1260	43		33	8.2	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	14.9	75 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	15.25	76 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-06C**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-17**	**Matrix:**	**SOIL**
Analytical Method:	**8082**	**% Moisture:**	**43**
Sample Wt/Vol:	**15 g**	**Extract Vol:**	**5000 uL**

File ID:	Dilution:	Date Prep	Date Analyzed	Analytical Batch ID
P603443.D	1	4/19/2007	4/19/2007	P6041907

CAS Number	Parameter	Conc	Qualifier	RL	MDL	Units
TARGETS						
12674-11-2	AROCLOR 1016	4.4	U	30	4.4	ug/Kg
11104-28-2	AROCLOR 1221	6.8	U	30	6.8	ug/Kg
11141-16-5	AROCLOR 1232	10	U	30	10	ug/Kg
53469-21-9	AROCLOR 1242	9.1	U	30	9.1	ug/Kg
12672-29-6	AROCLOR 1248	4.4	U	30	4.4	ug/Kg
11097-69-1	AROCLOR 1254	2.9	U	30	2.9	ug/Kg
11096-82-5	AROCLOR 1260	7.3	U	30	7.3	ug/Kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	17.81	89 %	50 - 132		SPK: 20
2051-24-3	Decachlorobiphenyl	18.59	93 %	58 - 125		SPK: 20

U = Not Detected
RL = Reporting Limit
MDL = Method Detection Limit
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Presumptive Evidence of a Compound

Chemtech

Hit Summary Report

SDG No.: Y2385 Order ID: Y2385
Client: Shaw E & I, Inc. Project ID: Ash Pit Charact-Kent Ave
Test: PCB

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	**APS-00**							
Y2385-10	APS-00	SOIL	AROCLOR 1260	73		33	8.1	ug/Kg
			Total PCB's:	73.00				
Client ID:	**APS-01A**							
Y2385-04	APS-01A	SOIL	AROCLOR 1260	1400	E	27	6.8	ug/Kg
			Total PCB's:	1400.00				
Client ID:	**APS-01ADL**							
Y2385-04DL	APS-01ADL	SOIL	AROCLOR 1260	2100	D	140	34	ug/Kg
			Total PCB's:	2100.00				
Client ID:	**APS-01B**							
Y2385-11	APS-01B	SOIL	AROCLOR 1260	33		24	6.0	ug/Kg
			Total PCB's:	33.00				
Client ID:	**APS-02A**							
Y2385-05	APS-02A	SOIL	AROCLOR 1260	12000	E	31	7.6	ug/Kg
			Total PCB's:	12000.00				
Client ID:	**APS-02ADL**							
Y2385-05DL	APS-02ADL	SOIL	AROCLOR 1260	36000	D	3100	760	ug/Kg
			Total PCB's:	36000.00				
Client ID:	**APS-02B**							
Y2385-12	APS-02B	SOIL	AROCLOR 1260	6200	E	26	6.6	ug/Kg
			Total PCB's:	6200.00				
Client ID:	**APS-02BDL**							
Y2385-12DL	APS-02BDL	SOIL	AROCLOR 1260	15000	D	1300	330	ug/Kg
			Total PCB's:	15000.00				
Client ID:	**APS-03A**							
Y2385-06	APS-03A	SOIL	AROCLOR 1260	3200	E	38	9.5	ug/Kg
			Total PCB's:	3200.00				
Client ID:	**APS-03ADL**							
Y2385-06DL	APS-03ADL	SOIL	AROCLOR 1260	4700	D	380	95	ug/Kg
			Total PCB's:	4700.00				
Client ID:	**APS-03B**							
Y2385-13	APS-03B	SOIL	AROCLOR 1260	45		29	7.2	ug/Kg
			Total PCB's:	45.00				

Chemtech

Hit Summary Report

SDG No.: Y2385
Client: Shaw E & I, Inc.
Test: PCB

Order ID: Y2385
Project ID: Ash Pit Charact-Kent Ave

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	**APS-04A**							
Y2385-07	APS-04A	SOIL	AROCLOR 1260	28000	E	40	9.8	ug/Kg
		Total PCB's:		28000.00				
Client ID:	**APS-04ADL**							
Y2385-07DL	APS-04ADL	SOIL	AROCLOR 1260	120000	D	7900	2000	ug/Kg
		Total PCB's:		120000.00				
Client ID:	**APS-04B**							
Y2385-14	APS-04B	SOIL	AROCLOR 1260	700	E	29	7.2	ug/Kg
		Total PCB's:		700.00				
Client ID:	**APS-04BDL**							
Y2385-14DL	APS-04BDL	SOIL	AROCLOR 1260	790	D	58	14	ug/Kg
		Total PCB's:		790.00				
Client ID:	**APS-05A**							
Y2385-08	APS-05A	SOIL	AROCLOR 1260	760		56	14	ug/Kg
		Total PCB's:		760.00				
Client ID:	**APS-06A**							
Y2385-09	APS-06A	SOIL	AROCLOR 1260	360		110	26	ug/Kg
		Total PCB's:		360.00				
Client ID:	**APS-06B**							
Y2385-16	APS-06B	SOIL	AROCLOR 1260	43		33	8.2	ug/Kg
		Total PCB's:		43.00				
Client ID:	**APW-01**							
Y2385-01	APW-01	WATER	AROCLOR 1260	0.76		0.51	0.160	ug/L
		Total PCB's:		0.76				
Client ID:	**APW-02**							
Y2385-02	APW-02	WATER	AROCLOR 1260	1.3		0.51	0.160	ug/L
		Total PCB's:		1.30				

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Lab Chronicle

Order ID:	Y2385	Order Date:	4/18/2007 3:24:10 PM
Client:	Shaw E & I, Inc.	Project:	Ash Pit Charact-Kent Ave
Contact:	Daniel Duh	Location	C31

Lab ID	Client ID	Matrix	Test	Method	Sample Date	PrepDate	AnalDate	Received
Y2385-01	**APW-01**	**WATER**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-02	**APW-02**	**WATER**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-04	**APS-01A**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-04DL	**APS-01ADL**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/23/07	
Y2385-05	**APS-02A**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-05DL	**APS-02ADL**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/20/07	
Y2385-06	**APS-03A**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-06DL	**APS-03ADL**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/20/07	
Y2385-07	**APS-04A**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-07DL	**APS-04ADL**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/20/07	
Y2385-08	**APS-05A**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	

Y2385-09	**APS-06A**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-10	**APS-00**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-11	**APS-01B**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-12	**APS-02B**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-12DL	**APS-02BDL**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/20/07	
Y2385-13	**APS-03B**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-14	**APS-04B**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-14DL	**APS-04BDL**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/20/07	
Y2385-15	**APS-05B**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-16	**APS-06B**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	
Y2385-17	**APS-06C**	**SOIL**			**04/17/07**			**04/18/07**
			PCB	8082		04/19/07	04/19/07	

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TABULATED RESULTS
TOTAL PETROLEUM HYDROCARBONS
(C8-C40)
Method 8100

Client: Shaw E & I, Inc.
Project: Ash Pit Charact-Kent Ave
Collection Date: 4/17/07
Extraction Date: 4/19/07
Initial Wt/Vol: 990
Final Wt/Vol: 1
Percent Solids 0
Dilution Factor: 1

PrepBatch: PB26255
Matrix WATER
Lab Project: Y2385
Lab Sample ID Y2385-01
Lab File ID: P9005460.D
Analyst: JJ
Received Date: 04/18/07
Analysis Date: 04/25/07

Client ID	Parameter	Results	Qual	MDL	Units
APW-01	TPH GC	86	U	85.86	ug/L

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TABULATED RESULTS
TOTAL PETROLEUM HYDROCARBONS
(C8-C40)
Method 8100

Client: Shaw E & I, Inc.
Project: Ash Pit Charact-Kent Ave
Collection Date: 4/17/07
Extraction Date: 4/19/07
Initial Wt/Vol: 980
Final Wt/Vol: 1
Percent Solids 0
Dilution Factor: 1

PrepBatch: PB26255
Matrix WATER
Lab Project: Y2385
Lab Sample ID Y2385-02
Lab File ID: P9005461.D
Analyst: JJ
Received Date: 04/18/07
Analysis Date: 04/25/07

Client ID	Parameter	Results	Qual	MDL	Units
APW-02	TPH GC	166		86.73	ug/L

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TABULATED RESULTS
TOTAL PETROLEUM HYDROCARBONS
(C8-C40)
Method 8100

Client: Shaw E & I, Inc.
Project: Ash Pit Charact-Kent Ave
Collection Date: 4/17/07
Extraction Date: 4/19/07
Initial Wt/Vol: 15.32
Final Wt/Vol: 1
Percent Solids 60.9
Dilution Factor: 20

PrepBatch: PB26254
Matrix SOLID
Lab Project: Y2385
Lab Sample ID Y2385-04
Lab File ID: P9005479.D
Analyst: JJ
Received Date: 04/18/07
Analysis Date: 04/26/07

Client ID	Parameter	Results	Qual	MDL	Units
APS-01A	TPH GC	1950000		182210.27	ug/Kg

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TABULATED RESULTS
TOTAL PETROLEUM HYDROCARBONS
(C8-C40)
Method 8100

Client: Shaw E & I, Inc.
Project: Ash Pit Charact-Kent Ave
Collection Date: 4/17/07
Extraction Date: 4/19/07
Initial Wt/Vol: 15.31
Final Wt/Vol: 1
Percent Solids 55.4
Dilution Factor: 10

PrepBatch: PB26254
Matrix SOLID
Lab Project: Y2385
Lab Sample ID Y2385-05
Lab File ID: P9005480.D
Analyst: JJ
Received Date: 04/18/07
Analysis Date: 04/26/07

Client ID	Parameter	Results	Qual	MDL	Units
APS-02A	TPH GC	586000		100215.29	ug/Kg

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TABULATED RESULTS
TOTAL PETROLEUM HYDROCARBONS
(C8-C40)
Method 8100

Client: Shaw E & I, Inc.
Project: Ash Pit Charact-Kent Ave
Collection Date: 4/17/07
Extraction Date: 4/19/07
Initial Wt/Vol: 15.11
Final Wt/Vol: 1
Percent Solids 44
Dilution Factor: 10

PrepBatch: PB26254
Matrix SOLID
Lab Project: Y2385
Lab Sample ID Y2385-06
Lab File ID: P9005481.D
Analyst: JJ
Received Date: 04/18/07
Analysis Date: 04/26/07

Client ID	Parameter	Results	Qual	MDL	Units
APS-03A	TPH GC	1290000		127850.31	ug/Kg

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TABULATED RESULTS
TOTAL PETROLEUM HYDROCARBONS
(C8-C40)
Method 8100

Client: Shaw E & I, Inc.
Project: Ash Pit Charact-Kent Ave
Collection Date: 4/17/07
Extraction Date: 4/19/07
Initial Wt/Vol: 15.09
Final Wt/Vol: 1
Percent Solids 41.9
Dilution Factor: 20

PrepBatch: PB26254
Matrix SOLID
Lab Project: Y2385
Lab Sample ID Y2385-07
Lab File ID: P9005482.D
Analyst: JJ
Received Date: 04/18/07
Analysis Date: 04/26/07

Client ID	Parameter	Results	Qual	MDL	Units
APS-04A	TPH GC	2430000		268872.05	ug/Kg

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TABULATED RESULTS
TOTAL PETROLEUM HYDROCARBONS
(C8-C40)
Method 8100

Client: Shaw E & I, Inc.
Project: Ash Pit Charact-Kent Ave
Collection Date: 4/17/07
Extraction Date: 4/19/07
Initial Wt/Vol: 15.17
Final Wt/Vol: 1
Percent Solids 29.5
Dilution Factor: 10

PrepBatch: PB26254
Matrix SOLID
Lab Project: Y2385
Lab Sample ID Y2385-08
Lab File ID: P9005483.D
Analyst: JJ
Received Date: 04/18/07
Analysis Date: 04/26/07

Client ID	Parameter	Results	Qual	MDL	Units
APS-05A	TPH GC	2270000		189937.77	ug/Kg

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TABULATED RESULTS
TOTAL PETROLEUM HYDROCARBONS
(C8-C40)
Method 8100

Client: Shaw E & I, Inc.
Project: Ash Pit Charact-Kent Ave
Collection Date: 4/17/2007
Extraction Date: 4/19/2007
Initial Wt/Vol: 15.27 ↑ 1 ↓ 15.27
Final Wt/Vol: 1
Percent Solids 15.5
Dilution Factor: 10

PrepBatch: PB26254
Matrix SOLID
Lab Project: Y2385
Lab Sample ID Y2385-09
Lab File ID: P9005484.D
Analyst: JJ
Received Date: 04/18/07
Analysis Date: 04/26/07

Client ID	Parameter	Results	Qual	MDL	Units
APS-06A	TPH GC	2700000		359127.11	ug/Kg

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TABULATED RESULTS
TOTAL PETROLEUM HYDROCARBONS
(C8-C40)
Method 8100

Client: Shaw E & I, Inc.
Project: Ash Pit Charact-Kent Ave
Collection Date: 4/17/07
Extraction Date: 4/19/07
Initial Wt/Vol: 1
Final Wt/Vol: 15.27
Percent Solids 15.5
Dilution Factor: 10

PrepBatch: PB26254
Matrix SOLID
Lab Project: Y2385
Lab Sample ID Y2385-09
Lab File ID: P9005484.D
Analyst: JJ
Received Date: 04/18/07
Analysis Date: 04/26/07

Client ID	Parameter	Results	Qual	MDL	Units
APS-06A	TPH GC	629000000		5483870.97	ug/Kg

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TABULATED RESULTS
TOTAL PETROLEUM HYDROCARBONS
(C8-C40)
Method 8100

Client: Shaw E & I, Inc.
Project: Ash Pit Charact-Kent Ave
Collection Date: 4/17/07
Extraction Date: 4/19/07
Initial Wt/Vol: 15.19
Final Wt/Vol: 1
Percent Solids 52.4
Dilution Factor: 1

PrepBatch: PB26254
Matrix SOLID
Lab Project: Y2385
Lab Sample ID Y2385-10
Lab File ID: P9005470.D
Analyst: JJ
Received Date: 04/18/07
Analysis Date: 04/26/07

Client ID	Parameter	Results	Qual	MDL	Units
APS-00	TPH GC	155000		10678.98	ug/Kg

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Lab Chronicle

Order ID:	Y2385	Order Date:	4/18/2007 3:24:10 PM
Client:	Shaw E & I, Inc.	Project:	Ash Pit Charact-Kent Ave
Contact:	Daniel Duh	Location	C31

Lab ID	Client ID	Matrix	Test	Method	Sample Date	PrepDate	AnalDate	Received
Y2385-01	APW-01	WATER			04/17/07			04/18/07
			TPH	8100		04/19/07	04/25/07	
Y2385-02	APW-02	WATER			04/17/07			04/18/07
			TPH	8100		04/19/07	04/25/07	
Y2385-04	APS-01A	SOIL			04/17/07			04/18/07
			TPH	8100		04/19/07	04/26/07	
Y2385-05	APS-02A	SOIL			04/17/07			04/18/07
			TPH	8100		04/19/07	04/26/07	
Y2385-06	APS-03A	SOIL			04/17/07			04/18/07
			TPH	8100		04/19/07	04/26/07	
Y2385-07	APS-04A	SOIL			04/17/07			04/18/07
			TPH	8100		04/19/07	04/26/07	
Y2385-08	APS-05A	SOIL			04/17/07			04/18/07
			TPH	8100		04/19/07	04/26/07	
Y2385-09	APS-06A	SOIL			04/17/07			04/18/07
			TPH	8100		04/19/07	04/26/07	
Y2385-10	APS-00	SOIL			04/17/07			04/18/07
			TPH	8100		04/19/07	04/26/07	

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent ,**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APW-01**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-01**	**Matrix:**	**TCLP**
		% Solids:	**0.00**

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	31.0	U	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	58.2	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	28.7	J	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	52.5	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	7.400	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

Comments:

U = Not Detected
DL = Method Detection Limit or Instrument Detection Limit

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Spiked sample recovery not within control limits

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent ,	**Date Received:**	4/18/2007
Client Sample ID:	APW-02	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-02	**Matrix:**	TCLP
		% Solids:	0.00

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	31.0	U	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	71.2	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	37.5	J	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	38.7	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

Comments:

U = Not Detected
DL = Method Detection Limit or Instrument Detection Limit

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Spiked sample recovery not within control limits

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent ,**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-01A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-04**	**Matrix:**	**TCLP**
		% Solids:	**0.00**

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	84.4	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	787		ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	84.3		ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	43.3	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

Comments:

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N = Spiked sample recovery not within control limits

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent	**Date Received:**	4/18/2007
Client Sample ID:	APS-02A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-05	**Matrix:**	TCLP
		% Solids:	0.00

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	31.0	U	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	910		ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.200	J	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	92.4		ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	470		ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	61.2	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	11.8	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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B = Analyte Found In Associated Method Blank
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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent ,	**Date Received:**	4/18/2007
Client Sample ID:	APS-03A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-06	**Matrix:**	TCLP
		% Solids:	0.00

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	31.0	U	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	322	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	19.0	U	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	93.7	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent ,	**Date Received:**	4/18/2007
Client Sample ID:	APS-04A	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-07	**Matrix:**	TCLP
		% Solids:	0.00

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	31.0	U	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	424	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	11.9	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	19.0	J	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	40.6	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	8.900	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

Comments:

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N = Spiked sample recovery not within control limits

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent .**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-05A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-08**	**Matrix:**	**TCLP**
		% Solids:	**0.00**

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	31.0	U	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	317	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	29.1	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	25.4	J	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	61.0	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	30.7	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent .**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-06A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-09**	**Matrix:**	**TCLP**
		% Solids:	**0.00**

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	35.8	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	322	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	41.7	J	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	67.6	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	14.9	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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B = Analyte Found In Associated Method Blank
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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent ,**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-00**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-10**	**Matrix:**	**TCLP**
		% Solids:	**0.00**

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	31.0	U	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	901		ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	6.900	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	59.3	J	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	60.4	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent .**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-01B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-11**	**Matrix:**	**TCLP**
		% Solids:	**0.00**

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	67.6	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	1600		ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	26.2	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	66.2		ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	52.7	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	17.4	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent ,	**Date Received:**	4/18/2007
Client Sample ID:	APS-02B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-12	**Matrix:**	TCLP
		% Solids:	0.00

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	70.6	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	1110		ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.800	J	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	17.7	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	61.2		ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	46.8	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	17.9	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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Report of Analysis

Client:	Shaw E & I, Inc.	**Date Collected:**	4/17/2007
Project:	Ash Pit Charact-Kent	**Date Received:**	4/18/2007
Client Sample ID:	APS-03B	**SDG No.:**	Y2385
Lab Sample ID:	Y2385-13	**Matrix:**	TCLP
		% Solids:	0.00

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	31.0	U	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	1190		ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.900	J	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	21.3	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	119		ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	27.5	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	6.300	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent ,**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-04B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-14**	**Matrix:**	**TCLP**
		% Solids:	**0.00**

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	78.0	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	778		ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	16.8	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	48.7	J	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	31.1	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	10.2	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent ,**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-05B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-15**	**Matrix:**	**TCLP**
		% Solids:	**0.00**

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	64.6	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	1110		ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	9.500	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	38.2	J	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	68.9	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent ,**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-06B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-16**	**Matrix:**	**TCLP**
		% Solids:	**0.00**

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	71.0	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	1200		ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	16.3	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	45.8	J	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	53.4	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	9.400	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent .**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-06C**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-17**	**Matrix:**	**TCLP**
		% Solids:	**0.00**

CAS No.	Analyte	Conc.	Qualifier	Units	DL	Dilution	Date Prep	Date Anal.	Method
7440-38-2	Arsenic	68.5	J	ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-39-3	Barium	940		ug/L	31.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-43-9	Cadmium	9.000	U	ug/L	9.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-47-3	Chromium	17.4	J	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-92-1	Lead	53.2	J	ug/L	19.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7439-97-6	Mercury	1.1	U	ug/L	1.1	1	4/20/2007	4/30/2007	EPA SW-846 7470
7782-49-2	Selenium	32.6	J	ug/L	21.0	1	4/27/2007	4/30/2007	EPA SW-846 6010
7440-22-4	Silver	6.000	U	ug/L	6.000	1	4/27/2007	4/30/2007	EPA SW-846 6010

Comments:

U = Not Detected
DL = Method Detection Limit or Instrument Detection Limit

J = Estimated Value
B = Analyte Found In Associated Method Blank
N = Spiked sample recovery not within control limits

Chemtech Consulting Group

Hit Summary Sheet
SW-846

SDG No.: Y2385 Order ID: Y2385

Client: Shaw E & I, Inc. Project ID: Ash Pit Charact-Kent Ave

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	**APS-00**							
Y2385-10	APS-00	TCLP	Barium	901		500	31.0	ug/L
Y2385-10	APS-00	TCLP	Chromium	6.900	J	50.0	6.000	ug/L
Y2385-10	APS-00	TCLP	Lead	59.3	J	60.0	19.0	ug/L
Y2385-10	APS-00	TCLP	Selenium	60.4	J	100	21.0	ug/L
Client ID:	**APS-01A**							
Y2385-04	APS-01A	TCLP	Arsenic	84.4	J	100	31.0	ug/L
Y2385-04	APS-01A	TCLP	Barium	787		500	31.0	ug/L
Y2385-04	APS-01A	TCLP	Lead	84.3		60.0	19.0	ug/L
Y2385-04	APS-01A	TCLP	Selenium	43.3	J	100	21.0	ug/L
Client ID:	**APS-01B**							
Y2385-11	APS-01B	TCLP	Arsenic	67.6	J	100	31.0	ug/L
Y2385-11	APS-01B	TCLP	Barium	1600		500	31.0	ug/L
Y2385-11	APS-01B	TCLP	Chromium	26.2	J	50.0	6.000	ug/L
Y2385-11	APS-01B	TCLP	Lead	66.2		60.0	19.0	ug/L
Y2385-11	APS-01B	TCLP	Selenium	52.7	J	100	21.0	ug/L
Y2385-11	APS-01B	TCLP	Silver	17.4	J	50.0	6.000	ug/L
Client ID:	**APS-02A**							
Y2385-05	APS-02A	TCLP	Barium	910		500	31.0	ug/L
Y2385-05	APS-02A	TCLP	Cadmium	9.200	J	30.0	9.000	ug/L
Y2385-05	APS-02A	TCLP	Chromium	92.4		50.0	6.000	ug/L
Y2385-05	APS-02A	TCLP	Lead	470		60.0	19.0	ug/L
Y2385-05	APS-02A	TCLP	Selenium	61.2	J	100	21.0	ug/L
Y2385-05	APS-02A	TCLP	Silver	11.8	J	50.0	6.000	ug/L
Client ID:	**APS-02B**							
Y2385-12	APS-02B	TCLP	Arsenic	70.6	J	100	31.0	ug/L
Y2385-12	APS-02B	TCLP	Barium	1110		500	31.0	ug/L
Y2385-12	APS-02B	TCLP	Cadmium	9.800	J	30.0	9.000	ug/L
Y2385-12	APS-02B	TCLP	Chromium	17.7	J	50.0	6.000	ug/L
Y2385-12	APS-02B	TCLP	Lead	61.2		60.0	19.0	ug/L
Y2385-12	APS-02B	TCLP	Selenium	46.8	J	100	21.0	ug/L
Y2385-12	APS-02B	TCLP	Silver	17.9	J	50.0	6.000	ug/L
Client ID:	**APS-03A**							
Y2385-06	APS-03A	TCLP	Barium	322	J	500	31.0	ug/L
Y2385-06	APS-03A	TCLP	Selenium	93.7	J	100	21.0	ug/L

Hit Summary Sheet
SW-846

SDG No.: Y2385 **Order ID:** Y2385

Client: Shaw E & I, Inc. **Project ID:** Ash Pit Charact-Kent Ave

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	**APS-03B**							
Y2385-13	APS-03B	TCLP	Barium	1190		500	31.0	ug/L
Y2385-13	APS-03B	TCLP	Cadmium	9.900	J	30.0	9.000	ug/L
Y2385-13	APS-03B	TCLP	Chromium	21.3	J	50.0	6.000	ug/L
Y2385-13	APS-03B	TCLP	Lead	119		60.0	19.0	ug/L
Y2385-13	APS-03B	TCLP	Selenium	27.5	J	100	21.0	ug/L
Y2385-13	APS-03B	TCLP	Silver	6.300	J	50.0	6.000	ug/L
Client ID:	**APS-04A**							
Y2385-07	APS-04A	TCLP	Barium	424	J	500	31.0	ug/L
Y2385-07	APS-04A	TCLP	Chromium	11.9	J	50.0	6.000	ug/L
Y2385-07	APS-04A	TCLP	Lead	19.0	J	60.0	19.0	ug/L
Y2385-07	APS-04A	TCLP	Selenium	40.6	J	100	21.0	ug/L
Y2385-07	APS-04A	TCLP	Silver	8.900	J	50.0	6.000	ug/L
Client ID:	**APS-04B**							
Y2385-14	APS-04B	TCLP	Arsenic	78.0	J	100	31.0	ug/L
Y2385-14	APS-04B	TCLP	Barium	778		500	31.0	ug/L
Y2385-14	APS-04B	TCLP	Chromium	16.8	J	50.0	6.000	ug/L
Y2385-14	APS-04B	TCLP	Lead	48.7	J	60.0	19.0	ug/L
Y2385-14	APS-04B	TCLP	Selenium	31.1	J	100	21.0	ug/L
Y2385-14	APS-04B	TCLP	Silver	10.2	J	50.0	6.000	ug/L
Client ID:	**APS-05A**							
Y2385-08	APS-05A	TCLP	Barium	317	J	500	31.0	ug/L
Y2385-08	APS-05A	TCLP	Chromium	29.1	J	50.0	6.000	ug/L
Y2385-08	APS-05A	TCLP	Lead	25.4	J	60.0	19.0	ug/L
Y2385-08	APS-05A	TCLP	Selenium	61.0	J	100	21.0	ug/L
Y2385-08	APS-05A	TCLP	Silver	30.7	J	50.0	6.000	ug/L
Client ID:	**APS-05B**							
Y2385-15	APS-05B	TCLP	Arsenic	64.6	J	100	31.0	ug/L
Y2385-15	APS-05B	TCLP	Barium	1110		500	31.0	ug/L
Y2385-15	APS-05B	TCLP	Chromium	9.500	J	50.0	6.000	ug/L
Y2385-15	APS-05B	TCLP	Lead	38.2	J	60.0	19.0	ug/L
Y2385-15	APS-05B	TCLP	Selenium	68.9	J	100	21.0	ug/L
Client ID:	**APS-06A**							
Y2385-09	APS-06A	TCLP	Arsenic	35.8	J	100	31.0	ug/L
Y2385-09	APS-06A	TCLP	Barium	322	J	500	31.0	ug/L
Y2385-09	APS-06A	TCLP	Lead	41.7	J	60.0	19.0	ug/L
Y2385-09	APS-06A	TCLP	Selenium	67.6	J	100	21.0	ug/L
Y2385-09	APS-06A	TCLP	Silver	14.9	J	50.0	6.000	ug/L

Hit Summary Sheet
SW-846

SDG No.: Y2385 Order ID: Y2385

Client: Shaw E & I, Inc. Project ID: Ash Pit Charact-Kent Ave

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	**APS-06B**							
Y2385-16	APS-06B	TCLP	Arsenic	71.0	J	100	31.0	ug/L
Y2385-16	APS-06B	TCLP	Barium	1200		500	31.0	ug/L
Y2385-16	APS-06B	TCLP	Chromium	16.3	J	50.0	6.000	ug/L
Y2385-16	APS-06B	TCLP	Lead	45.8	J	60.0	19.0	ug/L
Y2385-16	APS-06B	TCLP	Selenium	53.4	J	100	21.0	ug/L
Y2385-16	APS-06B	TCLP	Silver	9.400	J	50.0	6.000	ug/L
Client ID:	**APS-06C**							
Y2385-17	APS-06C	TCLP	Arsenic	68.5	J	100	31.0	ug/L
Y2385-17	APS-06C	TCLP	Barium	940		500	31.0	ug/L
Y2385-17	APS-06C	TCLP	Chromium	17.4	J	50.0	6.000	ug/L
Y2385-17	APS-06C	TCLP	Lead	53.2	J	60.0	19.0	ug/L
Y2385-17	APS-06C	TCLP	Selenium	32.6	J	100	21.0	ug/L
Client ID:	**APW-01**							
Y2385-01	APW-01	TCLP	Barium	58.2	J	500	31.0	ug/L
Y2385-01	APW-01	TCLP	Lead	28.7	J	60.0	19.0	ug/L
Y2385-01	APW-01	TCLP	Selenium	52.5	J	100	21.0	ug/L
Y2385-01	APW-01	TCLP	Silver	7.400	J	50.0	6.000	ug/L
Client ID:	**APW-02**							
Y2385-02	APW-02	TCLP	Barium	71.2	J	500	31.0	ug/L
Y2385-02	APW-02	TCLP	Lead	37.5	J	60.0	19.0	ug/L
Y2385-02	APW-02	TCLP	Selenium	38.7	J	100	21.0	ug/L

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Lab Chronicle

Order ID:	Y2385	Order Date:	4/18/2007 3:24:10 PM
Client:	Shaw E & I, Inc.	Project:	Ash Pit Charact-Kent Ave
Contact:	Daniel Duh	Location	C31

Lab ID	Client ID	Matrix	Test	Method	Sample Date	PrepDate	AnalDate	Received
Y2385-01	**APW-01**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-02	**APW-02**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-04	**APS-01A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-05	**APS-02A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-06	**APS-03A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-07	**APS-04A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-08	**APS-05A**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-09	**APS-06A**	**TCLP**			**04/17/07**			**04/18/07**

			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-10	**APS-00**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-11	**APS-01B**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-12	**APS-02B**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-13	**APS-03B**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-14	**APS-04B**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-15	**APS-05B**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-16	**APS-06B**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	
Y2385-17	**APS-06C**	**TCLP**			**04/17/07**			**04/18/07**
			TCLP ICP Metals	6010		04/27/07	04/30/07	
			TCLP Mercury	7470		04/20/07	04/30/07	

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APW-01**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-01**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Corrosivity (as pH)	7.5		0.00	pH	1	4/19/2007	9040 Corrosivity
Ignitability	NO		0.00	ignit.	1	4/26/2007	1010 Ignitability

Comment

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APW-02**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-02**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Corrosivity (as pH)	7.5		0.00	pH	1	4/19/2007	9040 Corrosivity
Ignitability	NO		0.00	ignit.	1	4/26/2007	1010 Ignitability

Comment

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-01A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-04**	**Matrix:**	**SOIL**
% Solids:	**60.90**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	8.8		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-02A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-05**	**Matrix:**	**SOIL**
% Solids:	**55.40**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	9.0		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-03A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-06**	**Matrix:**	**SOIL**
% Solids:	**44.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	9.8		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-04A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-07**	**Matrix:**	**SOIL**
% Solids:	**41.90**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	9.7		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-05A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-08**	**Matrix:**	**SOIL**
% Solids:	**29.50**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	9.7		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

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Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-06A**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-09**	**Matrix:**	**SOIL**
% Solids:	**15.50**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	9.8		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-00**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-10**	**Matrix:**	**SOIL**
% Solids:	**52.40**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	9.2		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-01B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-11**	**Matrix:**	**SOIL**
% Solids:	**68.80**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	8.5		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-02B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-12**	**Matrix:**	**SOIL**
% Solids:	**63.90**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	8.8		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-03B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-13**	**Matrix:**	**SOIL**
% Solids:	**57.60**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	9.2		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-04B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-14**	**Matrix:**	**SOIL**
% Solids:	**58.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	8.5		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-05B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-15**	**Matrix:**	**SOIL**
% Solids:	**56.90**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	8.5		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-06B**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-16**	**Matrix:**	**SOIL**
% Solids:	**51.20**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	8.9		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Shaw E & I, Inc.**	**Date Collected:**	**4/17/2007**
Project:	**Ash Pit Charact-Kent Ave**	**Date Received:**	**4/18/2007**
Client Sample ID:	**APS-06C**	**SDG No.:**	**Y2385**
Lab Sample ID:	**Y2385-17**	**Matrix:**	**SOIL**
% Solids:	**57.40**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Reactive Cyanide	10.00	U	10.00	mg/Kg	1	4/19/2007	7.3.3.2 Reactive Cyanide
Reactive Sulfide	40.00	U	40.00	mg/Kg	1	4/19/2007	7.3.4.2 Reactive Sulfide
Ignitability	NO		0.00	ignit.	1	4/26/2007	SW-846 CH 7.1 Ignitability
Corrosivity (as pH)	9.4		0.00	pH	1	4/20/2007	9045 Corrosivity

Comment

CHEMTECH

Lab Chronicle

Order ID:	Y2385	Order Date:	4/18/2007 3:24:10 PM
Client:	Shaw E & I, Inc.	Project:	Ash Pit Charact-Kent Ave
Contact:	Daniel Duh	Location	C31

Lab ID	Client ID	Matrix	Test	Method	Sample Date	PrepDate	AnalDate	Received
Y2385-01	**APW-01**	**WATER**			**04/17/07**			**04/18/07**
			Corrosivity	9040		04/19/07	04/19/07	
			Ignitability	1010		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-02	**APW-02**	**WATER**			**04/17/07**			**04/18/07**
			Corrosivity	9040		04/19/07	04/19/07	
			Ignitability	1010		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-04	**APS-01A**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-05	**APS-02A**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-06	**APS-03A**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	

			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-07	**APS-04A**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-08	**APS-05A**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-09	**APS-06A**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-10	**APS-00**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-11	**APS-01B**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-12	**APS-02B**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	

			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-13	**APS-03B**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-14	**APS-04B**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-15	**APS-05B**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-16	**APS-06B**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	
Y2385-17	**APS-06C**	**SOIL**			**04/17/07**			**04/18/07**
			Corrosivity	9045		04/20/07	04/20/07	
			Ignitability	SW-846 CH 7.1		04/26/07	04/26/07	
			Reactive Cyanide	7.3.3.2.REV 3		04/19/07	04/19/07	
			Reactive Sulfide	7.3.4.2. REV 3		04/19/07	04/19/07	

CHEMTECH

284 Sheffield Street Mountainside, NJ 07092
Tel . (908) 789-8900 Fax (908) 789-8922

END OF ANALYTICAL RESULTS

TESTWELL LABORATORIES, INC.
Total Commitment to Quality

CORPORATE HEADQUARTERS: 47 HUDSON STREET, OSSINING, NY 10562
PHONE: (914) 762-9000 FAX: (914) 762-9638 WEB: www.testwelllabs.com

WINDSOR PIN READING

CLIENT:	Shaw Environmental & Infrastructure Inc.	**PROJECT ID:**	PMI-001AA
PROJECT:	Kent Avenue Ash Pit	**REPORT #:**	EPNF001
ADDRESS:	Kent Avenue Brooklyn NY	**WEATHER:**	

To:

Shaw Environmental & Infrastructure Inc.
101-1 Colin Drive
Holbrook NY 11741

Attention : Saul Ash

Copies Sent To:

INSPECTOR(S): Bouzyla Victor
TIME IN 7:00 AM **TIME OUT** 3:30 PM

GC/CM:
SUB CONTRACTOR (S):
ARCHITECT/ENGINEER: /

OTHER:

REPORTED TO : Saul Ash OF: Shaw Environmental & Infrastructure Inc.
REF. DRAWINGS : Contract Drawings
REF. SPECIFICATION : Project Specifications
CODE/PROCEDURE # : ASTM C-803
ACCEPTANCE STD :

General Location Where Inspection was Performed:
North, South & West wall.

Specific Location Where Inspection was Performed:
Refer page 2.

Deficiency(s) Noted: None

Previous Deficiency(s) Resolved: None

REMARKS:
None.

ATTACHMENTS: None.

WINDSOR PIN READING

CLIENT:	Shaw Environmental & Infrastructure Inc.	**PROJECT ID:**	PMI-001AA
PROJECT:	Kent Avenue Ash Pit	**REPORT #:**	EPNF001
ADDRESS:	Kent Avenue Brooklyn NY	**WEATHER:**	

Test #	Location	Pin Reading (mm)	Average of 7	Average of 5	Compressive Strength (psi)
1	West wall, South end 3' below grade	0.853			
		0.850			
		0.855			
		0.860*			
		0.848*			
		0.854			
		0.856	0.854	0.854	4066
2	West wall, South center 3' below grade	0.855			
		0.860			
		0.842			
		0.835*			
		0.854			
		0.865*			
		0.848	0.851	0.852	4038
3	West wall, North center 3' below grade	0.865			
		0.878*			
		0.870			
		0.872			
		0.857*			
		0.864			
		0.870			
4	West wall, North end 3' below grade	0.875	0.868	0.868	4252
		0.860			
		0.858			
		0.870			
		0.855*			
		0.864			
		0.877*	0.866	0.866	4224
5	North wall, West end	0.880			

WINDSOR PIN READING

CLIENT:	Shaw Environmental & Infrastructure Inc.	**PROJECT ID:**	PMI-001AA
PROJECT:	Kent Avenue Ash Pit	**REPORT #:**	EPNF001
ADDRESS:	Kent Avenue Brooklyn NY	**WEATHER:**	

Test #	Location	Pin Reading (mm)	Average of 7	Average of 5	Compressive Strength (psi)
		0.875*			
		0.894			
		0.900*			
		0.885			
		0.880			
		0.896	0.887	0.887	4504
6	North wall, East end	0.887*			
		0.915			
		0.920*			
		0.894			
		0.899			
		0.910			
		0.918	0.907	0.907	4768
7	South wall	0.845			
		0.850			
		0.865*			
		0.850			
		0.842*			
		0.860			
		0.858	0.853	0.853	4052
8	West wall	0.824*			
		0.845			
		0.850			
		0.840			
		0.848			
		0.855*			
		0.852	0.845	0.847	3974

TESTWELL LABORATORIES, INC.
Total Commitment to Quality

CORPORATE HEADQUARTERS: 47 HUDSON STREET, OSSINING, NY 10562
PHONE: (914) 762-9000 FAX: (914) 762-9638 WEB: www.testwelllabs.com

WINDSOR PIN READING

CLIENT:	Shaw Environmental & Infrastructure Inc.	**PROJECT ID:**	PMI-001AA
PROJECT:	Kent Avenue Ash Pit	**REPORT #:**	EPNF001
ADDRESS:	Kent Avenue Brooklyn NY	**WEATHER:**	

Remarks : None.

TESTWELL LABORATORIES, INC.
Total Commitment to Quality

CORPORATE HEADQUARTERS: 47 HUDSON STREET, OSSINING, NY 10562
PHONE: (914) 762-9000 FAX: (914) 762-9638 WEB: www.testwelllabs.com

WINDSOR PIN READING

CLIENT:	Shaw Environmental & Infrastructure Inc.	**PROJECT ID:**	PMI-001AA
PROJECT:	Kent Avenue Ash Pit	**REPORT #:**	EPNF002
ADDRESS:	Kent Avenue Brooklyn NY	**WEATHER:**	

To:

Shaw Environmental & Infrastructure Inc.
101-1 Colin Drive
Holbrook NY 11741

Attention : Saul Ash

Copies Sent To:

INSPECTOR(S): Bouzyla Victor
TIME IN 7:00 AM **TIME OUT** 3:30 PM

GC/CM:
SUB CONTRACTOR (S):
ARCHITECT/ENGINEER: /

OTHER:

REPORTED TO : Anthony Chuliver OF: Project Team
REF. DRAWINGS : Contract Drawings
REF. SPECIFICATION : Project Specifications
CODE/PROCEDURE # : ASTM C-803
ACCEPTANCE STD :

General Location Where Inspection was Performed:
East & South wall.

Specific Location Where Inspection was Performed:
Refer Page 2.

Deficiency(s) Noted: None

Previous Deficiency(s) Resolved: None

REMARKS:
None.

ATTACHMENTS: None.

WINDSOR PIN READING

CLIENT:	Shaw Environmental & Infrastructure Inc.	**PROJECT ID:**	PMI-001AA
PROJECT:	Kent Avenue Ash Pit	**REPORT #:**	EPNF002
ADDRESS:	Kent Avenue Brooklyn NY	**WEATHER:**	

Test #	Location	Pin Reading (mm)	Average of 7	Average of 5	Compressive Strength (psi)
1	East wall, North half	0.865			
		0.875			
		0.862*			
		0.854			
		0.888*			
		0.880			
		0.867	0.870	0.868	4252
2	East wall, South half	0.880			
		0.875			
		0.868			
		0.877			
		0.884*			
		0.880			
		0.865*	0.876	0.877	4374
3	East wall center	0.870			
		0.865*			
		0.874			
		0.885			
		0.892*			
		0.870			
		0.868	0.875	0.873	4322
4	Southeast wall	0.880			
		0.875			
		0.885			
		0.894*			
		0.878			
		0.864*			
		0.882	0.880	0.880	4410

TESTWELL LABORATORIES, INC.
Total Commitment to Quality

CORPORATE HEADQUARTERS: 47 HUDSON STREET, OSSINING, NY 10562
PHONE: (914) 762-9000 FAX: (914) 762-9638 WEB: www.testwelllabs.com

WINDSOR PIN READING

CLIENT:	Shaw Environmental & Infrastructure Inc.	**PROJECT ID:**	PMI-001AA
PROJECT:	Kent Avenue Ash Pit	**REPORT #:**	EPNF002
ADDRESS:	Kent Avenue Brooklyn NY	**WEATHER:**	

Remarks : None.

Organic Cationic Flocculant
Solve 9222

Material Safety Data Sheet

Date Issued: September, 2008
Date Revised: September, 2008

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **SOLVE 9222**
CHEMICAL TYPE: Water soluble polymer in emulsion.
COMPANY: WaterSolve, LLC, 4964 Starr St. SE, Grand Rapids, MI 49546, USA
For Product information call 616-575-8693.

2. HAZARDS IDENTIFICATION

CAUTION! MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY BE HARMFUL IF INHALED. MAY CAUSE EYE IRRITATION, MAY CAUSE SKIN AND REKSPIRATORY TRACT IRRITATION.

HMIS Ratings: Health: 1 Fire: 1 Reactivity 0 Personal Protection: B
Hazard Scale: 0=minimal 1=slight 2=moderate 3=serious 4=severe *=chronic hazard

Potential health effects

Route of exposure
Inhalation, skin absorption, skin contact, eye contact, ingestion

Eye contact
Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin contact
Can cause skin irritation. Symptoms may include redness and burning of skin, and other skin damage.

Ingestion
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation
Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable.

Aggravated Medical Conditions
Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: Skin, lung (for example, asthma-like conditions).

Symptoms
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), lung irritation, central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) lack of coordination, confusion, irregular heartbeat, narcosis (dazed or sluggish feeling, convulsions, coma.

Target Organs
Exposure to this material (or a component has been found to cause kidney damage in male rats. The mechanism by which this toxicity occurs is specific to the male rat and the kidney effects are not expected to occur in humans. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects.

Carcinogenicity
This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). This product (or a component) is a petroleum-derived material. Similar materials and certain compounds occurring naturally in petroleum oils have been shown to cause skin cancer in laboratory animals following repeated exposure without washing or removal.

Reproductive hazard
There are no Data available for assessing risk to the fetus from material exposure to this material.

4. COMPOSTION/INFORMATION ON INGREDIENTS

Component Analysis – Inventory

Component	CAS#	CONCENTRATION
Aliphatic hydrocarbon	NJTS#254504001-5164	>=20-<30%
SURFACTANT	NJTS#254504001-5466	>=1-<3%
Alcohols, C12-18 ETHOXYLATED>1<2.5 MOLE	68213-23-0	>=1-<3%
Alcohols, C12-18 ETHOXYLATED>1<2.5 MOLE	68213-23-0	>=1-<1.5%

FIRST AID MEASURES

Eye Contact: If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes, while holding eyelids open. Consult a physician.

Skin Contact: Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse

Ingestion: Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. .If possible, do not leave individual unattended.

Inhalation: If symptoms develop, move individual away from exposure and into fresh air. If Symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting.
Treatment: No information available.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Water spray, Dry chemical, carbon dioxide (CO_2).

Hazardous combustion products: Hydrocarbons, carbon dioxide and carbon monoxide.
Protective equipment for firefighters: Wear full firefighting turn-out gear (full Bunker gear), and

Respiratory protection (SCBA). Use water spray to cool fire exposed containers and structure until fire is out if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

Flammability Class for Flammable Liquids:
Combustible Liquid Class IIIB.

NFPA Ratings: Health: 1 Fire: 1 Reactivity: 0
Hazard Scale: 0=minimal 1=slight 2=moderate 3=serious 4=severe

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see Section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions: Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up: Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other information: Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage: Store in a cool, dry ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

General advice: These recommendations provide general guidance for handling this product. Personal Protective Equipment should be selected for individual for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls:	Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.
Personal protection equipment	
Respiratory protection:	A NOISH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.
Hand Protection:	Impervious gloves (rubber or neoprene) are recommended.
Eye protection:	Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.
Skin/body protection:	Wear resistant gloves (consult your safety equipment supplier). Discard gloves that show tears, pinholes, or signs of wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	viscous liquid
Color:	white
Odor:	mild hydrocarbon odor
pH:	3.7@ 10g/l
Flash point:	>212°F / >100°C, Cleveland open cup
Solubility (H_2O):	water soluble
Evaporation Rate:	<1 (butyl acetate=1)
Exposure limits:	0.6%(V) 7% (V)
Vapor pressure:	35.00 hPa @68°F / 20°C
Melting Point (^{o}C):	5°F/-15°C
Boiling Point:	103.00°C /217°F
Vapor density:	N/E
Density:	1 g/cm³

10. STABILITY AND REACTIVITY

Stability: Stable under usual application conditions.
Hazardous conditions to avoid: Heat, flames and sparks.

Hazardous Decomposition Products: Hydrocarbons, carbon dioxide and carbon monoxide.

Incompatibility: Strong oxidizing agents.
.

Hazardous Polymerization: Product will not undergo hazardous polymerization.
Thermal decompositions: No data.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

ALIPHATIC HYDROCARBON	LD50 Rat: >8,000 mg/kg
SURFACTANT	NO DATA AVAILABLE
ALCOHOLS, C12-18, ETHOXYLATED>1<2.5MOLE	LD50 Rat: >2,000 mg/kg

Acute inhalation toxicity

ALIPHATIC HYDROCARBON	LD 50 Rat: >2,500ppm, 4h
SURFACTANT	NO DATA AVAILABLE
ALCOHOLS, C12-18, ETHOXYLATED>1<2.5MOLE	NO DATA AVAILABLE

Acute dermal toxicity

ALIPHATIC HYDROCARBON	LD50 Rabbit: >4,000mg/kg
SURFACTANT	NO DATA AVAILABLE
ALCOHOLS, C12-18, ETHOXYLATED>1<2.5MOLE	NO DATA AVAILABLE

12. ECOLOGICAL INFORMATION

Aquatic toxicity

Acute and Prolonged Toxicity to Fish

48 h LC50 Pimeohales promelas (flathead minnow): 11mg/L

Acute Toxicity to Aquatic Invertebrates

48h LC50 Water Flea (Ceriodaphnia dubia): 1.75 mg/L

Environmental Fate:

BOD: 383,000 mg/l
COD: 1,930,000 mg/l

13. DISPOSAL CONSIDERATIONS

General Product Information:

Incinerate or dispose of unadulterated product as a non-hazardous waste. Solidify and landfill according to local, state, and federal regulations.

Disposal Instructions:

Contain and collect using absorbent material if needed. Flush residuals to drain for normal biological treatment. Place collected material into suitable containers for proper disposal.

14. TRANSPORT INFORMATION

Dangerous goods description (if indicated above) may not reflect package size, quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for description that are specific to the shipment.

16 REGULATORY INFORMATION

California Prop. 65

WARNING! This product contains a chemical known in the State of California to cause cancer.
ACRYLAMIDE
LEAD
NICKEL
ARSENIC
CADMIUM
WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

LEAD
MERCURY
CADMIUM

SARA Hazard Classification Acute Health Hazard
SARA 313 Components
Reportable quantity- Components

ALIPHATIC HYDROCARBON NJTS#25404001-5164
SURFACTANT NJTS#254504001-5466
ALCOHOLS, C12-18, ETHOXYLATED>1<2.5MOLE 68213-25-0

HMIS / NFPA	HEALTH	FLAMMIBILTIY	REACTIVITY	other
	1	1	0	No data

15. OTHER INFORMATION

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information.

The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Geotube® Dewatering Technology Testing
Con Edison Kent Ave, Brooklyn, NY
Sediment Processing

For:

Shaw Environmental and Infrastructure
Saul Ash, CPG
Program Manager
101-1 Colin Drive
Holbrook, NY 11741
631-472-4000 ext 239

By:

Mineral Processing Services, LLC
James E. Meagher, Principal
Peter Kaye, Sales Agent
50 Market Street
S0. Portland, Maine 04106
207-741-2955 - Phone

www.mpsmaine.com

January 6, 2009

Purpose

The purpose of this report is to evaluate the dewatering characteristic of sediments provided by Shaw Environmental from Con Edison Kent Ave, Brooklyn, NY project site using Smartfeed™ and Geotube® dewatering technology. The application of technologies is to receive an estimated 600yd³ of sediment from hydraulic dredging or diver operation and dewater using Geotube® on barges and or bulkhead.

Scope

The scope of this report is to provide an opinion as to the consolidation of Geotube® dewatered sediments and filtrate parameters that would be discharged to waterway. MPS has supported similar projects in NYC processing several thousands of yd³ meeting project parameters when Geotube® and Smartfeed™ technologies was specified.

Methods

Several samples from the project site containment basin were collected by Shaw resulting in 40 gallons of in-situ slurry. These samples were identified by Shaw as to their locations within the containment site where samples were removed. Samples were transported by MPS vehicle to MPS laboratory So. Portland, Maine facility. In addition to MPS work scope analytical testing of filtrate and solids resulting from filtration testing was to be collected and submitted to Shaw Laborites 17 Princess Rd, Lawrenceville, NJ Attn: Charles Shaefer PhD using chain of custody protocol.

Sample preparation as outline in addendum #1 required the co-mingling in equal volumes of the samples received per Shaw direction. This allowed averaging of possible sediment variations for technology applications tests for dewatering. Reference to "the sediment sample" in the report will be in the co-mingled state.

The following test methods resulted in successful applications of Geotube® and Smartfeed™ technologies.

I. Addendum #1 **Sample Preparation**
II. Addendum # 2 **RDT** Rapid Dewatering Test Polymer Screening for Geotube® Application
III. Addendum # 3 **P-GDT** Pressure Gravity Dewatering Test

<u>Notes of Sample Consolidation using no Dilution:</u>

- Consolidation of the sample required combining (8) 5 gallon pails of sediment from various locations to create a 40 gallon sample for testing.
- This resulted in a sediment sample of 42.8% d.s. with a specific gravity of 1.82 s.g.
- The wet bulk density of sample was 10.2 lbs/gal
- Particle size analysis was 18.2 % by dry weight volume of the sample retained on 100 US. Mesh Screen
- Sample pH was 8.40 @ 20c

- Conductivity was 37 uS/cm (brackish water)
- Salinity 1.10 % (brackish water)

Notes of Sample Preparation with Dilution:

- Sample dilution to expected dredge or diver operations dry solids averaging 5 % to Geotubes
- Sample dilution with salt water maintaining conductivity of 37 uS/cm
- Diluted sample pH 8.02 @ 18c
- Salinity 1.10% (brackish water)

Sample prepared for RDT Rapid Dewatering Test (Addendum II)

RDT Chemical Conditioning Review Notes

- Chemical conditioning testing used polymers with proven application in sediment dewatering in previous projects.
- Polymers from test kits of Aries Chemical, Ashland Chemical, Cytec Chemical, Ciba Chemical, SNF Chemical and Watersolve were tested.
- Polymers were evaluated based on water release rate, filtrate clarity, floc appearance and shear resistance in salt water application.
- RDT test log attached shows polymers at optimum dose rate (Addendum II)
- Results were each manufacturer had a cationic emulsion with low charge/ medium molecular weight range that met criteria.
- Aquatic toxicity of polymers chosen has met in past projects EPA "Methods for Measuring Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" when used in conjunction with Smartfeed™ condition management.

P-GDT Geotube® Application Testing Review Notes

- Chemical program shear in salt water application requires low velocity valves in Geotube manifolds
- Mini-tube test pressure 3 psi
- Minimal loss of suspended solids on 1st void fill reflecting proper chemical dose rate
- pH with polymer addition 7.96 @ 19.2 c
- Combined filtrate from 1st 2nd & 3rd void fill test 12 mg/l TSS
- Metal solubility of individual metal hydroxide complexes occurs at different pH's. and can increase if pH of process slurry drops below background pH of 7.6 .
- Consolidation rates of solids in Geotube® will require anticipated 12-15 days before stacking.
- Established target percent dry solids for Geotube Estimator for filtration area after 1st filling is 24.20 % d.s.
- Geotube filtration area required to process (1) bone dry tone of solids is 2.40 yd^3
- Estimated dry solids in Geotube® after 14 days 58.3%

Geotube Estimator Comments

- Estimators are based on processing 600 yd^3 of sediment as received for test evaluation
- Processing raw feed to remove course grain size being 100 US Mesh or greater is an option to reduce the amount of Geotubes^3 filter area. But not cost effective for projects less than 8,000 yd^3.
- Projections are based on marine processing, no fresh water was used in dilution of sample
- Projections of Geotube processing dry solids is based on 60'circumurance design
- Projections of Geotube filtration volume is based on using Smartfeed™ process manager
- Barge applications have successfully used 60' cir design and seem to be the choice by contractors; other size designs are available as shown in estimator.
- *Estimator Filtration* area is length of Geotube® required to be purchased
- *Estimator Dewatered* area is the consolidation volume after 14 days dewatering

Geotube Barge Application Review

- Geotubes® have been successfully used in several applications on barges in NYC where barge stability, water quality are critical consistently throughout filling. This is attained using Geotube Installation Specification Appendix IX and self leveling design barges.
- Process management determining lbs. of solids filling in to each tube is imperative to prevent barge heeling, which results in a stop work condition until rectified
- Space limitation requires chemical conditioning to be accurate at all times to avoid lower than design consolidation rates in the Geotube® resulting in larger area for dewatering.
- Discharge water quality at a minimum needs to be monitored in real time with alarm sets and trends for pH , Nut's & TSS which indicate early onset of process upset
- Radio contact with dredge or diver operator and filtration manager needs to a part of project SOP in preventing process upset
- Barge processing location meets:
    - NYSDEC & NYSDOS Costal Zone Regulatory
    - Have contract in place for stand-by tug for unforeseen events in barge management

- Fish, Wildlife , Wetlands& Water Resources
    - 1.01. Water Based Construction Practices

- Submittal of barge or bulkhead process layout with rotation time line
- Spill prevention and secondary containment of sediment on barges or bulkhead
- Identify special needs of filter cake handling i.e.: dryness, odor
- Barge or bulkhead preparation i.e.: under drain design, filtrate collection and self leveling

Conclusion

The evaluation methods discussed have resulted in successful applications when employed with Smartfeed™ filtration process software monitoring for Geotubes® and on-site support from a filtration technician supporting daily project challenges. A process warranty is provided by MPS manufacturer of Geotube® supporting technologies and distributor of Geotube® dewatering systems.

Acknowledgements

TenCate Geotube® for design soft ware applications for Geotubes® and to polymer vendors Aries Chem, Ashland Chem, Ciba Cytec, SNF and Watersolve for applications test kits. Special thanks to Saul Ash of Shaw Environmental & Infrastructure, Inc. support in establishing project goals.

Attachments:

TENCATE
Geotube

TenCate Geotube RDT Test
A Fast And Easy Way To Measure Dewatering Efficiency and Polymer Selection

Prueba TenCate Geotube RDT
Un medio rápido y fácil de medir la Eficiencia en el desagüe y la selección del polímero

Test de Déshydratation Rapide (TDR) de TenCate Geotube
Une méthode simple et rapide pour choisir le polymère et évaluer l'efficacité de la déshydratation

TenCate Geotube RDT Teste
Uma maneira simples e rápida de medir

Protective & Outdoor Fabrics
Aerospace Composites
Armour Composites
Geosynthetics
Industrial Fabrics
Synthetic Grass

TENCATE
materials that make a difference


Geotube
DISPOSABLE Latex Gloves

Required Equipment for the Geotube® RDT

1. One five-gallon (20L) plastic bucket
2. Plastic cups
3. Two 500ml clear beakers
4. 100ml graduated cylinder
5. 3.75" (9.5cm) diameter Geotube® GT 500 fabric
6. RDT Test Kit
7. Hand mixer (to make down neat polymer to solution)
8. Syringes
9. Latex gloves
10. Hand sanitizer
11. Stopwatch

Equipo requerido para la prueba Geotube® RDT

1. Una cubeta plástica de 20 litros (5 galones)
2. Tazas plásticas
3. Dos vaso graduados transparentes de 500ml
4. Un cilindro graduado de 100ml
5. Círculos de Geotube® GT 500 de 9.5 cm de diámetro (3.75")
6. El Prueba RDT el kit
7. Mezcladores manuales (para diluir polímero puro a solución)
8. Jeringas
9. Guantes de látex
10. Limpiador para desinfeccion de manos
11. Cronómetro

Matériel requis pour le TDR de TenCate Geotube

1. Un seau en plastique de 20 litres (5 gallons)
2. Récipients en plastique
3. Deux béchers de 500 ml
4. Un cylindre gradué de 100 ml
5. Un morceau de membrane Geotube® GT 500 de 9.5 cm de diamètre (3.75 pouces)
6. Kit de test TDR
7. Un mixer (pour mettre le polymère en solution)
8. Seringues
9. Gants de latex
10. Désinfectant pour les mains
11. Un chronomètre

Equipamentos necessários para a realização do teste Geotube® RDT

1. 1 balde plástico de 20L
2. Recipientes plásticos
3. 2 beckers transparentes de 500ml
4. Cilindro graduado de 100ml
5. Amostra cilíndrica de geotêxtil Geotube® GT 500 com diâmetro de 9.5cm
6. Kit de teste RDT
7. Misturador manual para o preparo da solução de polímero
8. Seringas
9. Luvas de látex
10. Desinfetante para as mãos
11. Cronômetro

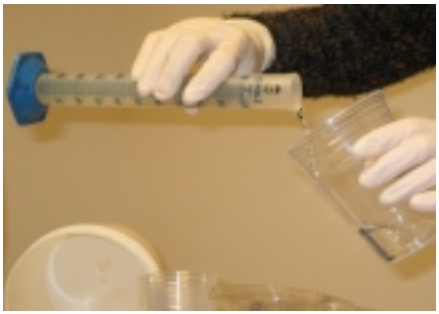
A Fast and Easy Way to Evaluate Sludge Dewatering and Polymer Selection

The Geotube® RDT (Rapid Dewatering Test) is a fast and easy test to determine how well a sludge sample dewaters through the GT 500 textile. The test is designed to:

- Evaluate the efficiency of the candidate polymers
- Measure the volume of effluent filtered from the sludge
- Record the time for filtration
- Analyze the quality of effluent water

Step 1

Measure 100ml of water into cups in which to make down polymer solution. This is usually an ample amount to conduct several 1-liter sludge tests. If sludge sample is high in solids by weight, a higher dose of polymer will be required.

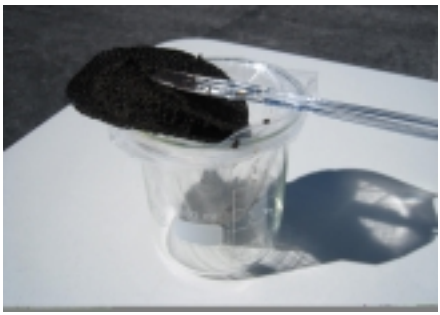


Step 2

Make down neat polymer into 1.0%, 0.5%, 0.3%, or 0.25% solution by adding neat polymer to each cup of 100ml of water. Make down charts are available from TenCate Geotube. Vigorous shaking or mechanical mixing is required to invert the neat polymer into solution. If using an electric hand mixer, mix for about 10-15 seconds only. Allow the polymer solution to age for 15-20 minutes before adding polymer solution to the sludge samples. Repeat this make down procedure with other candidate polymers being tested.

Step 3

Assemble the RDT test kit by inserting a 3.75 in. (9.5 cm) diameter piece of Geotube® GT 500 fabric into the plastic funnel. Assemble funnel and place on top of the collection beaker.



Step 4

Fill a 500ml beaker with the sludge to be tested. Determine a starting point for the polymer dosage in PPM and draw the required amount of polymer into a syringe. Example: Start with 40 PPM. If this dosage creates a good floc, test a lower dosage until the optimum dose is determined. A chart of dosages is available from TenCate Geotube. Add the polymer solution to the 500ml of sludge and begin to pour the sample back and forth between the two beakers until a floc forms.

Step 5

Slowly pour the 500ml of conditioned sludge into the RDT funnel.

Step 6

Using a stopwatch, time the free water flow through the funnel. Record the effluent volume at 30-second intervals up to 5 minutes.

Step 7

Examine the filtrate for clarity and suspended solids. Remove the RDT from the beaker, and unscrew the top of the funnel.

Slowly remove the Geotube® GT 500 fabric from the plastic funnel and collect the dewatered sludge. Examine how the cake releases from the fabric.

Repeat this procedure for all the candidate polymers to determine the most efficient polymer in terms of time to dewater, volume of filtrate, and clarity of filtrate.

Step 8

Collect a sample of dewatered sludge. Conduct a moisture content test to determine percent dewatered solids.

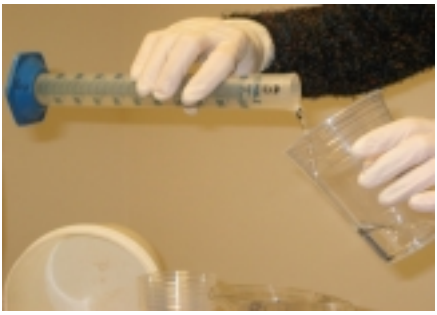
Una manera rápida y fácil de evaluar el desagüe de lodos y la selección de polímero

La prueba Geotube® RDT (Rapid Dewatering Test) es una prueba rápida y fácil para determinar que tan bien una muestra de lodo desagua a través del geotextil GT 500. La prueba esta diseñada para:

- Evaluar la eficiencia de los polímeros seleccionados
- Medir el volumen del liquido drenado del lodo
- Medir el tiempo requerido para la filtración
- Analizar la calidad del agua drenada

Paso 1

Mida 100ml de agua en las tazas en donde se diluirá la solución de polímero. Esto es normalmente una cantidad suficiente para conducir varias pruebas con 1 litro de lodo. Si el contenido de sólidos (por peso) es alto en la muestra del lodo, una dosis mas elevada de polímero será requerida.

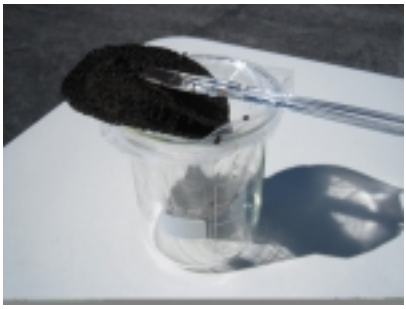


Paso 2

Diluya el polímero puro en soluciones de 1.0%, 0.5%, 0.3%, o 0.25%, añadiendo el polímero puro a las tazas de 100 ml con agua. Tablas de dilución están disponibles en TenCate Geotube. Se requiere de mezclado vigoroso o mezclado mecánico para incorporar el polímero puro a la solución. Si se esta usando un mezclador manual eléctrico, mezcle únicamente 10-15 segundos. Permita asentar a la solución por 15-20 minutos antes de añadir la solución de polímero a las muestras de lodo. Repita esta dilución con los otros polímeros que se están evaluando.

Paso 3

Ensamble el equipo de prueba RDT insertando una muestra de textil GT 500 de 9.5 cm de diámetro en el embudo plástico. Ensamble el embudo y coloque en la parte superior del vaso colector.



Paso 4

Llene un vaso de 500ml con el lodo a ser evaluado. Determine un punto de arranque para la dosificación del polímero en PPM y tome la cantidad del polímero requerido con una jeringa. Ejemplo: Empiece por 40 PPM. Si esta dosificación crea un buen floculo, pruebe con una dosis menor hasta que la dosis optima sea determinada. Una tabla de dosis esta disponible de TenCate Geotube. Añada la solución de polímero al lodo de 500ml y empiece a mezclar la muestra con dos vasos hasta que se forme un floculo.

Paso 5

Lentamente vacié los 500ml de lodo acondicionado en el embudo RDT.

Paso 6

Usando un cronometro, tome el tiempo que le toma al agua para pasar a través del embudo. Mida el volumen desaguado a intervalos de 30 segundos hasta 5 minutos.

Paso 7

Examine la claridad y sólidos suspendidos del filtrado. Remueva el RDT del vaso y destornille la parte superior del embudo.

Lentamente remueva el geotextil Geotube® GT 500 del embudo plástico y recolecte el lodo desaguado. Examine como se despega la torta de la tela.

Repita este procedimiento con todos los polímeros a ser evaluados, para determinar el polímero mas eficiente, en términos de tiempo de desagüe, volumen filtrado y claridad del filtrado.

Paso 8

Colecte una muestra del lodo desaguado. Realice una prueba de contenido de humedad para determinar el porcentaje de sólidos desaguados.

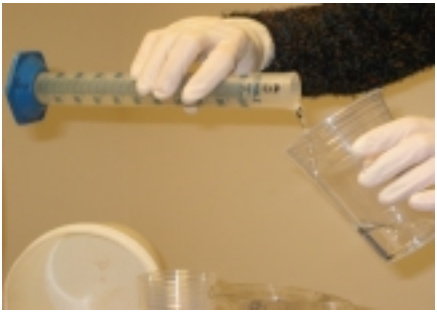
Une méthode simple et rapide pour effectuer le choix de polymères et évaluer l'efficacité de la déshydratation

Le Test de Déshydratation Rapide (TDR) de TenCate Geotube est une méthode simple et rapide pour valider l'aptitude d'une boue conditionnée par un polymère à s'égoutter au travers d'une membrane GT 500. Ce test est conçu pour:

- Évaluer l'efficacité des polymères potentiels
- Mesurer le volume de l'effluent exfiltré par la membrane
- Chronométrer le temps de filtration
- Analyser la qualité de l'effluent

Étape 1

Mesurer 100 ml d'eau dans des récipients qui serviront à préparer les solutions de polymères. Pour chaque solution de polymère, la quantité ainsi produite est suffisante pour réaliser plusieurs tests sur différents échantillons d'un litre de boues. Si la boue présente une forte concentration en solide, une dose plus importante de polymères sera requise.

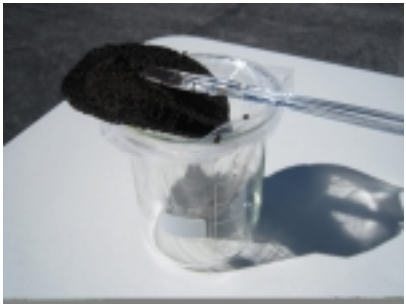


Étape 2

Diluer le polymère pur pour obtenir des solutions de concentration 1.0%, .5%, .3% ou .25% en ajoutant du polymère pur dans chacune des tasses de 100 ml d'eau. Des chartes de dilution sont disponibles auprès de TenCate Geotube. Un brassage vigoureux, à la main ou mécanique, est nécessaire pour bien mettre en solution le polymère pur. Si vous utilisez un mixer de cuisine, mélanger pendant 10 à 15 secondes seulement. Laisser reposer la solution de polymère pendant 15 à 20 minutes avant de l'ajouter à l'échantillon de boues. Répéter cette procédure de dilution avec les autres polymères potentiels que vous souhaitez tester.

Étape 3

Assembler le kit de test TDR en insérant un morceau de membrane Geotube® GT 500 de 9.5 cm de diamètre (3.75 pouces) au sommet l'entonnoir en plastique. Assembler la partie supérieure de l'entonnoir et placer l'ensemble sur le dessus d'un bécher.



Étape 4

Remplir un bécher de 500 ml avec la boue à déshydrater. Déterminer une concentration de polymère de départ et prendre le volume nécessaire de polymère dans une seringue. Exemple: Démarrez avec 40 ppm. Si cette concentration permet de créer un bon floc, tester une concentration inférieure, jusqu'à trouver la concentration optimale. Une charte de référence des concentrations est disponible auprès de TenCate Geotube. Ajoutez la solution de polymère aux 500 ml de boues et commencer à verser et reverser l'échantillon dans les deux béchers pour bien mélanger la boue et la solution de polymère jusqu'à ce que les flocs se forment.

Étape 5

Verser doucement les 500 ml de boues conditionnées dans l'entonnoir.

Étape 6

En utilisant un chronomètre, mesurer le temps pendant lequel l'eau libre s'écoule à travers l'entonnoir. Noter le volume de l'effluent toutes les 30 secondes pendant 5 minutes.

Étape 7

Examiner la turbidité ainsi que les matières en suspension dans l'effluent. Enlever le kit TDR du bécher et dévisser la partie supérieure de l'entonnoir.

Retirer doucement la membrane Geotube® GT 500 de l'entonnoir en plastique et récupérer la boue déshydratée. Examiner la manière avec laquelle la boue déshydratée se détache de la membrane.

Répéter la procédure avec chacun des polymères potentiels afin de déterminer le polymère le plus efficace en termes de temps d'égouttage, de volume et de transparence de l'effluent.

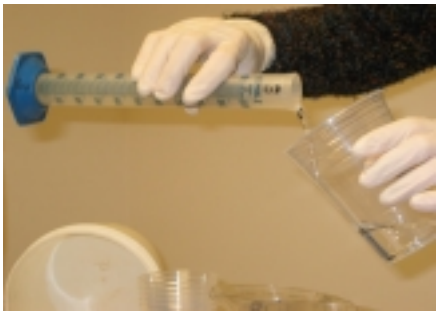
Étape 8

Prendre un échantillon de boues déshydratées. Faire un test de siccité pour déterminer le pourcentage d'humidité dans l'échantillon.

Um modo rápido e fácil e avaliar o desaguamento do lodo e a seleção do polímero

O Geotube® RDT (Teste de Desaguamento Rápido) é um teste simples e rápido para determinar a eficiência do desafuamento de uma amostra através da trama do geotêxtil GT 500. O teste é projetado para:

- Avaliar a eficiência do políemro selecionado
- Medir o volume de percolado filtrado do lodo
- Registrar o tempo de filtração
- Analisar a qualidade do percolado



Passo 1:

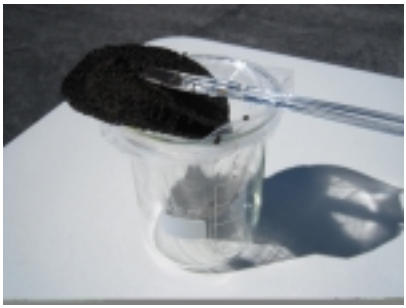
Medir 100ml de água em vários recipientes para preparo da solução de polímero. Esta quantidade é suficiente para se realizar vários testes com 1 litro de lodo. Se a amostra de lodo apresentar um teor de sólidos muito elevado em massa, uma dose maior de polímero deve ser requerida.

Passo 2:

Preparar soluções de polímero em concentração de 1.0%, 0.5%, 0.3% ou 0.25% adicionando polímero em cada recipiente de 100 ml de água. Gráficos para este procedimento estão disponibilizados pela TenCate Geotube. Agitar vigorosamente de forma manual ou mecânica é necessário para que o polímero abra suas cadeias e forme a solução. Se for usado um misturador elétrico manual, misturar por aproximadamente 15 a 20 segundos apenas. Permitir que a solução de polímero descanse por 15 a 20 minutos antes que seja adicionada a amostra do lodo. Repetir este procedimento para todos os polímeros que serão testados.

Passo 3:

Montar o kit do teste RDT inserindo a peça de Geotube® GT 500 no funil de plástico. Montar o funil e posicionar acima do becker de coleta do percolado.



Passo 4:

Encher um becker de 500 ml com o lodo a ser testado. Determinar um ponto de partida para a dosagem em PPM do polímero e carregue uma seringa com a quantidade requerida. Exemplo: Ponto de partida 40 PPM. Se a dosagem permitir a formação de bons flocos, teste uma dosagem menor até alcançar um ponto ótimo para a dosagem ser determinado. Gráficos para este procedimento estão disponibilizados pela TenCate Geotube. Adicionar a solução de polímero aos 500 ml de lodo e utilizando 2 beckers transfira a mistura de um para o outro até a formação dos flocos.

Passo 5:

Lentamente despeje os 500 ml de lodo floculado para o funil RDT.

Passo 6:

Utilizando um cronômetro, marcar o tempo da água livre fluir através do funil. Registrar o volume de percolado a cada 30 segundo durante 5 minutos.

Passo 7:

Examinar o percolado quanto a sua turbidez e percentual de sólidos. Remover o RDT do becker e desatarraxe o topo do funil.

Remova lentamente o geotêxtil Geotube® GT 500 do funil de plástico e coletar o lodo desaguado. Examinar como o lodo se desprende do geotêxtil.

Repetir este procedimento para todos os polímeros candidatos e determinar o mais eficiente em termos de tempo de desaguamento, volume de percolado e turbidez do percolado.

Passo 8:

Coletar amostra do lodo desaguado e analisar esta amostra quanto ao seu teor de sólidos.

CAUTION!

Do Not Exceed Fill Height Printed On Geotube® Unit.
Always Install Geotube® Containers On A Flat, Level Surface.
If any questions, contact your TenCate Geotube Representative.

¡PRECAUCION!

No exceda la altura de llenado impresa en el Geotube®
Siempre instale el Geotube® en una superficie plana y nivelada
Para cualquier duda o ampliación contacte a su representante de TenCate Geotube.

ATTENTION!

Ne pas dépasser la hauteur limite de remplissage imprimée sur chaque Geotube®.
Toujours installer les containers Geotube® sur une surface plane et au niveau.
Pour toute question, contacter votre représentant TenCate Geotube.

Atenção!

Não exceda a altura máximas de enchimento impressa nas unidades Geotube®.
Sempre instale as unidades Geotube® em superfície plana.
Para quaisquer esclarecimentos, contate seu representante TenCate Geotube.

3680 Mount Olive Road
Commerce, Georgia 30529

706.693.1897
Toll Free 888.795.0808
Fax 706.693.1896
www.geotube.com

TENCATE
materials that make a difference

P-GDT

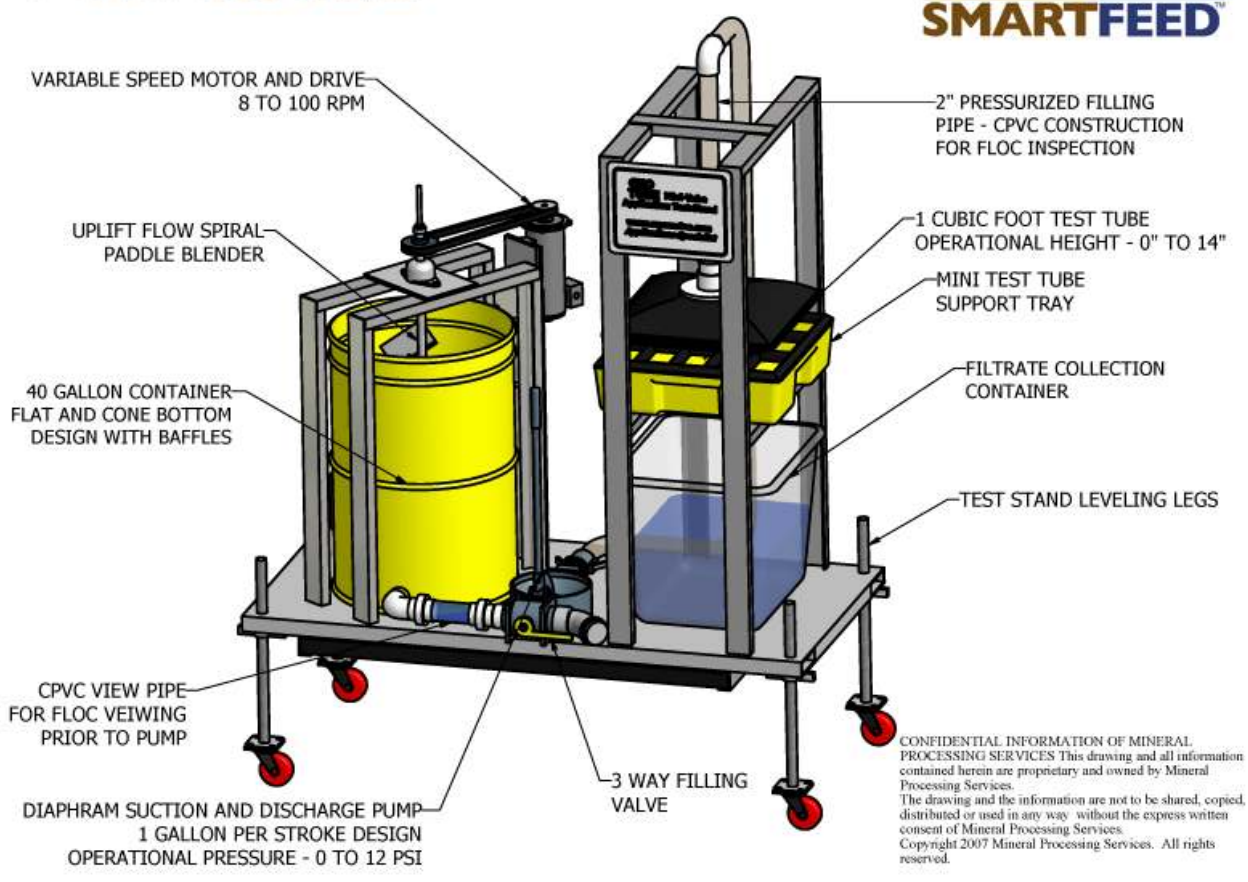
Pressure-Gravity Dewatering Test Procedures

Steps For A Successful Test Of SmartFeed™ Geotube® Dewatering Technology

SF SMARTFEED®

TENCATE Geotube

P-GDT Test Stand



SmartFeed™ P-GDT (Pressure-Gravity De-watering Test) is a demonstration, using a Geotube® MiniTube™, of sludge dewatering under field conditions.

Once complete, the P-GDT will establish baseline measurements for the use of SmartFeed™ technology that can then be carried forward and applied to an entire dewatering project.

The purpose of the test is to:

» Visualize the dewatering process
» Simulate physical force interaction between permeability of filter fabric selection and polymer performance under full-scale application pressure
» Confirm chemical program (polymer) dosage are representative of full-scale application
» Create samples of filtrate and filter cake
» Confirm application mass-balance of Geotube® filtration area required for project

Note: Prior to P-GDT testing, a Geotube® distributor needs to conduct a Rapid Dewatering Test (RDT) for polymer screening of the project.

Note: Protective eyewear and face shields are required for personnel operating the P-GDT test unit.

Step 1

Sample quantity varies depending on slurry type and percent of solids of slurry.

Insert 2" hose supplied with test unit in to sample storage container using test stand pump for transfer slurry to mix tank. *Note: Valve 1 handle in suction position*

Turn on tank mixer remove 300 ml sample from mix tank for dry solids testing

Record gallons measurement on side of mix tank

Install MiniTube™ 1 cubic foot capacity on stand support tray and connect piping

Turn on mixer speed at 50%

Step 2

Add polymer to mix tank at dose rate determined by Rapid Dewatering Test (RDT)

Adjust mixer until floc is evenly distributed in tank

Pump slurry thru piping re-circulate to mix tank *Note: Connect pump discharge hose to mix tank re-circulation fitting*

Once recirculated, discharge slurry has similar floc as mix tank, stop pumping and connect hose to MiniTube™ fill manifold

Confirm gallon measurements on side of mix tank

Step 3

"1st phase fill": Operate fill pump until pressure gauge located on pump discharge achieves discharge pressure of Geotube circumference 30' circ 2.6 psi * 45' circ 3.0 psi * 80' circ 3.5 psi

Maintain test pressure on MiniTube™ for 60 sec then stop pumping

Stop slurry mixer

Allow MiniTube™ to drain for 20 minutes

Step 4

Record level in mix tank and subtract amount from previous volume to attain gallons of slurry processed in 1st phase fill

Record volume in filtrate collection tray after 20 minutes as filtrate from 1st phase fill

Step 5

Start mixer

"2nd phase fill": Operate fill pump until MiniTube™ achieves pressure as in 1st fill phase and hold for 60 seconds

Stop mixer

Record volume in mix tank as volume processed in 2nd fill phase

Allow MiniTube™ to drain for 20 minutes and record volume as 2nd fill phase

Step 6

Start mixer

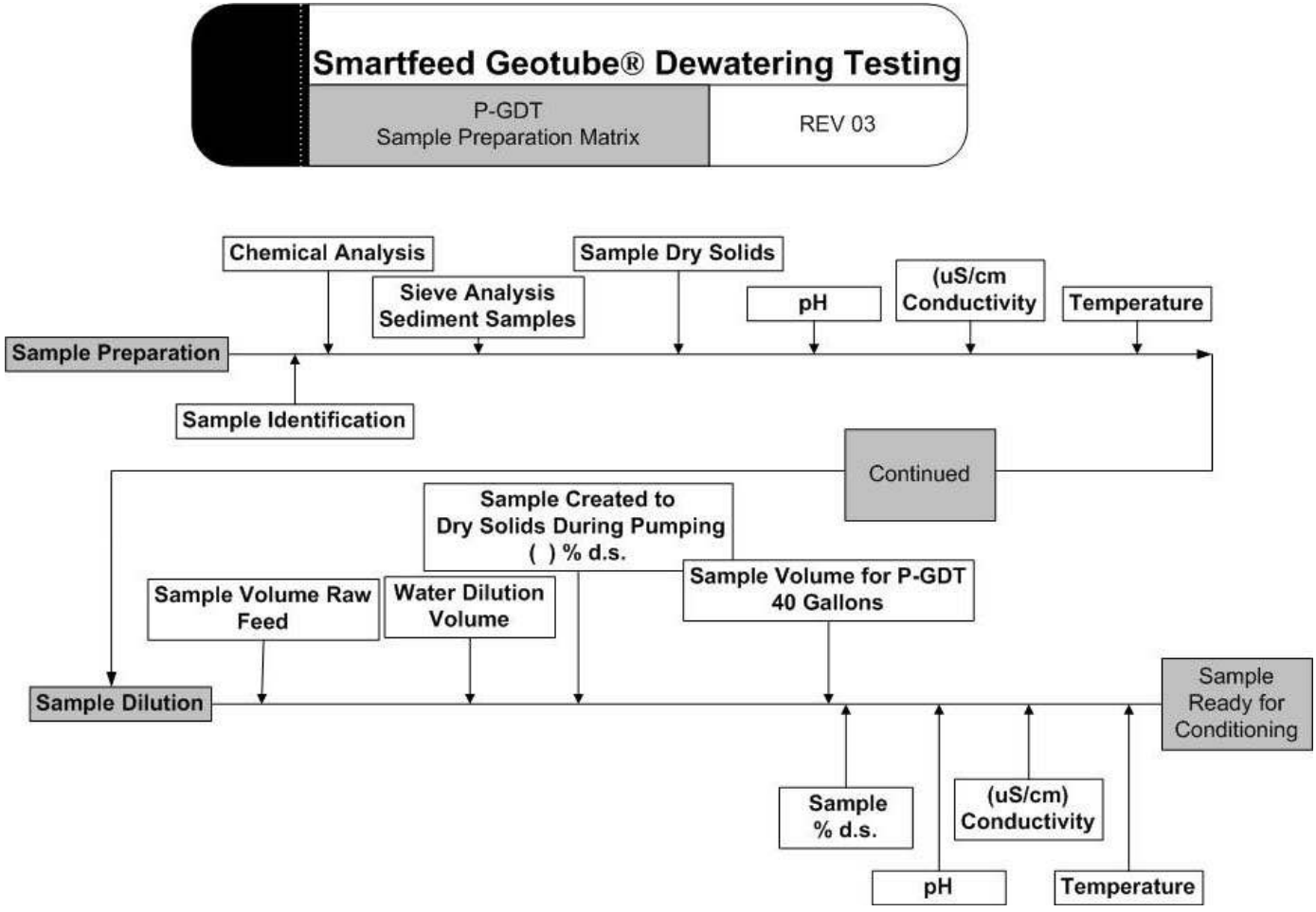
"3rd phase fill": Operate fill pump until MiniTube™ achieves pressure as in 2nd fill phase and hold for 60 seconds

Stop mixer

Record volume in mix tank as volume processed in 3rd fill phase

Allow MiniTube™ to drain for 20 minutes and record volume as 3rd fill phase

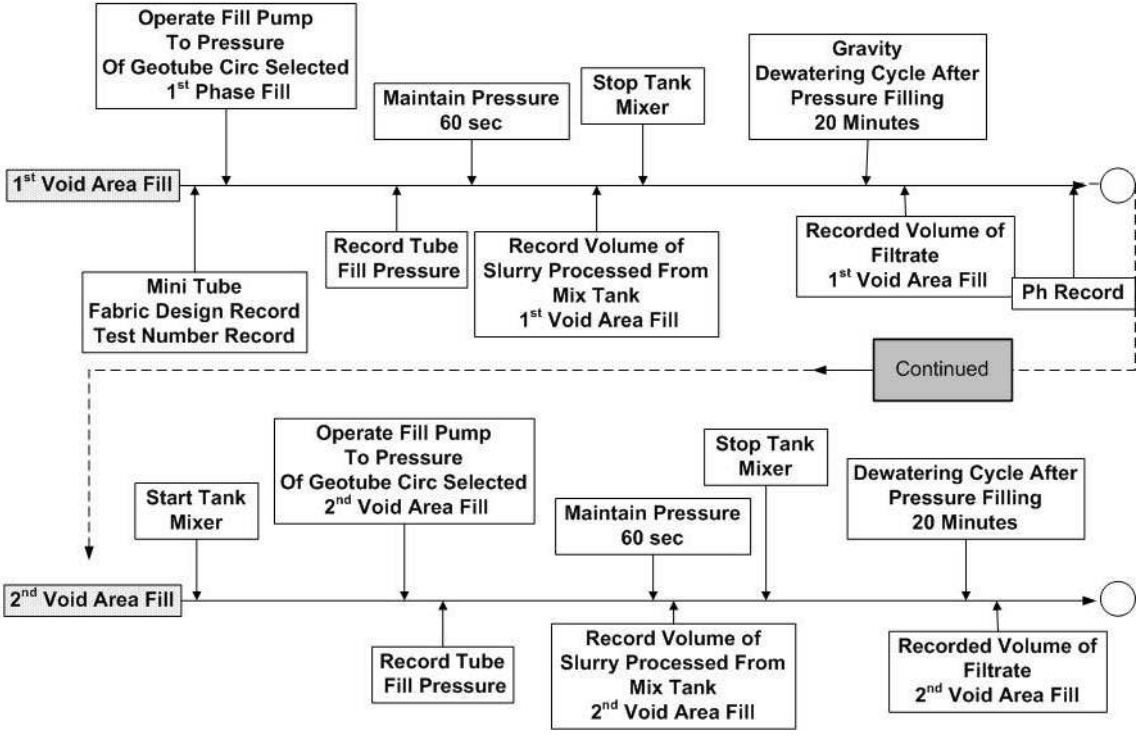
The data collected and samples resulting from P-GDT test will allow Geotube® distributor to estimate filtration area required for project. Samples can be used for further testing in a physical and chemical analysis to support permitting requirements.

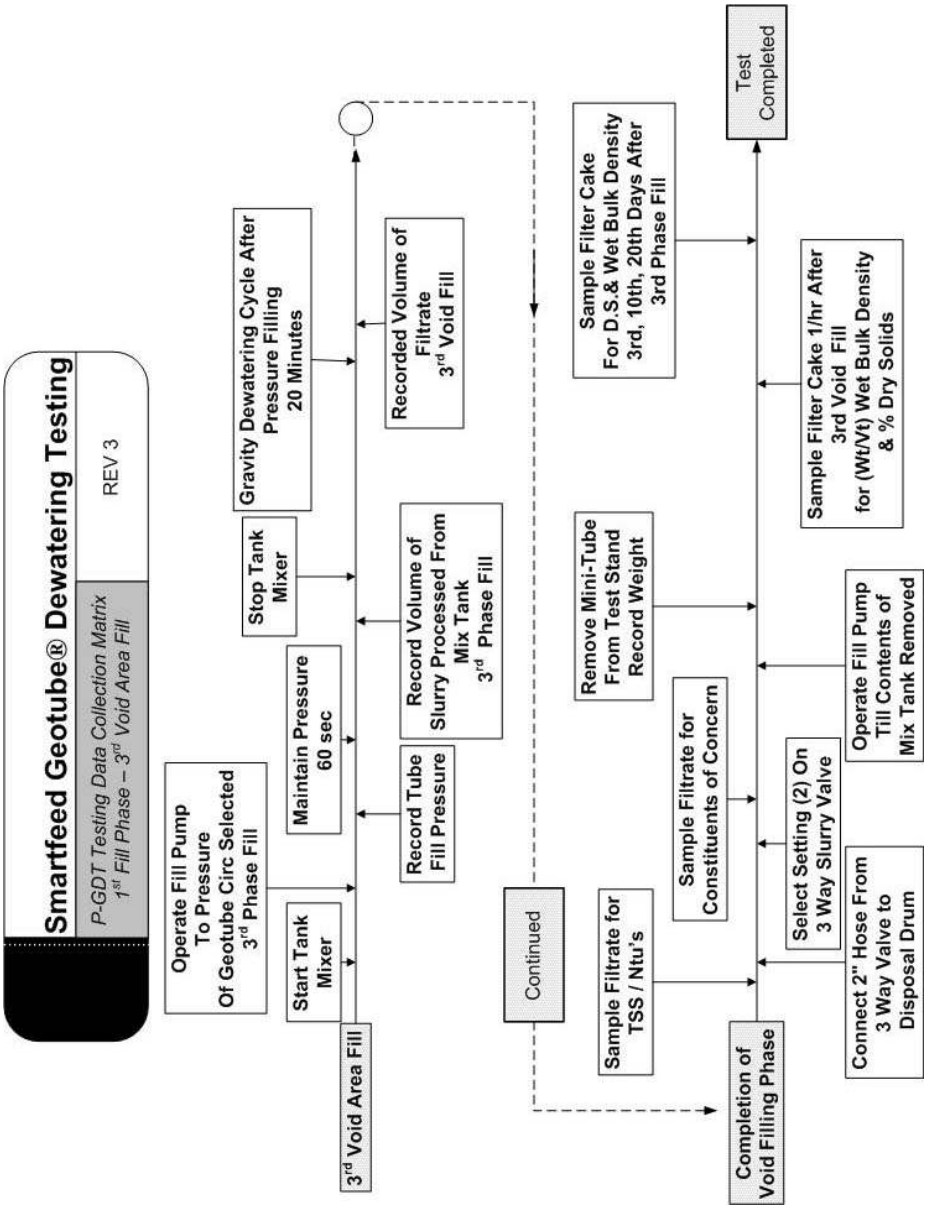

Smartfeed Geotube® Dewatering Testing
P-GDT
Sample Preparation Matrix
REV 03
Chemical Analysis
Sieve Analysis
Sediment Samples
Sample Dry Solids
pH
(uS/cm
Conductivity
Temperature
Sample Preparation
Sample Identification
Continued
Sample Created to
Dry Solids During Pumping
( ) % d.s.
Sample Volume Raw
Feed
Water Dilution
Volume
Sample Volume for P-GDT
40 Gallons
Sample Dilution
Sample
Ready for
Conditioning
Sample
% d.s.
(uS/cm)
Conductivity
pH
Temperature

P-GDT
Smartfeed™ Geotube® Dewatering Testing

P-GDT Testing Data Collection Matrix
Fill 1st Fill Phase

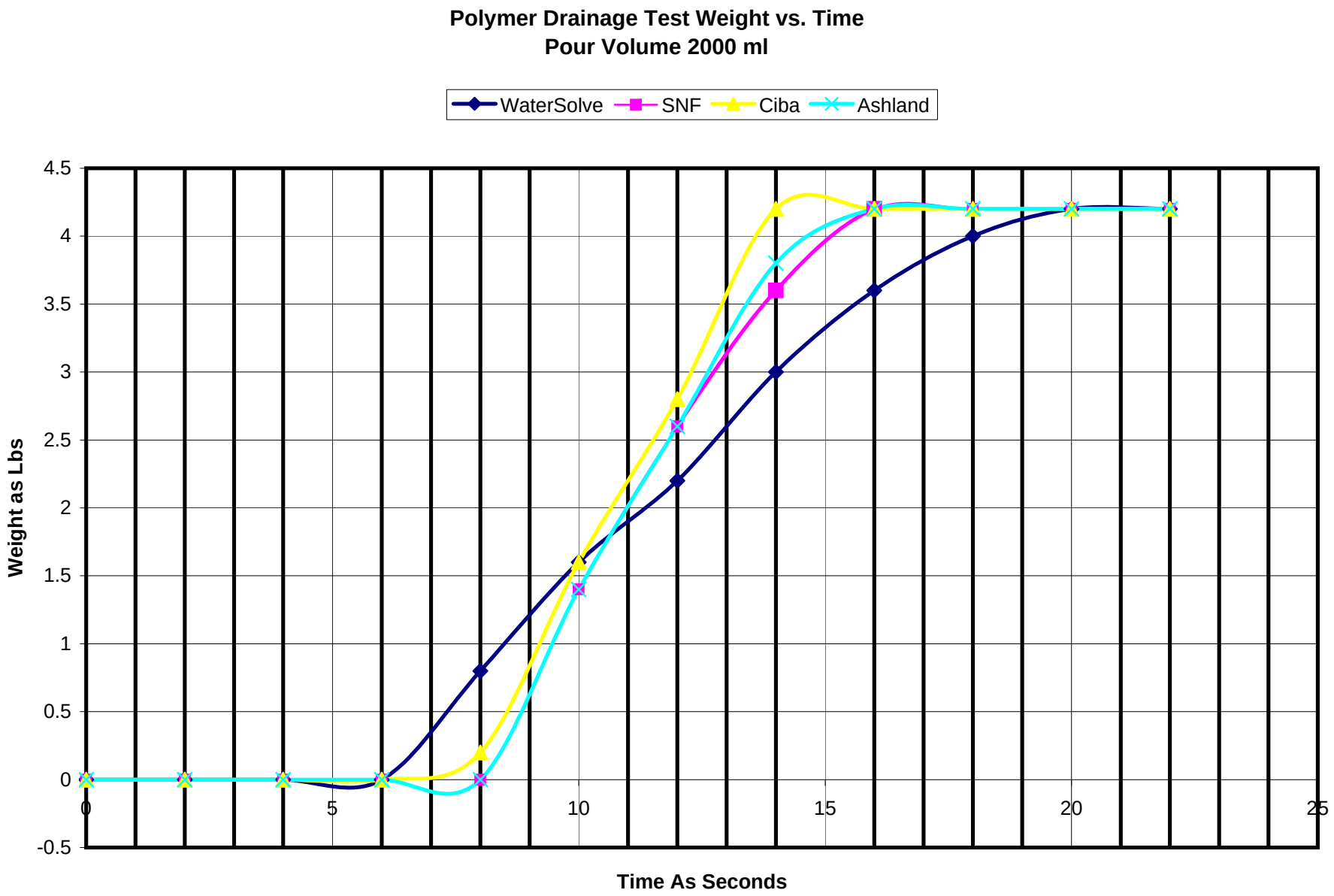
REV 3





Mineral Processing Services LLC

Application Specialists and Manufacturer Of Supporting Technologies For Geotube®
PMB 128 50 Market Street, South Portland, ME 04104
Telephone (207) 741-2955 Fax (207) 799-3782
http://www.smartfeedsystem.com jmmps@maine.rr.com


Polymer Drainage Test Weight vs. Time
Pour Volume 2000 ml
WaterSolve
SNF
Ciba
Ashland
Weight as Lbs
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
0
5
10
15
20
25
Time As Seconds

Geotube® Estimator Filtration Quantity

English Units Input-Know Volume
Version 5.1
Licensed to : Jim Meagher 11-22-05

Project Name:	**Shaw / ConEdsion Kent Ave**
Location:	**Brooklyn, NY**
Contact:	**Saul Ash**
Date:	**January 5th 2009**
Type of Material:	**Fly Ash & Sediment**

Input		Units
Volume	600	Cubic Yards
Specific Gravity	1.80	
% Solids in Place	42.8%	
% Solids During Pumping	10.0%	
P-GDT Test 1st Phase Filling Target % Solids*	24%	
% Coarse grain & sand*	18.0%	

Output		Units
Total Volume Pumped	**612,120**	Gallons
Wet Volume per day	**120,000**	Gallons
Wet Volume per day	**594.1**	CY
Total Bone Dry Tons	**267.0**	Tons
Estimated Pumping Days	**5.1**	Days
Estimated Dewatered Volume	**440.0**	CY
Estimated Dewatered Weight	**460.0**	Tons

** % Coarse grain & sand is removed from the calculation for volume reduction due to dewatering and added back in at the end in required Geotube® volume.*

** P-GDT test % solids with in Geotube® at completion of 1st phase filling to design height is the bulk rate Geotube® quantity.*

Production

Pumping Rate (GPM)	1,000
Hours per Day	8.0
% Efficiency	25%

Estimated Geotube® Quantity

Circumference	Feet
30'	
45'	
60'	**200**
75'	
90'	
120'	

Legal Hauling Capacity	15	Tons

MDS Dimension	Each
22.5' X 26'	

GEOTUBE® DEWATERING CONTAINER
Smartfeed™ Process Technology
(Standard Dewatering Specification)

[NOTE: For Marine Specifications go to Index page 4.0.]

Index

Note: Pages Numbered by Section

GEOTUBE®
DEWATERING CONTAINER
(Standard Dewatering Specification)

Version 8.0
January 17, 2008

PART 1 - GENERAL INFORMATION

1.1 Description

A. Scope. CONTRACTOR shall furnish all labor, materials, equipment, polymer, polymer feed system, and incidentals as shown, specified, and required in connection with deployment, and filling of the Geotube® container, in accordance with the lines, grades, design, and dimensions shown on the drawings as specified herein.

B. General. CONTRACTOR shall furnish the Geotube® container by positioning it on a prepared surface that is level across the width of the Geotube® container with a maximum slope 1% for the first 100 ft. and not to exceed 0.5% in the overall length direction of the Geotube® container and to be filled with dredged or pumped material to a height not to exceed the manufacturer's specifications.

C. Related Sections. Section _____.

1.2 Quality Assurance

Manufacturer Qualifications. All Geotube® containers and ancillary products shall be the standard product of a manufacturer who has been regularly engaged in the integral design, manufacture, and fabrication of the products, and whose product has proven reliable in similar service for 5 years. The Geotube® container manufacturer must be ISO 9001 certified and can provide a current ISO certification. The Geotube® container manufacturer must have an on-site company lab that has a current A2LA certification.

1.3 Submittals

A. Plan of Construction

1.) The contractor must submit prior to award of contract a detailed Plan of Construction. This plan shall include, but not be limited to, site plan, dewatering containment cell, Geotube® container layout, dredging or pumping methods, implementation of SmartFeed™ mass-balance system showing density, percent solids, flow measurement all integrated into a real time controller, polymer type, polymer injection system/location, flocculation monitoring, filling method, covering in-place, beneficial use, or disposal alternatives.

2.) A copy of the manufacturer's installation instructions detailed for this project.

3.) A copy of the bench-scale, Pressure-Geotube© Dewatering Test or hanging bag test report for the specific material to be dewatered.

B. Drawings

1.) Submit shop drawings of the materials, equipment, and method of installation details for the complete system.

2.) Submit manufacturer's product literature and specifications for material(s) utilized to construct Geotube® containers, including Filling Port details, connection details, site layout, piping, manifold, and related components.

3.) Provide a mass balance of the pumping flow rates, chemical make-down, amount of dilution water, filtrate volume, density measurement, and percent solids — all integrated into a real time control system, showing a method of collection, and discharge point.

4.) Details and layout of the dry or emulsion polymer make-down and metering system.

C. Submit a signed certification from the manufacturer indicating that the materials utilized meet the project specification requirements and are designed specifically for this purpose. The Geotube® manufacturer must be ISO 9001 certified and have an on-site A2LA certified laboratory.

1.4 Product Delivery, Handling, and Storage

A. Product Delivery

Geotube® container and related components shall be delivered to the project site in a protective wrap or cover. Each tube shall be clearly labeled for easy identification. All Geotube® containers greater than 1,000 lbs. gross weight or installed in the wet shall be rolled on a steel pipe and the ends fitted with PVC protective caps.

B. Product Handling

No hooks, tongs, or other sharp instruments shall be used for handling Geotube® containers. Also, the container should not be dragged along the ground. Geotube® containers should be unrolled into position as recommended by the manufacturer.

C. Product Storage

Geotube® containers shall be stored in areas where water cannot accumulate, elevated off of the ground, and protected from conditions that will affect the proper ties or performance of the container. Geotube® containers should not be exposed to temperatures in excess of 180° F. Duration of storage time shall not exceed manufacturer's recommendation.

PART 2 - PRODUCTS

2.1 Geotube® Container

A. Geotube® Container Material: The Geotube® container material shall be fabricated from GT 500, a "Specially Engineered Dewatering Textile" manufactured from high tenacity polypropylene multifilament and monofilament yarns, which are woven into a stable network such that the yarns retain their relative position. The Geotube® container material shall be inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

B. The Geotube® container shall be fabricated by sewing together mill widths of the GT 500 woven engineered textile to form a tubular shape. The seams shall be parallel stitch lines with 1.4" spacing. The sewing thread shall be multi-ply polyester filament yarn.

C. Geotube® containers fabricated 45 ft**.** or greater in circumference must be fabricated with the mill roll length of the GT 500 woven engineered textile and the adjacent seams being in the circumferential direction with the closure of the Geotube® container having a longitudinal seam on the bottom of the container. Each Geotube® container shall be fabricated with one or more PVC filling ports located along the top centerline of the Geotube® container. The filling port is comprised of 1.5" thick inside and outside flange rings that sandwiches the Geotube® GT 500 woven engineered textile surface between 1/8" thick rubber gaskets and secured with ¾" bolts. This provides a connection that exceeds the strength of a traditional sewn seam. In addition to the flanges, the fill port includes a fabric sleeve that clamps around the feed line to prevent leakage.

D**.** PVC Fill Ports are for the attachment of the dredge or pump discharge line to the Geotube® container and shall be located at intervals of no more that 100 feet, or as recommended by the manufacturer. Fill ports shall be ridged PVC with an inner port body and outer port body each comprising one or more cellular surfaces capable of distributing a force caused by the clamping of the inner port body and outer port body together with steel bolts and nuts. Fill ports shall be either **4" (GP-4)** or **8" (GP-8)** in diameter with a 48-inch long, flexible non-woven 8 oz. geotextile sleeve.

E. "Specially Engineered Dewatering Textile" material and factory-sewn seams utilized in the construction of the Geotube® container shall meet or exceed the values shown below in Table 1.

Chart 1:
Geotube® Fill Heights & Dewatered Volume

Estimated Dewatered Height is calculated by using Geotube® Simulator Tube Volume X 90%

Geotube® Circumference (feet)	Recommended Fill Height (feet)*	Factor of Safety	Dewatered Volume in Cubic Yds. Per Linear Foot.**
22.5'	5.5'	3.3	1.26
30'	6.5'	3.1	2.07
45'	7.0'	4.9	3.78
60'	7.5'	4.4	5.76
75'	8.0'	3.9	7.90
80'	8.0'	3.4	8.55
90'	8.5'	3.4	10.40
120’	9.0	3.2	14.60

*Only with the use of Geotube® Fill Port System.

**At the recommended fill height, the Geotube® unit will hold this amount of volume. The % solids will depend on the material, proper chemical conditioning, and the time allowed to dewater.

The above information to be used as a guideline for estimated purposes.

Table 1:
GT 500 Polypropylene - "Specially Engineered Dewatering Textile"

GT 500 is composed of high-tenacity polypropylene yarns, which are woven into a stable network such that the yarns retain their relative position. GT 500 is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Mechanical Properties	**Test Method**	**Unit**	**Minimum Average Roll Value**	
			Machine Direction	**Cross Direction**
Wide Width Tensile Strength (at ultimate)	ASTM D 4595	kN/m (lbs/in)	70 (400)	96.3 (550)
Wide Width Tensile Elongation	ASTM D 4595	%	20 (max.)	20 (max.)
Factory Seam Strength	ASTM D 4884	kN/m (lbs/in)	70.1 (400)	
Apparent Opening Size (AOS)	ASTM D 4751	mm (U.S. Sieve #)	0.425 (40)	
Water Flow Rate	ASTM D 4491	$l/m/m^2$ (gpm/ft^2)	813 (20)	
Mass/Unit Area	ASTM D 5261	g/m^2 (oz/yd^2)	585 (17.3) (Typical Value)	
UV Resistance (% strength retained after 500 hrs.)	ASTM D 4355	%	80	

PRODUCT AND MANUFACTURER

Geotube® containers provided by:

TenCate
3680 Mount Olive Road
Commerce, GA 30529
Phone: (706) 693-1897
Fax: (706) 693-1896

Or: Engineer Approved Equal

PART 3 - PLAN OF CONSTRUCTION AND EXECUTION

Prior to performing any work, the contractor shall submit a "Plan of Construction" describing the sequences of operations for the installation of the Geotube® container. The plan shall address site preparation, deployment, chemical/polymer selection, mixing, injection, and filling of the tubes, and anchoring or securing methods. Equipment used for these operations shall also be outlined.

3.1 Site Preparation

A. Areas in which Geotube® containers are to be placed shall be constructed according to the lines and grades shown on the Drawings. Where such areas are below the allowable grades, they shall be brought to grade. All obstructions that could damage the Geotube® containers, such as roots and projecting stones, shall be removed. The site surface is best if it can be designed with a level grade 0° slope across the width of the Geotube® container and a maximum slope 1% for the first 100 ft. and not to exceed 0.5% in the overall length direction of the Geotube® container. This will require a drainage system such as an aggregate system on a sloped cover that drains to a sump or lower outlet, or a three-dimensional filtration fabric with a ditch system around the parameter that allows the filtrate to flow unobstructed. It is preferred that the perimeter of the dewatering cell be complete with a 2 ft. high containment berm with 1:1 side slopes.

B. The site must have an impervious membrane such as NT100 or similar material placed on the prepared surface to underlay the entire Geotube® dewatering site and to cover the perimeter containment berms.

C. On top of the NT100 membrane and under the Geotube® containers (also when stacking), a drainage medium shall be required as described in paragraph A. Acceptable materials would be Geotube® Filtration Fabric (GFF) or a minimum of 4 inches of washed free draining aggregate. If used, the three-dimensional filtration fabric shall be installed prior to placement of the Geotube® container and may be installed in between each layer. The GFF provides drainage beneath the Geotube® containers for each layer especially when stacking.

D. The NT100 membrane must meet the specification shown in Table 2 on page 10.

E. The GFF must meet the specifcaion shown in Table 3 on page 11.

F. Immediately prior to placing the Geotube® containers, the ENGINEER shall inspect the prepared area, and no tubes shall be placed thereon until the area has been favorably reviewed and approved by the engineer.

Table 2:
NT100 Membrane

Mechanical Properties	Test Method	Unit	Typical Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D 4632-91	kN (lbs)	1.29 (290)	1.00 (225)
Grab Tensile Elongation	ASTM D 4632-91	%	31	40
Trapezoid Tear Strength	ASTM D 4533-91	kN (lbs)	0.30 (67)	0.20 (45)
Puncture Strength	ASTM D 4833-00	kN (lbs)	0.53 (120)	
Permeability	ASTM D 4491-99A	cm/sec	< 1 x 10-14	
Abrasion Resistance	ASTM D 4886-88 (sliding block)	% strength retained	90	
UV Resistance after 500 hours	ASTM D 4355-02	% strength retained	> 70	
Physical Properties	Test Method	Unit	Typical Value	
Mass/Unit Area	ASTM D 5261-92	g/m2 (oz/yd2)	287 (8.4)	
Thickness	ASTM D 5199-01	mm (mils)	0.43 (17.0)	
Roll Dimensions (width x length)	--	m (ft)	4 x 100 (13.1 x 328)	
Roll Area	--	m2 (yd2)	400 (477)	
Estimated Roll Weight	--	kg (lbs)	120 (266)	

NT100 is Provided by:

TenCate
3680 Mount Olive Road
Commerce, GA 30529
Phone: (706) 693-1897
Fax: (706) 693-1896

Or: Engineer Approved Equal

Table 3:
GFF — Geotube® Filtration Fabric

Mechanical Properties	Test Method	Unit	Typical Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.891 (425)	1.558 (350)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.935 (210)	0.690 (155)
Puncture Strength	ASTM D 4833	kN (lbs)	0.734 (165)	
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5511.112 (800)	
Air Flow	ASTM D 737	cfm	1300	
Thickness	ASTM D 5199	mm (mils)	4.826 (190)	

Physical Properties	Test Method	Unit	Typical Value
Weight	ASTM D 5261	g/m² (oz/y²)	342.390 (10.1)
Fiber Content			100% PP
Construction		EPI x PPI	26 x 18

GFF is Provided by:

TenCate
3680 Mount Olive Road
Commerce, GA 30529
Phone: (706) 693-1897
Fax: (706) 693-1896

Or: Engineer Approved Equal

3.2 Testing

Rapid Dewatering Test (RDT) in conjunction with Pressure-Geotube® Dewatering Test (P-GDT) should be conducted to help determine proper drainage, volume reduction, and type and dosage of conditioners and or polymers. The RDT and P-GDT can assist in determining filtration parameters which Smartfeed™ will maintain in full-scale material flow rates. Conditioner and/or polymer are generally used to achieve the desired rate of dewatering and the clarity and quality of the effluent water. The Filtration Manager must approve the chemical program.

3.3 Placement of Geotube® Container

A. Place Geotube® containers within the limits shown on the Drawings.

B. The unrolled Geotube® container should be placed on top of the drainage media and be unrolled down the length direction of the dewatering site and unfolded.

C. Fill ports should be on the top and down the centerline of the unrolled Geotube® container. The dimensions of the feed pipe and the opening of the ports should be measured prior to connecting the flanges.

3.4 Filling Process

A. Following the tube placement, filling with materials from the source shall be accomplished in accordance with the approved Plan of Construction. Any excess discharge shall be directed away from the tubes into a designated area. Before filling, the fill ports not being used for filling shall be closed according to the manufacturer's recommendations to prevent loss of material during filling of the Geotube® containers.

B. The dredge or pump discharge pipe shall be free of protrusions that could tear the Geotube® surface. The dredge or pump discharge pipe shall be supported above the fill port in a manner which reduces stress on the PVC fill port. Excessive movement of the dredge or pump discharge pipe during filling can result in damage to the Geotube® container or to the PVC fill port. The Connection Detail supplied by the manufacturer should be followed for the best method to affix the dredge or pump discharge pipe to the Smartfeed™ process trailer.

C. The Smartfeed™ shall be provided assembled on a skid or trailer pre-wired and mechanically complete with computer operation interface installed inline between the dredge and the Geotube® filling pipe manifold. The filtration parameters resulting from the RDT & P-GDT testing are to be entered in to the Smartfeed™ program prior to start up by Filtration Mgr. The Smartfeed™ is to have chemical make down and delivery capacity of chemicals at dilution and gpm as specified in "*RDT test dose rate log"* The Smartfeed™ technology is to evaluate every 15 seconds during filling of Geotube® with the following parameters:

a. Slurry pH

b. Slurry Conductivity
c. Slurry Flow
d. Slurry Density
e. Slurry Percent of Dry Solids
f. Chemical shear inversion velocity during mixing with slurry

D. Using these parameters the Smartfeed recalculates to confirm the chemical dosage rate.

(Note: Specification E for sediment applications)

E. *The Smartfeed™ technology design for sediment applications evaluates course fraction i.e.: rocks, sand, debris which accounts for greater density in mass measurement. Smartfeed™ determines dry solids measurement independent of course grain fraction. This results in chemical program dosage rates far less than dosage rates calculated on density of the entire mass. This protects from a chemical overdoes situation or an influx in performance of the Geotube® containers.*

F. The Filtration manger shall be responsible to maintain and operate the Smartfeed™ Additional project support shall be as follow:
   a. Provide daily process logs, gallons processed, dry tons processed
   b. Provide daily trend analysis of, gpm, slurry percent solids, polymer consumption and ph
   c. Provide effluent water quality measurement; Ntu's, TSS, pH, Salinity
   d. Provide for each Geotube® a mass balance of water and solids processed
   e. Filtration manager shall provide optimization recommendations to project engineer increasing efficiency of operation using process reports.

G. Upon filling the tube, the Fill Port sleeves shall be closed by rolling the sleeve down to the top of the port and closing with a clamp. The Geotube® containers shall be filled as evenly as possible until the design height has been achieved. Effluent water shall be allowed to adequately drain away from the Geotube® container.

H. After 1st phase filling, allow Geotube® container to dewater, then the Geotube® container can be filled again to the recommended height. This process can be repeated until the Geotube® dewatering process is completed.

I. Geotube® container recommended filling heights will be supplied by the manufacturer.

J. Overall compliance with the manufacturer's installation instructions is required.

3.5 Manufacturer's Representative and Filtration Manager

A Manufacturer's Representative shall be present for the installation of the first Geotube® containers unless the Contractor can prove adequate, successful experience with this technology. A properly vetted Filtration Manager shall supervise SmartFeed™ operation throughout the project.

3.6 Terminology

A. Geotube® Container — A large tube [greater than 7.5 ft. (2.3 m) in circumference] fabricated from high strength engineered textiles in lengths greater than 20 ft. (6.1 m). Geotube® containers are used for containment and dewatering of high moisture content sludge and other fine grain material. Also, Geotube® containers are used for coastal and riverine erosion control, and cores for marine structures such as sand dunes and levees. The tubes can also be filled by a combination mechanical and hydraulic method.

The Filling Port, also know as "Injection Port", are PVC flanges which the inner port body and outer port body each comprise one or more cellular surfaces capable of distributing a force caused by the clamping of the two bodies together. Once bolted to the top of the Geotube® container, the dredge or pump discharge line can be attached. Ports are typically 4 to 12 inches in diameter with a 3 to 5 feet long flexible sleeve. Ports are spaced along the top of the tube to provide access by the contractor. Spacing is usually between 50 and 75 ft. Additional ports may be added to accommodate high content sand slurry dredged or pumped materials.

C. "Specially Engineered Dewatering Textile" — A woven synthetic textile used to construct the Geotube® container.

D. Polymers — Polyacrylamide polymers can be non-ionic, anionic, or cationic.

E. SmartFeed™ chemical conditioning system provides polymer storage, metering pump, static mixers, calibration cylinder, flow control, related piping, flow meter, density meter and related equipment for properly pacing of polymer injection.

F. Bench-Scale — Geotube® Rapid Dewatering Test (RDT) is a fast and easy test to determine how well a sludge dewaters through the GT 500 textile. The test is designed to: evaluate the efficiency of the polymer, measure the volume of effluent filtered from the sludge, record the time of filtration, and analyze the quality of the effluent water. Contact your local Geotube® representative for assistance in conduction this test.

H. Pressure-Geotube® Dewatering Test (P-GDT) is a demonstration of the methodology of the sludge dewatering by means of a Geotube® container. The purpose of the test is to: visualize the dewatering methodology, evaluate the efficiency of the selected polymer, analyze the clarity and quality of the effluent, and indicate achievable percent solids. Contact your local Geotube® representative for assistance in conducting this test.

Process Control and Reporting For Geotube©

Chemically Conditioned Slurry Dewatering

Mineral Processing Services, LLC —

Manufacturer of Supporting Technologies for Geotube® Applications

SMARTFEED™

Dewatering using Geotube® is recognized as a cost-saving technology for many slurry dewatering projects.

SmartFeed™ process controls contribute to a successful Geotube® application, maintaining benefits throughout the project.

Model 1200 EM

* Process up to 1,200 gpm slurry flow process
* Condition up to 12% d.s. raw feed
* Deliver up to 70 gpm of .5% polymer dilution

Site Requirements

* 6" pipe connection for slurry feed
* 2"pipe connection 100 gpm @ 80 psi
* Power 60 amps 480 volts 3 phase
* Lay-down area 40' x 12'

Model 2500 EM

* Treats up to 2,500 gpm slurry flow
* Process slurry up to 12% d.s
* Can deliver up to 400 gpm of .5% polymer dilution

Site Requirements

* 8" pipe connection for slurry feed
* 4" pipe connection 400 gpm @ 80 psi
* Power 100 amps 480 volts 3 phase
* Lay-down area 40' x 30'

Model 4000 EM

* Treats up to 4,000 gpm slurry flow
* Process slurry up to 25% d.s.
* Can deliver up to 1,200 gpm .5% polymer dilution

Site Requirements

* 12" pipe connection for slurry feed
* 4" pipe connection 600 gpm @ 100 psi "dilution water"
* 4" pipe connection 600 gpm @ 100 psi "post dilution"
* Power 200 amps 480 volts 3 phase
* Lay-down area 80' x 40'

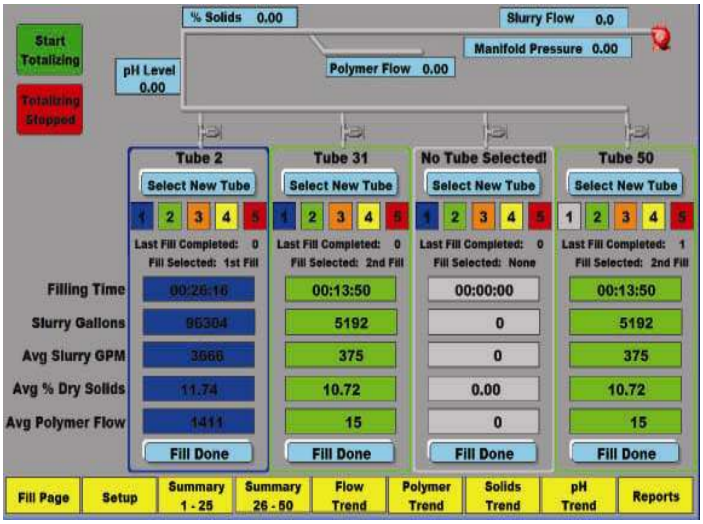
Mineral Processing Services, LLC

PMB 128, 50 Market St., South Portland, ME 04106

Phone: (207) 741-2955 · Fax: (207) 799-3782

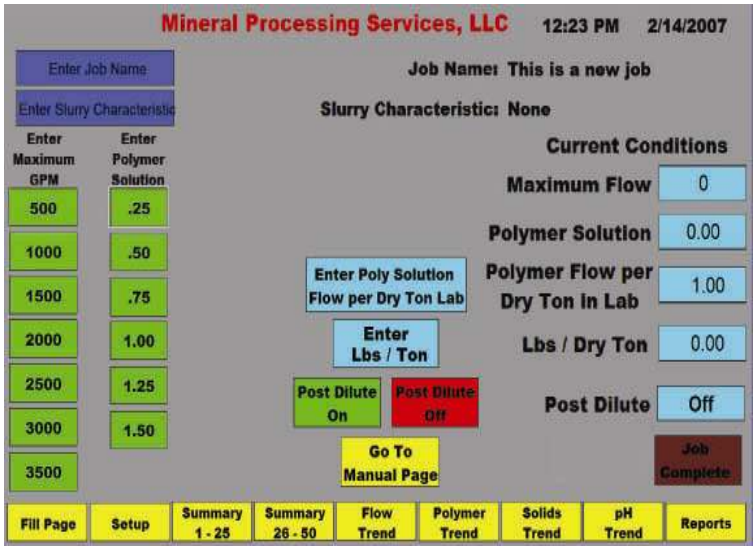
Web: http://www.smartfeedsystem.com · E-mail: jmmps@maine.rr.com

Knowing Your Project Parameters



SmartFeed™ monitors slurry characteristics, such as density, percent dry solids, flow, pH, pressure and polymer induction shear velocity, and recalculates the dose rate every 15 seconds based on these changing parameters — maintaining optimum performance of the Geotube® and polymer.

SmartFeed™ computer operational interface provides gpm, percent dry solids average, total dry tons of solids and polymer volumes processed to each Geotube® selected on the project.



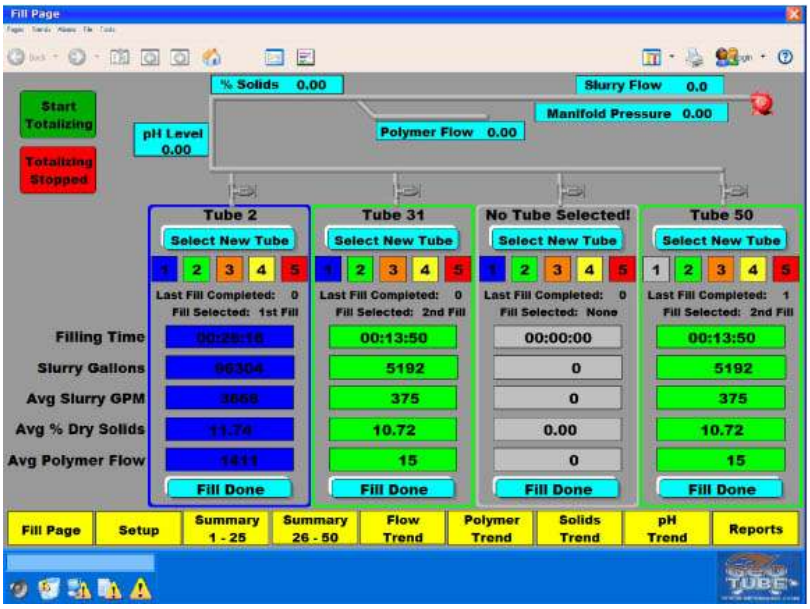
- Cost-Saving Polymer Preparation Systems
- Real-Time Polymer Demand Dosing Based On Actual Dry Solids
- Polymer-To-Slurry Induction Mixers With Shear Monitoring
- Daily Project Mass-Balance Reporting

Mineral Processing Services, LLC

PMB 128, 50 Market Street · South Portland, ME 04106

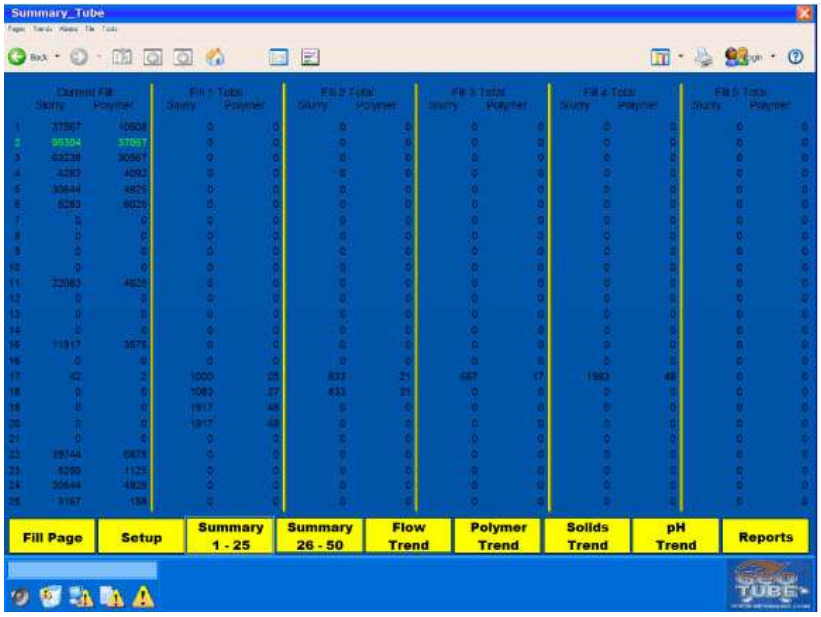
Phone: (207) 741-2955 · Fax: (207) 799-3782 · Web: http://www.smartfeedsystem.com · E-mail: jmmps@maine.rr.com

Risk Management And Reporting



SmartFeed™ provides full reporting of dewatering performance *for each Geotube*© in the project — including filling time, gallons of slurry pumped, average GPM, average percent dry solids and average polymer flow.

This data can be exported to Excel spreadsheets and charted, to provide quality management reports to stakeholders.



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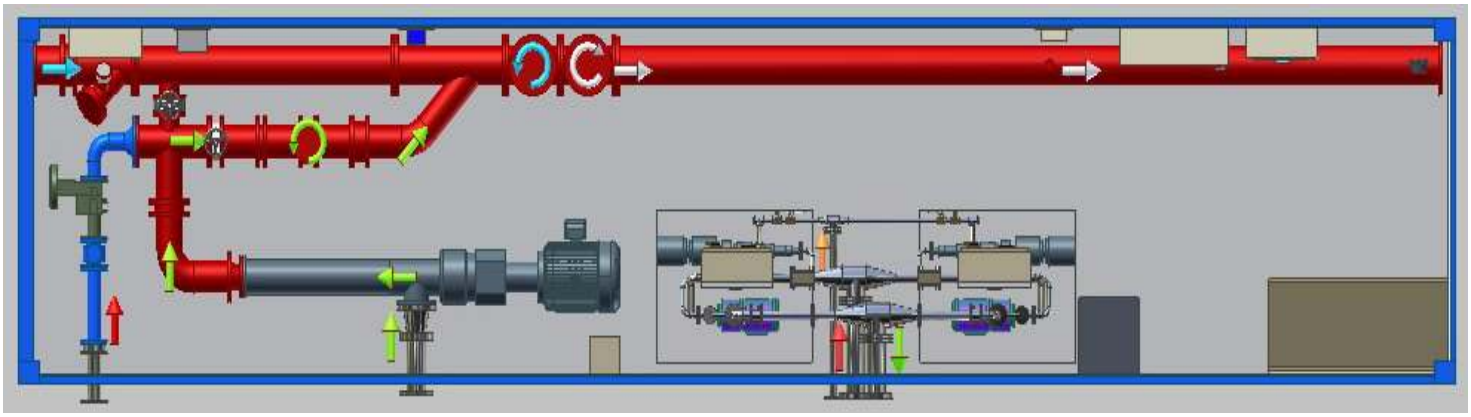
Process Flow



SmartFeed™ Features

* ANSI pipe connections for dredge or pump system slurry feed
* ANSI pipe connections for water supply
* NEMA 4-fuseable disconnect for primary power supply
* Water treatment test equipment for TSS, DS, pH, turbidity, salinity
* Slurry flow meter
* Water flow meters
* Emulsion polymer preparation systems
* Positive-cavity polymer feed pumps
* Density meters
* Dry solids meters
* Post-dilution water to polymer inline variable-velocity static mixers
* Polymer to slurry inline variable-velocity static mixers self-cleaning
* Computer operator interface for process functions
* Data acquisition for daily process mass-balance reporting
* Filtration technicians to maintain and operate SmartFeed™ systems

SmartFeed™ Benefits

* Replicates P-GDT bench-test parameters for full-scale application
* Reduces polymer consumption up to 30% over non-SmartFeed™ applications
* Reduces Geotube® area requirements up to 20% over non-SmartFeed applications
* Maintains filtrate quality standards 100% of the operational period
* Provides process parameters reports daily to support project production rates
* **SmartFeed™ Cost-Saving Benefits Increase Project Profitably and Successes!**

SmartFeed™ is a Patent Pending Technology of Mineral Processing Services, LLC

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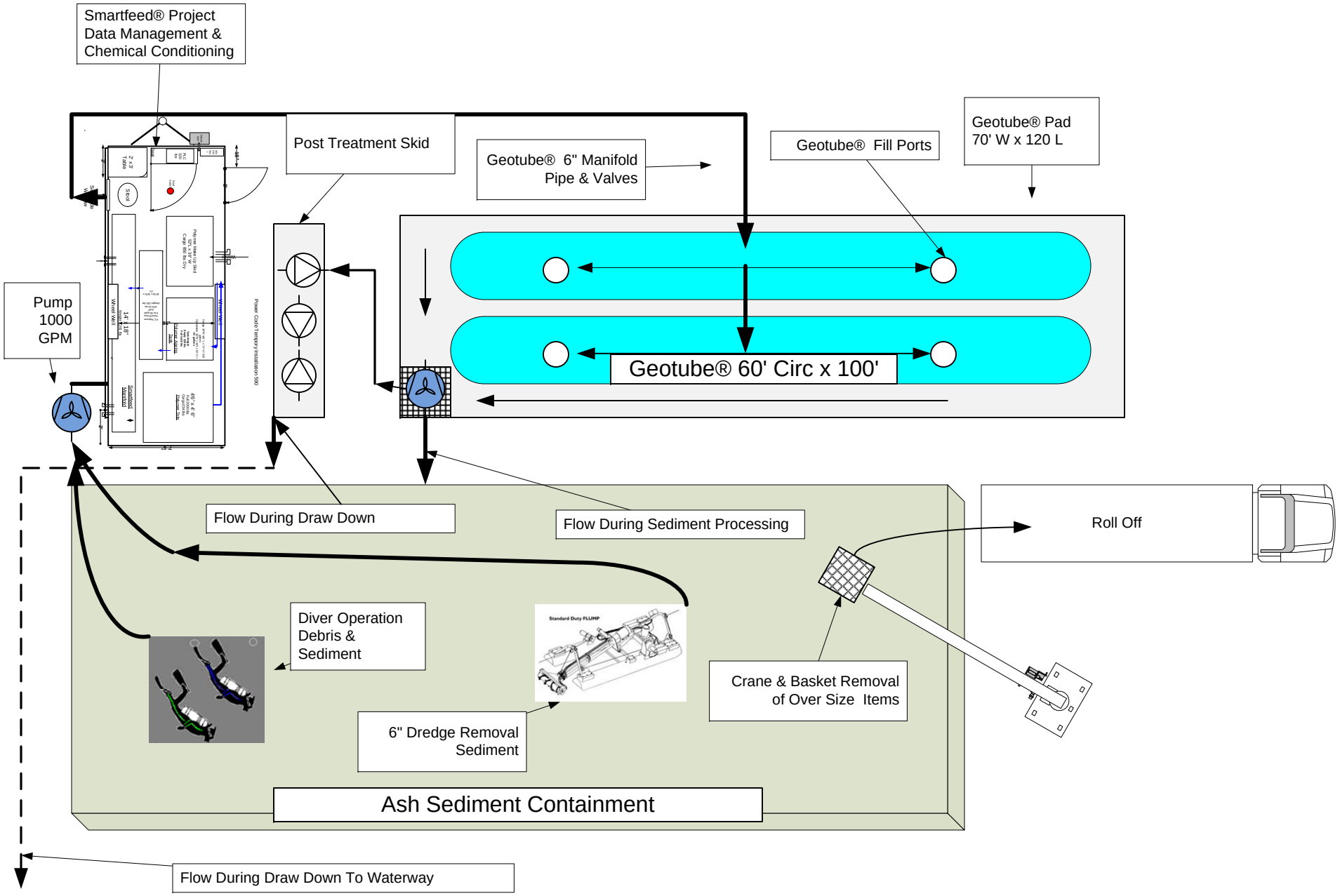
Geotube® Smartfeed® Flow Diagram
Con Edison Kent Ave Station Ash & Sediment Processing
January 6th 2008
Processing 600 yd³ Sediment @ 1000 gpm



NEW YORK CITY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
INDUSTRIAL PRETREATMENT PROGRAM
INSPECTION & PERMIT SECTION

PROCEDURE FOR OBTAINING LETTER OF APPROVAL FOR DEWATERING/DISCHARGE PERMIT

Applicants must submit:

1. Cover letter with job description and complete Wastewater Quality Control Application.

2. Site plan (to scale) including type and size of public sewer lines, both existing and proposed sewer connections, location of equipment, pumps, pipes, and exact point of discharge (POD).

3. All documents and drawings must have a legend and a New York State Registered Architect=s or Professional Engineer=s original signature and stamp.

4. Properly sized and approved interceptor/separator/pH neutralization system or other pretreatment system - including specifications, engineering calculations and details.

5. For jobs requiring different types of pretreatment equipment, detailed flow diagrams must be provided.

6. Complete wastewater/groundwater analyses accompanied by chain of custody must be submitted on certified laboratory letterhead.

7. If the proposed discharge/dewatering exceeds 10,000 gallons per day additional Letter of Approval must be obtained from the DEP Division of Connections & Permitting. The contact person is Mr. Suresh Kumar, Associate Project Manager, and can be reached at (718) 595-5205.

8. Prior to commencement of discharge Applicants must obtain Discharge/Dewatering Permit from respected Borough office contingent to presenting the above Letter(s) of Approval and upfront payment of sewer charges.

All inquiries should be directed to the attention of Mr. Saied Islam, Assistant Mechanical Engineer, at (718) 595-4707.

1.0 Quality Assurance/Quality Control

This Quality Assurance Project Plan (QAPP) presents the sampling and analysis methods to be utilized in following the post-remediation sampling programs at the Site. It also outlines the responsibilities and procedures for data quality assurance specific to the project.

Con Edison is responsible for the remediation of the Site. Con Edison has retained Shaw Environmental Inc. (Shaw) for remediation oversight and reporting. Shaw personnel will perform the remediation-related quality assurance testing, review the data generated, and prepare a final engineering report for submittal to NYSDEC. In this capacity, Shaw is responsible for ensuring that the remediation is performed in accordance with this RAWP and meets the requirements of project specifications.

1.1 Project Management Responsibility

As directed by Con Edison, Shaw will provide project management support for this project. The Shaw Program Manager will be responsible for project implementation and coordination with Con Edison. The Project Manager will be responsible for ensuring that the project objectives and schedule for Shaw's activities are met. In addition, he/she is responsible for technical quality control and project oversight and will provide qualified site personnel and laboratory services for this monitoring program. The Project Manager has the authority to commit the resources necessary to meet project objectives and requirements, and to ensure that technical and scheduling objectives are achieved successfully.

The project staff is responsible for implementing the field oversight/sampling in order to meet the project objectives and requirements. The project staff will report directly to the Shaw Project Manager. Figure 15 provides a personnel organizational chart for this project.

Quality Assurance Responsibility

QA responsibilities for the project are summarized below.

QAPP Review/Approval

The Project Quality Assurance (QA) Officer is responsible for review and approval of the QAPP and will provide QA technical assistance to the project personnel. The QA Officer will not be directly involved in the day-to-day operations of the project but will be available to resolve any QA discrepancies.

Data Assessment

It will be the responsibility of the Project QA Officer, the Project Manager, and their staff to evaluate the analytical data to determine if the data generated have

met the project data quality objectives and are sufficient to meet the projects monitoring objectives.

Field Operation Responsibility

Field Sampling

Each post-remediation sampling/testing event will be headed by a designated Field Operations Leader (FOL) who will be responsible for leading and coordinating all field activities. The FOL, who will report directly to the Shaw Project Manager, will be responsible for the implementation of the field program, keeping field activities on schedule, and coordination and oversight of any subcontractors assisting the Shaw field team. The FOL will also be responsible for identifying any problems in the field and/or any changes to the monitoring program and initiating the appropriate corrective action with the Project Manager to resolve them.

1.2 QA Objectives for Data Measurement

The overall Quality Assurance (QA) objective of the monitoring programs associated with the implementation of the remedial action is to develop and implement procedures for field sampling, chain of custody, laboratory analysis and reporting, and to provide reliable analytical results. Specific procedures to be used for sampling, chain of custody, laboratory analysis, reporting, internal quality control, audits, preventative maintenance, and corrective actions are described in other sections of this QAPP. The purpose of this section is to address the Data Quality Objectives with respect to accuracy, precision, completeness, representativeness, and comparability.

Data Quality Objectives

Data quality objectives (DQO) are based on the concept that different data uses require different levels of data quality. Data quality can be defined as the degree of uncertainty in the data with respect to precision, accuracy and completeness. The 5 general levels of data quality are:

Level 1 – field screening or analysis using portable instruments. Results are often not compound-specific and not quantitative, but results are available in real-time. It is often used for health and safety monitoring and initial site characterization.

Level II – field analyses using more sophisticated portable analytical instruments; in some cases, the instruments may be set up in a mobile laboratory. There is a wide range in the quality of data that can be generated, depending on the use of suitable calibration

standards, reference materials, and sample preparation equipment, and the training of the operator. Results are available in real-time or several hours.

Level III – USEPA routine analytical services. All analyses are performed in an off-site NYSDOH ELAP-certified analytical laboratory following standard USEPA protocols. Level III is characterized by rigorous QA/QC protocols and documentation.

Level IV – analytical analysis by pre-approved, non-standard methods. All analyses are performed in an off-site approved analytical laboratory. Method development or method modification may be required for specific constituents or detection limits. Level IV will be characterized by rigorous QA/QC protocols and documentation.

Level V – physical property and engineering material analysis by approved standard or non-standard methods. All analyses are performed in an off-site laboratory. QA/QC protocols and documentation may be required for some analyses.

Data generated as part of the remedial program at the Kent Avenue Generating Station will include Level I, Level III, and potentially Level V, if concrete cores are collected and analyzed. Should Level V data be required, industry-accepted QA/QC protocols and documentation for sample collection will be followed. Analytical protocols and QA/QC and documentation of protocols for analysis of concrete core or chip samples will be similar to those for Level III data.

Field blank, trip blank and duplicate samples will be analyzed to assess the quality of the data resulting from the field sampling program.

The level of Quality Control (QC) provided by the laboratory will be as required by the applicable USEPA methods. Deliverables for the Kent Avenue Generating Station ash pit remediation project will conform to NYSDEC Analytical Services Protocol (ASP) Category A.

Completeness is defined as the measure of the amount of valid data obtained from a measurement system compared to the amount that was expected to be obtained under normal conditions. Completeness is expressed as the percentage of valid data obtained from a measurement system. For data to be considered valid, it must meet all the acceptance criteria including accuracy and precision, as well as any other criteria specified by the analytical method used. Samples for which the critical data points fail accuracy or precision data quality objectives, and therefore completeness objectives, will require reanalysis of samples until the quality objectives are met. Sufficient sample volume will be collected to ensure that reanalysis can occur as needed.

Representativeness is the extent to which the database reflects the conditions in the study area. Representativeness is a function of the analytes evaluated and sampling locations. The sampling program is designed to maximize the collection of representative data. The historical database has been compiled through prior site investigations. Representativeness will be satisfied by ensuring that the sampling plan is followed, proper sampling techniques are used, proper analytical procedures are followed, and holding times of the samples are not exceeded.

Comparability expresses the degree of confidence with which one data set can be compared to another. Key factors promoting comparability are use of standard field and laboratory techniques, consistency in reporting (e.g., units) and collection of representative data. Because of the use of standard methods and the development of a formal QAPP, data generated as part of this monitoring program are anticipated to have high comparability with other data collected under this program.

1.3 Field Sampling and Analysis Plan

The Field Sampling Plan (FSP) presents methods and procedures for the collection of sediment and concrete chip samples for laboratory chemical analysis.

Procedures pertaining to the collection of these samples are as follows:

1.3.1 Sampling at the Mud Line

If post-remediation samples of the substrate underlying the ash pit are required, then discrete samples will be collected either by:

- using dedicated core liners positioned inside steel drilling casing and pushed into the substrate by the force of a Vibracore drilling rig; or
- samples will be collected by divers using hand implements

1.3.2 Sampling of Concrete

If post-remediation samples of a concrete bottom and walls of the ash pit are required, then discrete samples will be collected either by:

- using decontaminated concrete drills that are rated for submersible use
- samples will be collected by divers using hand operated concrete drills
- samples will be preserved in closable dedicated metal or hard plastic containers

A task-specific health and safety plan (HASP) will be prepared as a required document for the safe execution of the method(s) to be employed prior to the beginning of the sampling events. The HASP will be prepared and approved by a qualified safety individual employed by Shaw Environmental Inc., and the HASP shall be approved by Con Edison prior to the beginning of the sampling events. The Field Operations Leader will be responsible for ensuring adherence to the HASP during sampling.

1.4 Recordkeeping and Chain of Custody

Field Logs

Field records must be documented in the field logbook and must contain sufficient information such that someone else can reconstruct the sampling event without reliance on the sample collector's memory. The logbook is a controlled document which records all major on-site activities. The logbook is a bound notebook with pages that cannot be removed without cutting or tearing pages. Daily entries into the logbook may contain a variety of information. At the beginning of each day the following information must be recorded:

- Date
- Start time (arrival)
- Weather
- All field personnel present
- Any visitors present
- End time (departure)

Entries in the field logbook will include, as applicable:

- Start and completion time of activities at each sample location.
- Sampling point name and description.
- Sample depth interval for each substrate sample.
- Location of each concrete sample
- Sample collection procedure and equipment.
- Type and number of sample containers used.
- Collector's sample identification numbers.
- Modifications to health and safety protocols, (e.g., level of protection).
- Work performed.
- Deviations from established protocols, if any.

Upon return to the office, individual field data sheets will be completed and signed, and placed in the project file. Photocopies will be made of all field logbook pages and placed in the project file. This ensures a record exists in the office of all field and sampling activities, and limits the potential loss of field notes due to the loss or destruction of the log book in the field.

Chain-of-Custody

Chain-of-custody records for all samples will be maintained. A sample will be considered to be "in custody" of an individual if said sample is either in direct view of or otherwise directly controlled by that individual. Storage of samples during custody will be accomplished according to established preservation techniques, in appropriately sealed storage containers. Chain-of-custody will be accomplished when the samples or sealed sample coolers are directly transferred from one individual to the next, with the first individual witnessing the signature of the recipient upon the chain-of-custody record.

If samples are to be sent via a courier (e.g., Federal Express), signed Chain-of-Custody Forms will be included in each cooler documenting sample content. Chain-of-Custody Forms will be placed in a zip-lock bag or equivalent sealable pouch and attached to the inside lid of the sample cooler. A copy will be kept by the sampling personnel.

The chain-of-custody records will contain the following information:

- Respective sample numbers of the laboratory and Shaw, if available.
- Signature of collector.
- Date and of time of collection.
- Sample matrix.
- Identification of sampling point.
- Number of containers.
- Parameters requested for analysis, if appropriate.
- Signature of person(s) involved in the chain of possession.
- Description of sample bottles and their condition.
- Problems associated with sample collection (i.e., breakage, no preservatives), if any.

Laboratory Chain-of-Custody Procedures

The purpose of the chain-of-custody procedure is to document in a legally defensible manner, the transfer of custody for each sample from collection through analysis to analytical data reports. The sample custody procedures to be used by the laboratory will

conform to the guidelines of the NYSDEC Analytical Services Protocol (ASP), and are performed under the supervision of the Sample Coordinator. The Sample Coordinator will have primary responsibility for ensuring that chain-of-custody procedures are followed and all documentation is properly executed.

Sample Receiving and Log-In

When samples arrive at the laboratory, the sample coordinator from the laboratory documents the condition of the locked or sealed shipping box on the custody form. He/she then checks the sample label information against the custody record, notes the conditions of the samples and verifies proper container and preservative procedures. Samples are then logged in by assigning laboratory identification numbers in serialized ascending sequence. The sample log-in record will include the cooler temperature, sample number, date of receipt, condition of sample when received, the assigned laboratory number, sample preparation, sample distribution and other pertinent information. A sample distribution sheet will be generated.

Sample Storage

Prior to preparation and analysis, all samples will be secured in a refrigerator maintained at approximately 4°C. Samples obtained for volatile organic analysis will be stored in a secured refrigerator used for the storage of volatile organic samples only.

Tracking During Sample Preparation and Analysis

Analysts will sign for the receipt of all samples to be processed and maintain the samples in their possession or in view at all times when the samples are outside of the storage area. At all times when custody is transferred, both the issuing and receiving parties will verify that information in the sample label is properly recorded.

1.5 Calibration Procedures

This section describes procedures for maintaining the accuracy of all instruments and measuring equipment to be used for field measurements and laboratory analysis.

Field Instruments

All instruments used in the field to gather, generate, or measure environmental data will be calibrated in accordance with procedures consistent with those recommended by the manufacturer to provide Level I field screening quality data. All equipment to be used during the field work will be examined to verify that it is in proper operating condition. Field notes from previous sampling work will also be reviewed to ensure any previous equipment problems are not overlooked and that all necessary repairs have been carried out.

Calibration of field instruments will be performed at intervals specified by the manufacturer or more frequently as conditions warrant.

Headspace screening of soil samples will be performed using a photoionization detector (PID) equipped with a lamp appropriate for the range of chemical compounds anticipated to be present in the soils to be screened. Lamp recommendations can be found in the operating manual accompanying the PID.

Laboratory Instruments

This section describes the calibration procedures and frequency for the instrumentation which will be used in the determination of the parameters of interest. All materials used for instrument calibration, internal standards and surrogate standards will be of the highest purity available and will be obtained through the USEPA Pesticide and Industrial Chemicals Repository, or a suitable commercial source. The procedures used and frequency of calibration for all analytical instruments will satisfy the NYSDEC ASP requirements.

1.6 Sample Preparation and Analytical Procedures

All samples collected for chemical analysis will be analyzed by laboratories certified by the New York State Department of Health's Environmental Laboratory Approval Program (ELAP) to perform laboratory services in the State of New York.

All analytical procedures will be USEPA Methods as specified in the Site Investigation Work Plan. The samples will be managed in the laboratory in accordance with the procedures specified in the laboratory QA Manual.

1.7 Data Reduction, Validation and Reporting

Data Reduction

Analytical results will be reduced to the concentration units specified in the analytical procedures. All calculations will be independently checked by senior laboratory staff.

Data from field measurements and sample collection activities will be recorded in the field log book. Field data sheets will be prepared for each sampling location from the field log book and will include any field measurements made, sample collection technique, analysis to be performed and any other relevant information with regard to each sample.

Data Validation

Data evaluation will be performed by the specific analytical task leader, the Laboratory QC Officer, and the Laboratory QA Manager. Validation will be accomplished through routine audits of the data collection and flow procedures, and monitoring of sample results. Data collection and flow audits include:

- Review of sample documents for completeness by the analyst(s) at each step of the analysis scheme.
- Daily review of instrument logs, performance test results, and analyst performance by the analytical task manager.
- Unannounced audits of report forms, notebooks, and other data sheets by the Laboratory QA Manager.
- Daily review of performance indicators such as blanks, surrogate recoveries, duplicate analyses, matrix spike analyses, etc. by the analytical task manager.
- Checks on a random selection of calculations by the Laboratory QA Manager.
- Review by the Laboratory QA Manager of all reports prior to, and subsequent to, computerized data entry.
- Review and approval of final report by the Laboratory QA Manager.

Results from the analysis of project and blind audit QC samples will be calculated and evaluated as reported. If these results indicate data quality problems, immediate corrective action will be taken, and all data collected since previous QC audits will be carefully reviewed for validity.

Validation of field data will be performed on two different levels. All data will be validated at the time of collection by following standard procedures and QC checks. Data will also be validated by supervisory personnel who will review the data for anomalous values. Any inconsistencies discovered will be resolved immediately, if possible, by seeking clarification from the field personnel responsible for data collection, or by performing the measurement over again. The supervisory personnel are also responsible for ensuring that justifiable data is obtained by following the field objectives described below:

- Adherence to the approved Field Sampling and Analysis Plan.
- Equipment and instruments are properly calibrated and in working order.
- Samples are collected according to written standard operating procedures.
- Sufficient sample volume is collected to maintain sample integrity and conduct all required analysis/
- All applicable field QC samples are provided with each sample set.
- Compete chain-of-custody documentation is maintained throughout the duration of the field effort, and copies are included with each sample shipment.
- Field samples will arrive at the laboratory in good condition.

Data Reporting

Laboratory reports will be Category A deliverables for substrate delineation or concrete characterization.

1.8 Internal Quality Control Checks

Quality control methods used in field activities and in the laboratory ensure that the data generated meet all the precision and accuracy objectives. In addition, these procedures provide a check of the integrity of sampling equipment and decontamination procedures, as well as possible sources of sample contamination in the laboratory.

Field Sampling Collections

Quality control procedures for the field sampling activities will include the following measures:

- Field blanks
- Trip blanks
- Field duplicates
- Matrix spike/matrix spike duplicates (MS/MSDs)

Field and trip blanks are used as control or external QA/QC samples to detect contamination that may be introduced in the field (either atmospheric or from sampling equipment), in transit to or from the sampling site, or in the bottle preparation, sample log - in, or sample storage stages within the laboratory.

Field blank samples, prepared in the field, are analyzed to check for procedural contamination at the site that may cause sample contamination. Field blanks are collected for soil samples by pouring laboratory-supplied water through the sampling equipment. Trip blanks, prepared in the laboratory, are unopened VOC jars filled with laboratory-supplied water or sealed canisters that accompany the samples. Trip blanks are used to assess the potential for contamination of water or air samples due to volatile contaminant migration during sample shipment and storage. Duplicates are pairs of identical samples collected in the field to check variability in sampling, analysis and, as applicable, matrix.

Field blanks will be analyzed at a rate of one per 20 samples collected for every matrix. One trip blank will accompany each shipment containing a field blank sample. Duplicates will be collected at a rate of one per twenty samples. Method-related QC samples (spikes, duplicates, method blanks, etc.) will be performed by the laboratory at a rate of one per twenty samples.

The trip blanks are samples of analyte-free water, prepared at the same location and time as the preparation of bottles that are to be used for sampling. They remain with the sample bottles while in transit to the site, during sampling, and during the return trip to the laboratory. One trip blank (for VOC analysis) will accompany each cooler of samples containing a field blank sample. At no time during these procedures are they opened. Upon return to the laboratory, they are analyzed as if they were another sample,

receiving the same QA/QC procedures as ordinary field samples. If these samples are accidentally opened, it will be noted on the chain of custody.

Field blanks are prepared in the field (at the sampling location) using empty bottles and analyte-free water obtained from the laboratory. Field blanks are performed by pouring the analyte-free water over or through the decontaminated sampling equipment, and then into the empty sample bottles supplied for the field blank. One field blank will be collected for every 20 samples.

MS/MSDs are used to determine the effects of matrix interference on analytical results. Spikes of analytes are added to aliquots of sample matrix. Samples are spiked to determine accuracy as a percentage recovery of the analyte from the sample matrix. A matrix duplicate is prepared in the same manner as the matrix spike sample.

Field Measurements

Quality control procedures for measurements made in the field will include following the proper calibration specified by the manufacturer to ensure proper working order and performing all field measurements in duplicate

All duplicate field measurements must be within 10 percent of each other. Field measurements outside of this limit will require a third measurement. The deviating measurement will then be crossed out and initialed in the field log. If measurements within this limit cannot be obtained, the instrument will be recalibrated or replaced.

Laboratory Analysis

Laboratory quality control procedures will follow the applicable USEPA method requirements. These procedures will include at a minimum, the following where applicable:

- Method blanks
- Surrogate spikes/recovery
- Matrix spikes/Matrix spike duplicates (MS/MSD)
- Internal standards
- Instrument calibration

Method blanks provide a check for residual contamination in the analytical instrument and are performed for each sample delivery group. Surrogates are non-target analytes that are added to samples and QA/QC samples to evaluate the effectiveness of the analyses. MS/MSD analysis may be on a sample aliquot associated with the monitoring program, or it may be performed on another sample run in the same batch.

1.9 Performance and Systems Audits

Performance and systems audits are conducted as a check to determine the quality of operations and to monitor the capability and performance of the measurement system. Performance audits are quantitative in nature and use data from performance evaluation samples such as blanks and matrix spikes to assess the data being collected. Systems audits are more qualitative. They consist of a review of the entire data production process, taking into consideration both sample acquisition procedures and analytical systems within the laboratory.

Internal Laboratory Audits

System audits are performed quarterly by the laboratory to evaluate the various components of the laboratory's measurement system to assess proper selection and use. These audits consist of an on-site review of a laboratory's quality assurance systems and physical facilities for sampling, calibration, and measurements. In addition to the laboratory's own internal system of periodic, system audits are performed on a regular basis by the USEPA and NYSDOH.

Performance audits are also performed regularly by laboratory personnel. Performance audits provide a systematic check of laboratory operations and measurement systems. For maximum usefulness, two types of performance evaluation (PE) samples are employed: A single-blind and a double-blind:

Single-blind – A sample which is known by all concerned to be a PE, with only the values unknown; the results of these samples are useful in determining technical systemic problems within the operating group.

Double-blind – A sample which appears to be a routine client sample; both identity and values are unknown to the laboratory. Double-blind samples are useful in identifying technical systemic problems, random analytical problems, and non-technical systemic problems.

1.10 Preventative Maintenance

Preventative maintenance is carried out to minimize downtime of field and laboratory instruments and field sampling devices. All field sampling equipment are checked and monitoring instruments are calibrated before the sampling event to ensure they are in proper working order.

1.11 Corrective Actions

Corrective actions are those measures taken to rectify a laboratory or field measurement system that is out of control. Corrective action may be initiated by any person performing work in support of the monitoring program at any time.

The need for corrective action may be identified by system or performance audits or by standard QC procedures. The essential steps in the corrective action system are:

1. Identification and definition of the problem.
2. Assignment of responsibility for investigating the problem.
3. Investigation and determination of the cause of the problem.
4. Determination of a corrective action to eliminate the problem.
5. Assigning and accepting responsibility for implementing the corrective action.
6. Implementing the corrective action and evaluating its effectiveness.
7. Verifying that the corrective action has eliminated the problem.

The QA Officer will ensure that these steps are taken and that the problem, which led to the corrective action, has been resolved.

Field Sample Collection

In the field, unforeseen conditions or circumstances can arise which may make it necessary to revise or deviate from the approved QAPP. Any nonconformance to the QAPP, resulting from conditions in the field requiring changes to approved procedures, will be documented in the field logbook. Field personnel are required to notify the FOL of any field activity which might require a corrective action. It is the responsibility of the FOL and/or the Project Manager to identify any nonconformance, and initiate and develop a corrective action to address each nonconformance. Once a corrective action is developed, it is the responsibility of the project manager to review and approve the corrective action. The approved corrective action will then be implemented by the FOL and the field team.

The sampling personnel are responsible for ensuring that corrective actions are initiated for all non-conformances with field sampling activities. These duties include: evaluating all reported non-conformances, controlling additional work on non-conforming activities and any work dependent on those activities, determining actions to be taken, maintaining a log of non-conformances, reviewing nonconformance reports and corrective actions taken. The FOL is also responsible for ensuring that nonconformance reports are placed in project file.

When changes become necessary to the field program to accommodate site-specific needs, the FOL will notify the Project Manager for approval. When modifications to the sampling program are required, the change will be documented in the field logbook.

Field Measurements

Most problems related to instrument and equipment malfunction will be avoided by checking out field equipment prior to entering the field and by keeping sufficient spare parts and batteries on site to limit downtime. Any deviations from the QAPP will be documented in the field logbook by field personnel and the FOL and will require corrective actions.

Laboratory Analysis

Failure to meet established analytical controls, such as the quality control objectives, prompts corrective action. In general, corrective action may take several forms and may involve a review of the calculations, a check of the instrument maintenance and operation, a review of analytical technique and methodology, and reanalysis of quality control and field samples. If a potential problem develops that cannot be solved directly by the responsible analyst, the supervisor, the department manager and/or the quality assurance coordinator, may examine and pursue alternative solutions. In addition, the appropriate project chemist may be notified in order to ascertain if contact with the client is necessary.

Corrective action due to a performance audit or a check sample problem is initiated by the quality assurance coordinator, the affected laboratory personnel are promptly informed, as are the laboratory supervisors and managers.

1.12 Quality Assurance Reports to Management

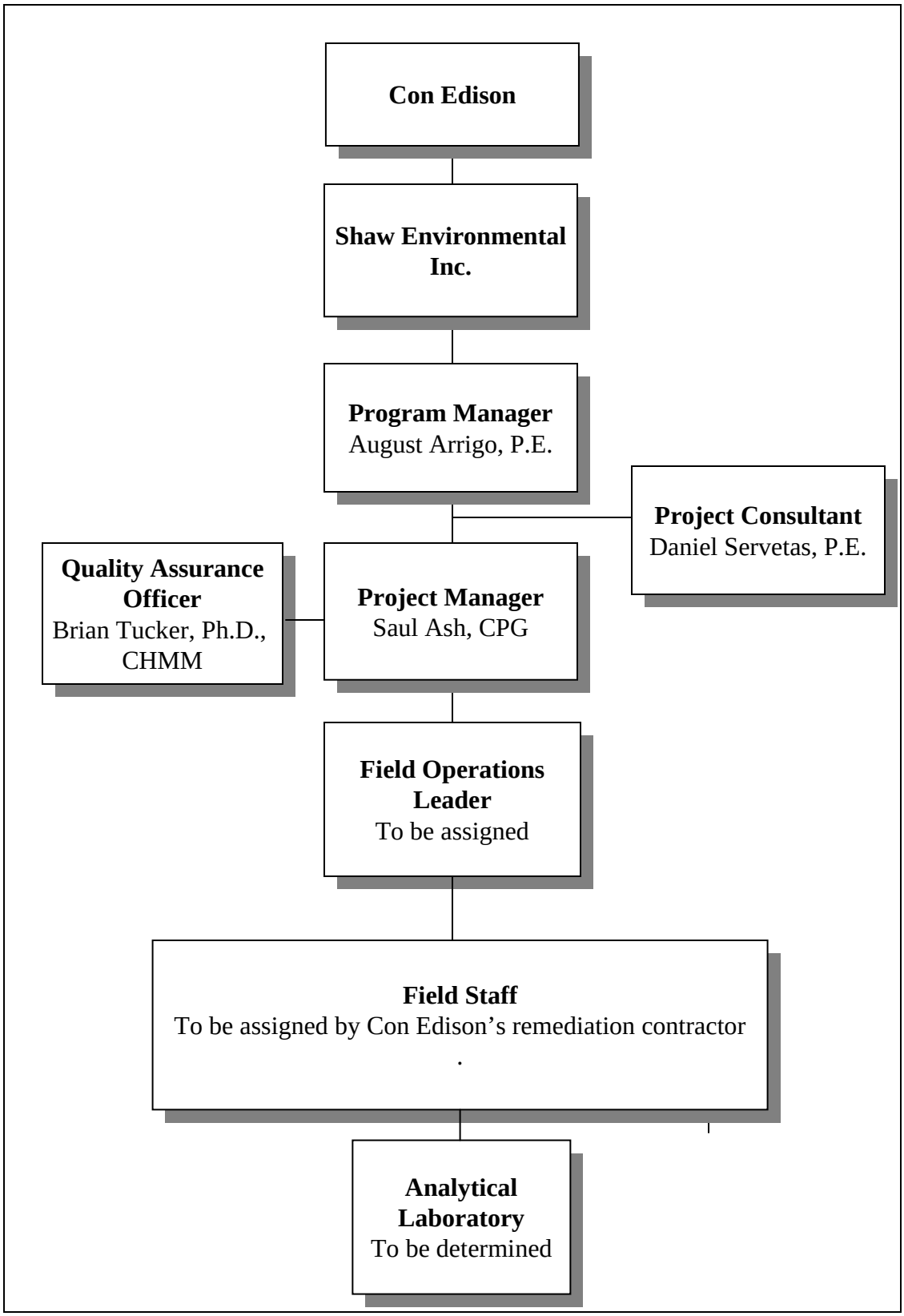
The Project Manager will be kept apprised of the QA/QC aspects related to the ongoing monitoring program to ensure the established objectives may be met. Reports to management will include:

- An assessment of measurement data accuracy, precision, and completeness.
- Significant QA/QC problems and recommended solutions.
- Resolutions of previously stated problems.

Status reports will be submitted to describe the progress of the project. These will include field progress reports, compiled field data sets, and corrective action documentation at appropriate intervals. Situations requiring immediate corrective action measures will be brought to the attention of the Project Manager.

The Laboratory Director will provide QA update as part of the laboratory data package for each sampling episode to describe any QA/QC problems and corrective actions.

Figure 15
Quality Assurance Project Plan
Organizational Chart
Kent Avenue Ash Pit Remediation



1.0 INTRODUCTION

1.1 Project Background

During the remedial activities, air and dust emissions will be monitored and controlled to protect the surrounding environment from exposure to potential airborne contaminants. The monitoring will include air monitoring of the perimeter of the Site and any haul roads to verify compliance with all applicable emissions standards.

On behalf of Con Edison, Shaw performed a Remedial Investigation (RI) of the ash pit in April 2007. The Remedial Investigation activities were completed pursuant to the NYSDEC approved Remedial Investigation Work Plan (RIWP) dated March 2007, and revised May 3, 2007. During the RI, 13 sediment samples were collected by Vibracore sampling, and two water samples were collected by bailer. Sampling of the ash pit was again performed in December 2008 according to the NYSDEC approved Feasibility Study Work Plan dated July 2008. Sediment samples were collected at seven locations, and water samples were collected at three locations.

Although laboratory analysis of the sediment and water samples collected to date did not report any detectable concentrations of VOCs, the analysis did report detectable concentrations of Total Petroleum Hydrocarbons of up to 166 µg/L in the water samples, and up to 2,700 mg/kg in the sediment samples. In addition, a substance with an oily consistency was observed in several of the retrieved sediment samples. Therefore, it is believed that there is a potential for the release of VOCs into air during remedial activities.

This Community Air Monitoring Program (CAMP) has been developed to address potential dust and subsurface VOCs that may be released to air during remedial activities. This CAMP was written in accordance with the NYSDEC requirements presented in Appendix 1A of the Draft DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC 2002). The CAMP requires real-time monitoring for both dust and VOCs at adjoining properties that contain sensitive receptors (e.g., Division Avenue, Kent Avenue, the public park east of Kent Avenue, and the high rise residential building on Kent Avenue opposite Clymer Street) and the downwind perimeter of the Site area and haul roads. The measures included in the CAMP will provide a level of protection for the occupants of the neighborhood schools and residences, as well as the downwind community, from potential airborne releases. The CAMP sets forth specific action levels for determining the monitoring frequency and the appropriate corrective actions, including work shut-down.

1.2 Project Purpose and Objectives

The principal purpose of the CAMP is to monitor air quality in the vicinity of the Site and haul roads during the remedial actions. The CAMP consists of monitoring of dusts and vapors on both a real-time and continuous basis. Monitoring of this project will include all standard monitoring functions for environmental remediation projects including real-time air monitoring for particulate matter/dust and VOCs, observations for visible emissions and odors, inspection and monitoring of the contractor's work practices, and reporting to the NYSDEC and the NYSDOH. Continuous monitoring will be performed during all ground intrusive activities.

Principal objectives of the program are as follows:

- Monitor dust as PM_{10} on a real-time or continuous basis such that dust associated with the remedial actions are maintained below action levels.
- Monitor VOC vapors on a real-time or continuous basis such that vapors associated with the remedial actions are maintained below action levels.
- Monitor VOCs and visible emissions so that vapors and dust from the ash pit area and haul roads do not leave the Site.
- In the event that dust or VOC levels exceed action levels, construction personnel will be immediately notified so that all necessary corrective actions can be taken.

1.3 Operations to be Monitored

The remedial actions to be performed at the ash pit consist of:

- The removal of sediment and water from the ash pit by pumping and by diver-operated mechanical dredges;
- The dewatering of sediment using filter tubes constructed of geotextiles and known as Geotube®s; and
- The discharge of filtered water to the municipal sewer via a sewer manhole on Division Avenue.

2.0 AIR MONITORING PROCEDURES

Air monitoring stations will be established in two stationary locations (upwind Site perimeter and the downwind Site perimeter) and a roving air monitor utilizing hand-held instruments to monitor the air will walk the northern and eastern perimeters of the Site area. The downwind monitoring station will be located in the predominantly downwind direction of the Site and its location will vary depending on daily conditions (e.g., wind direction). A wind sock will be used to determine and monitor wind direction throughout the work day.

These air-monitoring activities include real-time monitoring for VOCs and particulates based on the New York State CAMP requirements. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. **Table 11** summarizes dust and VOC action levels and appropriate actions. As a supplement to **Table 11**, a flow chart summarizing action levels/action is provided on **Figure 16**.

2.1 VOC Direct Reading Monitoring

VOC monitoring equipment will consist of a photo ionization detector (PID) equipped with the appropriate lamp capable of detecting VOCs that could possibly be released from the ash pit. The monitoring equipment will be calibrated on a daily basis and documented in a dedicated field log book. The instrument will be capable of calculating 15-minute running average concentrations, which will be compared to the prescribed action levels.

Upwind 15 minute average background concentrations will be subtracted from the downwind 15 minute average concentrations to establish concentrations reflective of work activities during the periods between collection of background readings.

The 15-minute running average concentrations will be compared to the following:

- If the ambient air concentration of total organic vapors at the downwind perimeter of the Site exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the Site persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the Site or half the distance to the nearest potential receptor or residential structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the downwind perimeter of the Site, activities must be shutdown and the engineering controls and the site work plan re-evaluated.

As an extra precautionary measure, when the downwind perimeter of the Site is within 20 feet of the nearest potential receptor (Division Avenue), then the perimeter organic vapor level must

not exceed VOC background concentrations. This guideline is proposed in order to avoid vapor migration into nearby residential buildings. If VOC background concentrations are exceeded at any time at any perimeter location within 20 feet of the nearest receptor, then activities must be shutdown and the engineering controls and the site work plan re-evaluated.

2.2 Particulate (Dust) Direct Reading Monitoring

Particulate (dust) concentrations will be monitored continuously at the upwind and downwind perimeters of the Site and haul roads. The particulate monitoring will be performed using real-time aerosol or particulate monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM_{10}) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level established below. The equipment will be equipped with an audible alarm to indicate exceedance of the action level, and will be calibrated in accordance with the manufacturer's operating instructions and documented in a dedicated logbook. In addition, fugitive dust migration will be visually assessed during all work activities.

The primary standards for PM_{10} are 150 micrograms per cubic meter ($\mu g/m^3$) over a 24 hour averaging time and 50 $\mu g/m^3$ over an annual averaging time. Both of these standards are averaged arithmetically. The action level will be established at 150 $\mu g/m^3$ over the integrated period not to exceed 15 minutes. While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If downwind particulate levels are detected in excess of 150 $\mu g/m^3$, the upwind background level must be measured immediately. If the downwind site particulate measurement is greater than 100 $\mu g/m^3$, but less than 150 $\mu g/m^3$ above the background level, additional dust suppression techniques will be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. If the dust suppression measures being utilized at the site do not lower particulates to an acceptable level (e.g., below 150 $\mu g/m^3$ and no visible dust from the Site and haul roads), work will be suspended until appropriate corrective measures are implemented to remedy the situation.

3.0 AIR MONITORING RECORDKEEPING AND OBSERVATIONS

The qualified safety officer or technician will ensure that all air-monitoring data is logged in a dedicated log book. Documentation shall be made clear, concise, and provide the data, time of entry, location, personnel, weather conditions, and background concentrations for each monitoring station. Documentation will also include all observational data that has potential for impacting results, such as potential off-site interferences, on-site public interferences, damage to instruments, site equipment problems, or weather related interferences.

All pages must be numbered; no lines shall be left blank (or put a line through it), and must be initialed on each page in ink. The last entry page for the shift or day that has blank space left at the bottom shall have a line drawn diagonally across it and signed at the bottom of the page. All corrections must be made with a single line, initialed, and dated.

Monthly and daily wind rose data will be available for use at the Site as a reference for assessing the frequency of available wind directions. Instrumentation shall also be used at the Site to determine the wind speed (anemometer), wind direction (wind sock), barometric pressure (barometer), and relative humidity (psychrometer). These weather data shall be obtained on an hourly basis while work is progressing and documented in the dedicated field log book.

Real time data (e.g., PM_{10} and VOCs) will be downloaded from the data loggers at the end of each day. Fifteen-minute averages from each station and instantaneous readings, if any, used for decision purposes will be recorded. Daily plots of real-time data will be generated.

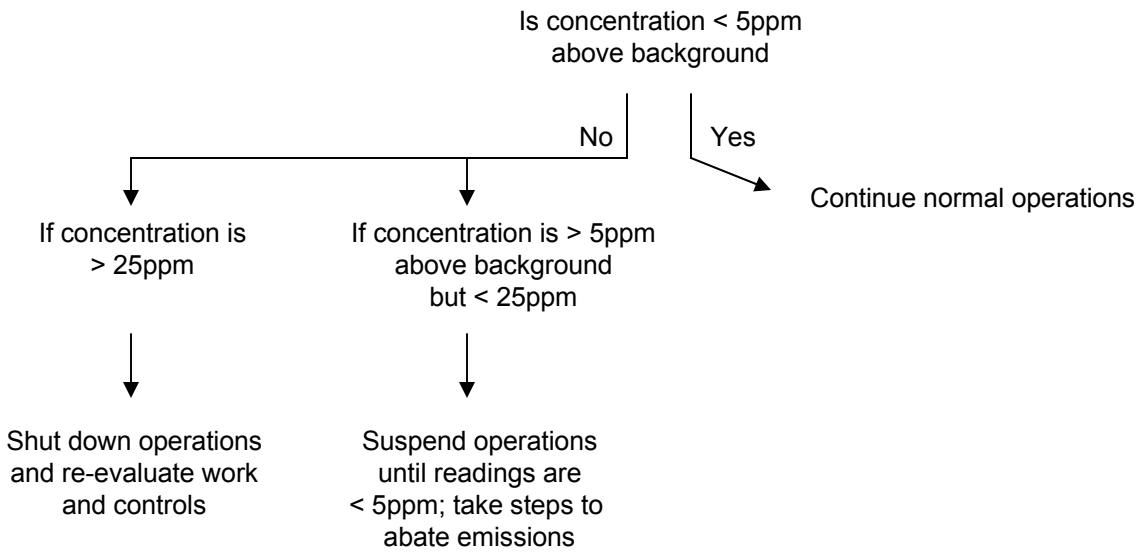
The NYSDEC and NYSDOH will be notified promptly via phone and/or electronic mail of any exceedance of an Action Level and of the corrective actions taken in connection with the exceedance.

3.1 Equipment Operational Requirements

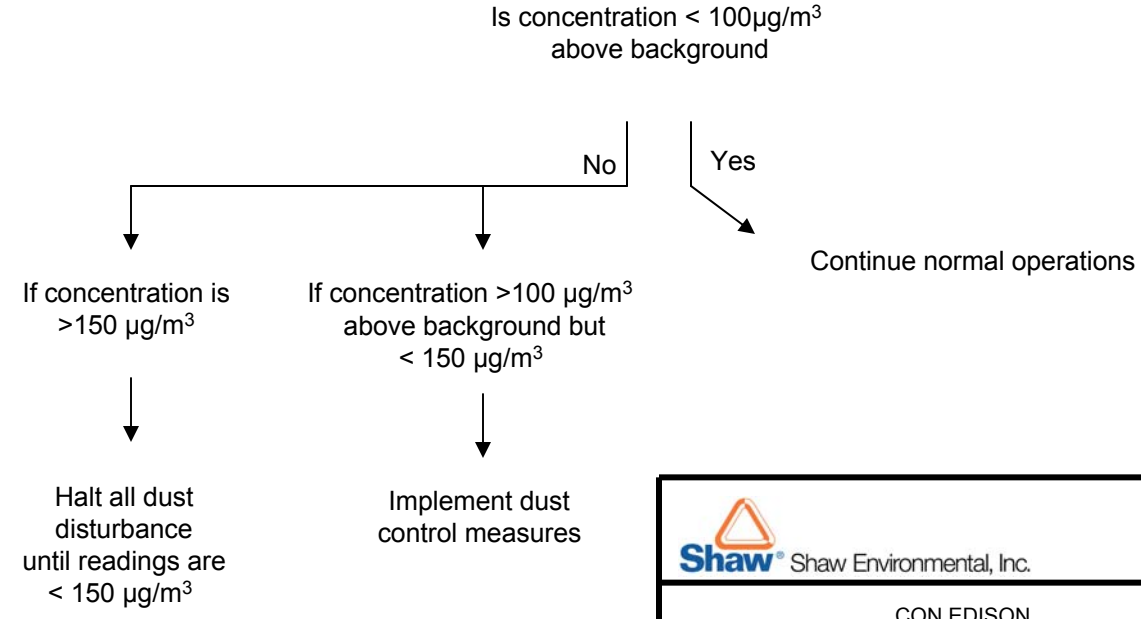
The air monitoring equipment will be operated by trained and qualified personnel. Personnel who perform air-monitoring functions described in this section will be experienced in the use of field air monitoring equipment, as well as the air monitoring procedures described above. There will be appropriate staff (chemist, industrial hygienist or environmental scientist) for assessing the results of air monitoring and advising the Shaw Field Safety Officer, and the Con Edison Project Manager and onsite Construction Management representative of air quality considerations.

All monitoring equipment will be calibrated on a daily basis in accordance with the manufacturer's operating instructions. A dedicated log book for each monitoring unit will be maintained that details the date, time, calibration gas, or other standard, and name of person performing the calibration.

Volatile Organic Monitoring
Downwind of Site



Particulate Monitoring
Downwind of Site



VOC and particulate readings based on 15 minute time weighted average

Shaw® Shaw Environmental, Inc.

CON EDISON

FIGURE 16

FLOW CHART FOR VOC AND PARTICULATE MONITORING ACTION LEVELS

FORMER KENT AVENUE GENERATING STATION
BROOOKLYN, NY

Table 11
Air Monitoring Summary Table for
Ash Pit Remedial Action

Monitoring Device	Monitoring Location/ Personnel	Monitoring Frequency	Action Level	Action
PM-10 Aerosol/ Particulate Air Monitoring Unit with Audible Alarm	Upwind and Downwind of Site	Continuous during all excavation or dust producing activities for 15 minute average readings Background is the most recent upwind 15 minute average reading	<100 µg /m^3 (15 min. TWA) above background at the downwind perimeter of Site > 100 µg /m^3 (15 min. TWA) above background at the downwind perimeter of Site for any 15 min. average, or visible dust leaving the Site > 150 µg/m^3 (15 min. TWA) above upwind background level downwind perimeter of Site	Continue normal operations Implement dust control measures Halt all dust disturbance work until downwind perimeter of Site reading is < 150 µg/m^3 above upwind perimeter.
PID	Upwind and Downwind of Site	Continuous during all excavation or dust producing activities for 15 minute average readings Background is the most recent upwind 15 minute average reading	< 5 ppm (above background) >5 ppm above background but < 25 ppm (15-minute TWA) > background within 20 feet of nearest receptor	Continue normal operations Suspend operations until readings indicate < 5.0 ppm for 15-minute TWA Take steps to abate emissions* Shutdown operations and re-evaluate work and controls

TWA - Time Weighted Average
PID - Photo Ionization Detector
µg/m^3 – Microgram per Cubic Meter
ppm – Parts per Million
** Use suppressant foam, or cover ash pit or removed waste*

SITE SPECIFIC HEALTH AND SAFETY PLAN
AMENDMENT DOCUMENTATION

Project Name: **Inactive Ash Pit Remedial Investigation Activities at the Former Con Edison Kent Avenue Generating Station** **Project No.:** **126649**

Amendment No.: **5** **Date:** **June 18, 2009**

Amendment Revises: *Page:* **N/A** **Section:** **1.0, 3.0, and 5.0**

Task(s) Amendment Affects:* **Scope of Work, Task Specific Hazards, and Protective Equipment**

**(Attach new/revised Job Safety Analyses)*

Reason For Amendment: The fifth amendment is for a change in the original scope of work at the site consisting of overseeing a contractor during the removal of sludge of the former Kent Avenue Generating Station Ash Pit.

Amendment: *(Attach separate sheet(s) as necessary)*

See Attachment.

Reviewed / Approved by:

Saul Ash
Project Manager

Greg McElroy
NE H&S Regional Manager

Introduction:

This Health and Safety Plan (HASP) amendment has been prepared to address the Shaw Environmental Inc. personnel oversight of a contractor during the removal of sludge at the former Con Edison Kent Avenue Generating Station site located in New York City, New York. A separate HASP will be provided by the contractor for removing the sludge. This HASP amendment will be used in conjunction with the original Shaw HASP dated April 2006. All project participants must read and understand this HASP amendment and verify having done so by signing the agreement and acknowledgement sheet (See Attachment 1). The project approval form for this HASP amendment is on the cover page of this amendment.

Scope of Work:

The change in the original scope of work is:

- Oversight of a contractor during the removal of sludge.

Note: Sludge removal contractor will prepare a separate HASP for their activities.
Shaw personnel may not enter into a confined space without first notifying the PM and HSM.

Task-Specific Hazard Analysis/Controls:

Based on the change in the original scope of work, the primary hazards include drowning, slip/trip/falls and being struck by against objects.

Site personnel shall review the Task-Specific JSA for main tasks each day prior to the start of work. The daily JSA will need to be updated to address the new hazards and their controls. Thus, all site crew members must be briefed on the additional hazards and control measures. The JSA reviews must be documented on the JSA form, and crew member signatures must be obtained verifying that the review has been acknowledged.

Protective Equipment

Task	Initial PPE Level	Upgrade PPE Level	Skin Protection	Respiratory Protection	Other PPE
Oversite of Sludge Removal	Modified Level D	None	Work clothes with long pants and shirt with a 4” sleeve, personal flotation device	None	Hard-hat, steel-toe boots, Type I safety vest, hearing protection safety glasses, and Leather gloves

ATTACHMENT 1

AGREEMENT AND ACKNOWLEDGEMENT SHEET

HASP AMENDMENT AGREEMENT AND ACKNOWLEDGEMENT SHEET

HASP AMENDMENT AGREEMENT AND ACKNOWLEDGEMENT		
1. I have read and fully understand the HASP amendment and my responsibilities. 2. I agree to abide by the provisions of the HASP amendment.		
Name		Signature
Company		Date
Name		Signature
Company		Date
Name		Signature
Company		Date
Name		Signature
Company		Date
Name		Signature
Company		Date
Name		Signature
Company		Date
Name		Signature
Company		Date

ATTACHMENT 2

JOB SAFETY ANALYSIS/ HS045

JOB SAFETY ANALYSIS

DATE:

JOB#:
PERMIT#:
ISSUED BY:

SUPERVISION/FOREMAN

Consider the following and check the items which apply to the job, then review with the work crew.

PERMITS
_____Required
_____Cold Work
_____Hot Work
_____Entry Permit
_____All Conditions Met
_____Signed Off When Complete
_____Other_____

PERSONAL PROTECTIVE EQUIP. (PPE)
_____Type of Gloves
_____Composition of Gloves
_____Special Purpose Gloves
_____Tyvek Suit
_____Acid Suit /Slicker Suit
_____Rubber Boots
_____Mono Goggles (vented/non-vented)
_____Face Shield
_____Respirator
_____Fresh Air
_____Ear Protection
_____Safety Harness
_____Burning Goggles
_____Other_____

TOOLS
_____Current Inspection
_____Proper Tools for the Job
_____Good Tool Condition
_____Qualifications
_____Other_____

EMERGENCY EQUIPMENT
_____Fire Extinguishers
_____Safety Shower
_____Evacuation Route
_____Other_____

ACCESS
_____Scaffold (properly inspected)
_____Ladder (Tied off)
_____Man lift
_____Personnel Basket (inspected/approved)
_____Operator Training
_____Special Provisions
_____Other_____

WELDING
_____Flash burns
_____Combustibles
_____Spark Containment
_____Shields
_____Grounding
_____Water Hose
_____Fire Extinguisher
_____Fire Blanket
_____Fire Watch
_____Sewer Covers
_____Other_____

OVERHEAD WORK
_____Barricades
_____Signs
_____Hole Cover
_____Handrail
_____Other_____

ELECTRICAL
_____Locked & Tagged out
_____Try Start/Stop Switch
_____GFCI Test
_____Assured Grounding
_____Extension Cord Inspection
_____Other_____

LIFTING
_____Forklift
_____Cherry Picker
_____Load Chart
_____Angle
_____Crane
_____Chain fall
_____Proper Rigging Practices
_____Manual Lifting
_____Condition of Equipment
_____Operator Certificate

HAZARDS (ENVIRONMENTAL)
_____ Electrical Shock
_____ Heat Stress
_____ Heavy Objects
_____ Hot/Cold Surf. Or Mat.
_____ Inadequate Lighting
_____ Line Breaking
_____ Noise
_____ Poor Access/Egress
_____ Sharp Objects
_____ Other_____

HAZARDS/CHEMICALS
_____ Chemical Burn Shin/Eyes
_____ Flammable
_____ Ingestion
_____ Inhalation
_____ Skin Contamination

HAZARDS/BODY
_____ Fall Potential
_____ Pinch Points
_____ Slip-Trip Potential
_____ Other_____

OTHER WORK IN AREA
_____ Others Working Overhead
_____ Type Work Others Doing
_____ PPE Due to Other Work
_____ Other_____
_____

CONFINED SPACE

Know the following:

Possible hazards within the confined space
First signs of exposure
How to summons help
How to track personnel
Entering and exiting the confined space
Maintain contact with all entrants by voice or visual
Do not attempt to rescue unless you
are a part of a coordinated effort
Remain at entry point assume no duties with take you from there

.

SUPERVISOR/FOREMAN RECOMMENDATION:

DATE:

JOB SAFETY ANALYSIS

JOB#:
PERMIT#:
ISSUED BY:

Location of Job (Unit/Location on Project):				
Required PPE:	**Safety Access/ Location**	Supervisor of Work:		
	Safe Haven:	JSA Prepared by:		
	Wind Direction:	Are other crews in area?		
Pre-Job Preparation 1. Fill out JSA 2. Review JSA (EVERYONE) 3. Sign JSA (EVERYONE)	Evacuation Route: Assembly Point:	New: Revised:		

Job Task (What are You Doing)	**Audit the Job:**
	Audit Time:
Potential Hazards	**Supervisors Comments:**
Recommended Action or Procedure	**Supervisor's Initials:**

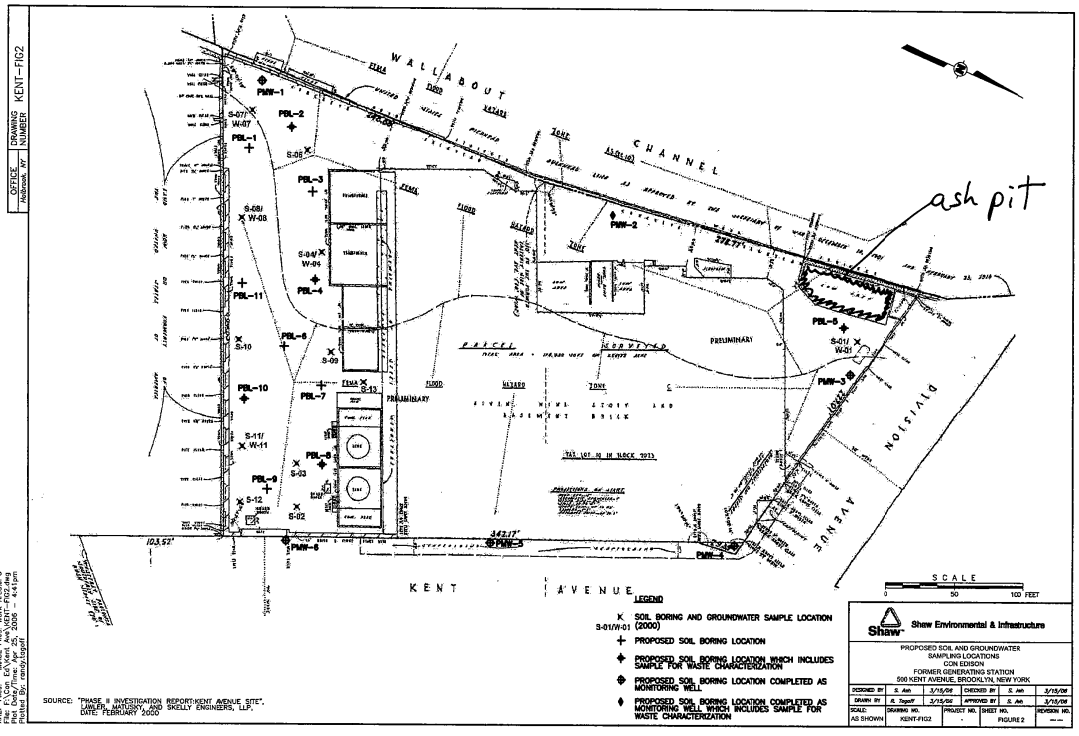
Crew Name Signatures:		

ACTIVITY HAZARD ANALYSIS FOR CONTRACTOR OVERSIGHT				
Task Breakdown	**Potential Hazards**	**Critical Safety Practices**	**Personal Protective Clothing and Equipment**	**Monitoring Devices**
Contractor Oversight	Lack of communicating tasks ideals to field personnel may lead to an injury/illness, environmental hazard, near hit, equipment damage, or rework.	• Site management will conduct Job Safety Analysis with field personnel before the start of work on a new task. • Project personnel shall inspect all equipment before it is used. Equipment that is damaged shall be tagged out of service until it is repaired. • Unsafe acts or conditions shall be reported to the Site Manager/subcontractor site lead and corrected as soon possible.		
	Struck By/ Against Motor Vehicles/ Operating Equipment	• Wear reflective warning vests when exposed to vehicular traffic • Isolate potential equipment swing areas • Avoid/isolate survey activities in high traffic areas • Make eye contact with vehicle operators before approaching/crossing high traffic areas • Understand and review hand signals • Emphasize The Buddy System where injury potential exists	Hard hat, safety glasses with attached side shields, steel toe work boots, reflective traffic safety vests, hearing protective devices as needed	
	Inhalation and Contact with site contaminants	• Provide workers proper skin, eye and respiratory protection based on the exposure hazards present • Review hazardous properties of site contaminants with workers before operations begin • Monitor breathing zone air to determine levels of contaminants • Maintain the buddy system in areas where sudden releases of toxic vapors may occur • Follow OSHA standard safety work practices.		
	Drowning	• Wear USCG Approved personal flotation devices for work activities on or near water	USCG approved flotation device	
	Slips, Trips, Falls	• Clear walkways, work areas of equipment and tools • Mark, identify, or barricade other obstructions	If working in a confined space and/or from a manlift, a full body harness	

ACTIVITY HAZARD ANALYSIS FOR CONTRACTOR OVERSIGHT				
Task Breakdown	**Potential Hazards**	**Critical Safety Practices**	**Personal Protective Clothing and Equipment**	**Monitoring Devices**
			will be required.	
	Handling Heavy Objects	• Observe proper lifting techniques • Obey sensible lifting limits (60 lb. maximum per person manual lifting) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads		
	Sharp Objects	• Wear cut resistant work gloves when the possibility of lacerations or other injury may be caused by sharp edges or objects • Maintain all hand and power tools in a safe condition • Keep guards in place during use • Close doors, windows on heavy equipment to prevent injuries from tree branches and other vegetation	Leather gloves	
	Insect/ Animal Bites	• Review injury potential with workers • Avoid insect nests areas, habitats outside work areas • Emphasize The Buddy System where such injury potential exists • Use insect repellant to protect against sting injuries		
	Contact Dermatitis	• Wear long sleeve shirts / trousers to avoid skin contact with plants or other skin irritants • Identify and review poisonous plants with workers • Avoid unnecessary clearing of plant/vegetation areas • Cover vegetation with plastic (visqueen) where survey position raises exposure potential • Apply protective cream/lotion to exposed skin to prevent poison ivy or similar reactions		
	High Ambient Temperature	• Monitor for Heat stress in accordance with it E&I Health and Safety Procedures # HS400 • Provide fluids to prevent worker dehydration • Follow work/rest schedule in the HASP	Insulated Clothing (subject to ambient temperature)	Meteorological Equipment

ATTACHMENT 3

JOB SAFETY ANALYSIS/ HS045



SOURCE: "PHASE II INVESTIGATION REPORT-KENT AVENUE SITE", LAWLER, MATUSKY & SKELLY ENGINEERS, LLP, DATE: FEBRUARY 2000

Shaw Environmental & Infrastructure

PROPOSED SOIL AND GROUNDWATER SAMPLING LOCATIONS
CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

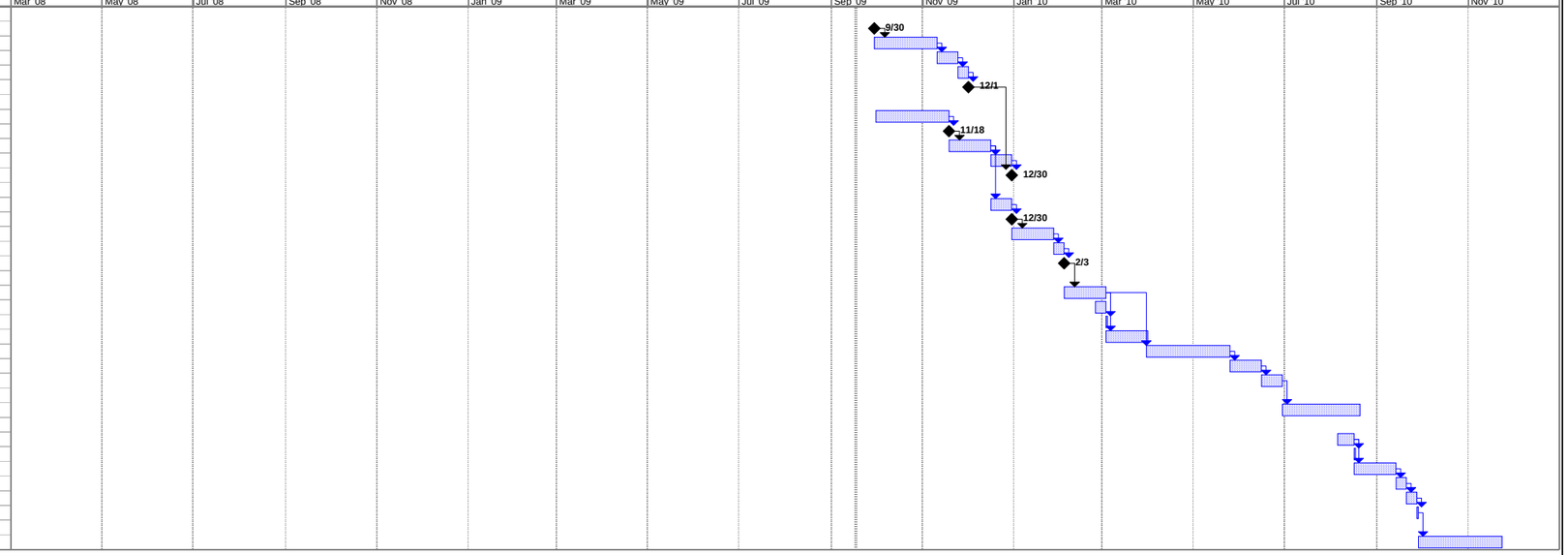
DESIGNED BY	S. Ann	3/15/02	CHECKED BY	S. Ann	3/15/02
DRAWN BY	K. Topoff	3/15/02	APPROVED BY	S. Ann	3/15/02
SCALE: AS SHOWN	DRAWING NO. KENT-FIG2		PROJECT NO. -	SHEET NO. FIGURE 2	REVISION NO. ---

OFFICE: Rockaway, NY | DRAWING NUMBER: KENT-FIG2

XREF Files: IMAGE Files: Work Area.JPG
Plot Date/Time: Fri Mar 15 2002 - 10:41am
Plotted By: randy.topoff

Attachment 9:Former Kent Avenue Generating Station
Ash Pit Remediation Schedule

ID	Task Name	Duration	Start	Finish	Predecessors
1					
2	Submit RAWP for DEC approval	0 days	Wed 9/30/09	Wed 9/30/09	
3	DEC review of RAWP	30 days	Wed 9/30/09	Tue 11/10/09	2
4	Revise RAWP as per DEC comments	10 days	Wed 11/11/09	Tue 11/24/09	3
5	DEC review of final RAWP	5 days	Wed 11/25/09	Tue 12/1/09	4
6	Receive DEC Approval of RAWP	0 days	Tue 12/1/09	Tue 12/1/09	5
7					
8	Prepare Bid Specifications	35 days	Thu 10/1/09	Wed 11/18/09	
9	Submit first draft of Bid Specifications to Con Edison	0 days	Wed 11/18/09	Wed 11/18/09	8
10	Con Edison review of Bid Specifications	20 days	Thu 11/19/09	Wed 12/16/09	9
11	Revise Bid Specifications as per Con Edison comments	10 days	Thu 12/17/09	Wed 12/30/09	10
12	Submit final draft of bid specification	0 days	Wed 12/30/09	Wed 12/30/09	11,6
13					
14	Prepare remedial cost estimate	10 days	Thu 12/17/09	Wed 12/30/09	10
15	Submit first draft of remedial cost estimate to Con Edison	0 days	Wed 12/30/09	Wed 12/30/09	14
16	Con Edison review of remedial cost estimate	20 days	Thu 12/31/09	Wed 1/27/10	15
17	Revise remedial cost estimate as per Con Edison comments	5 days	Thu 1/28/10	Wed 2/3/10	16
18	Submit final draft of remedial cost estimate	0 days	Wed 2/3/10	Wed 2/3/10	17
19					
20	Issue RFP	20 days	Thu 2/4/10	Wed 3/3/10	18
21	Preparation for Pre-Bid Meeting	5 days	Thu 2/25/10	Wed 3/3/10	
22	Hold Pre-Bid Meeting	1 day	Thu 3/4/10	Thu 3/4/10	20
23	Bidders Respond to RFP	20 days	Thu 3/4/10	Wed 3/31/10	20
24	Select Low Bid	40 days	Wed 3/31/10	Tue 5/25/10	20
25	Contractor submittal of initial deliverable plans	15 days	Wed 5/26/10	Tue 6/15/10	24
26	Review of deliverables	10 days	Wed 6/16/10	Tue 6/29/10	25
27					
28	Site Remediation and oversight of field work	38 days	Wed 6/30/10	Fri 8/20/10	26
29					
30	Review analytical and field data	7 days	Fri 8/6/10	Mon 8/16/10	
31	Prepare NFA request	1 day	Tue 8/17/10	Tue 8/17/10	30
32	Prepare Remedial Action Summary Report	20 days	Tue 8/17/10	Mon 9/13/10	30
33	Con Edison review of RASR	5 days	Tue 9/14/10	Mon 9/20/10	32
34	Revise RASR per Con Edison comments	5 days	Tue 9/21/10	Mon 9/27/10	33
35	Submit RASR and NFA request for DEC review	1 day	Tue 9/28/10	Tue 9/28/10	34
36					
37	DEC approval of NFA request	40 days	Wed 9/29/10	Tue 11/23/10	35



Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline

REFERENCES

1. Ash Pit Investigation: Former Kent Avenue Generating Station, Lawler, Matusky & Skelly Engineers LLP, June 1, 2000.

2. Ash Pit Remedial Investigation Work Plan, Shaw Environmental Inc., March 2007.

3. Ash Pit Remedial Investigation Summary Report, Shaw Environmental Inc., March 2008.

4. Ash Pit Feasibility Study Work Plan, Shaw Environmental Inc., July 2008.

5. Ash Pit Feasibility Study Summary Report, Shaw Environmental Inc., March 2009.

6. Con Edison Letter of Response to NYSDEC Letter of Response to Ash Pit Remedial Investigation Summary Report, April 17, 2008.

7. Draft DER-10 Technical Guidance for Site Investigation and Remediation, New York State Department of Conversation, December 2002

8. Guidance for Conducting Remedial Investigation and Feasibility Studies Under CERCLA, Interim Final, USEPA, October 1988

9. New York City Department of Environmental Protection, Limitations for Effluent to Sanitary or Combined Sewers

10. New York State Department of Conservation Letter of Response to Ash Pit Remedial Investigation Summary Report, April 14, 2008.