REMEDIAL INVESTIGATION WORK PLAN

REMEDIAL INVESTIGATION - 2006
RCA - ROCKY POINT (SITE #152011)
TOWN OF BROOKHAVEN
SUFFOLK COUNTY
NEW YORK

JANUARY 26, 2006

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
REGION - 1
SUNY BUILDING - 40
STONY BROOK, NEW YORK 11790-2356

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ABBREVIATIONS AND ACRONYMS

ASP	-	Analytical Service Protocol
ELAP	-	Environmental laboratory Accreditation Program
MDL	-	Method Detection Limit
NTU	-	Nephelometric Turbidity Unit
PQL	-	Practical Quantitation Limit
SVOC	-	Semivolatile Organic Compound
SOW	-	Statement Of Work
TAL	-	Target Analyte List
TCL	-	Target Compound List
TIC	-	Tentatively Identified Compound
VOC	-	Volatile Organic Compound
PCB	-	Polychlorinated Biphenyl
PCA	-	Principle Component Analysis
HASP	-	Health And Safety Plan
PID	-	Photoionization Detector
QA/QC	-	Quality Assurance / Quality Control
QAPP	-	Quality Assurance Project Plan
RI	-	Remedial Investigation Work Plan
TIC	-	Tentatively Identified Compounds

SITE INVESTIGATION WORK PLAN
RCA ROCKY POINT SITE, TOWN OF BROOKHAVEN
SUFFOLK COUNTY, NEW YORK
(SITE # 152011)

1. INTRODUCTION

The New York State Department of Environmental Conservation (NYSDEC) presents this work plan to determine if the past remedial work was sufficient to remediate this state owned class 2 hazardous waste site. NYSDEC staff conducted four site inspections to assist in the preparation of this work plan.

The initial site inspection was done on August 25, 2005. The two areas of interest for this site inspection were the remediated area by former Building #9 where some PCB contaminated soils are covered by a cap and an area known to have been used by the former operator for landfilling. Due to heavy overgrowth, the old landfill area was not found during this initial site inspection. However, many other areas around the site were visually inspected while looking for the landfill area.

At the PCB capped area, the two monitoring wells that had been constructed to monitor the groundwater downgradient of the 1988 PCB capped area were inspected to determine if they were usable for the planned site investigation. Both of these monitoring wells are filled with rocks and can't be repaired. This work plan will include tasks to decommission these two monitoring wells and to install two new replacement monitoring wells at the PCB capped area.

On August 26, 2005, another inspection was performed by a former Project Manager to locate the landfill area. The landfill area was found, but not thoroughly inspected on that day. Other portions of the site were visually inspected for signs of landfilling. No other suspicious areas were observed.

On August 29, 2005, the old landfill area was inspected in greater detail. The four monitoring wells installed in 1990 for the Phase II investigation of the landfill were found in good conditions and are useable for future sampling. A metal detector indicated numerous areas with some buried metal. The metal detector also was used to determine the approximate extent of the area that had been used for landfilling. In three separate areas with readings on the metal detector, a shallow test pit was dug with a hand shovel to four feet below grade as an initial evaluation of the nature of the fill. A piece of metal cable was found in one these pits. This work plan will include tasks to determine the nature and extent of the fill with a special emphasis on determining the potential presence of PCB containing equipment or chemical containing drums in the fill.

On November 28, 2005, NYSDEC staff performed another site inspection to look for other areas at the site that might have been used for landfilling. This site inspection

will be discussed in Section 2.3(D).

2. SITE DESCRIPTION AND SITE HISTORY

2.1 SITE DESCRIPTION

The RCA Rocky Point site, located in the town of Brookhaven, Suffolk County, New York is currently owned by the New York State Department of Environmental Conservation. The size of the property is 5,100 acres and the area surrounding the site is wooded. However, only approximately 2 acres of this site, consisting of an old landfill and a capped area with residual PCB contamination, are included in the listed class 2 site. The landfill area is about 1 acre in size that was placed in a 2-acre natural kettle hole. The PCB cap area is approximately one half of an acre in size. Current use of this resource management area includes hiking, bicycling, horse back riding and hunting. The nearest residential area, the hamlet of Rocky Point, is approximately 1.5 miles to the north. There is one public water supply well approximately 7000 feet south of the landfill site. There are two USGS observation wells: one 5000 feet southeast and one 3500 feet south southwest. The nearest domestic well is approximately 5000 feet southeast of the landfill site. Since the groundwater flow direction is generally to the north, none of these wells are hydraulically downgradient of the site.

2.2 SITE HYDROGEOLOGY[1]

Groundwater in the area occurs in the wedge-shaped accumulation of unconsolidated sediments of Pleistocene and Upper Cretaceous age which are approximately 1100 feet in thickness in th vicinity of the site (thickness saturated with fresh groundwater). The basal bedrock on which these sediments lie is of Precambrian age and consists of schists and gneisses which outcrop in western Queens County and dip southeast on the average of about 65 feet per mile, or slightly less than 1°, to an estimated depth of about 2000 feet in south-central Suffolk County. The surface of the bedrock is approximately 1000 feet below mean sea level in the vicinity of the site.

The Cretaceous fluvial and deltaic deposits rest directly upon the 100+ ft., clay-like weathered surface of Precambrian bedrock, and are divided into the Raritan Formation and the overlying Magothy Formation. The Raritan formation is composed of a lower and sand member (Lloyd Sand Aquifer) and a clay member, both of which are widely distributed on Long Island. The top of the Lloyd Sand in Suffolk County ranges from 200-1700 ft. below sea level, and its thickness ranges from 150 ft. in the northwestern part of Suffolk County to over 300 ft. in the southeastern part of the county. This unit has not been widely tapped as an aquifer except in northern Nassau County where it is relatively accessible and on the south shore where saltwater intrusion has threatened overlying aquifers.

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[1] Reference: Work Plan for the RCA - Rocky Point Landfill, July 7, 1988.

The Raritan clay member serves to confine water in the underlying Lloyd aquifer and retards but does not prevent flow between the Lloyd and the overlying Magothy aquifer. The top of the Raritan clay in Suffolk County ranges from 100-1400 ft. below sea level trending northwest to southeast, respectively, and its thickness ranges from 100-300 ft., following the same trend.

The Magothy Formation, which is utilized as a major aquifer, consists of a great thickness of alternating fine sands, clays, silts, and some coarse beds of sand and gravel. The top of the formation generally ranges from 300 ft. above to 250 ft. below sea level, and ranges in thickness from 330-1000 ft. in Suffolk County.

The Pleistocene glacial deposits which constitute the upper Glacial aquifer overlie and irregular Magothy surface eroded and scoured by glacial contact. A deeply penetrating well in the vicinity of the site indicates that the glacial deposits extend to a depth of 555 ft. below the National Geodetic Vertical Datum of 1929 (roughly correlative to mean sea level), thus placing the Magothy-Glacial interface at approximately 645-655 ft. below land surface elevation at the site. Such a depth would indicate the presence of a deep glacial scour at the location of the site. Since the proposed investigation is designed to sample the upper ten feet of the water table, the concern on this drilling project will be mainly with the sands of the upper Glacial aquifer.

Horizontal groundwater flow direction is to the north to northwest; however, due to the regional groundwater hydraulics and the high permeability of the native soils, a strong vertical flow component is anticipated. Depths to groundwater are 45 feet at landfill area (Phase II RI Report/1990) and 102 feet at capped area (As-Built Documentation Report/1989) below the natural grade.

2.3 SITE HISTORY

2.3(A) General:

The site was a transcontinental radio communication station from 1921 to 1978. Much of the property was cleared for antenna arrays which included towers 400 feet tall. The majority of the properties were covered by a grid work of timber antenna supports. In 1978, RCA turned the facility over to the New York State Department of Environmental Conservation. All known hazardous waste disposal at this site involved the spilling of PCB fluids contained in the many electrical transformers that were used at the site.

2.3(B) PCB Capped Area:

Building # 9 was the main transformer building of the RCA transcontinental radio communication station. Commencing in 1927, until 1975 , Rocky Point had been used solely as a transmitting station (there was a receiving station at Riverhead). The PCB containing electrical equipment including capacitors and transformers had been operated at this part of Rocky Point facility for half of a century. During the period of August 1982 to January 1983, a limited remedial activity was performed to remove

electrical equipment containing PCBs. During the removal operations, a PCB spill occurred outside of Building #9, which resulted in soil contamination. The concrete floor inside the building was also impacted. Between the period of December, 84 and June, 85, approximately 22,000 cubic yards of PCB contaminated soil were removed and properly disposed of off-site. Contaminated concrete was also removed from the floor inside the Building # 9 and disposed. The excavated area outside of the building was subsequently backfilled with clean soil. In the fall of 1988, a cap was placed over the spill area. The capped area was protected by a chain link fence. The perimeter of the capped area was determined by the PCB concentrations in soils less than 10 ppm at depths of 6 inches and 24 inches. In April 1989, a testing of the floor of Building #9 revealed that all of the contaminated concrete had not been removed. In September 1989, all of the concrete floor inside the building was removed. Testing found contamination in the soil under the floor. This soil was excavated as deeply as possible without undermining the integrity of the building. There was still contamination present but work could not proceed until the building was demolished. In February 1990, Building # 9 was demolished. The foundation was left in the ground. In November 1990, the north wall of the foundation (which was contaminated) and approximately 1,100 cubic yards of contaminated soil were excavated and shipped to a licensed hazardous waste landfill in Utah. Sampling showed that the soil on the bottom of the excavation contained less than 10 ppm of PCBs. The excavation was filled with clean soil.

Two new monitoring wells were installed northwest (downgradient) of the cap during the period of capping construction in 1988. The wells were sampled on December 9, 1988 and no PCBs were detected. At present, it has not been possible to collect samples from these two wells due to the placement of rocks obstructing the wells. The wells will be abandoned according to applicable NYSDEC protocols and will be replaced.

2.3(C) Landfill Area:

RCA used a natural kettle hole area in the southwest portion of the site as a landfill. It is alleged that a part of the landfill area (approximately 200 ft. x 200 ft. x 20 ft. deep) received an unknown quantity of discarded capacitors containing PCBs. As per an estimate by Marshal Etter dated December 12, 1979, about one dozen capacitors were buried in the landfill. It is also alleged that there were PCB containing condensers disposed of in this landfill. Additionally, the landfill is comprised of bulk debris including old cable, telephone poles, porcelain insulators, wood scraps, hinges, remains of old radios and transmitters, rusted drums, and other assorted debris. In 1980, the Suffolk County Department of Health Services, in cooperation with the NYSDEC, drilled soil borings and installed four monitoring wells both in and around the landfill. Seventeen shallow soil borings (between 2.5 and 5 feet), were augured through the filled area. Garbage was encountered in all but three of these borings. One 20-foot boring was drilled through the fill area, and encountered glass, brass, mica, copper wiring and other garbage. Three forty-foot borings, completed outside of the fill area were free of garbage. Four 2-inch inside diameter steel monitoring wells were also installed as part of this investigation, but only one groundwater sample was collected because a pump broke

down. PCBs were not detected in this groundwater sample. Another Phase II investigation for just the landfill portion was completed by Roux Associates, Inc. in 1989 and no hazardous wastes were found (See the enclosed tables with the results of soil and groundwater sampling). Four PVC monitoring wells were installed for this Phase II investigation. These wells have not been vandalized and will be sampled as one of the tasks in this work plan.

Building #1 was the primary control and communication center, with ancillary buildings and structures around the site providing support services. In 1992, all of these buildings were demolished. All concrete and masonry construction and demolition material from the main building complex, the tower, the diesel building, the three electrical substations and two under ground basement areas were disposed of in the landfill area.

2.3(D) Buried Drum Allegation:

On March 20, 2000, a citizen who reportedly had second hand knowledge concerning a former RCA worker voluntarily provided a statement. Approximately twelve years prior to the allegation, the citizen making the allegation had a casual conversation with a person who was reportedly a former bulldozer operator at the RCA Rocky Point site. This former RCA employee reportedly told the informant that on a number of occasions that he had buried drums at the site at night that had been brought to the site by truck. The former employee did not have any idea of the contents in those drums. Unfortunately, when the allegation was reported in 2000, this former employee was deceased thereby making it impossible to acquire further information about this potential release. There was no information about the burial location(s), the quantity of the drums, the nature of the wastes contained in the drums, or the years when the disposal occurred.

This allegation has been evaluated by the NYSDEC on several occasions. Since the site is 5,100 acres in size, it was not feasible to evaluate all areas of the site for potential burial disposal. It was necessary to focus the attention of the evaluation to the most promising locations. Despite many visits to the site by NYSDEC staff during and after the earlier site remedial work in the late 1980's and early 1990's, there has been no area that contained visual evidence of consequential waste disposal other than the landfill area discussed under section 2.3(C). To look for other potential areas where the burial of wastes might have occurred, historical aerial photographs were retrieved to look for disturbed areas. Then, the suspected areas were inspected for signs that these areas of interest might have been used for disposal. This was done under a limited basis in March 2003 and was conducted on an expanded basis in the Fall of 2005 during the preparation of this work plan.

The March 2003 evaluation was centered around the northwestern portion of the site primarily to evaluate elevated areas seen on a topographical map. On March 20, 2003, John Conover and Bob Stewart visited the site and checked several elevated areas to the west and east of the north-south access road in this portion of the site. These areas were first visually inspected for potential burial locations. All of the elevated areas on

the topographic maps appeared to be natural. Next, a metal detector was used to further evaluate selected locations for buried metal. Finally, a hand shovel was used to perform shallow test pits in several different locations to look for buried wastes. Some metallic wires were found in a small area to the west of the road in a slight depression. However, there was no evidence that this area might contain any other buried metal. The finding of wire in the surface soils at this site was not a remarkable occurrence. It is common to find wire at this site since it had formerly contained many antenna arrays which involved the use of large amounts of wire throughout the site. Regardless, this area was re-evaluated again in 2005 to re-check the area for buried metal.

The expanded evaluation in the Fall of 2005 first involved the collection of more historical aerial photographs from different years to look for changes in the photographs that would suggest that a particular area might have been used for landfilling. Cleared areas in the middle of the woods away from areas used as part of the normal site operations were of the most interest. Aerial photographs from 1947, 1962, 1972, 1994 and 1995 were reviewed. Nine disturbed areas and the old landfill area were selected for further evaluation by a geophysical survey with a magnetometer (See Figure-8). A magnetometer is often used to detect ferrous metallic objects. It is designed to locate buried metallic objects made of steel or iron such as drums, tanks, pipes, and metallic debris. On November 28, 2005, the NYSDEC staff went to the site to check the ten selected areas for buried drums with the metal detector. No evidence of buried metals were found in any of the selected areas other than the old landfill area. Only the landfill area had significant positive detections on the metal detector that were suggestive of significant amounts of buried metal. Therefore, it was concluded that only this area would be further evaluated to complete the re-evaluation of the buried drum allegation. Test pits are the best way to determine the nature of the fill in landfilled areas. One of the tasks in this work plan will be the sampling of three test pit locations (TP-1, TP-2, and TP-3 in Figure-4) in three different areas with positive readings on the metal detector in the landfill area.

2.3(E) References, reports and other documents:

1. Consent Order # T0061885, executed November 16, 1989.
2. "As Built Documentation, Construction Certification, Site Remediation, Rocky Point and Riverhead State Gamelands, Long Island, New York" by Hart Engineers Inc., Pittsburgh, Pennsylvania, January 1989.
3. "Phase 2 Investigation, RCA Rocky Point Landfill, Site No. 152011", by Roux Associates, Huntington, New York, September 1990.
4. " Work Plan, PCB Contaminated Soil Removal, Former Building No. 9, Rocky Point, Long Island, New York" by Hart Engineers, Inc., Pittsburgh, Pennsylvania, October 1990.
5. "Final Report, PCB Contaminated Soil Removal, Former Building No. 9, Rocky Point, Long Island, New York" by McLaren/Hart Environmental Engineering Corporation, Pittsburgh, Pennsylvania.

2.3(F) Chronology of Events:

1927 - 1978:
The site was a transcontinental communications station owned by RCA Globcom. RCA Globcom operated the natural kettle hole area as a landfill.

1978:
RCA Globcom made a gift of the site to the NYSDEC.

1980:
An investigation of the landfill area failed to detect contamination in the soil and groundwater. Three groundwater water monitoring wells were installed. The locations are shown in phase - II investigations (RCA 2-RP, RCA 3-RP and RCA 4-RP in FIGURE - 5).

August 1982:
RCA Globcom voluntarily entered into an Agreement and Release with NYSDEC to undertake remedial actions necessary at the site.

August 1982 - January 1983:
RCA Globcom commenced testing and removal of all suspect electrical equipment. When the electrical equipment was being removed from Building #9, PCB fluids were spilled onto the ground outside of the building.

1984: Listed as a class 2 site.

1985:
RCA Globcom removed approximately 2,200 cubic yards of soil and completed the initial decontamination of spill areas outside of Building # 9. The excavation was backfilled with clean soil.

August, 1988:
The spill area was capped with high density polyethylene. Two monitoring wells were installed downgradient (MW-1 CA and MW-2 CA in FIGURE-6). Contaminated concrete was removed from the floor inside of Building # 9 and was disposed.

April, 1989:
Testing of the floor revealed that all of the contaminated concrete had not been removed.

September, 1989:
All of the concrete floor inside the building was removed. The impacted soil was also excavated but there was still contamination present. Work could not proceed until the building was demolished.

1989:
A Phase II investigation of the landfill area failed to detect contamination in soil or groundwater. Four PVC monitoring wells were installed (MW-1, MW-2, MW-3 and MW-4 in FIGURE - 5).

February, 1990:
Building # 9 was demolished but the foundation was left in the ground.

November, 1990:
The north wall of the foundation (which was contaminated) and 1,100 cubic yards of contaminated soil were excavated and shipped to a licensed hazardous waste landfill in Utah.

1992:
All of the remaining buildings and structures were demolished and disposed.

March 20, 2000:
A citizen voluntarily provided a statement regarding a second hand unconfirmed allegation of buried drums of unknown contents.

March 20, 2003.
John Conover and Bob Stewart visited the site and checked two elevated areas in the northeastern portion to look for any indication of potential buried drums. There was no evidence of buried drums at this location.

November 28, 2005,
The NYSDEC staff went to the site to check the ten selected areas (based on old aerial photographs) for buried drums with the metal detector. No evidence of buried metals were found in any of the selected areas other than the old landfill area.

3. SCOPE OF WORK

The Scope of Work for the site investigation includes tasks that will establish the nature of the fill in the landfill area and will provide more recent groundwater quality data for the PCB-capped area and the former landfill. The Scope of Work includes the following tasks:

1. Geophysical Investigation
2. Monitoring Well Decommissioning
3. Monitoring Well Installation
4. Addition of Buffer Zone for all Groundwater Monitoring Wells
5. GPS Survey for all Groundwater Monitoring Wells
6. Soil Sampling from Test Pits
7. Groundwater Sampling
8. Remedial Investigation Report Preparation

Based on the tasks mentioned in the Scope of Work, a cost sheet is to be developed and NYSDEC Region 1 will appoint a contractor for implementing the tasks of field investigation.

3.1 GEOPHYSICAL INVESTIGATION:

The geophysical survey with a metal detector has essentially been completed. This survey is discussed under Section 2.3(D). However, the metal detector will be used in the field to confirm test pit location in the landfill area, as discussed under Section 3.6

3.2 MONITORING WELL DECOMMISSIONING:

(A) Capped Area: The two monitoring wells for the capped area (FIGURE-6) are filled with rocks and can't be repaired. These two monitoring wells will be decommissioned as per NYSDEC "Draft Groundwater Monitoring Well Decommissioning Procedures, November 2002".

SPECIFICATIONS OF THE MONITORING WELLS TO BE DECOMMISSIONED AT THE CAPPED AREA:

Both of the existing wells are identical. Well decommission details are shown in FIGURE-7.

Depth to groundwater	= 102 feet.
Well diameter	= 2 inches.
Length of well casing	= 91 feet
Length of Screen	= 30 feet
Screen size	= 0.020 inches.
Total well depth	= 121 feet.

(B) Landfill Area: The three steel monitoring wells installed for the1980 investigation at the landfill area (RCA 2-RP, RCA 3-RP and RCA 4-RP in Figure - 5) will not be used for future sampling and will be decommissioned according to the same procedures.

3.3 MONITORING WELL INSTALLATION

Two new monitoring wells will be installed for the capped area to replace the damaged wells as shown in (FIGURE - 6). These two monitoring wells will be used for groundwater sampling for this investigation and for future groundwater monitoring at the capped area. The monitoring wells will be installed in accordance with NYSDEC TAGM#4008. The hollow-stem auger drilling methods will be used for installation of monitoring wells. After the completion of drilling and monitoring well installation, all wells will be developed prior to the collection of groundwater samples. The following procedures will be used to install and develop all monitoring wells:

- PVC 2-inch diameter threaded, flush-joint casing and screens will be installed.
- Wells will be screened in the unconsolidated deposits. Screen length of the well will be 15 feet (5 feet out and 10 feet in) and slot openings will be 0.020 inch. Alternatives may be used at the discretion of the Project Manager, based on site-specific geologic conditions.

- Flush-mount protective casings will be used to reduce the chances that the new wells will be vandalized.
- Where appropriate, the annulus around the screens will be backfilled with #0 Morie silica sand (based on site-specific geologic conditions and screen slot size) to a height of 2 feet above the top of the screen.
- Neat cement grout, a bentonite pallet seal, or a bentonite slurry (30 gallons water to 30 pounds of bentonite, or relative proportions) will be placed above the sand pack. The bentonite pellets will be hydrated for 30 to 60 minutes after installation. The bentonite pellet seal will be a minimum of 36 inches in depth.
- A fine sand pack approximately 1- foot thick will be placed above and below the bentonite seal to isolate it and to prevent mixing of components.
- The remainder of the annular space will be filled with a bentonite/cement or mixed grout up to the ground surface.
- A concrete surface pad (2 feet by 2 feet by 6-inch) will be sloped to the north or as instructed by the project manager. A weep hole will be drilled at the base of the protective flush mount casing to allow any water between the inner and outer casing to drain.
- Each outer casing will be permanently labeled using a steel hand stamp as designated in FIGURE-6 (MW-1 CA & MW-2 CA).
- Geologic logs and monitoring well construction diagrams should be developed for each of the monitoring wells.

Characteristics of each newly installed well will be recorded on a well installation checklist. After a minimum of 48 hours after completion, a submersible pump will be used to develop the wells according to NYSDEC protocols.

Development water will initially be monitored for organic vapors with a PID. In addition, the development water will be observed for the presence of non-aqueous phase liquids (NAPLs) or sheens. The wells will be developed until the water in the well is reasonably free of visible sediment (<50 NTU if possible or until pH, temperature and specific conductivity stabilize as judged suitable by the Project Manager). In no case will well development exceed 8 hours per well. Following development, wells will be allowed to recover for at least one week before groundwater is purged and sampled. All monitoring well development will be overseen by the project manager and recorded in the field logbook.

WELL SPECIFICATIONS:

Depth to groundwater	= 102 feet.
Well diameter	= 2 inches.
Length of well casing (PVC)	= 97 feet
Length of Screen	= 15 feet (5 feet above static water table and 10 feet below static water table).
Screen size	= 0.020 inches.
Total well depth	= 112 feet.

3.4 ADDITION OF BUFFER ZONE:

A 10 foot diameter Buffer Zone will be installed around all Monitoring Wells (MW-1 CA and MW-2 CA at the capped area and MW-1 thru MW-4 at the landfill area). The Buffer Zone will consist of NYSDOT#1 Stone or equivalent and a Commercial Grade Landscape Fabric. The purpose of these Buffer Zones is to eliminate the growth of vegetation in the area of the monitoring wells and a clear work area. The construction of the Buffer Zone will follow these steps. Place a 10 foot diameter circle of landscape fabric around the well head. On top of the fabric place a 4 inch compacted layer of NYSDOT#1 stone or equivalent.

3.5 GPS SURVEY: All groundwater monitoring wells will require GPS coordinates. The Region 1 staff will perform the GPS survey to gather these GPS coordinates.

3.6 SOIL SAMPLING FROM TEST PITS

It is reported that PCB-containing electrical equipments (Capacitors/Condensers) were buried in the landfill. There was an unconfirmed allegation that drums were buried at the site. If the former operators were burying drums at this site, the most likely location to find them would be in the landfill area. This location is isolated from other areas and surrounded by wooded areas. It is the only area where landfilling is evident on old aerial photographs. On November 28, 2005, the NYSDEC staff went to the site to check the ten selected areas (based on old aerial photographs) for buried drums with the metal detector. No evidences of buried metals were found in any of the selected areas other than the old landfill area. Only the landfill area had significant positive detections on the metal detector that were suggestive of significant amounts of buried metal. Three test pits (TP-1, TP-2, & TP-3 in Figure- 4) to ten feet deep will be performed in the landfill area to determine the nature of the fill. The locations of the three test pits were selected based on positive readings on a metal detector that are suggestive of buried metal at these locations. The metal detector will be used again before the pit tests are initiated to verify the earlier positive detections at the selected locations. The contractor will provide a backhoe and supporting equipment for the pit excavation operations. The backhoe would be decontaminated in the field. The decontamination water will be captured and drummed for off-site disposal. The contractor will be responsible for proper disposal of the decontamination water. NYSDEC will collect and analyze the decontamination water sample for disposal purposes. Level-D protection is expected to be appropriate for the excavation work since a soil gas survey done with a photo ionization detector (PID) capable of detecting volatile organic compounds with an ionization potential less than 10.2 eV did not detect the presence of any volatile organic compounds (VOCs) in the landfill area. The excavated soils will be returned to each pit. The top 1 foot of soils from each pit, which is expected to consist of clean fill, would be staged separately and be used as the surface cover of each test pit backfill. Finally, visually clean sand from a nearby area will be brought to the test pit locations and will be used as the final surface cover for the test pit. Accessibility to the landfill site might be jeopardized by the small plants or branches. The contractor may have to trim these obstacles in order to make the site accessible.

One soil sample will be collected from each of the three test pits based on the visual appearance of the soils, odors and/or PID readings. Each sample will be collected from the bucket of the backhoe doing the test pit. No one will enter any of the test pits for any reason. The soil sampling locations are shown in (FIGURE-4). Each of these three samples would be analyzed for VOCs, SVOCs, PCBs and metals. The organic samples would be sent to the state lab for analysis. The six inorganic samples (one for each pit, a duplicate and a MS and MSD) would be sent to an off-site ELAP certified laboratory. The state lab samples will have their own internal quality assurance review. The inorganic samples done by category B deliverables at an off-site lab are not currently planned for data review. However, if there are questions about the usability of the inorganic data, this task could be added later. Additional soil samples will be collected from any test pit that would not be adequately characterized by one soil sample.

In the event that large containers (drums, transformer, etc.) suspected of potentially containing significant quantities of hazardous waste are uncovered, the excavation will be closed without disturbing the containers further and a revised health and safety plan will be developed with a revised sampling strategy and increased level of protection, as warranted by the finding.

3.7 GROUND WATER SAMPLING

The two new wells at the capped area (FIGURE-6) will be sampled for PCBs only. The contractor would collect the samples using low-flow sampling techniques, probably with a Grundfos Redi-Flo II pump. The purge water will be disposed of in accordance with NYSDEC requirements. The samples would be sent to the state laboratory for analysis.

The four PVC wells by the landfill area (MW-1, MW-2, MW-3, and MW-4 in FIGURE-5) will be sampled by the contractor using low-flow sampling techniques. Samples collected from each well at landfill area would be analyzed for VOCs, SVOCs (base/neutrals only), PCBs, and metals. The eight inorganic samples (one of each well, a duplicate and a MS and MSD sample) would have to be sent to an outside laboratory for analysis. The other samples would be sent to the state laboratory. NYSDEC Region 1 staff will ship the samples to the respective laboratories.

3.8 REPORTING AND SCHEDULE:

The NYSDEC REGION-1 office will prepare a RI report. The report will incorporate the findings of the R1 activities. The report will identify specific contamination concentrations throughout each media (e.g. soil, groundwater, etc), which is necessary to determine whether any media require remediation or further evaluation. Key components of the RI report will include:

- Description of RI activities.
- Nature of fill in the test pits
- Comparison of site soil and groundwater analytical data to appropriate NYSDEC guidance values and standards.
- Monitoring well sampling details.

- Site photographs.
- Conclusion and recommendations.

The NYSDEC Region - 1 will implement the tasks by March 31, 2006. A draft report is scheduled for submission by June 30, 2006.

4. QUALITY ASSURANCE/QUALITY CONTROL PLAN (QA/QC PLAN)

4.1 INTRODUCTION

This QA/QC PLAN presents the objective, organization and specific protocols for field sampling, sample handling and storage, chain-of-custody, laboratory analysis, and data handling and management. Preparation of the plan was based on New York State Department Environmental Conservation guidance document "Draft DER - 10 Technical Guidance for Site Investigation and Remediation". The guidance documents mentioned in the Section 7.4 of the "Draft DER - 10 Technical Guidance for Site Investigation and Remediation" will also apply to all QA/QC protocols and SCGs values.

4.2 OBJECTIVE

The objective of the RCA Rocky Point site investigation is to determine what additional remedial measures, if any, are required to remediate this site. Previous analytical data and the analytical data generated from this investigation will be reviewed and a recommendation for no further action, additional investigation or additional remediation requirements will be made based on the data. All analytical data will be provided by the laboratories using the NYS June 2000 Analytical Services Protocols (ASP) Category B deliverable format. Units of concentrations should be µg/kg for soil samples and µg/l for groundwater samples.

4.3 ORGANIZATION

1. Abdur Rahman, Environmental Engineer 1, NYS Department of Environmental Conservation, Region 1, SUNY Building 40, Stony Brook, New York 11790. Phone: (631) 444 0247.

He is the overall Project Manager of the site and will coordinate and manage the sampling procedures, and will ensure that QA/QC protocols are implemented according to this Work Plan and NYSDEC guidance documents.

2. Robert Stewart, Environmental Engineer 1, NYS Department of Environmental Conservation, Region 1, SUNY Building 40, Stony Brook, New York 11790. Phone: (631) 444 0244

He will provide technical guidance for the sampling and analytical procedures and provide assistance with the sample collection. He will also oversee the project implementation.

4.4 SAMPLING PROCEDURES

4.4(A) Soil Sampling:

One soil sample will be collected from each of the three test pits based on the visual appearance of the soils, odors and/or PID readings. The soil samples will be collected directly from the bucket of the backhoe doing the test pit. No one will stand near the edge of the test pits nor enter any of the test pits, regardless of depth for health

and safety reasons. The soil sampling locations are shown in (FIGURE-4). Each of these three samples would be analyzed for VOCs, SVOCs (base/neutrals only), PCBs and metals. The organic samples would be sent to the state lab for analysis. The six inorganic samples (one for each pit, a duplicate and a MS and MSD) would be sent to an off-site ELAP certified laboratory. The state lab samples will have their own internal quality assurance review. The inorganic samples done by category B deliverables at an off-site lab are not currently planned for data review. However, if there are questions about the usability of the inorganic data, this task could be added later.

4.4(B) Groundwater Sampling:

The two new wells (MW-1 CA and MW-2 CA) at the capped area (FIGURE-6) would be sampled for PCBs only. The contractor will collect the samples using low-flow sampling techniques, probably with a Grundfos Redi-Flo II pump. The samples will be collected directly from the pump's discharge. The samples would be sent to the NYSDEC laboratory for PCB analysis.

The four PVC wells (MW-1, MW-2, MW-3 and MW-4 by the landfill (FIGURE-5) would be sampled by the contractor using low-flow sampling techniques. Samples collected from each well at landfill area would be analyzed for VOCs, SVOCs (base/neutrals only), PCBs, and metals. The eight inorganic samples (one of each well, a duplicate and a MS and MSD sample) would have to be sent to an outside laboratory for analysis. The other samples would be sent to the state laboratory. NYSDEC Region 1 staff will ship the samples to the respective laboratories.

All samples in the landfill area including QA/QC samples will be collected in duplicate sets. One set will be sent to the NYSDEC lab for organic analysis and another set to an outside NYSDOH certified ELAP lab for metal analysis. A trip blank will accompany each cooler that contains samples to be analyzed for VOCs.

4.5 CHAIN-OF-CUSTODY PROCEDURES

For each day of sampling, a chain-of-custody sheet will be completed and submitted to the laboratory. A copy of the chain-of-custody sheet will also be retained by the Project Manager. The chain-of-custody sheet will include the project name, the sampler's signature, the sampling locations, the date and time of sample collection, and analysis parameters requested. The sampling container should be marked as NYSDEC Lab or ELAP as applicable.

4.6 QA/QC SAMPLES

QA/QC samples will be obtained during the groundwater sampling and soil sampling. Disposable spoons or scoops for soil sampling will be used, so a field blank sample will not be required for the soil sampling. Dedicated tubing will be used for the low-flow sampling equipment so that no field blank will be required for the groundwater sampling. During groundwater and soil sampling, one trip blank per cooler will be provided by the laboratory for each set of samples to be submitted to the laboratory for VOC analysis. The trip blanks will be prepared from analyte-free water by the laboratory

and will remain in the coolers in which the samples are stored. Trip blanks will be analyzed for VOCs. The purpose of trip blanks are to ensure that no cross-contamination of VOCs occurs in the sample cooler and to attest to laboratory water quality.

A matrix spike and matrix spike duplicate for groundwater samples will be submitted to the laboratory by obtaining two extra volumes of a selected groundwater sample. As per NYSDEC QA/QC protocol, the frequency of matrix spike and matrix spike duplicates should be one per 20 samples. As six groundwater samples will be collected, one matrix spike and one matrix spike duplicate will be sufficient. The purpose of the matrix spike and matrix spike duplicates are to confirm the accuracy and precision of the laboratory.

A matrix spike and matrix spike duplicate for soil samples will also be submitted to the laboratory by obtaining two extra volumes of a selected soil sample. One matrix spike and one matrix spike duplicate will be submitted. As per NYSDEC QA/QC protocol, the frequency of matrix spike and matrix spike duplicates should be one per 20 samples. As only three soil samples are planned, one matrix spike and one matrix spike duplicate will be sufficient.

In addition, one field duplicate for soil sampling and one for groundwater sampling will also be obtained. Each field duplicate sample will be prepared by collecting a separate aliquot of a parent sample. The field duplicate sample will be analyzed for the same parameters as the primary sample and the results will be used to attest to the precision of the laboratory.

No VOC samples will be sent to outside laboratory, so a trip blank will not be required for this cooler of metal samples.

4.7 SAMPLE ANALYSIS

4.7(A) Soil:

The soil samples collected from the landfill area (TP-1, TP-2, and TP-3, Figure-4) will be analyzed for VOCs, SVOCs (base/neutrals only), PCBs, and metals. One set of the three soil samples will be sent to the NYSDEC laboratory for VOCs, SVOCs, and PCBs analysis. Another set of the three soil samples will be sent to a New York State Department of Health certified ELAP laboratory for metals analysis. Separate QA/QC samples will be submitted to the NYSDEC lab and ELAP lab. Additional soil samples will be collected from any test pit that would not be adequately characterized by one soil sample. Analytical methods, preservation, container requirements, and holding times are shown on (TABLE -14).

4.7(B) Groundwater:

The groundwater samples collected from the capped area (MW-1 CA and MW-2 CA in Figure-6) will be analyzed for PCBs only EPA analytical method 8082. These samples will be sent to the NYSDEC lab.

The groundwater samples from the landfill area (MW-1, MW-2,MW-3, and MW-4 in Figure 5) will be analyzed for VOCs, SVOCs (base/neutrals only), PCBs, and metals. One set of these groundwater samples will be submitted to the NYSDEC laboratory for VOCs, SVOCs (base/neutrals only), and PCBs analysis. Another set of these groundwater samples will be sent to a New York State Department Of Health certified ELAP laboratory for metals analysis. Separate QA/QC samples will be submitted to the NYSDEC lab and ELAP lab (No trip blank to outside lab). Analytical methods, preservation, container requirements, and holding time have been shown in Section 4.8 (TABLE - 14).

4.8 ANALYTICAL METHODS/QUALITY ASSURANCE SUMMARY TABLE (SOIL)

Sample Matrix	Sample Designations	Location	Parameters	EPA Method	Sample preservation	Holding Time	Sample Container	Laboratory
Soil	TP-1, (*1) TP-2, TP-3	Landfill	VOCs,	8260 B	Cool to 4°C No headspace	7 days to analysis	2-OZ glass jars	NYSDEC
Soil	TP-1, TP-2, TP-3	Landfill	SVOCs, Base/Neutrals	8270 C	Cool to 4°C	5 days to extraction ; 40 days from extraction to analysis	300 ml amber glass jar.	NYSDEC
Soil	TP-1, TP-2, TP-3	Landfill	PCBs	8082	Cool to 4°C	5 days to extraction ;40 days from extraction to analysis	300 ml amber glass jar.	NYSDEC
Soil	TP-1, TP-2, TP-3	Landfill	Metals TAL- 23	SW-846 Method 6010 B/7000 series	Cool to 4°C	26 days for Hg. Six months for other metals	300 ml amber glass jar.	NYSDOH ELAP certified lab.
Soil	Field duplicate TP -X (DEC) and TP-X (ELAP) (*2)	Landfill	Same Parameters as primary samples	Same methods applicable to parameters of primary samples	Same as primary samples	Same as primary sample	Same as primary sample	Organic samples at NYSDEC lab and inorganic sample at ELAP lab.
Soil	Matrix Spike MS (Soil)DEC and MS(Soil) ELAP	Landfill	Same Parameters as primary samples	Same methods applicable to parameters of primary samples	Same as primary samples	Same as primary sample	Same as primary sample	Organic samples at NYSDEC lab and inorganic sample at ELAP lab.
Soil	Matrix Spike Duplicate; MSD (Soil) DEC, MSD(Soil) ELAP	Landfill	Same Parameters as primary samples	Same methods applicable to parameters of primary samples	Same as primary samples	Same as primary sample	Same as primary sample	Organic samples at NYSDEC lab and inorganic sample at ELAP lab.

(*1) Additional soil samples will be collected, if necessary to adequately characterize the wastes in the landfill area.
(*2) TP-X is a blind duplicate of one of the test pit samples.

Actual number of samples may vary depending on field conditions and field observations.
MS/MSDs require duplicate volume for all parameters for soil.

4.9 ANALYTICAL METHODS/QUALITY ASSURANCE SUMMARY TABLE (GROUNDWATER)

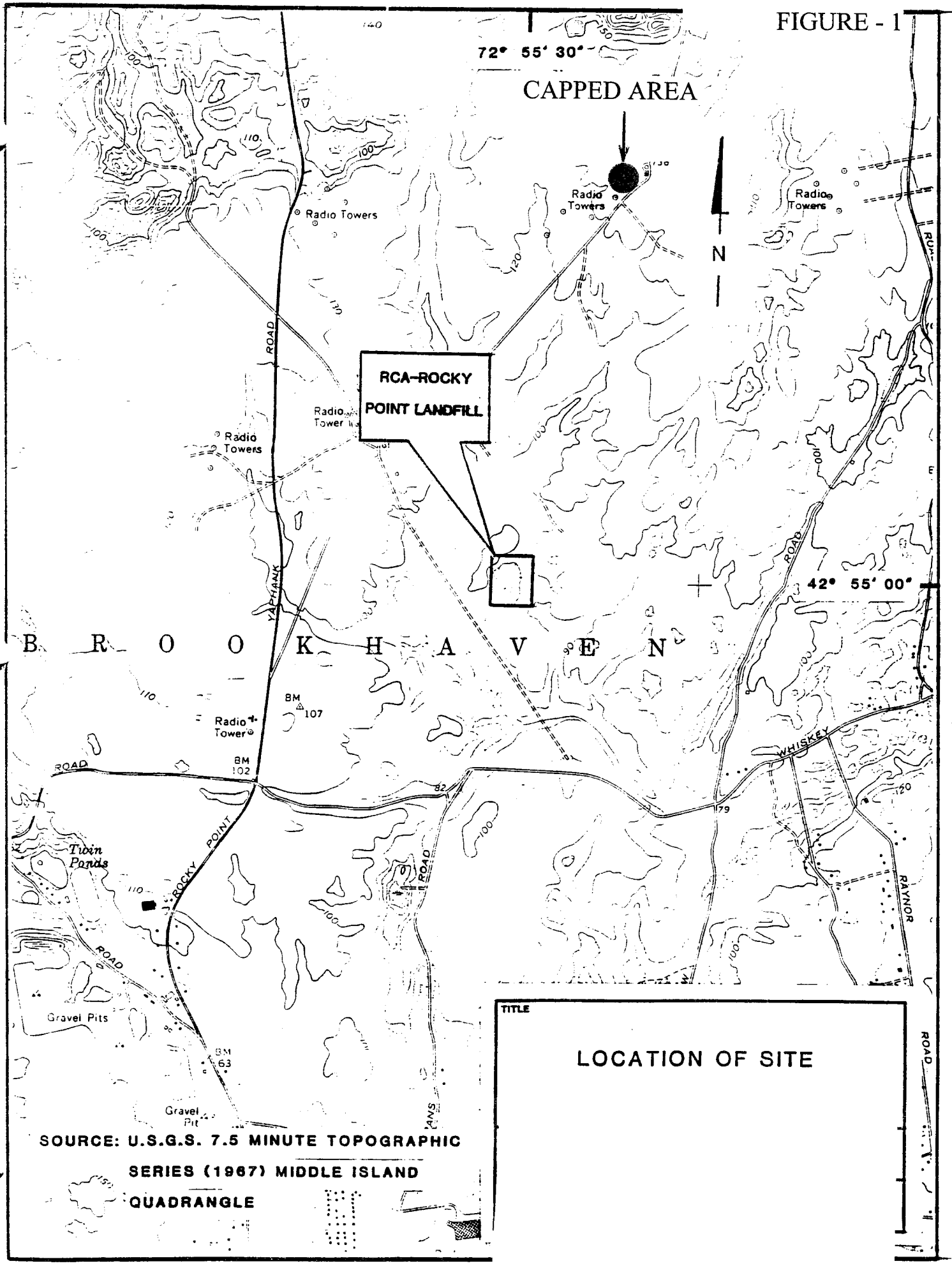
Sample Matrix	Sample Designations	Location	Parameters	EPA Method	Sample preservation	Holding Time	Sample Container	Laboratory
Groundwater	MW-1 CA, MW-2 CA	Capped area	PCBs	8082	Cool to 4°C	5 days to extraction; 40 days from extraction to analysis	1 L amber glass jars.	NYSDEC lab.
Groundwater	MW-1, MW-2, MW-3, MW-4	Landfill	PCBs	8082	Cool to 4°C	5 days to extraction; 40 days from extraction to analysis	1 L amber glass jars.	NYSDEC lab.
Groundwater	MW-1, MW-2, MW-3, MW-4	Landfill	VOCs	8260 B	pH less than 2 with HCL Cool to 4°C; No headspace	10 days to analysis	40 ml VOA vials	NYSDEC lab.
Groundwater	MW-1, MW-2, MW-3, MW-4	Landfill	SVOCs Base/Neutrals	8270 C	Cool to 4°C;	5 days to extraction; 40 days from extraction to analysis	1 L amber glass jars.	NYSDEC lab
Groundwater	MW-1, MW-2, MW-3, MW-4	Landfill	Metals	SW-846 Method 6010B/7000 Series	pH less than 2 with HNO3; Cool to 4°C;	26 days to analysis for Hg; 6 months to analysis for other metals.	1 L Polyethylene container.	NYSDOH certified ELAP lab.
Groundwater	Field duplicate; GW-X (*1)	Landfill	PCBs, VOCs, SVOCs (B/N only) and Metals.	PCBs-8082 VOCs-8260B SVOC-8270C TAL-SW-846 Method 6010B/7000 Series	Same as primary samples	Same as primary samples	Same as primary samples	NYSDEC lab for PCBs, VOCs, SVOCs. NYSDOH certified ELAP for metals
Groundwater	MS (GW) (*2)	Landfill	PCBs, VOCs, SVOCs, & Metals.	PCBs-8082 VOCs-8260B SVOC-8270C TAL-SW-846 Method 6010B/7000 Series	Same as primary samples	Same as primary samples	Same as primary samples	NYSDEC lab for PCBs, VOCs and SVOCs. NYSDOH certified ELAP for metals

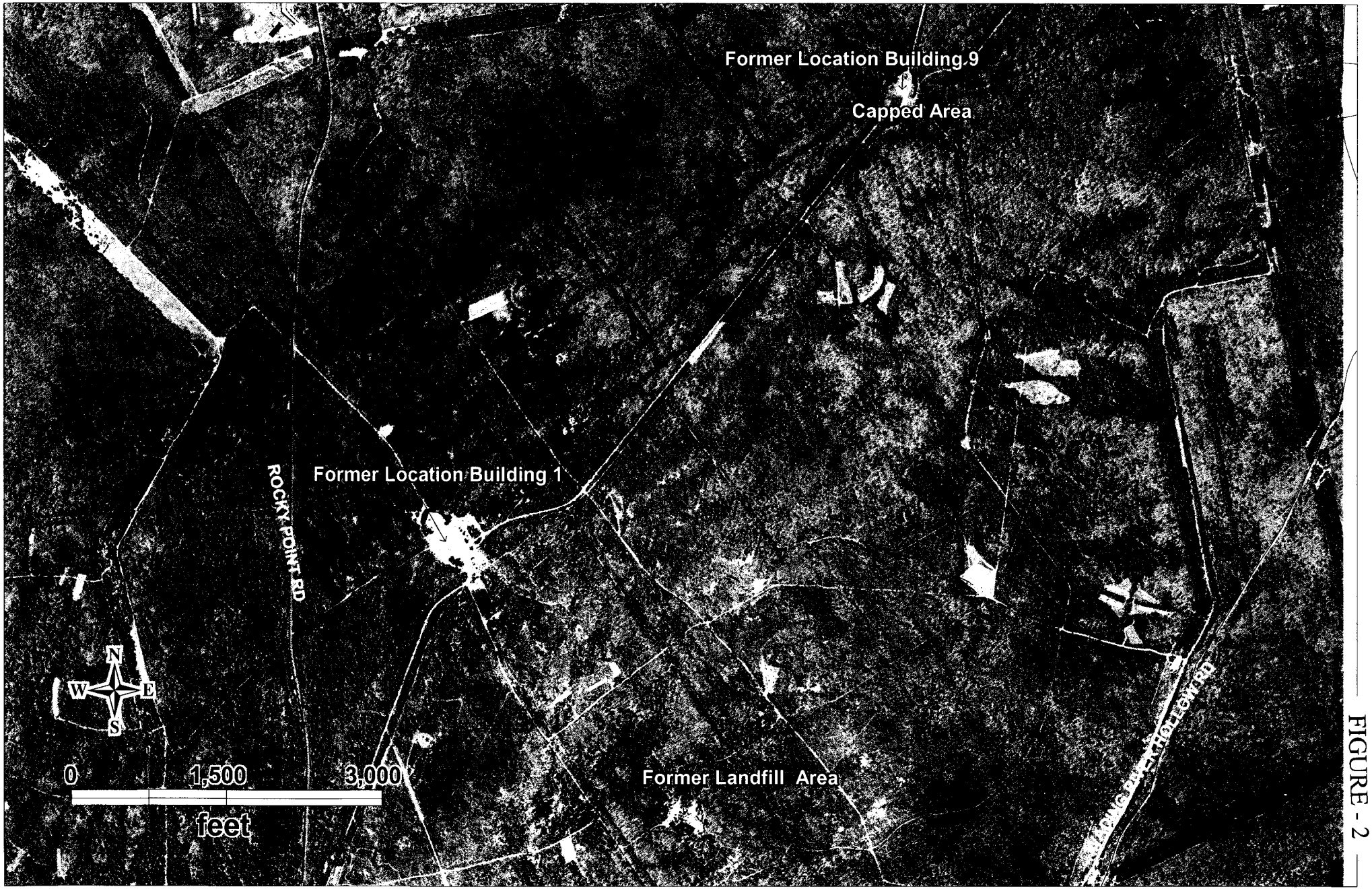
Groundwater	Matrix Spike Duplicate; MSD-(GW) (*2)	Landfill	PCBs, VOCs, SVOCs (B/N only) & Metals.	PCBs-8082 VOCs-8260B SVOC-8270C TAL-SW-846 Method 6010B/7000 Series	Same as primary samples	Same as primary samples	Same as primary samples	NYSDEC lab for PCBs, VOCs and SVOCs . NYSDOH certified ELAP for metals
Groundwater	Trip blane; 1 per Cooler	Landfill	VOCs	VOCs-8260B	pH less than 2 with HCL Cool to 4°C; No headspace	10 days to analysis	40 ml VOA vials	NYSDEC lab. No trip balank to outside lab.

Actual number of samples may vary depending on field conditions and field observations.
MS/MSDs require triplicate volume of groundwater sample for PCBs, VOCs, and SVOCs and duplicate volume for metals.

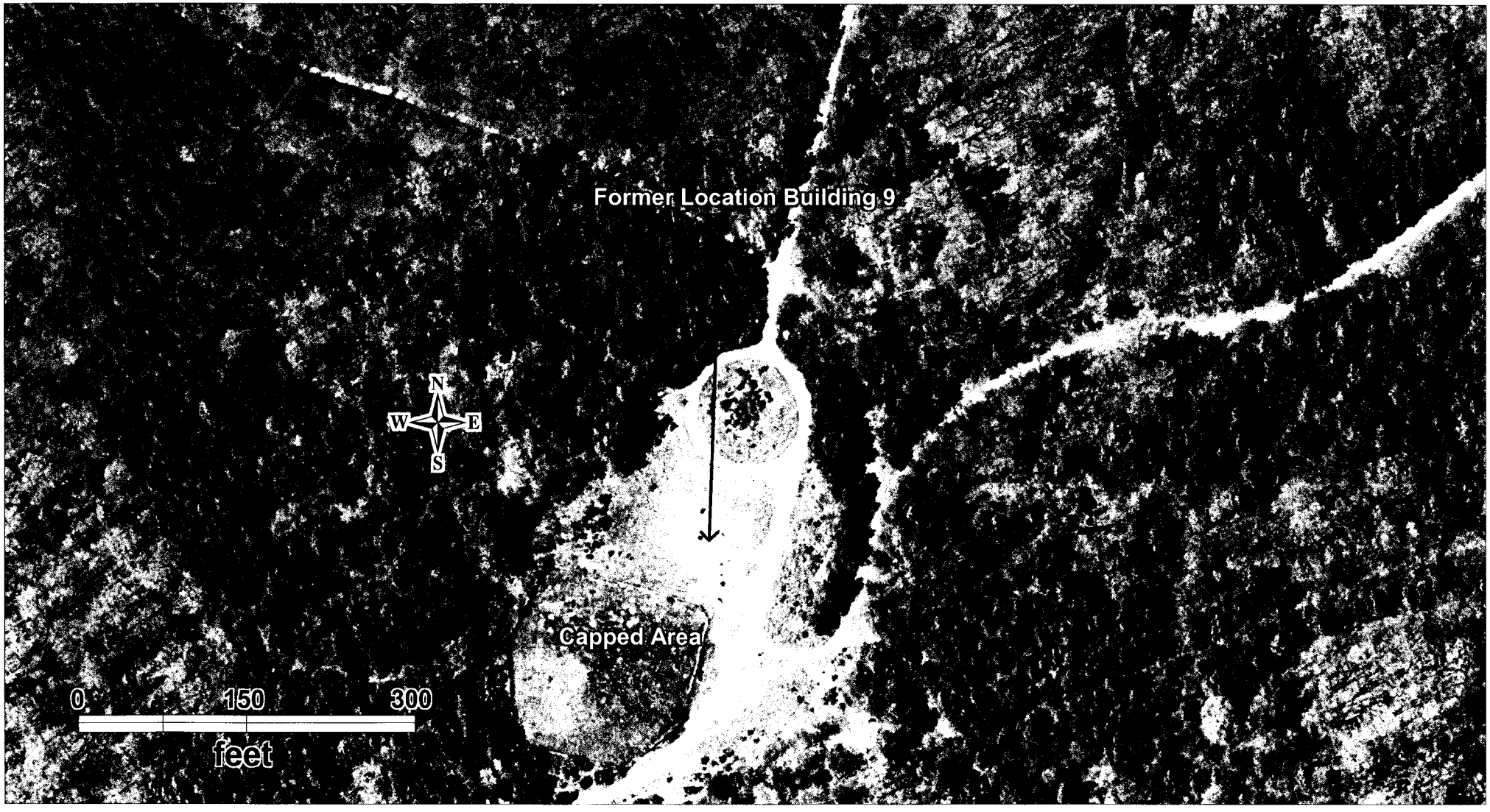
(*1) GW-X is a blind duplicate of one of the groundwater samples.
(*2) MS/MSD will be collected at one of the groundwater sampling locations;

FIGURE - 1


72° 55' 30"
CAPPED AREA
N
RCA-ROCKY
POINT LANDFILL
Radio Towers
Radio Towers
Radio Towers
Radio Tower
Radio Towers
42° 55' 00"
B R O O K H A V E N
YAPHANK ROAD
ROCKY POINT ROAD
WHISKEY ROAD
RAYNOR ROAD
BM 107
BM 102
BM 63
Radio Tower
Twin Ponds
Gravel Pits
Gravel Pit
TITLE
LOCATION OF SITE
SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC
SERIES (1967) MIDDLE ISLAND
QUADRANGLE



LOCATIONS OF SITE (CAPPED AREA AND LANDFILL AREA) IN AERIAL MAP.



LOCATION OF SITE (CAPPED AREA) IN AERIAL MAP

FIGURE - 3

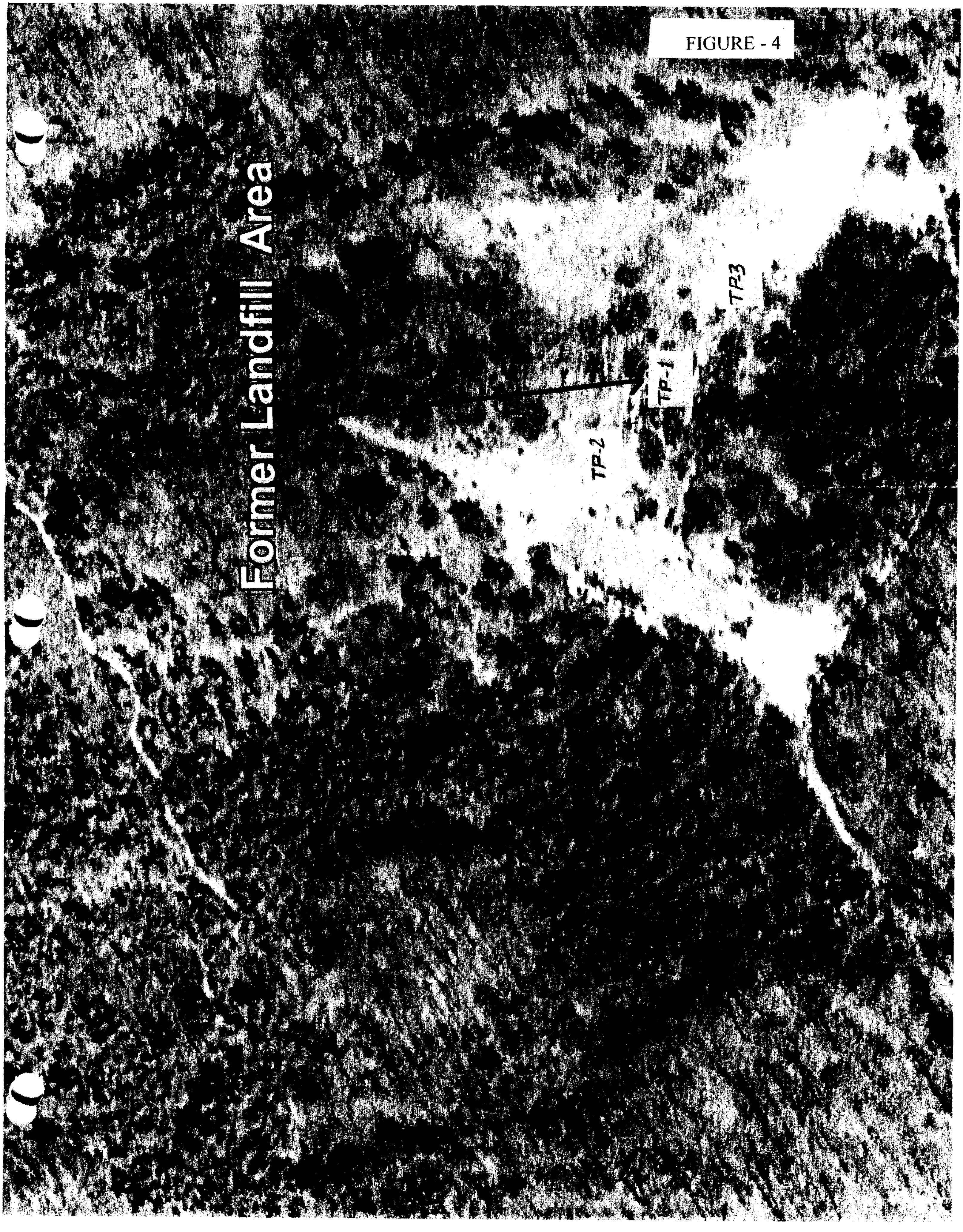
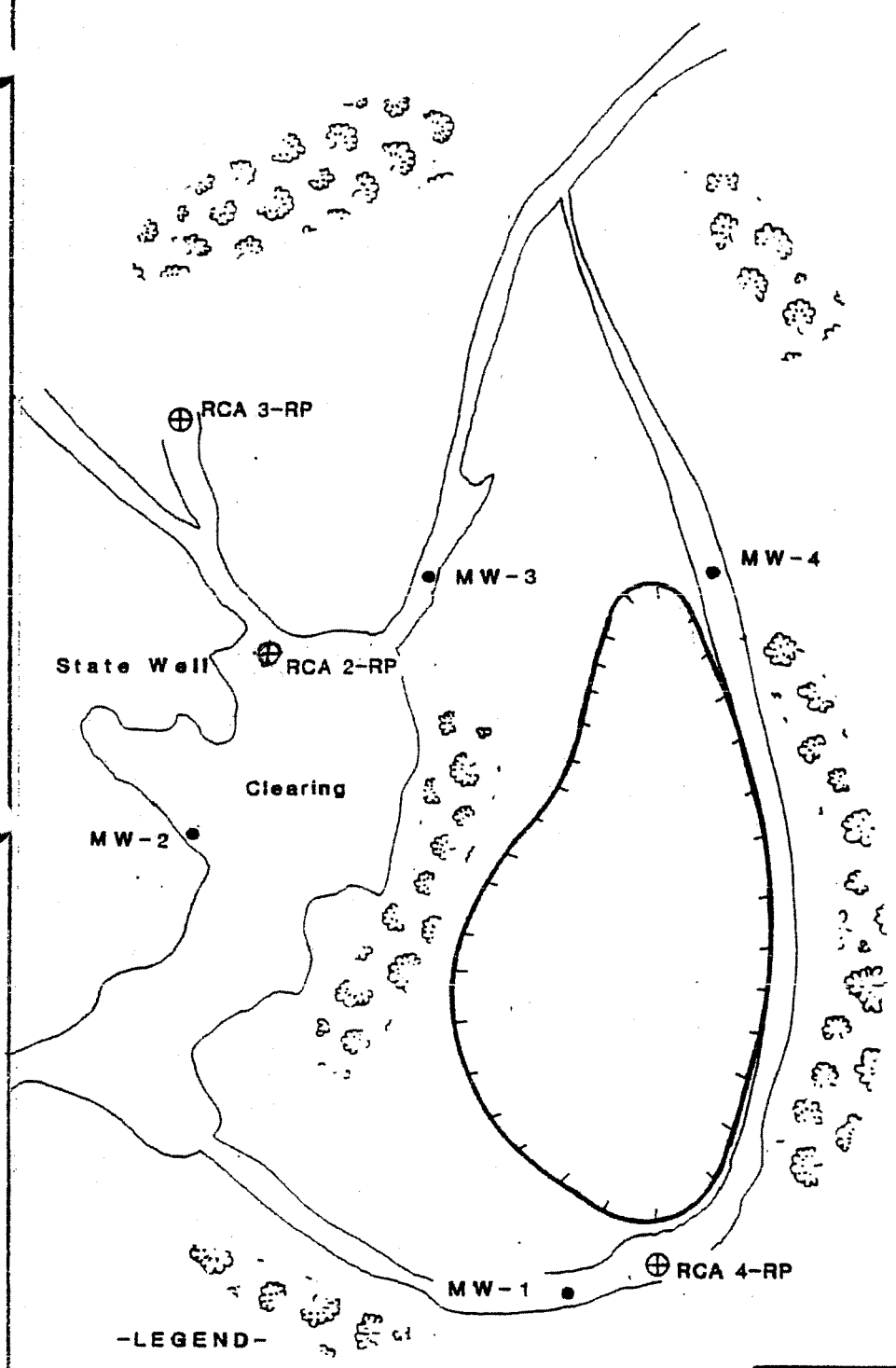


FIGURE - 4

FIGURE - 5



TITLE

LOCATIONS OF MONITORING WELLS AND SHALLOW SOIL SAMPLES

PREPARED FOR

GIBBS AND HILL / NYSDEC

ROUX Consulting Ground-Water Geologists ROUX ASSOCIATES INC

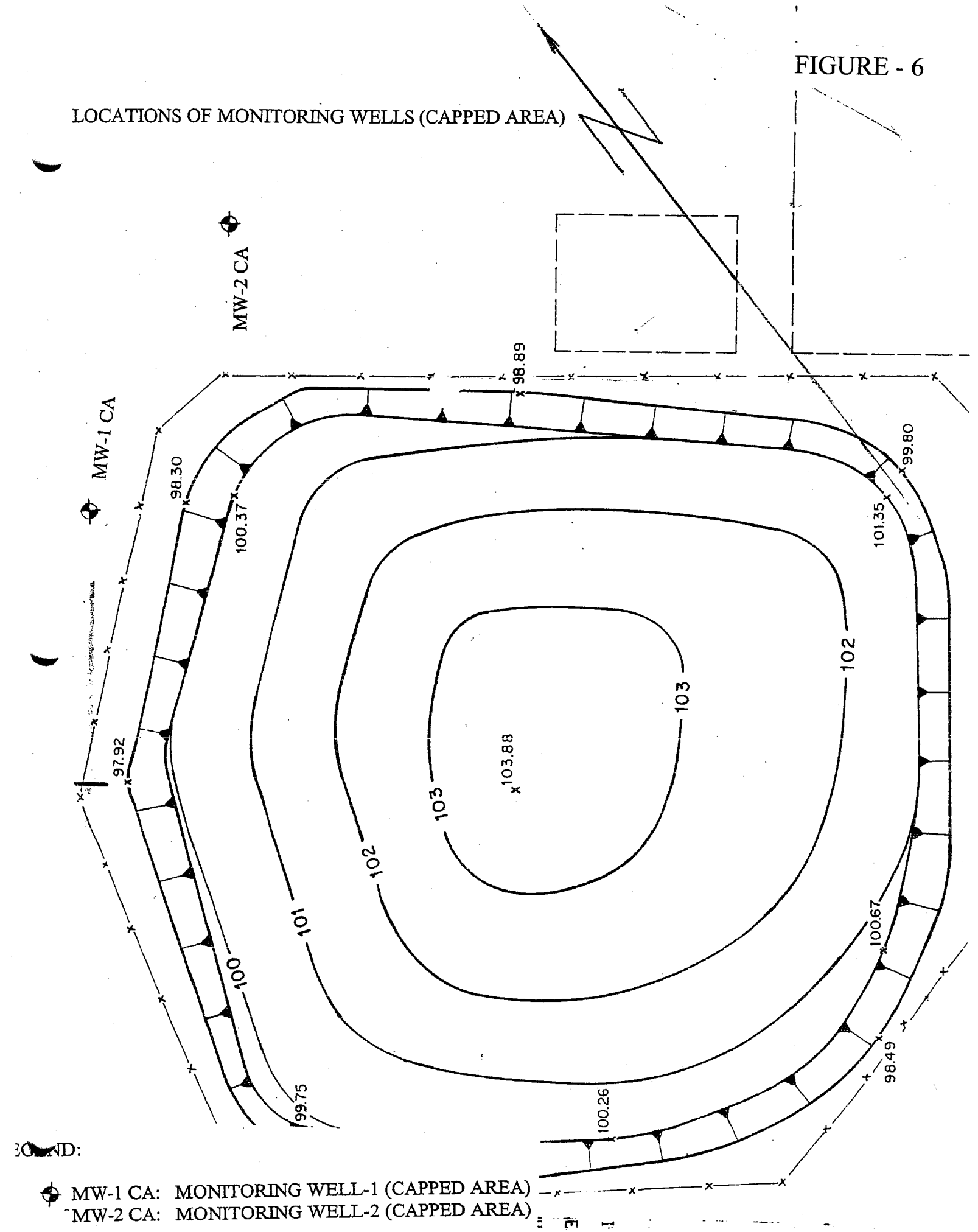
SCALE SHOWN

DATE 11/88

FIGURE 2

FIGURE - 6

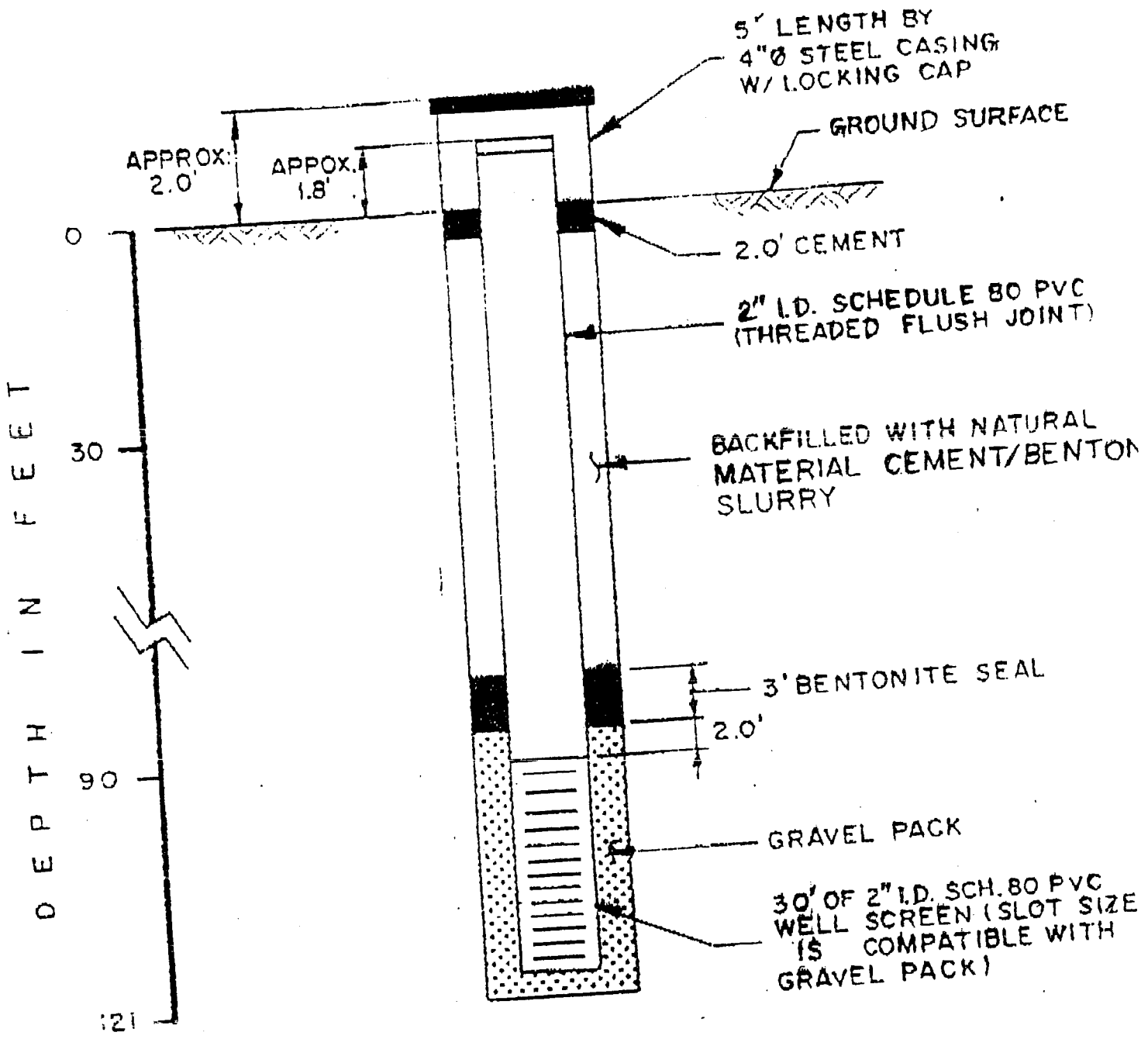
LOCATIONS OF MONITORING WELLS (CAPPED AREA)



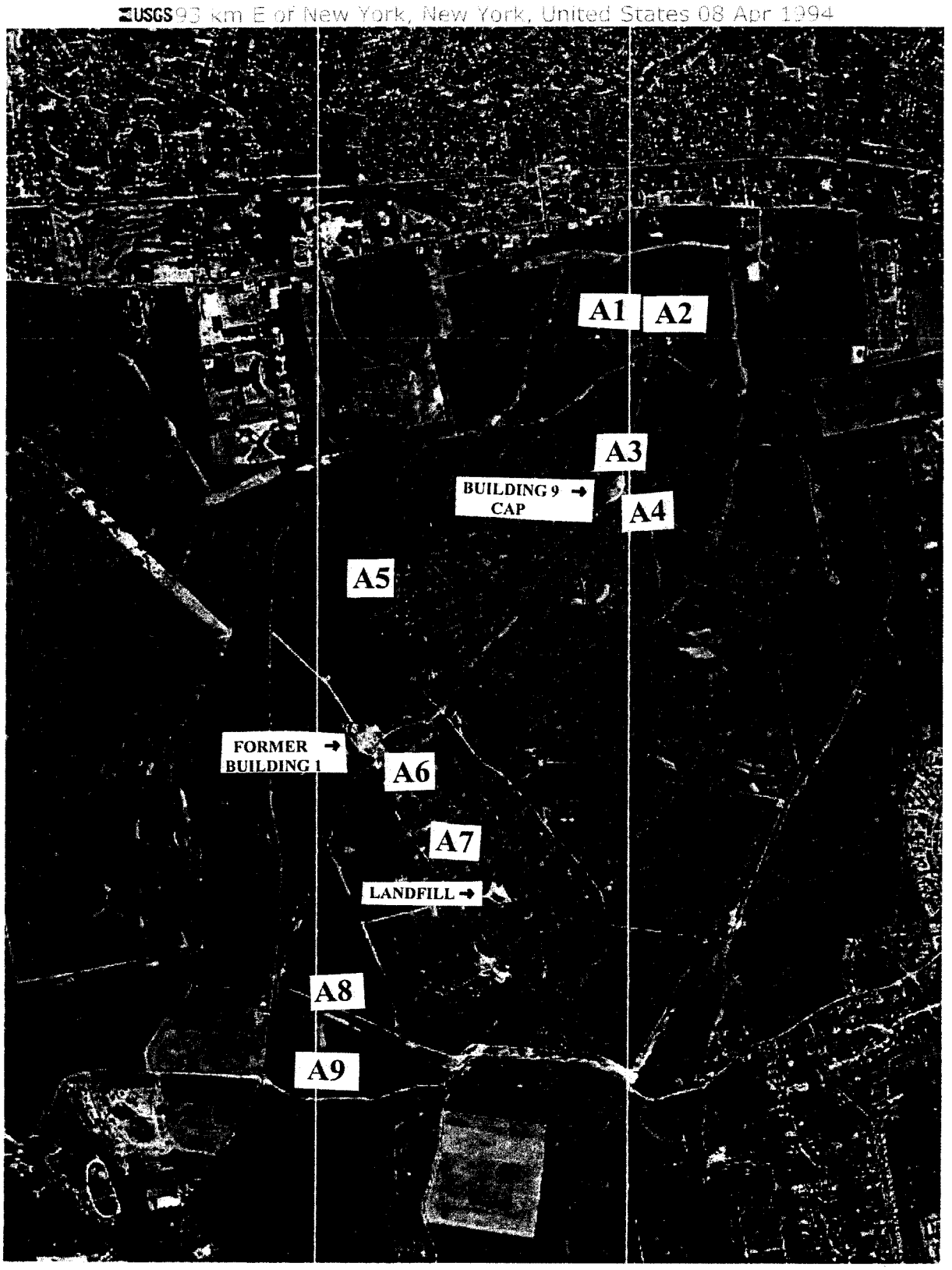
LEGEND:

MW-1 CA: MONITORING WELL-1 (CAPPED AREA)

MW-2 CA: MONITORING WELL-2 (CAPPED AREA)



MONITORING WELL DETAILS AT CAPPED AREA
(TO BE DECOMMISSIONED)

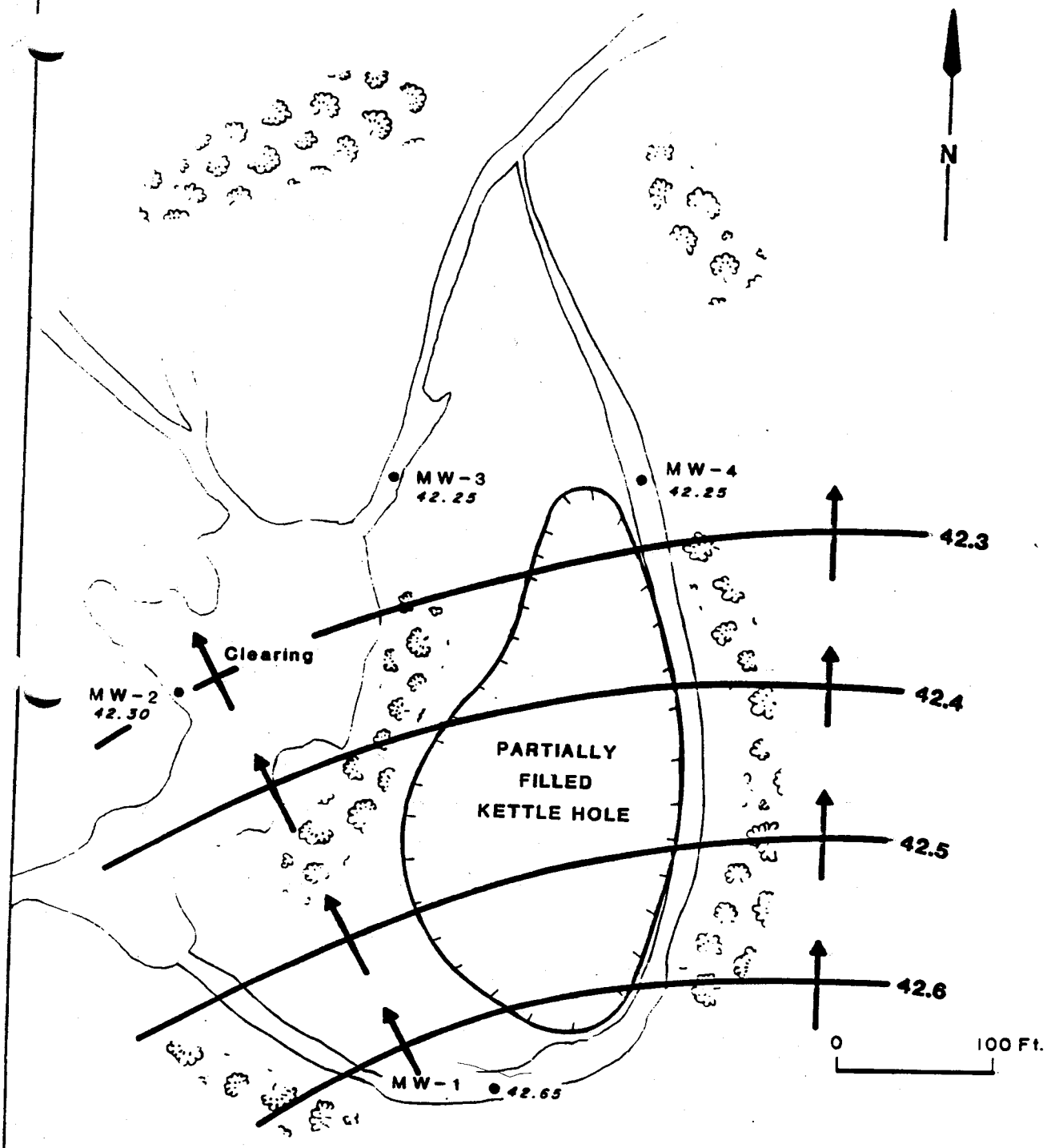


GEOPHYSICAL SURVEY LOCATIONS

RCA ROCKY POINT, SITE # 152011

A1 - SURVEY LOCATION 1

FIGURE - 9



LEGEND

MW-1 ● MONITORING WELL LOCATION AND DESIGNATION

42.65 ELEVATION OF THE WATER TABLE IN FEET RELATIVE TO A COMMON DATUM

—— LINE OF EQUAL ELEVATION OF THE WATER TABLE IN FEET RELATIVE TO A COMMON DATUM

←—— DIRECTION OF GROUND-WATER FLOW

TITLE

WATER TABLE ELEVATION

NOVEMBER 3, 1989

PREPARED FOR

GIBBS AND HILL / NYSDEC

ROUX Consulting Ground-Water Geologists ROUX ASSOCIATES INC

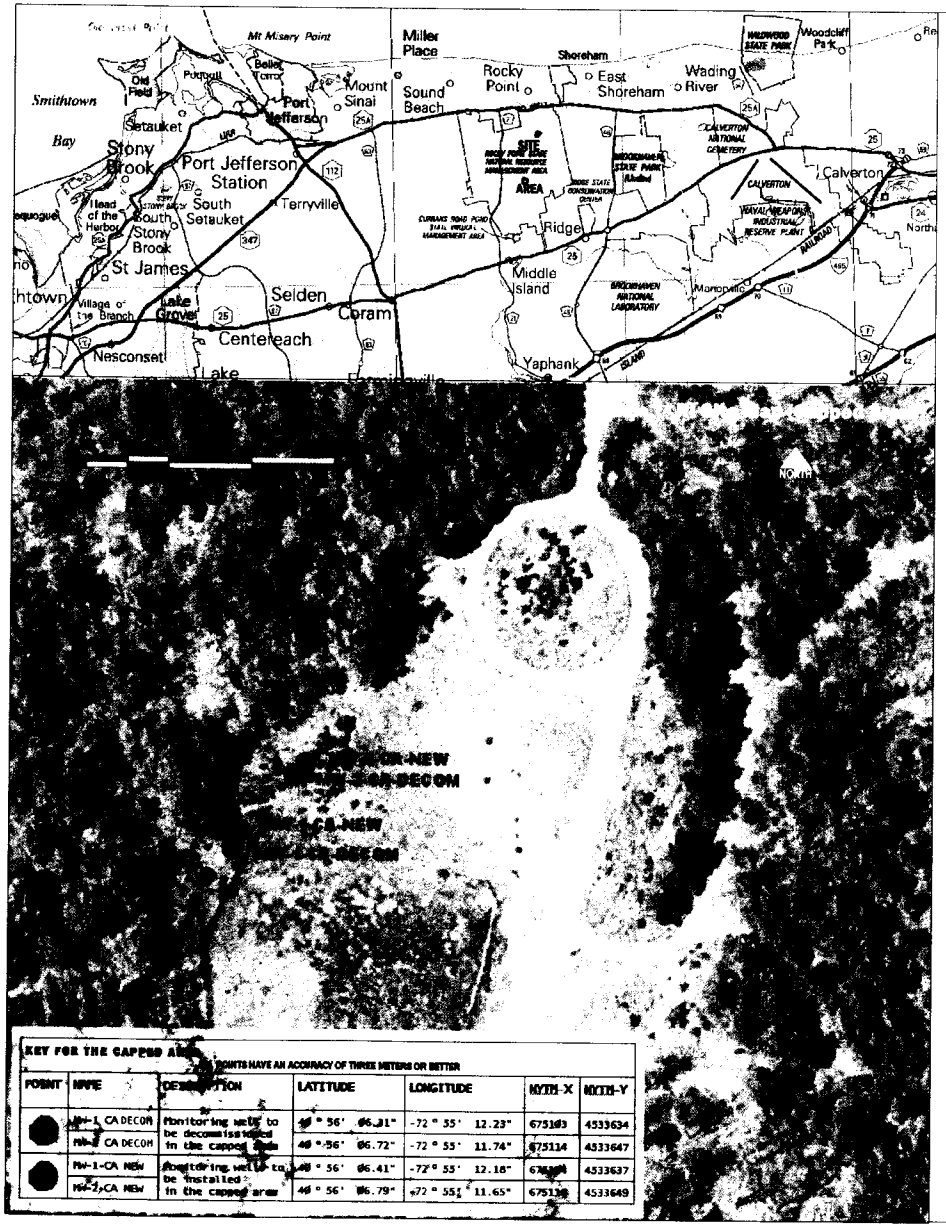
SCALE SHOWN

DATE 5/89

FIGURE 3.

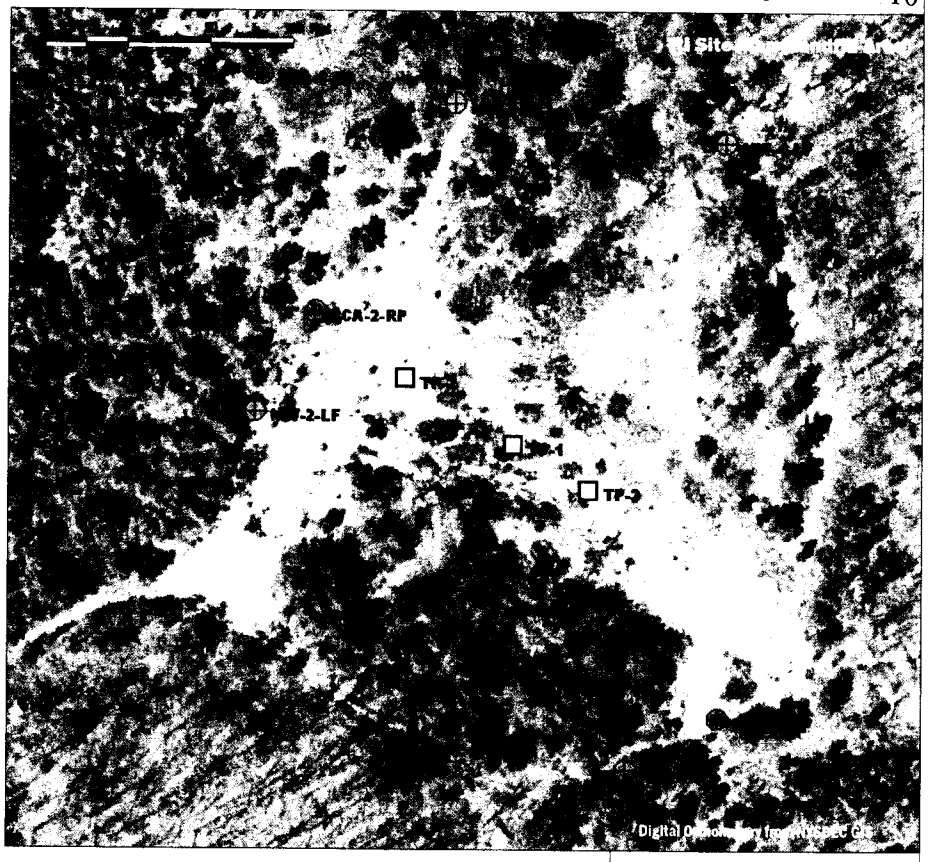
FIGURE-10

Remedial Investigation Site Maps FIGURE 10



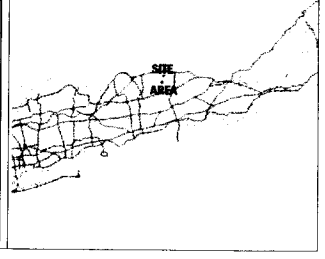
KEY FOR THE CAPPED AREA
ALL POINTS HAVE AN ACCURACY OF THREE METERS OR BETTER

POINT	NAME	DESCRIPTION	LATITUDE	LONGITUDE	NYTM-X	NYTM-Y
●	MW-1 CA DECOM	Monitoring wells to be decommissioned in the capped area	40° 56' 06.31"	-72° 55' 12.23"	675103	4533634
●	MW-2 CA DECOM		40° 56' 06.72"	-72° 55' 11.74"	675114	4533647
●	MW-1-CA NEW	Monitoring wells to be installed in the capped area	40° 56' 06.41"	-72° 55' 12.18"	675104	4533637
●	MW-2-CA NEW		40° 56' 06.79"	-72° 55' 11.65"	675116	4533649



KEY FOR THE LANDFILL AREA
ALL POINTS HAVE AN ACCURACY OF THREE METERS OR BETTER

POINT	NAME	DESCRIPTION	LATITUDE	LONGITUDE	NYTM-X	NYTM-Y
⊕	MW-1 LF	Landfill area monitoring wells to be sampled	40° 54' 57.15"	-72° 55' 37.74"	674557	4531487
	MW-2 LF		40° 54' 59.28"	-72° 55' 40.63"	674488	4531551
	MW-3 LF		40° 55' 01.03"	-72° 55' 38.99"	674525	4531606
	MW-4 LF		40° 55' 00.76"	-72° 55' 36.86"	674575	4531599
⊕	RCA-2 RP	2" steel monitoring wells in landfill area to be decommissioned	40° 54' 59.85"	-72° 55' 40.13"	674499	4531569
	RCA-3 RP		40° 55' 01.22"	-72° 55' 40.53"	674489	4531611
	RCA-4 RP		40° 54' 57.43"	-72° 55' 37.01"	674574	4531496
□	TP-1	Test pit to be dug in landfill area	40° 54' 59.05"	-72° 55' 38.57"	674536	4531545
	TP-2		40° 54' 59.45"	-72° 55' 39.41"	674516	4531557
	TP-3		40° 54' 58.76"	-72° 55' 37.98"	674559	4531537



MONITORING WELL CONSTRUCTION DETAILS (LANDFILL)

Table 1. Monitoring Well Construction Details, RCA Rocky Point Landfill, Rocky Point, New York.

Well Number	Bottom of Boring (ft)	Screen Zone (ft) *	Elevation of Measuring Point (ft)	Height of Measuring Point (ft)	Land Surface Elevation (ft)	Well Diameter (inches)
MW-1	62.00	59.00 - 49.00	95.34	2.24	93.10	2
MW-2	57.00	56.00 - 46.00	91.59	2.79	88.80	2
MW-3	55.00	53.50 - 43.50	88.99	2.09	86.90	2
MW-4	53.70	53.00 - 43.00	89.14	2.14	87.00	2

Note: * Well depths and screen zones are measured from land surface.
- Measuring point elevation is relative to a common datum.
- Measuring point for all monitoring wells is top of PVC.
- Height of measuring point is measured in feet above land surface.

ETC

DEC 29, 1988
QC9958

QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

PCB Compounds - GC/MS Analysis Data (QR83)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
BH6639	O.H. MATERIALS	OH6321RET	MW-01	881214	1400	0

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen Added ug/l	% Recov
18P	PCB-1242	ND	46	ND	ND	ND	0	-	ND	0	-
19P	PCB-1254	ND	46	ND	ND	ND	0	-	ND	0	-
20P	PCB-1221	ND	46	ND	ND	ND	0	-	ND	0	-
21P	PCB-1232	ND	46	ND	ND	ND	0	-	ND	0	-
22P	PCB-1248	ND	46	ND	ND	ND	0	-	ND	0	-
23P	PCB-1260	ND	46	67.8	69.8	ND	100	59	ND	123	55
24P	PCB-1016	ND	46	ND	ND	ND	0	-	ND	0	-

a. zero and variable recoveries have been manually verified.

TABLE-7

ETC

DEC 29, 1988
QC9958

QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

PCB Compounds - GC/MS Analysis Data (QR83)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
BH6640	O.H. MATERIALS	OH6321RET	MW-02	881214	1530	0

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen Added ug/l	% Recov	Unspiked Sample ug/l	Concen Added ug/l	% Recov
18P	PCB-1242	ND	44	ND	ND	ND	0	-	ND	0	-
19P	PCB-1254	ND	44	ND	ND	ND	0	-	ND	0	-
20P	PCB-1221	ND	44	ND	ND	ND	0	-	ND	0	-
21P	PCB-1232	ND	44	ND	ND	ND	0	-	ND	0	-
22P	PCB-1248	ND	44	ND	ND	ND	0	-	ND	0	-
23P	PCB-1260	ND	44	67.8	69.8	ND	100	59	ND	123	55
24P	PCB-1016	ND	44	ND	ND	ND	0	-	ND	0	-

All zero and variable recoveries have been manually verified.

TABLE-3

H2M LABS, INC.
575 Broad Hollow Road, Melville, N.Y. 11747
(516) 694-3040 FAX: (516) 694-4122
ENVIRONMENTAL and INDUSTRIAL ANALYTICAL LABORATORY

TABLE-4

(LANDFILL)

PESTICIDE ORGANICS ANALYSIS DATA SHEET

MW #1
RCA ROCKY PT
LANDFILL
ROUX ASSOCIATES

Lab Name: H2M LABS, INC. Contract: GIBBS & HILL

Matrix: WATER
Sample wt: vol 1000 (mL)
Level: LOW
% Moisture: not dec. X dec.
Extraction: SepF
GPC Cleanup: N pH: 6

Lab Sample ID: 871847
Lab File ID: 186 / 661 / 1363
Date Received: 11/03/88
Date Extracted: 11/06/88
Date Analyzed: 12/2/88 / 11/22/88 / 3/31/89
Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.5	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.5	U
5103-74-2	gamma-Chlordane	0.5	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.5	U
11104-28-2	Aroclor-1221	0.5	U
11141-16-5	Aroclor-1232	0.5	U
53469-21-9	Aroclor-1242	0.5	U
12672-29-6	Aroclor-1248	0.5	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

Date Reported: 05/16/89

John J. Molloy, P.E.
Laboratory Director

H2M LABS, INC.
575 Broad Hollow Road, Melville, N.Y. 11747
(516) 694-3040 FAX: (516) 694-4122
ENVIRONMENTAL and INDUSTRIAL ANALYTICAL LABORATORY

TABLE-5

PESTICIDE ORGANICS ANALYSIS DATA SHEET

LANDFILL

MW #2
RCA ROCKY PT
LANDFILL
ROUX ASSOCIATES

Lab Name: H2M LABS, INC. Contract: GIBBS & HILL

Matrix: WATER
Sample wt: vol 1000 (mL)
Level: LOW
% Moisture: not dec. X dec.
Extraction: SepF
GPC Cleanup: N pH: 6

Lab Sample ID: 871848
Lab File ID: 188 / 663 / 1364
Date Received: 11/03/88
Date Extracted: 11/06/88
Date Analyzed: 12/2/88 / 11/22/88 / 3/31/89
Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.5	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.5	U
5103-74-2	gamma-Chlordane	0.5	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.5	U
11104-28-2	Aroclor-1221	0.5	U
11141-16-5	Aroclor-1232	0.5	U
53469-21-9	Aroclor-1242	0.5	U
12672-29-6	Aroclor-1248	0.5	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

Date Reported: 05/16/89

****
Molloy
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John J. Molloy, P.E.
Laboratory Director

H2M LABS, INC.
575 Broad Hollow Road, Melville, N.Y. 11747
(516) 694-3040 FAX: (516) 694-4122
ENVIRONMENTAL and INDUSTRIAL ANALYTICAL LABORATORY

TABLE-6

PESTICIDE ORGANICS ANALYSIS DATA SHEET

MW #3
RCA ROCKY PT
LANDFILL -
ROUX ASSOCIATES

Lab Name: H2M LABS, INC. Contract: GIBBS & HILL

Matrix: WATER
Sample wt: vol 1000 (mL)
Level: LOW
% Moisture: not dec. X dec.
Extraction: SepF
GPC Cleanup: N pH: 6

Lab Sample ID: 871849
Lab File ID: 189 / 664 / 1366
Date Received: 11/03/88
Date Extracted: 11/06/88
Date Analyzed: 12/2/88 / 11/22/88 / 3/31/89
Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.5	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.5	U
5103-74-2	gamma-Chlordane	0.5	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.5	U
11104-28-2	Aroclor-1221	0.5	U
11141-16-5	Aroclor-1232	0.5	U
53469-21-9	Aroclor-1242	0.5	U
12672-29-6	Aroclor-1248	0.5	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

Date Reported: 05/16/89

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John J. Molloy, P.E.
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575 Broad Hollow Road, Melville, N.Y. 11747
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ENVIRONMENTAL and INDUSTRIAL ANALYTICAL LABORATORY

TABLE-7

PESTICIDE ORGANICS ANALYSIS DATA SHEET

MW #4 / 871850
RCA ROCKY PT LANDFILL
ROUX ASSOCIATES

Lab Name: H2M LABS, INC. Contract: GIBBS & HILL

Matrix: WATER
Sample wt: vol 1000 (mL)
Level: LOW
% Moisture: not dec. X dec.
Extraction: SEPF
GPC Cleanup: None pH: 6

Lab Sample ID: 871850
Lab File ID: 190 / 665
Date Received: 11/03/88
Date Extracted: 11/06/88
Date Analyzed: 12/02/88 / 11/22/88
Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.5	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.5	U
5103-74-2	gamma-Chlordane	0.5	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.5	U
11104-28-2	Aroclor-1221	0.5	U
11141-16-5	Aroclor-1232	0.5	U
53469-21-9	Aroclor-1242	0.5	U
12672-29-6	Aroclor-1248	0.5	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

Date Reported: 06/15/89

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John J. Molloy, P.E.
Laboratory Director

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575 Broad Hollow Road, Melville, N.Y. 11747
(516) 694-3040 FAX: (516) 694-4122
ENVIRONMENTAL and INDUSTRIAL ANALYTICAL LABORATORY

TABLE-8

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SS-1
RCA ROCKY PT
LANDFILL
ROUX ASSOCIATES

Lab Name: H2M LABS, INC. Contract: GIBBS & HILL

Matrix: SOIL
Sample wt: 27.9 (g)
Level: LOW
% Moisture: not dec. 10 dec.
Extraction: SONC
GPC Cleanup: N pH: 5.0

Lab Sample ID: 871860
Lab File ID: 194 / 679 / 1368
Date Received: 11/03/88
Date Extracted: 11/07/88
Date Analyzed: 12/2/88 / 11/29/88 / 3/31/89
Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/Kg	Q
319-84-6	alpha-BHC	8	U
319-85-7	beta-BHC	8	U
319-86-8	delta-BHC	8	U
58-89-9	gamma-BHC (Lindane)	8	U
76-44-8	Heptachlor	8	U
309-00-2	Aldrin	8	U
1024-57-3	Heptachlor epoxide	8	U
959-98-8	Endosulfan I	16	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

Date Reported: 05/16/89

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John J. Molloy, P.E.
Laboratory Director

H2M LABS, INC.
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ENVIRONMENTAL and INDUSTRIAL ANALYTICAL LABORATORY

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SS-2
RCA ROCKY PT
LANDFILL
ROUX ASSOCIATES

Lab Name: H2M LABS, INC. Contract: GIBBS & HILL

Matrix: SOIL
Sample wt: 28.7 (g)
Level: LOW
% Moisture: not dec. 2.1 dec. ___
Extraction: SONC
GPC Cleanup: N pH: 5.4

Lab Sample ID: 871861
Lab File ID: 195 / 680 / 1369
Date Received: 11/03/88
Date Extracted: 11/07/88
Date Analyzed: 12/2/88 / 11/29/88 / 3/31/89
Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/Kg	Q
319-84-6	alpha-BHC	8	U
319-85-7	beta-BHC	8	U
319-86-8	delta-BHC	8	U
58-89-9	gamma-BHC (Lindane)	8	U
76-44-8	Heptachlor	8	U
309-00-2	Aldrin	8	U
1024-57-3	Heptachlor epoxide	8	U
959-98-8	Endosulfan I	16	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

Date Reported: 05/16/89

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John J. Molloy, P.E.
Laboratory Director

TABLE-10

H2M LABS, INC.

575 Broad Hollow Road, Melville, N.Y. 11747
(516) 694-3040 FAX: (516) 694-4122

ENVIRONMENTAL and INDUSTRIAL ANALYTICAL LABORATORY

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SS-3
RCA ROCKY PT
LANDFILL
ROUX ASSOCIATES

Lab Name: H2M LABS, INC. Contract: GIBBS & HILL

Matrix: SOIL
Sample wt: 26.0 (g)
Level: LOW
% Moisture: not dec. 16 dec.
Extraction: SONC
GPC Cleanup: N pH: 5.3

Lab Sample ID: 871862
Lab File ID: 196 / 681 / 1370
Date Received: 11/03/88
Date Extracted: 11/07/88
Date Analyzed: 12/2/88 / 11/29/88 / 3/31/89
Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/Kg	Q
319-84-6	alpha-BHC	8	U
319-85-7	beta-BHC	8	U
319-86-8	delta-BHC	8	U
58-89-9	gamma-BHC (Lindane)	8	U
76-44-8	Heptachlor	8	U
309-00-2	Aldrin	8	U
1024-57-3	Heptachlor epoxide	8	U
959-98-8	Endosulfan I	16	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

Date Reported: 05/16/89

John J. Molloy, P.E.
Laboratory Director

(LANDFILL)

Summary of Soil Sampling Data Collected on November 3, 1988, RCA Rocky Point Landfill, Brookhaven, New York.

Sample Designation:	SS-1	SS-2	SS-3	SS-3R*	Field Blank	Trip Blank
(All sample concentrations in ug/kg)						
Volatile Organic Compounds						
Methylene chloride	37	29	31	32	--	4 J
Acetone	9 J	41	25	--	--	--
Chloroform	--	--	1 J	--	--	--
Toluene	4 J	4 J	3 J	5	--	--
Tentatively Identified Compounds**						
2-Methyl 2-pentene	10 B	--	21	12	9	6
2,3-Dimethyl 2 nitrobutane	--	--	--	--	--	--
4-Methyl-1-pentene	--	--	--	14	11	8
1,1,2-Trichloro 1,2,2-trifluoroethane	40	--	--	--	--	--
1,1,2-Trimethylcyclopropane	6	--	--	--	--	--
3-Penten-2-one	--	--	6	7	--	--
Unknown	--	--	--	--	--	16
Unknown	--	9	--	--	--	--
Unknown ketone	--	--	--	--	6	--
Unknown alkene	--	6	--	--	--	--
Unknown alkene	--	9	--	--	--	--
Semivolatile Organic Compounds						
Diethylphthalate	--	--	77	NA	--	NA
Butylbenzylphthalate	2300	--	--	NA	--	NA
bis (2-ethylhexyl) phthalate	1600 B	4300 B	3400 B	NA	20	NA
Tentatively Identified Compounds**						
Octadinoic acid	--	--	220	NA	--	NA
Eicosane,7-hexyl-(9CI)	290	--	--	NA	--	NA
Pentatriacontane (8CI9CI)	1900	--	--	NA	--	NA
Hexatriacontane (8CI9CI)	500	--	--	NA	--	NA
Dočosane (8CI9CI)	--	--	--	NA	12	NA
Hexadecane (8CI9CI)	1400	--	--	NA	--	NA
Eicosane,10-methyl-(9CI)	1400	--	--	NA	--	NA
Pentadecane (8CI9CI)	730	--	--	NA	--	NA
Tetratetracontane (8CI9CI)	250	--	1900	NA	--	NA
Hexadecanoic acid-(9CI)	--	390	--	NA	--	NA
Hexadecanoic acid, dioctyl	--	720	260	NA	--	NA
Methyl-Quinoline isomer	--	--	680	NA	--	NA
gamma-sitostreol	--	--	1400	NA	--	NA
Unknown	1400	1400	1500	NA	--	NA
Unknown	--	750	270	NA	--	NA
Unknown	--	--	220	NA	--	NA
Unknown	--	--	1100	NA	--	NA
Unknown	--	--	340	NA	--	NA
Unknown	--	--	530	NA	--	NA
Unknown	--	--	440	NA	--	NA
Unknown acid	--	180	--	NA	--	NA
Unknown organic acid	--	--	820	NA	--	NA
Unknown subs. alkane	--	--	1700	NA	--	NA
Metals						
Aluminum	4,440	5,510	3,510	NA	--	NA
Arsenic	2.9	3.0	1.9	NA	--	NA
Beryllium	--	--	--	NA	8	NA
Cadmium	--	--	--	NA	3	NA
Chromium	6.2	--	3.6	NA	--	NA
Copper	--	27.5	--	NA	--	NA
Iron	3,680	4,590	2,750	NA	--	NA
Lead	5.0	13.0	15.0	NA	--	NA
Magnesium	925	--	309	NA	--	NA
Manganese	109	32.9	52.5	NA	--	NA
Potassium	310	240	170	NA	--	NA
Silver	2.4	4.3	--	NA	--	NA
Sodium	4,450	4,640	2,680	NA	800	NA
Vanadium	10.9	--	8.9	NA	--	NA
Zinc	26.0	28.6	10.8	NA	--	NA

J = Indicates compound detected below detection limit, quantification estimated.
B = Indicates compound detected in blank.
* = SS-3R is a blind replicate of SS-3.
NA = Indicates compound not analyzed for.

Summary of Ground-Water Sampling Data Collected on November 3, 1988, RCA Rocky Point Landfill, Brookhaven, New York.

Well Designation:	MW-1#	MW-2	MW-3	MW-4	MW-5*	Field Blank	Trip Blank
(All sample concentrations in ug/L)							
Volatile Organic Compounds							
Methylene chloride	3 JB	6	4 JB	2 JB	-	--	4 J
2-Butanone	3 JB	--	24 B	--	--	--	--
1,1,1-Trichloroethane	--	12	--	--	--	--	--
Trichloroethene	--	--	2 J	--	--	--	--
Benzene	--	--	3 J	--	3 J	--	--
Toluene	--	2 J	19	--	-	--	--
Chlorobenzene	--	--	1 J	--	--	--	--
Tentatively Identified Compounds**							
2-Methyl 2-pentene	9 B	--	16 B	6 B	10 B	9	--
Hexane	6	17	9	--	27	--	--
2,3-Dimethyl 1-2 nitrobutane	--	7	--	--	--	--	6
Ethylindenhydrazine-acetaldehyde	--	--	--	5	--	--	--
Methylcyclopentane	--	--	--	--	6	--	--
4-Methyl 1-pentene	--	--	--	--	--	11	8
2,3-Dimethyl 2-butane	--	9	--	--	--	--	--
Unknown	--	8	5	11	8	--	16
Unknown	--	--	8	--	--	--	--
Unknown ketone	--	--	--	--	--	6	--
Semivolatile Organic Compounds							
1,2,4-Trichlorobenzene	--	--	--	--	3 J	--	NA
*Acenaphthene	--	--	--	--	3 J	--	NA
Pyrene	--	--	--	--	3 J	--	NA
Butylbenzylphthalate	--	--	--	--	170	--	NA
bis (2-Ethylhexyl) phthalate	--	--	--	--	16 B	20	NA
Tentatively Identified Compounds**							
Unknown	--	--	--	--	10	--	NA
Unknown alkane	--	--	--	--	60	--	NA
Unknown alkane	--	--	--	--	90	--	NA
Tentatively Identified Compounds**							
Octadecane,5,14-dibutyl-(9C)	--	--	--	--	40	--	NA
Octacosane (8CI9CI)	--	--	--	--	60	--	NA
Eicosane,7-hexyl-(9CI)	--	--	--	--	100	--	NA
Pentatriacontane (8CI9CI)	--	--	--	--	90	--	NA
Tritetracontane (8CI9CI)	--	--	--	--	70	--	NA
Hexatriacontane (8CI9CI)	--	--	--	--	48	--	NA
Heneicosane, 11-(1-ethylprop)	--	--	--	--	24	--	NA
Docosane (8CI9CI)	--	--	--	--	--	12	NA
Pesticides/PCBs							
Aldrin	--	--	--	--	--	0.12	NA

J = Indicates compound detected below detection limit, quantification estimated.
B = Indicates compound detected in blank.
* = MW-5 is a blind replicate of MW-3.
** = Indicates all concentrations estimated.
NA = Indicates compound not analyzed for.
# = Upgradient well.

LANDFILL)

Summary of Ground-Water Sampling Data Collected on November 3, 1988, RCA Rocky Point Landfill, Brookhaven, New York.

Well Designation:	MW-1#	MW-2	MW-3	MW-4	MW-5*	Field Blank	Trip Blank
(All sample concentrations in ug/L)							
Metals							
Aluminum	58,400	63,300	29,800	41,700	26,400	--	NA
Arsenic	80	110	57	96	60	--	NA
Barium	210	220	270	--	--	--	NA
Beryllium	--	--	--	9	5	B	NA
Cadmium	--	--	--	--	--	3	NA
Chromium	100	100	50	80	20	--	NA
Cobalt	170	120	70	110	100	--	NA
Copper	310	290	180	360	170	-	NA
Iron	104,000	130,000	7,400	166,000	66,200	--	NA
Lead	150	170	230	310	220	-	NA
Magnesium	5,200	3,400	2,900	5,200	3,200	--	NA
Manganese	13,000	4,900	3,100	5,100	2,800	--	NA
Mercury	--	0.2	--	--	--	--	NA
Nickel	100	50	50	80	80	--	NA
Potassium	7,400	8,000	5,400	7,600	5,100	--	NA
Silver	80	50	40	40	--	--	NA
Sodium	5,400	5,100	5,000	5,100	5,000	800	NA
Vanadium	--	--	70	60	--	--	NA
Zinc	260	180	140	240	140	--	NA

J = Indicates compound detected below detection limit, quantification estimated.
B = Indicates compound detected in blank.
* = MW-5 is a blind replicate of MW-3.
** = Indicates all concentrations estimated.
NA = Indicates compound not analyzed for.
# = Upgradient well.

HEALTH AND SAFETY PLAN

REMEDIAL INVESTIGATION - 2006
RCA ROCKY POINT (SITE #152011)
TOWN OF BROOKHAVEN
SUFFOLK COUNTY
NEW YORK

JANUARY 26, 2006

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
REGION -1
SUNY BUILDING - 40
STONY BROOK, NEW YORK 11790-2356

TABLE OF CONTENTS

HASP

RCA - ROCKY POINT RI - 2006

1.0 Introduction:

This Health and Safety Plan (HASP) addresses the health and safety practices that will be employed by workers participating in investigation activities at the RCA Rocky Point Site. The HASP takes into account the specific hazards inherent to the Site, and presents procedures to be followed by NYSDEC contractors, and all site visitors in order to avoid and if necessary, protect against health and/or safety hazards. All activities performed under this HASP will comply with Occupational Safety and Health Administration (OSHA) Regulations 29 CFR Part 1910 and 1926, and all other applicable federal, state, and local regulations. A copy of this HASP will be maintained on-site for the duration of work.

All workers who may participate in activities at the site that are under the direction of NYSDEC Region-1 are required to comply with the provisions specified in this HASP. All site visitors who enter designated work zones must also comply with this HASP. Refusal or failure to comply with the HASP or violation of any safety procedures by field personnel and/or contractors performing work covered by this HASP may result in immediate removal from the site.

1.1 Scope and Applicability of the HASP

This HASP is designed to be applicable to locations where remedial investigations are performed at the RCA Rocky Point site. This HASP may also be modified or amended to meet specific needs of the work proposed. This HASP will detail the site safety procedures, site background, and safety monitoring. It is the sole responsibility of the contractor to comply with the HASP.

1.2 Site Work Zone and Visitors

The site work zone during remedial investigations will be a 100 feet radius about the work location. This work zone may be extended if, in the judgement of the Construction Site Manager (CSM will be employed by the contractor and over all in charge of the construction operations) /the Project Manager, site conditions warrant a larger work zone.

No visitors will be permitted within the work zone without the consent of the Project Manager. All visitors will be required to be familiar with, and comply with, the HASP. The Project Manager/CSM will deny access to those whose presence within the work zone is unnecessary or those who are deemed by the PM /CSM to be in non-compliance with the HASP.

All site workers will be required to have 40-hour hazardous material training (eight-hour refresher courses annually), respirator fit test certification, and medical surveillance as stated in 29 CFR 1910.120.

The PM or Construction Site Manager will also give an on-Site health and safety discussion to all site personnel, including the workers, prior to initiating the site work. Workers not in attendance during the health and safety talk will be required to have the discussion with the PM/CSM prior to entering the work zone.

Emergency telephone numbers and directions to the nearest hospital are found in Table given below:

1.3 EMERGENCY TELEPHONE NUMBERS:

Police 911
Ambulance 911
N.Y.S. Department of Environmental Conservation (Spills) 631-444-0320
N.Y.S. Forest Ranger (R1 and R2) 646-739 4170 (Cell) or 631-444-0291
John T. Mather Memorial Hospital (Closest) 631-473-1320
St. Charles Hospital 631-474-6000
Stony Brook University Hospital 631-444-2465
Contractor's Contact Personnel - Will be added
NYSDEC Region-1 Contact Person: Abdur Rahman, P.M., 631-444-0247

Direction to John T. Mather Memorial Hospital
75 N Country Road
Port Jefferson, NY-11777-2119

1. Start out going NORTH on CR-21/ROCKY POINT RD toward INDUSTRIAL WAY. 0.6 miles
2. Turn LEFT onto NY-25A/N COUNTRY RD. 0.9 miles
3. Keep LEFT at the fork to go on NY-25A W. 4.0 miles
4. Turn RIGHT onto CRYSTAL BROOKHOLLOW RD/CRYSTAL BROOK HOLLOW RD. 0.3 miles
5. Turn LEFT onto N COUNTRY RD/CR-20 0.7 miles
6. End at 75 N Country Rd Port Jefferson, NY 11777-2119, US

Total Est. Time: 13 minutes Total Est. Distance: 6.87 miles

2.0 KEY PERSONNEL AND RESPONSIBILITIES

The project manager for this project will be Abdur Rahman, NYS DEC Region-1. The project visiting personnel may include Robert Stewart, John Conover, Timothy Byrnes, Walter J. Parish P.E.(RHWRE) and other NYSDEC personnel from Region 1 or main office in Albany, SCDHS personnel and NYSDOH personnel. Contractor personnel will also be on site. Contractor personnel will be provided with health and safety information by the Project Manager or Construction Site Manager.

3.0 Site Description:

3.1 General: This 5100 acre property consists of a small landfill and PCB capped area. The site was a transcontinental radio communication station from 1921 to 1978. Much of the property was cleared for antenna arrays which included towers 400 feet tall. The majority of the properties were covered by a grid work of timber antenna supports. In 1978, RCA turned the facility over to the New York State Department of Environmental Conservation.

3.2 Capped Area: The Building # 9 was the primary control and communication center, with ancillary buildings and structures around the site providing support services. Commencing in 1927, until 1975 , Rocky Point has been used as a solely transmitting station (there was a

receiving station at Riverhead). The PCB containing electrical equipment including capacitors and transformers had been operated at this part of Rocky Point facility for half of a century. During the period of August 1982 to January 1983, a limited remedial activity was performed to remove electrical equipment containing PCBs. During the removal operations, a PCB spill occurred outside of Building #9, which resulted in soil contamination. The concrete floor inside the building was also impacted. Between the period of December, 84 and June 85, approximately 22,000 cubic yards of PCB contaminated soil was removed and properly disposed. Contaminated concrete was also removed from the floor inside the Building # 9 and disposed. The excavated area outside of the building was subsequently backfilled with clean soil. In the fall of 1988, a cap was placed over the spill area. The capped area was protected by a chain link fence. In April 1989, a testing of the floor of Building #9 revealed that all of the contaminated concrete had not been removed. In September 1989, all of the concrete floor inside the building was removed. Testing found contamination in the soil under the floor. This soil was excavated as deeply as possible without undermining the integrity of the building. There was still contamination present but work could not proceed until the building was demolished. In February 1990, Building # 9 was demolished. The foundation was left in the ground. In November 1990, the north wall of the foundation (which was contaminated) and approximately 1,100 cubic yards of contaminated soil were excavate and shipped to a licensed hazardous waste landfill in Utah. Sampling showed that the soil on the bottom of the excavation was less than 10 ppm PCBs. The excavation was filled with clean soil.

Two new monitoring wells were installed northwest (downgradient) of the cap during the period of capping construction in 1988. The wells were sampled on December 9, 1988 and no PCBs were detected. At present, it has not been possible to collect samples from these two wells due to the placement of rocks obstructing the wells. The only option appears to be replacement, as there is no feasible alternative for removing the obstructions and thereby salvaging the wells.

3.3 Landfill Area: RCA operated the natural kettle hole area as a landfill. It is alleged that a part of the landfill area (approximately 200 ft. X 200 ft. X 20 ft. deep) received an unknown quantity of discarded capacitors containing PCBs. As per an estimate by Marshal Etter dated December 12, 1979, about one dozen of capacitors were dumped in the landfill. It is also alleged that there were PCB containing condensers disposed of in this landfill. Additionally, the landfill is comprised of bulk debris including old cable, telephone poles, porcelain insulators, wood scraps, hinges, remains of old radios and transmitters, rusted drums, and other assorted debris. In 1980, an investigation was undertaken under the auspices of NYSDEC's Region One office to address the problem of possible soil and groundwater contamination. Four wells were installed for groundwater sampling. Resulting groundwater and soil samples failed to turn up significant detections, including analyses for VOCs, SVOCs, metals and pesticides/PCBs, as well as a host of leachate parameters. Another Phase II investigation for just the landfill portion was completed in 1989 and no hazardous wastes were found. The four monitoring wells installed for this Phase II investigation were not vandalized and are usable for future sampling.

4.0 TASK/OPERATION HEALTH AND SAFETY ANALYSIS

This section will present health and safety analyses for the geophysical investigations, pit excavation, monitoring well decommissioning and monitoring well installations, soil sampling, groundwater sampling and all other field activities involved in the RCA Rocky Point site remedial investigations - 2006.

4.1 Safety Analysis

A hollow-stem auger drilling rig will be utilized to install the monitoring wells. A backhoe will be utilized for the excavation work. Level D protection is expected for the work. A photoionization detector (PID) will be used to monitor VOCs in the worker's breathing zone during drilling and installation of piping.

Steady-state PID readings greater than five ppm in the worker's breathing zone will require upgrading to Level C personal protective equipment. Steady-state readings, for this purpose, will be defined as readings exceeding five ppm above background for a minimum of ten seconds. Readings will be obtained at points approximately one foot above and then around the borehole/test pits. These points will defined the worker's breathing zone.

Upon encountering PID levels greater than five ppm above background in the worker's breathing zone, all personnel will be evacuated from the work zone in the upwind direction (if applicable). Specific evacuation routes will be discussed prior to commencement of work at each location based on work location and wind direction. In addition, an evacuation meeting place will be determined. Level C conditions are not anticipated to be encountered; however, if level C conditions arise, level C personal protection will be implemented including full-face air-purifying respirators with dust and organic vapor cartridges. All Contractor personnel and workers must be properly trained and fit tested prior to donning respirators. Level B conditions are not anticipated to be encountered as well; however, if level B conditions arise, no site work will be performed by contractor and a complete evaluation of the operation will be performed and this HASP will be modified.

All personnel who may directly contact potentially contaminated soil will be required to wear chemical-resistant gloves when the potential for dermal contact with the soil is possible. Dermal contact with excavated soils will be avoided.

Hard hats and steel-toe, steel-shank safety boots will be required when work is performed in the vicinity of heavy equipment (drill rigs, backhoes, etc)

Three test pits will be dug with a backhoe to 10 feet below grade. No one will enter the test pits for any reason. Samples will be collected from the bucket of the backhoe or from the pile of excavated soils. If intact drums are encountered, the test pit will be backfilled without disturbing or sampling of the drums. However, soils immediately adjacent to the drums may be used for soil sampling, if this sampling can be done safely in level C or D protection. Otherwise, the test pit will be backfilled immediately without the collection of soil samples.

4.2 Other Safety Considerations

4.2.1 Noise

During monitoring well drilling, installation, test pit excavation, monitoring well decommissioning, generate potentially harmful levels of noise. Hearing protection will be available to all site workers. The hearing protection will consist of foam, expansion-fit earplugs (or other approved hearing protection) with an Environmental Protection Agency noise reduction rating of at least 29 dB.

4.2.2 Slip/Trip/Fall Preventative Measures

To reduce the potential for slipping, tripping, or falling, the work zone will be kept clear of unnecessary equipment. All site workers will be required to wear work boots with adequate tread to reduce the potential for slipping (work boots must be leather or chemical-resistant and contain steel toes and steel shanks).

4.2.3 Insects and Ticks

Potential insect problems include, but are not limited to bees, wasps, and hornets. Prior to commencement of work, each work area will be surveyed for nests and hives to reduce the possibility of disturbing these insects. In addition, each site worker will be asked to disclose any allergies related to insect stings or bites. The worker will be requested to keep his or her anti-allergy medicine on Site.

Tick species native to Long Island consist of the pinhead-sized deer tick and the much-larger dog tick. All Site workers will be advised to avoid walking through tall grassy areas where possible and will be advised to check for ticks on clothing periodically.

4.2.4 Animals:

During the conduct of site operations, wild animals such as deers, stray dogs or cats, and mice may be encountered. Workers shall use discretion and avoid all contact with wild animals.

4.2.5 Plant:

Poison ivy, sumac and oak may be present on site. The CSM should identify the susceptible individuals. Worker shall avoid all contact with these plants.

4.2.6 Heat Stress:

Heat stress may become a concern especially if protective clothing is donned which will decrease natural ventilation. To assist in reducing heat stress the following measures will be taken:

- An adequate supply of water or other liquids will be brought on site. To prevent dehydration, personnel will be encouraged to drink generous amounts of water even if not thirsty.
- A shady rest area will be designated (beneath the trees) to provide shelter during sunny days.
- In hot weather, workers wearing protective clothing may be rotated.

When the temperature is over 70 degrees Fahrenheit and personnel are wearing protective

clothing, heat stress monitoring may be implemented as follows:

- Heart rate may be measured by counting the radial pulse for 30 seconds at the beginning of the rest period. The heart rate should not exceed 110 beats per minute. If the rate is higher, the next work period will be shortened by ten minutes (or 33%). If the pulse rate is 100 beats per minute at the beginning of the next rest period, the following work cycle will be shortened by 33%. The CSM will decide on the length of work periods and rest periods based on site conditions.
- Body temperature may be measured, if deemed necessary, at the beginning of the rest period. Oral temperature should not exceed 99 degrees Fahrenheit. If it does, the next work period will be shortened by ten minutes (or 33%). However, if the oral temperature exceeds 99.7 degrees Fahrenheit at the beginning of the next period, the following work cycle will be further shortened by 33%. Work will not re-commence until body temperature has dropped below 99 degrees Fahrenheit. Indications of heat stress range from mild (fatigue, irritability, anxiety, decreased concentration, dexterity or movement) to fatal. Medical help will be obtained for serious conditions.

Heat-related problems are:

- Heat rash: caused by continuous exposure to heat and humid air and aggravated by chafing clothes. Decreases ability to tolerate heat as well as being a nuisance.
- Heat cramps: caused by profuse perspiration with inadequate fluid intake and chemical replacement (especially salts). Signs: muscle spasm and pain in the extremities and abdomen.
- Heat exhaustion: caused by increased stress on various organs to meet increased demands to cool the body. Signs: shallow breathing; pale, cool, moist skin; profuse sweating; dizziness and lassitude.
- Heat stroke: the most severe form of heat stress. Can be fatal. Medical help must be obtained immediately. Body must be cooled immediately to prevent severe injury and/or death. Signs: red, hot, dry skin; no perspiration; nausea; dizziness and confusion; strong, rapid pulse; coma.

4.2.7 Cold Stress:

Cold exposure is a concern if work is conducted during cold weather or marginally cold weather during precipitation periods or moderate to high wind velocity periods. To assist in reducing cold exposure the following measures will be taken:

- All personnel will be required to wear adequate and appropriate clothing. This will include head gear to prevent the high percentage loss of heat that occurs in this area (thermal liners for hard hats if hard hats are required).
- Provide a readily available warm shelter near each work zone.
- carefully schedule work and rest periods to account for the current temperature and wind velocity conditions.
- Monitor work patterns and physical condition of workers and rotate personnel, as necessary.

Indications of cold exposure range from shivering, dizziness, numbness, confusion, weakness, impaired judgement, impaired vision to drowsiness. Medical help will be

obtained for serious conditions if they occur. Cold exposure-related problems are:

- Frost bite: Ice crystal formation in body tissues. The restricted blood flow to the injured part results in local tissue destruction.
- Hypothermia: Severe exposure to cold temperature resulting in the body losing heat at a rate faster than the body can generate heat. The stages of hypothermia are shivering, apathy, loss of consciousness, decreasing pulse rate and breathing rate and death.

4.2.8 The Buddy System

All activities in contaminated or potentially contaminated areas will be conducted by pairing off the site workers in groups of two (or three if necessary). Each person (buddy) will be able to:

- Provide his or her partner with assistance.
- Observe his or her partner for signs of chemical or heat exposure.
- Periodically check the integrity of his or her partner's protective clothing.
- Notify CSM or others if emergency help is needed

The buddy system will be instituted at the beginning of each workday. If new workers arrive on site, a buddy will be chosen prior to the new worker entering the work zone.

4.2.9 Site Communications

Two sets of communication systems will be established at the site: internal communication among personnel on-site, and external communication between on-site and off-site personnel.

Internal communication will be used to:

- Alert team members to emergencies
- Pass along safety information such as heat stress check, protective clothing check, etc.
- Communicate changes in the work to be accomplished.
- Maintain site control.

Due to ambient noise, verbal communications may be difficult at times. The CSM will carry a whistle (and compressed air horn if respirators are donned) to signal site workers. A single whistle blast will be the signal to immediately evacuate the work zone through the access control point. The signal will be discussed with all site workers prior to commencement of work.

An external communication system between on-Site and off-Site personnel will be established to:

- Coordinate emergency response
- Report to the Project Manager
- Maintain contact with essential off-site personnel

A cellular phone will be available at all times with CSM. In addition, the nearest stationary phone will be identified prior to the commencement of site operations and this location will be relayed to all site workers.

4.2.10 General Safe Work Practices

Standing orders applicable during site operations are as follows:

- No smoking, eating, drinking, or application of cosmetics in the work zone.
- No matches or lighters in the work zone.
- All Site workers will enter/exit work zone through the Site access point.
- Any signs of contamination, radioactivity, explosivity, or unusual condition such as dead animals will require evacuating the site immediately and reporting the information to the CSM and P.M.
- Lost fitting clothing or loose long hair will be prohibited in the work zone during drilling operations.
- A signal person will direct the backing of work vehicles.
- Equipment operators will be instructed to check equipment for abnormalities such as oozing liquids, frayed cables, unusual odors, etc.

5.0 COMMUNITY AIR MONITORING PLAN:

This community air monitoring plan has been designed to conform with the guidelines presented by the New York State Department of Health in Appendix 1A of the Draft New York State Department of Environmental Conservation DER-10 Technical Guidance for Site Investigation and Remediation. Real-time air monitoring for volatile compounds at the perimeter of the exclusion zone will be conducted. If particulates become a concern at the site, possibly as a result of concrete coring, excavating activities, or wind erosion of soils, this community plan will be modified accordingly. Contaminants on-site are not anticipated to pose a problem as particulates because of the anticipated high moisture content of the soil during field activities. The following procedures will be implemented during field activities as appropriate:

- Volatile organic compounds will be monitored at the downwind perimeter of the exclusion zone on a continuous basis. If 15-minute average total organic vapor levels exceed 5 ppm (or 5 ppm above background as determined at an upwind location), excavating activities will be temporarily halted and monitoring continued until total organic vapor levels drop below the action level. If the organic vapor level is above 25 ppm at the perimeter of the exclusion area, activities must be shut down. Monitoring will continue and the CSM will be consulted regarding a proper course of action. All 15-minute average readings must be recorded and be available for regulatory personnel to review.
- Particulates will become a concern if visible dust emissions occur from site investigation activities or wind erosion or if intrusive activities are performed. When particulates become a concern, the following protocol will be followed. PM10 particulate levels will be continuously monitored downwind at the perimeter of the exclusion zone with a portable real-time PM10 particulate monitor that will have an alarm set at 100µg/m3, then particulate levels upwind of the exclusion zone will be measured. If the downwind particulate level is more than 100µg/m3 greater than the upwind particulate level, dust suppression techniques (e.g. spraying water, covering exposed soils with poly sheeting) will be employed. If after implementation of dust suppression techniques, the downwind PM10 particulate level exceeds the upwind PM10 particulate level by greater than 150 µg/m3, activities will be halted and the CSM will be consulted. All readings will be recorded and be available for regulatory personnel to review. These action levels can be

modified if particulates are better characterized and identified.

6.0 PERSONAL TRAINING REQUIREMENTS

All NYSDEC personnel and contractor personnel will receive adequate training prior to entering the site. NYSDEC and contractor's personnel will, at a minimum, have completed OSHA-approved, 40-hour hazardous materials site safety training and OSHA-approved, eight-hour safety refresher course within one year prior to commencing field work. In addition, each worker must have a minimum of three days field experience under the direct supervision of a trained, experienced supervisor.

7.0 MEDICAL SURVEILLANCE PROGRAM

All workers at the site must participate in a medical surveillance program in accordance with 29 CFR 1910.120. A medical examination and consultation must have been performed within the last twelve months to be eligible for field work.

The content of the examination and consultation will include a medical and work history with special emphasis on symptoms related to the handling of hazardous substances, health hazards, and fitness for duty including the ability to wear required personal protective equipment under conditions (i.e., temperature extremes) that may be expected at the work site. All medical examinations and procedures shall be performed by, or under the supervision of, a licensed physician.

The physician shall furnish a written opinion containing:

- The results of the medical examination and tests.
- the physician's opinion as to whether the employee has any detected medical conditions that would place the worker at in creased risk of material impairment of the employee's health from work in hazardous waste operations.
- The physician's recommended limitations upon the worker assigned to the work.
- A statement that the worker has been informed by the physician of the results of the medical examination and any further examination or treatment.

An accurate record of the medical surveillance will be retained. The record will consist of at least the following information:

- The name and social security number of the employee.
- Physician's written opinions, recommended limitations, and results of examinations and tests.
- Any worker medical complaints related to exposure to hazardous substances.

8.0 PERSONAL PROTECTIVE EQUIPMENT:

8.1 General Considerations

The two basic objectives of the personal protective equipment (PPE) are to protect the wearer from safety and health hazards, and to prevent the wearer from incorrect use and/or malfunction of the PPE.

All work is expected to be performed during daylight hours and workdays, in general, are

expected to be eight to ten hours in duration. Any work performed beyond daylight hours will require the permission of the PM. This decision will be based on the adequacy of artificial illumination and the type and necessity of the task being performed.

Personal protection levels for the site activities are anticipated to be Level D.

8.2 Level D Protection

Personnel protective equipment:

- Coveralls
- Gloves*
- Boots/shoes, leather or chemical-resistant, steel toe and shank.
- Safety glasses or chemical splash goggles*
- Hard hat (face sheld*)
- Escape mask*

(*) Optional

8.3 Criteria for Selection of Level D Protection

Meeting any of these criteria allows use of Level D Protection:

- No contaminant levels above 5 ppm organic vapors or dusty conditions are present.
- Work functions preclude splashes, immersion, or the reasonable potential for unexpected inhalation of any chemicals above the TLV.

8.4 Decontamination Methods:

All personnel, clothing, equipment, and samples leaving the contaminated (work zone) area of the site must be decontaminated to remove any harmful chemicals or infectious organisms that may have adhered to them. Decontamination methods either (1) physically remove contaminants (2) inactivate contaminants by chemical detoxification or disinfection /sterilization, or (3) remove contaminants by a combination of both physical and chemical means. In many cases, gross contamination can be removed by physical means involving dislodging/displacement, rinsing, wiping off, and evaporation. Contaminants that can be removed by physical means include dust, vapors, and volatile liquids. All reusable equipment will be decontaminated by rinsing in a bath of detergent and water (respirators, gloves to be reused). Monitoring equipment will be decontaminated by wiping with paper towels and water.

The effectiveness of the decontamination will be evaluated near the beginning of site activities and will be modified if determined to be ineffective. Visual observation will be used for this purpose. The CSM will inspect decontaminated materials for discoloration, stains, corrosive effects, visible dirt, or other signs of possible residual contamination.

All disposable PPE will be discarded following use. All used PPE to be discarded will be placed in an appropriate receptacle for disposal.

9.0 EMERGENCY RESPONSE PLAN

This section will present the Emergency Response Plan (ERP) for the site. Pre-emergency planning will consist of reviewing the ERP with all workers at the site prior to initiation of work.

Personnel Roles

It is anticipated that during system installation activities at the site, in general, several

persons will be on the site. Should an emergency situation arise at the site, the PM will assume control and decision-making. The CPM will also resolve all disputes concerning health and safety requirements and precautions. The CSM will also:

- Be authorized to seek and purchase supplies as necessary.
- Have control over activities of everyone entering the site.

The CSM will communicate, by cellular telephone or other, with off-site personnel to manage the emergency situation. Phone numbers for the fire department, police, ambulance, NYS Department of Environmental Conservation Spill Response Department, are listed in this document. The hospital which will be utilized during an emergency will be John T. Mather Memorial Hospital. The directions to the hospital, along with the hospital's emergency room phone number are presented in this document and will be available at the site and will be placed in all vehicles of personnel involved in activities at the site. The St. Charles Hospital and Stony Brook University hospitals can also be used as alternative choice. The phone numbers of these two hospitals have also been provided in this document.

9.1 Response Follow-Up

Following an emergency, or incident, a detailed report will be generated by the CSM. All equipment will be restored to pre-emergency conditions. The HASP will be reviewed following an emergency to determine if it provides adequate information to assist in dealing with the emergency. The HASP may be revised to incorporate additional information as needed.

9.2 Emergency Recognition and Prevention

Before daily work assignments begin, each day a brief on-site meeting will be held by the CSM which will address health and safety issues related to the day's work. Prior to initiation of work, a detailed on-site health and safety meeting will be held to review all potential hazards, contingencies, and safety measures.

9.3 Safe Distances and Places of Refuge

The main potential cause of work zone evacuation is a significant vapor release. Vapor release evacuation will be discussed prior to subsurface activities at the site and in general will be in the upwind direction. Wind direction will be monitored at each work location and all workers will be notified of the direction of evacuation prior to commencement of work. Safe distances will be discussed at each location and determined by the CSM. The PID will be used to determine if workers have evacuated a sufficient distance.

At all times, vehicles which may be utilized in an emergency for transport to the hospital (or other destination) will have clear access to leave the site. The CSM will assure that an emergency vehicle does not become blocked-in by other vehicles.

9.4 Site Security and Control

The CSM will control entry of personnel into the work zone. No unnecessary persons shall be permitted in the work zone.

9.5 Decontamination Procedures During Emergencies

In the event of a medical emergency, decontamination will be performed if it does not

interfere with essential treatment. Decontamination will be performed by washing, rinsing, and/or cutting off protective clothing and equipment.

If decontamination cannot be performed, the victim will be wrapped in plastic to reduce contamination to other personnel. Emergency and off-Site medical personnel will be alerted to the potential contamination.

9.6 Emergency Medical Treatment and First Aid

Medical emergencies will be treated, in general by medical experts by transporting the victim to the nearby hospital. A first aid kit will be present on site for minor medical treatment.

10.0 SIGNS AND SYMPTOMS OF EXPOSURES

10.1 Chemical Hazard:

Type of Hazard	Signs and Symptoms
Chemical Hazard	Behavioral changes Breathing difficulties Changes in complexion of skin color Confusion Coordination difficulties Coughing Depression Dermatitis Dilated Pupils Dizziness Euphoria Fatigue and/or weakness Flushed face and/or neck Insomnia Irregular heartbeat Irritability Irritation of eyes, nose, respiratory tract, skin or throat Headache Lacrimation Light-Headedness Muscle Fatigue Nausia Nervousness Numbness in limbs Paresthesia Sleepiness Tingling Tremors Vertigo

Visual disturbance
Vomiting

10.2 Heat Exhaustion:

Type of Hazard	Signs and Symptoms
Heat Exhaustion	Clammy skin Confusion Dizziness Fainting Fatigue Heat rash Light-headedness Nausea Profuse sweating Slurred speech Weak pulse
Heat Stroke (may be fatal)	Confusion Convulsions Hot skin, high temperature (yet may feel chilled) Incoherent Speech Staggering gait Sweating stops (yet residual sweat may be present) Unconsciousness

CITIZEN PARTICIPATION PLAN (CPP)

RCA - ROCKY POINT
TOWN OF BROOKHAVEN
SUFFOLK
NEW YORK
SITE #152011

JANUARY 26, 2006

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
REGION -1
SUNY BUILDING - 40
STONY BROOK
NEW YORK 11790 - 2356.

RCA - ROCKY POINT SITE
CITIZEN PARTICIPATION PLAN

1.0 INTRODUCTION:

The New York State Department Environmental of Conservation (NYSDEC) - Region 1 presents this Citizen Participation Plan (CPP) for the RCA - Rocky Point Site located at Rocky Point - Yaphank Road in Rocky Point, Town of Brookhaven, Suffolk, New York. The Citizen Participation Plan was developed to provide a site-specific outline and guidance for citizen participation as required by the New York State Department of Environmental Conservation (NYSDEC).

The New York State Department of Environmental Conservation (NYSDEC) is committed to a citizen participation program at the Site. Citizen participation promotes public understanding of the responsibilities and investigation activities associated with this process. Citizen participation provides the NYSDEC with an opportunity to gain public input to support an investigation program that is protective of both public health and the environment. Consequently, the public's suggestions about this CPP and the citizen participation program for the Site are always welcome. Interested parties are encouraged to discuss their ideas and suggestions with project contacts listed in Appendix A of the CPP. A map of the Site showing its general location is presented as Figure 1. Another map of the site showing the investigation areas and the locations of the monitoring wells and test pits is presented as Figure 2.

2.0 SITE HISTORY

2.1 General:

The site was a transcontinental radio communication station from 1921 to 1978. Much of the property was cleared for antenna arrays which included towers 400 feet tall. The majority of the properties were covered by a grid work of timber antenna supports. In 1978, RCA turned the facility over to the New York State Department of Environmental Conservation. All known hazardous waste disposal at this site involved the spilling of PCB fluids contained in the many electrical transformers that were used at the site.

2.2 PCB Capped Area:

The Building # 9 was the main transformer building of the RCA transcontinental radio communication station. Commencing in 1927, until 1975 , Rocky Point had been used solely as a transmitting station (there was a receiving station at Riverhead). The PCB containing electrical equipment including capacitors and transformers had been operated at this part of Rocky Point facility for half of a century. During the period of August 1982 to January 1983, a limited remedial activity was performed to remove electrical equipment containing PCBs. During the removal operations, a PCB spill occurred outside of Building #9, which resulted in soil contamination. The concrete floor inside the building was also impacted. Between the period of

December, 84 and June, 85, approximately 22,000 cubic yards of PCB contaminated soil were removed and properly disposed. Contaminated concrete was also removed from the floor inside the Building # 9 and disposed. The excavated area outside of the building was subsequently backfilled with clean soil. In the fall of 1988, a cap was placed over the spill area. The capped area was protected by a chain link fence. The perimeter of the capped area was determined by the PCB concentrations in soils less than 10 ppm at depths of 6 inches and 24 inches. In April 1989, a testing of the floor of Building #9 revealed that all of the contaminated concrete had not been removed. In September 1989, all of the concrete floor inside the building was removed. Testing found contamination in the soil under the floor. This soil was excavated as deeply as possible without undermining the integrity of the building. There was still contamination present but work could not proceed until the building was demolished. In February 1990, Building # 9 was demolished. The foundation was left in the ground. In November 1990, the north wall of the foundation (which was contaminated) and approximately 1,100 cubic yards of contaminated soil were excavated and shipped to a licensed hazardous waste landfill in Utah. Sampling showed that the soil on the bottom of the excavation was less than 10 ppm PCBs. The excavation was filled with clean soil.

Two new monitoring wells were installed northwest (downgradient) of the cap during the period of capping construction in 1988. The wells were sampled on December 9, 1988 and no PCBs were detected. At present, it has not been possible to collect samples from these two wells due to the placement of rocks obstructing the wells. The wells will be abandoned according to applicable NYSDEC protocols and will be replaced.

2.3 Landfill Area:

RCA used a natural kettle hole area in the southwest portion of the site as a landfill. It is alleged that a part of the landfill area (approximately 200 ft. x 200 ft. x 20 ft. deep) received an unknown quantity of discarded capacitors containing PCBs. As per an estimate by Marshal Etter dated December 12, 1979, about one dozen capacitors were buried in the landfill. It is also alleged that there were PCB containing condensers disposed of in this landfill. Additionally, the landfill is comprised of bulk debris including old cable, telephone poles, porcelain insulators, wood scraps, hinges, remains of old radios and transmitters, rusted drums, and other assorted debris. In 1980, the Suffolk County Department of Health Services, in cooperation with the NYSDEC, drilled soil borings and installed four monitoring wells both in and around the landfill. Seventeen shallow soil borings (between 2.5 and 5 feet), were augured through the filled area. Garbage was encountered in all but three of these borings. One 20-foot boring was drilled through the fill area, and encountered glass, brass, mica, copper wiring and other garbage. Three forty-foot borings, completed outside of the fill area were free of garbage. Four 2-inch inside diameter steel monitoring wells were also installed as part of this investigation, but only one groundwater sample was collected because a pump broke down. PCBs were not detected in this groundwater sample. Another Phase II investigation for just the landfill portion was completed in 1989 and no hazardous wastes were found (See the enclosed tables with the results of soil and groundwater sampling). Four PVC monitoring wells were installed for this Phase II investigation. These wells have not been vandalized and will be sampled as one of the tasks in

this work plan.

Building #1 was the primary control and communication center, with ancillary buildings and structures around the site providing support services. In 1992, all of these buildings were demolished. All concrete and masonry construction and demolition material from the main building complex, the tower, the diesel building, the three electrical substations and two under ground basement areas were disposed of in the landfill area.

2.4 Buried Drum Allegation:

On March 20, 2000, a citizen who reportedly had second hand knowledge concerning a former RCA worker voluntarily provided a statement. Approximately twelve years prior to the allegation, the citizen making the allegation had a casual conversation with a person who was reportedly a former bulldozer operator at the RCA Rocky Point site. This former RCA employee reportedly told the informant that on a number of occasions that he had buried drums at the site at night that had been brought to the site by truck. The former employee did not have any idea of the contents in those drums. Unfortunately, when the allegation was reported in 2000, this former employee was deceased thereby making it impossible to acquire further information about this potential release. There was no information about the burial location(s), the quantity of the drums, the nature of the wastes contained in the drums, or the years when the disposal occurred.

This allegation has been evaluated by the NYSDEC on several occasions. Since the site is 5,100 acres in size, it was not feasible to evaluate all areas of the site for potential burial disposal. It was necessary to focus the attention of the evaluation to the most promising locations. Despite many visits to the site by NYSDEC staff during and after the earlier site remedial work in the late 1980's and early 1990's, there has been no area that contained visual evidence of consequential waste disposal other than the landfill area. To look for other potential areas where burial of wastes might have occurred, historical aerial photographs were retrieved to look for disturbed areas. Then, the suspected areas were inspected for signs that these areas of interest might have been used for disposal. This was done under a limited basis in March 2003 and was conducted on an expanded basis in the fall of 2005 during the preparation of the Remedial Investigation Work Plan-2006.

The March 2003 evaluation was centered around the northwestern portion of the site primarily to evaluate elevated areas seen on a topographical map. On March 20, 2003, John Conover and Bob Stewart (NYSDEC-Region 1 staff) visited the site and checked several elevated areas to the west and east of the north-south access road in this portion of the site. These areas were first visually inspected for potential burial locations. All of the elevated areas on the topographic maps appeared to be natural. Next, a metal detector was used to further evaluate selected locations for buried metal. Finally, a hand shovel was used to perform shallow test pits in several different locations to look for buried wastes. Some metallic wires were found in a small area to the west of the road in a slight depression. However, there was no evidence that this area might contain any other buried metal. The finding of wire in the surface soils at

this site was not a remarkable occurrence. It is common to find wire at this site since it had formerly contained many antenna arrays which involved the use of large amounts of wire throughout the site.

Regardless, this area was re-evaluated again in 2005 to re-check the area for buried metal. The expanded evaluation in the fall of 2005 first involved the collection of more historical aerial photographs from different years to look for changes in the photographs that would suggest that a particular area might have been used for land filling. Cleared areas in the middle of the woods away from areas used as part of the normal site operations were of most interest. Aerial photographs from 1947, 1962, 1972, 1994 and 1995 were retrieved. Nine disturbed areas and the old landfill area were selected for further evaluation by a geophysical survey with a magnetometer (See Figure-3). A magnetometer is often used to detect ferrous metallic objects. It is designed to locate buried metallic objects made of steel or iron such as drums, tanks, pipes, and metallic debris. On November 28, 2005, the NYSDEC staff went to the site to check the ten selected areas for buried drums with the metal detector. No evidence of buried metals were found in any of the selected areas other than the old landfill area. Only the landfill area had significant positive detections on the metal detector that were suggestive of significant amounts of buried metal. Therefore, it was concluded that only this area would be further evaluated to complete the re-evaluation of the buried drum allegation. Test pits are the best way to determine the nature of the fill in landfilled areas. One of the tasks in this work plan will be the sampling of three test pit locations (TP-1, TP-2, and TP-3 in Figure-2) in three different areas with positive readings on the metal detector in the landfill area.

3.0 PROPOSED REMEDIAL INVESTIGATION ACTIVITIES:

A detailed presentation of the scope of work and tasks are described in the Remedial Investigation Work Plan. The following is a presentation of the scope of work and tasks to be performed in the proposed Remedial Investigation at the RCA - Rocky Point Site. The New York State Department of Environmental Conservation will appoint a contractor to perform these tasks.

Task 1. Test Pits

Three test pits to ten feet deep will be performed in the landfill area to determine the nature of the fill. The locations of the three test pits have already been selected by the NYSDEC staff based on a metal detector investigation. All three locations have positive readings on a metal detector that are suggestive of buried metal at these locations. Large pieces of concrete should be expected in the fill.

A back hoe will be used for this test pit excavation. The backhoe will be decontaminated in the field. The decontamination water will be captured and drummed for off-site disposal. The contractor will be responsible for proper disposal of the decontamination water. NYSDEC will collect and analyze the decontamination water sample for disposal purposes.

Level-D protection is expected to be appropriate for the excavation work since a soil gas survey done with a photo ionization detector (PID) capable of detecting volatile organic compounds with an ionization potential less than 10.2 eV did not detect the presence of any volatile organic compounds (VOCs) in the landfill area. The excavated soils will be returned to each pit. NYSDEC staff will collect soil samples from the bucket of the backhoe. No one will be allowed to enter the test pits. No drums with chemical residues, transformers, or other large containers will be removed from the test pits.

There are no specifications on the size of the test pits other than that the final depth will be ten feet below the original grade. The top 1 foot of soils from each pit, which is expected to consist of clean fill, would be staged separately and be used as the surface cover of each test pit. Finally, visually clean sand from a nearby area will be brought to the test pit locations and will be used as the final surface cover for the test pits.

In the event that the test pits cannot be accomplished in level C or D protection or if buried drums containing consequently quantities of chemical wastes are uncovered, the excavation work will be terminated and backfilled. A revised approach would then be developed to complete the test pits.

Task 2. Monitoring Well Decommissioning

Task 2a <u>Capped Area</u>:

The two PVC monitoring wells for the capped area are filled with rocks and cannot be repaired. These two monitoring wells will be decommissioned as per NYSDEC "Draft Groundwater Monitoring Well Decommissioning Procedures, November 2002".

Specifications for the two identical monitoring wells in this area are:

Depth to groundwater	= 102 feet.
Well diameter	= 2 inches.
Length of well casing	= 91 feet
Length of Screen	= 30 feet
Screen size	= 0.020 inches.
Total well depth	= 121 feet.

Task 2b <u>Landfill Area</u>:

Three 2 inches steel monitoring wells were installed for the 1980 RI Investigation by the Suffolk County Department of Health Services (SCDHS) surrounding the landfill area and are to be decommissioned.

Task 3. Monitoring Well Installation in the Capped Area

Two new monitoring wells will be installed for the capped area to replace the damaged wells abandoned under Task 2a. These two monitoring wells will be used for groundwater sampling for this investigation and for future groundwater monitoring of the capped area. The monitoring wells will be installed in accordance with NYSDEC TAGM#4008. The hollow-stem auger drilling methods will be used for installation of monitoring wells.

The following procedures will be used to install all monitoring wells:

- PVC 2-inch diameter threaded, flush-joint casing and screens will be installed.
- Wells will be screened in the unconsolidated deposits. Screen length of the well will be 15 feet (5 feet out and 10 feet in) and slot openings will be 0.020 inch. Alternatives may be used at the discretion of the Project Manager, based on site-specific geologic conditions.
- Flush-mount protective casings will be used to reduce the chances that the new wells will be vandalized. The plate covering the well should be bolted in place. A locking expansion type cap with lock should be placed at the top of the well riser to secure it.
- Where appropriate, the annulus around the screens will be backfilled with #0 Morie silica sand (based on site-specific geologic conditions and screen slot size) to a height of 2 feet above the top of the screen.
- Neat cement grout, a bentonite pellet seal, or a bentonite slurry (30 gallons water to 30 pounds of bentonite, or relative proportions) will be placed above the sand pack. The bentonite pellets will be hydrated for 30 to 60 minutes after installation. The bentonite pellet seal will be a minimum of 36 inches in depth.
- A fine sand pack approximately 1- foot thick will be placed above and below the bentonite seal to isolate it and to prevent mixing of components.
- The remainder of the annular space will be filled with a bentonite/cement or bentonite grout to the flush-mount protective casing.
- A concrete surface pad (2 feet by 2 feet by 6-inch) will be sloped to the north or as instructed by the project manager. A weep hole will be drilled at the base of the protective flush mount casing to allow any water between the inner and outer casing to drain.
- Each outer casing will be permanently labeled using a steel hand stamp as their respective designation (MW-1 CA & MW-2 CA) or as instructed by the Project Manager.

The characteristics of each newly installed well will be recorded on a well installation checklist.

Well specifications:

Depth to groundwater	= 102 feet.
Well diameter	= 2 inches.
Length of well casing (PVC)	= 97 feet
Length of Screen	= 15 feet (5 feet above static water table and 10 feet below static water table).
Screen size	= 0.020 inches.
Total well depth	= 112 feet.

Task 4. Well Development

After the two new monitoring wells have been installed by the capped area and the grout has dried sufficiently (usually at least 48 hours), these two wells will be developed. A submersible pump will be used to develop the wells until a turbidity of less than 50 NTUs has been achieved. Development will be terminated after three hours of pumping if 50 NTUs has not been achieved at that time. A nephelometer will be required to read the turbidity of the development water.

Task 5. Well Sampling with Low-Flow Sampling Technique

After a minimum of 48 hours after well development performed in Task 4, the 2 new wells in the capped area and the four existing PVC wells in the landfill area will be sampled by low-flow sampling techniques in accordance with established EPA protocols. Flow rates in the order of 0.1 - 0.5 L/min are typically used during low-flow sampling. An appropriate sampling pump, such as a Grundfos Redi-Flo II pump, should be used for this sampling. A flow-through cell with appropriate meters to measure pH, specific conductance, dissolved oxygen, and turbidity is recommended to determine when the field sampling parameters have stabilized and the sample can be collected. An appropriate meter capable of reading the changing depth to water is necessary so that drawdown can be held within acceptable limits. The water table depression during sampling should be held within 0.3 ft. The on-site NYSDEC representative will supply the glassware, cooler, and ice for the sampling. He/she will take custody of the groundwater samples collected from each well the same day of sampling. The NYSDEC representative will arrange for shipping and analysis of the samples.

Task 6. Addition of Buffer Zone:

A 10 foot diameter Buffer Zone will be installed around the two newly installed monitoring wells at the capped area and the four existing PVC monitoring wells at the landfill area. The Buffer Zone will consist of NYSDOT#1 Stone or equivalent and a Commercial Grade Landscape Fabric. The purpose of these Buffer Zones is to eliminate the growth of vegetation in the area of the monitoring wells and to create a clear work area. The construction of the Buffer Zone will follow these steps:
Place a 10 foot diameter circle of landscape fabric around the well head.
On top of the fabric place a 4 inch compacted layer of NYSDOT#1 stone or equivalent.

4.0 CITIZEN PARTICIPATION ACTIVITIES:

Citizen participation activities are planned to promote communication between the community surrounding the Site and the New York State Department of Environmental Conservation. The citizen participation activities are intended to achieve the following objectives:

- To ensure that people affected by or interested in the property where RCA-Rocky Point

site is located receive important site information, understand the nature and progress of what has already been completed at the site and the planned activities to further investigate and evaluate the site.

- To promote open communication between the public and project staff throughout the remedial program.
- To ensure opportunities for the public to provide information, opinions and perspectives about the site, surrounding community and proposed plan for the site. This input will help in making more informed decisions and improve the remedial program.
- To communicate to the public that their input was considered and evaluated in the decision making process.

The New York State Department of Environmental Conservation will implement the citizen participation activities outlined in this plan. The contractor appointed by the New York State Department of Environmental Conservation will perform the remedial investigation field tasks under NYSDEC supervision and approval.

4.1 Site contact list:

A public contact list has been established for RCA - Rocky Point Site and will be used for all citizen participation activities. This list will be a comprehensive contact list that includes local and state officials, adjacent property owners, local news media, the public water supplier, and additionally requested contacts. The public contact list will be periodically updated based on public responses, attendance at public meetings, telephone calls from interested public, and returned mailings that could not be delivered. The Site Contact List, including contact information, is provided in (Appendix A). The adjacent and nearby property owners and residents owner portion of the contact list will be maintained confidentially in the project file and will not be included in citizen participation plan.

4.2 Document Repositories:

The public repositories established for RCA - Rocky Point Site will include the Region 1 office of the NYSDEC in Stony Brook and the North Shore Public Library (NSPL), 250 Route 25 A, Shoreham, NY 11786 - 2190. All documents pertaining to citizen participation activities and related notifications will be placed in the document repositories. Site repository locations and hours are included in (Appendix B) to the CPP.

4.3 Issues of Public Concern:

Issues of public concern at the Site include procedures for protection of public health and safety during investigation activities. During subsurface remedial investigation activities, worker and community health and safety activities will be conducted following the Community Air Monitoring Plan that has been designated to conform with the guidelines presented by the New York State Department of Health in Appendix 1 A of the Draft New York State Department of Environmental Conservation DER - 10 Technical Guidance for Site Investigation and Remediation. Odor, vapor, and dust controls such as water or foam sprays will be used as

required. Details on the Site Health and Safety Plan and the Community Air Monitoring Plan are part of the Remedial Investigation Work Plan - 2006.

4.4 Scope of Citizen Participation Activities:

The New York State Department of Environmental Conservation has developed a Remedial Investigation Work Plan and copies have been placed in the document repositories (Appendix **B**). The NYSDEC Region 1 will implement the tasks and scope of work in the work plan by March 31, 2006 and will prepare a Remedial Investigation Report as well. A RI report is scheduled for completion by June 30, 2006 and a copy will also be placed in each of the document repositories. Additional citizen participation including, but not limited to public meetings, availability sessions and mailing of fact sheets will occur as determined.

APPENDIX A
RCA ROCKY POINT SITE CONTACT LIST

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Great River, NY 11739-0587

APPENDIX - B

RCA-ROCKY POINT SITE DOCUMENT REPOSITORIES

Documents relevant to the environmental activities at the Site will be stored at the following document repositories:

New York State Department of Environmental Conservation
Region One Office
SUNY Building 40
Stony Brook, NY 11780-2356
Contact: Abdur Rahman
Phone: (631) 444 0240

Hours: 8:30 a.m. to 4:45 p.m., Monday to Friday.

Call in advance to make an appointment to view the documents at the NYSDEC Region One Office.

North Shore Public Library (NSPL)
250 Route 25 A
Shoreham, NY 11786-2190
Phone: (631) 929 4488

Hours: Monday to Friday: 10:00 a.m. to 9:00 p.m.
Saturday: 10:00 a.m. to 5:00 p.m.
Sunday : 1:00 p.m. to 5:00 p.m. (October to May).

FIGURE - 1
(CPP)

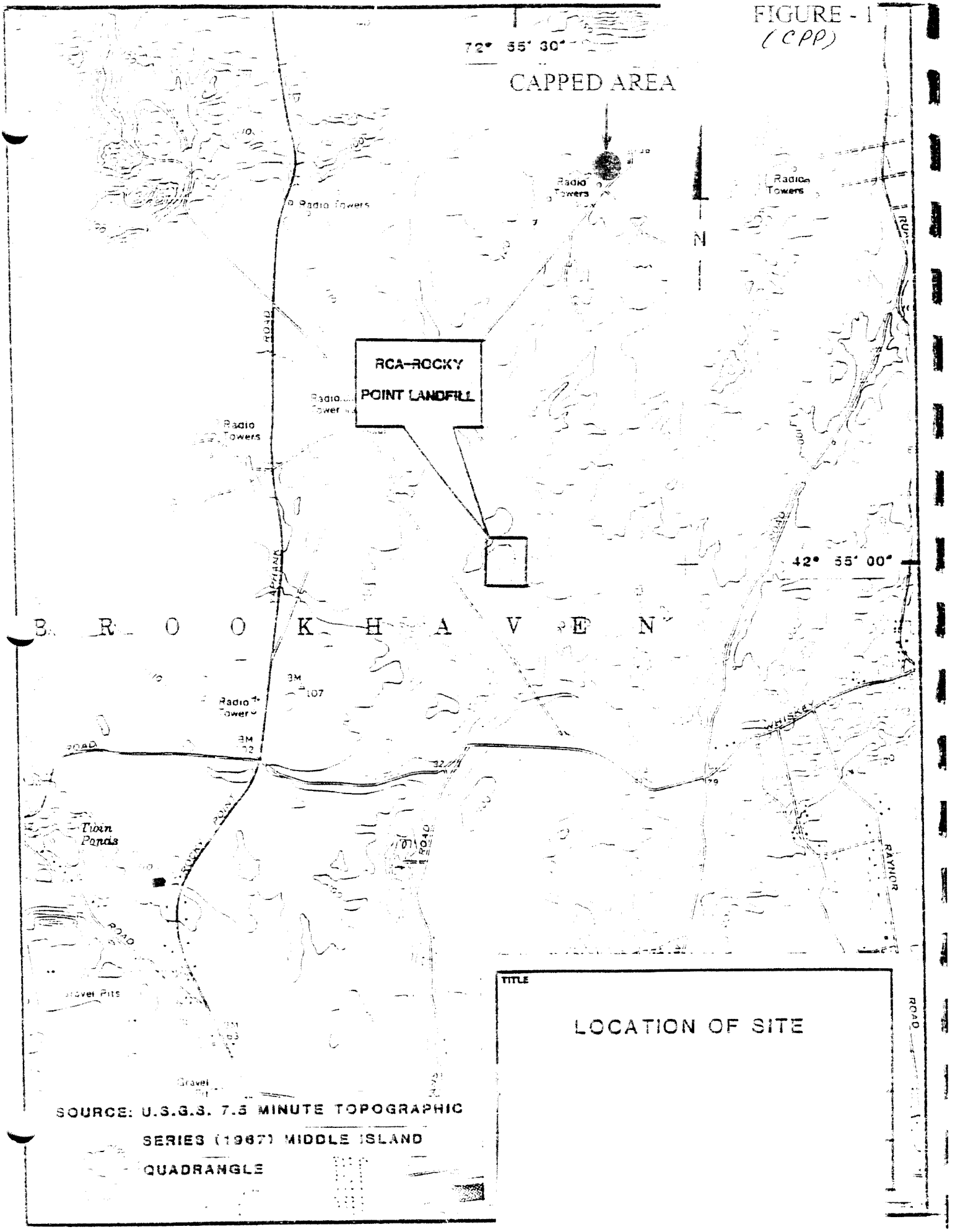
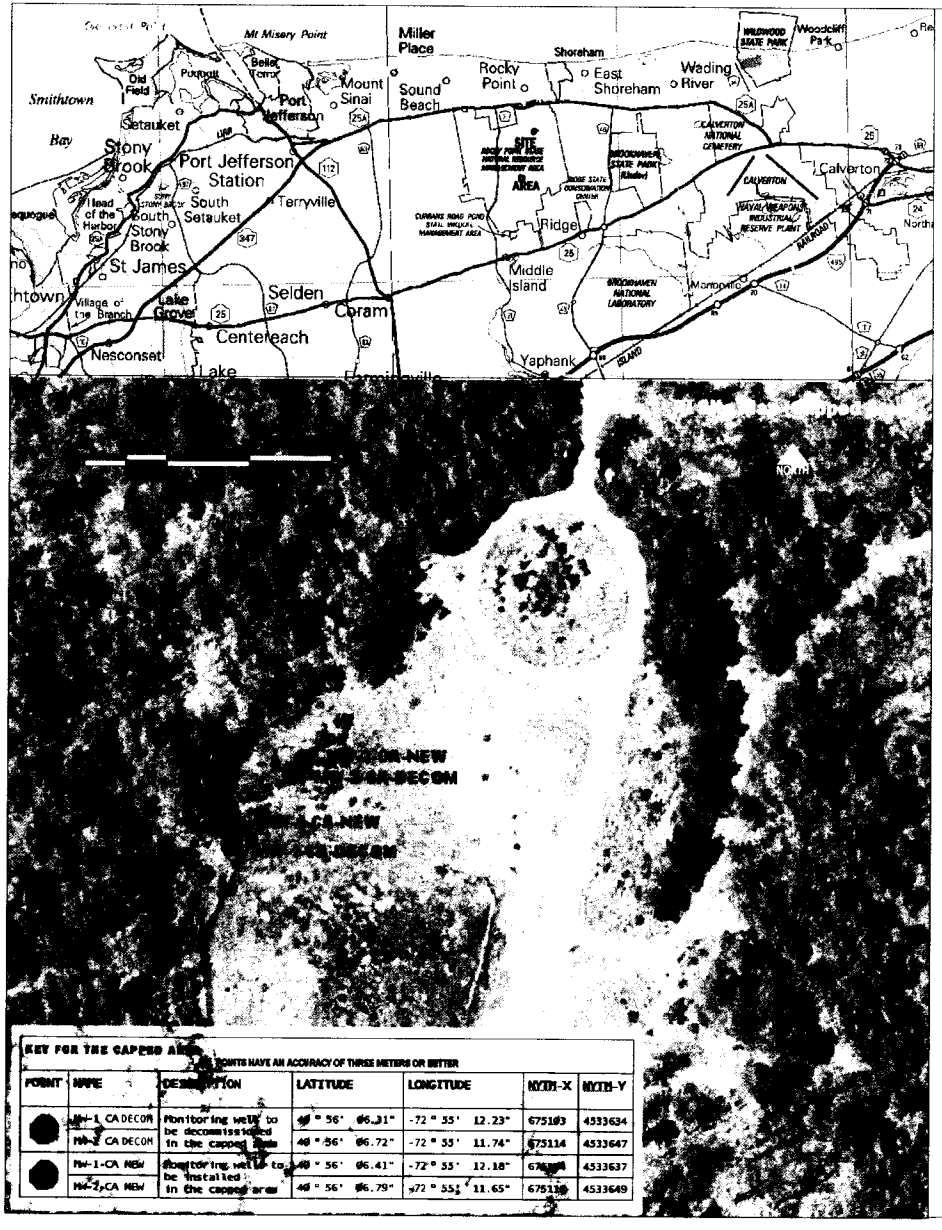

72° 55' 30"
CAPPED AREA
N
RCA-ROCKY
POINT LANDFILL
42° 55' 00"
B R O O K H A V E N
Radio Towers
Twin Ponds
Gravel Pits
SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC
SERIES (1967) MIDDLE ISLAND
QUADRANGLE
TITLE
LOCATION OF SITE

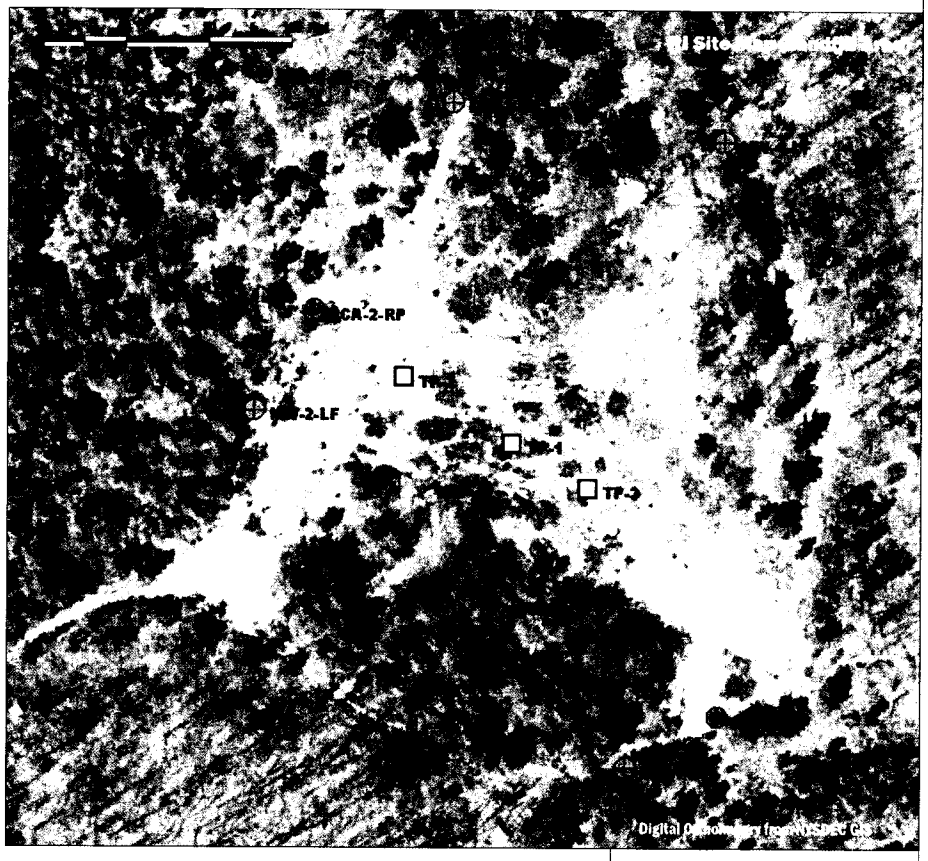
FIGURE 2
(CPP)

Remedial Investigation Site Maps FIGURE 2



KEY FOR THE CAPPED AREA
ALL POINTS HAVE AN ACCURACY OF THREE METERS OR BETTER

POINT	NAME	DESCRIPTION	LATITUDE	LONGITUDE	NYTM-X	NYTM-Y
●	MW-1 CA DECOM	Monitoring well to be decommissioned in the capped area	40° 56' 06.31"	-72° 55' 12.23"	675103	4533634
●	MW-2 CA DECOM		40° 56' 06.72"	-72° 55' 11.74"	675114	4533647
●	MW-1-CA NEW	Monitoring well to be installed in the capped area	40° 56' 06.41"	-72° 55' 12.18"	675104	4533637
●	MW-2-CA NEW		40° 56' 06.79"	-72° 55' 11.65"	675118	4533649



KEY FOR THE LANDFILL AREA
ALL POINTS HAVE AN ACCURACY OF THREE METERS OR BETTER

POINT	NAME	DESCRIPTION	LATITUDE	LONGITUDE	NYTM-X	NYTM-Y
⊕	MW-1 LF	Landfill area monitoring wells to be sampled	40° 54' 57.15"	-72° 55' 37.74"	674557	4531487
	MW-2 LF		40° 54' 59.28"	-72° 55' 40.63"	674488	4531551
	MW-3 LF		40° 55' 01.03"	-72° 55' 38.99"	674525	4531606
	MW-4 LF		40° 55' 00.76"	-72° 55' 36.86"	674575	4531599
◉	RCA-2 RP	2" steel monitoring wells in landfill area to be decommissioned	40° 54' 59.85"	-72° 55' 40.13"	674499	4531569
	RCA-3 RP		40° 55' 01.22"	-72° 55' 40.53"	674489	4531611
	RCA-4 RP		40° 54' 57.43"	-72° 55' 37.01"	674574	4531496
□	TP-1	Test pit to be dug in landfill area	40° 54' 59.05"	-72° 55' 38.57"	674536	4531545
	TP-2		40° 54' 59.45"	-72° 55' 39.41"	674516	4531557
	TP-3		40° 54' 58.78"	-72° 55' 37.98"	674559	4531537

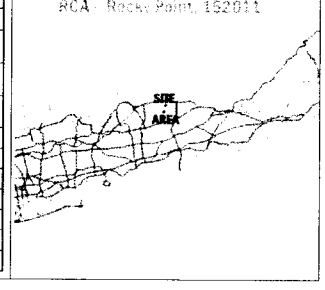
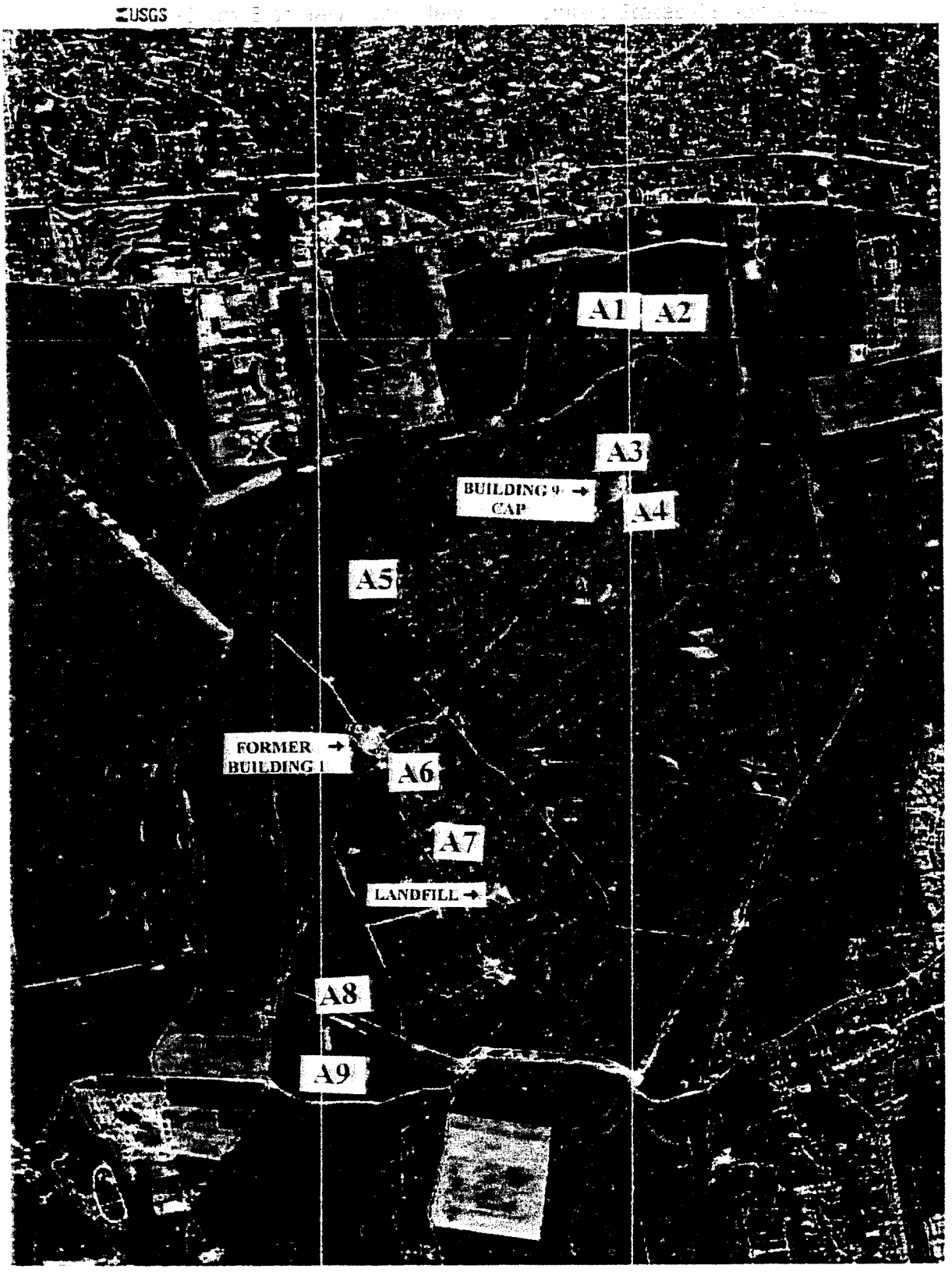


FIGURE - 3 (CPP)



GEOPHYSICAL SURVEY LOCATIONS

RCA ROCKY POINT, SITE # 152011

A1 - SURVEY LOCATION