REMEDIAL DESIGN WORK PLAN

CUBA LANDFILL SITE

Village of Cuba, Allegany County , New York
(Site Registry No. 9-02-012)

WORK ASSIGNMENT NO. D003600-26

Prepared For

New York State Department of Environmental Conservation

JUNE 2001

Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

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NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION

BY

DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
WOODBURY, NEW YORK

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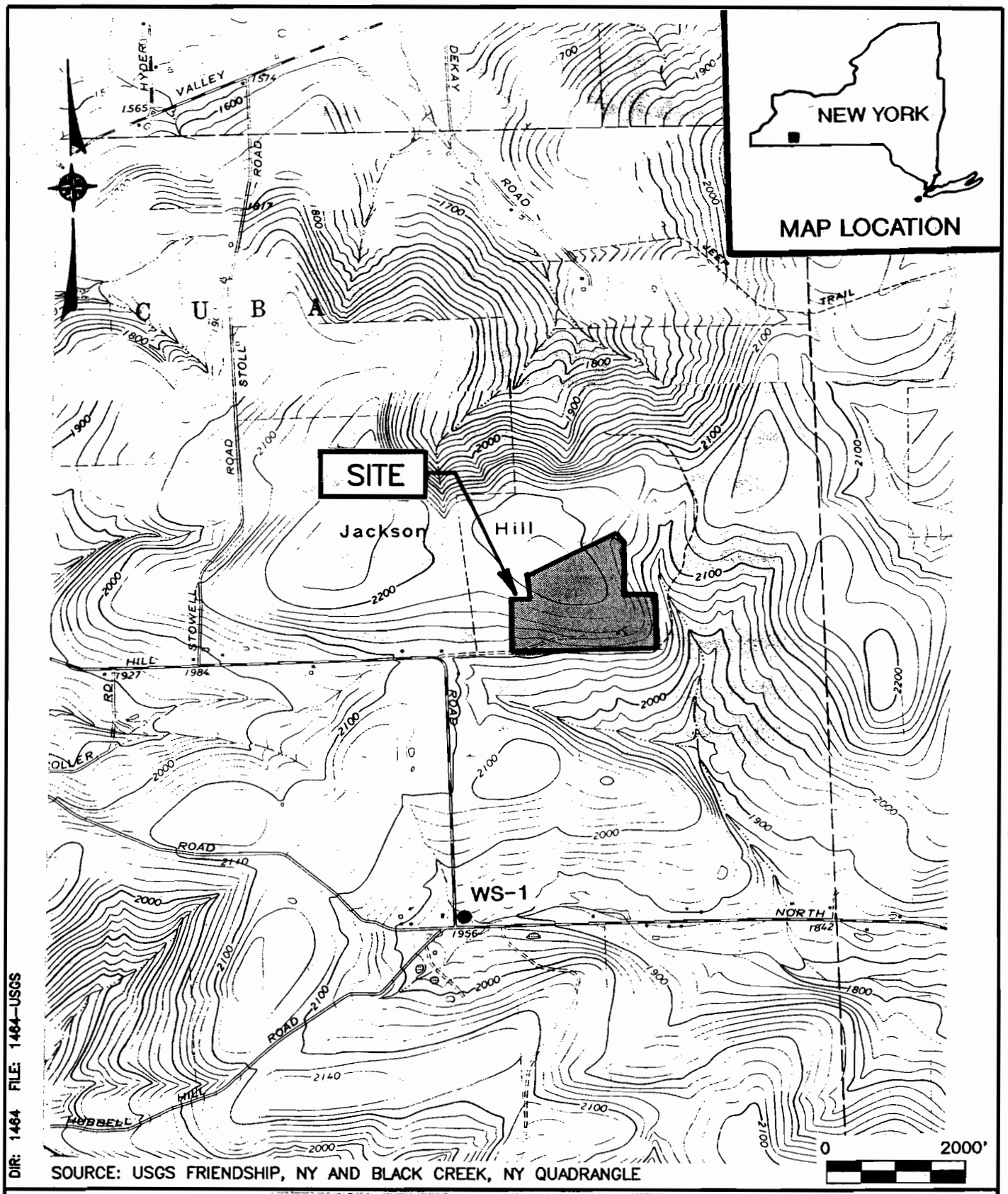
1.0 INTRODUCTION

As part of New York State's program to investigate and remediate hazardous waste sites, the New York State Department of Environmental Conservation (NYSDEC) has issued a work assignment to Dvirka and Bartilucci Consulting Engineers of Woodbury, New York under its Superfund Standby Contract with NYSDEC for remedial design for the Cuba Landfill Site located in the Village of Cuba, Allegany County, New York (see Figure 1-1). The site is a Class 2 New York State Superfund site (Registry No. 9-02-012).

Based on the results of the Remedial Investigation/Feasibility Study (RI/FS) for the Cuba Landfill and the criteria identified for evaluation of alternatives, the NYSDEC has selected containment of the Cuba Landfill as the selected remedy in accordance with NYSDEC TAGM No. 4044 - Accelerated Remedial Actions at Non-RCRA Regulated Landfills and 6 NYCRR Part 360. The components of the remedy are as follows:

- A remedial design program to verify the components of the conceptual design and provide details necessary for constructing the selected remedy;
- Construction of a new landfill cap to comply with 6 NYCRR Part 360 consisting of a geomembrane, geocomposite drainage layer, barrier protection layer and vegetative cover;
- Construction of a diversion trench on the north side of the landfill;
- Installation of a phytoremediation leachate control system, consisting of poplar trees, on the southern toe of the landfill; and
- A long-term groundwater monitoring program to verify the effectiveness of the selected remedy.

The remediation is being performed with funds allocated under the New York State Superfund Program. This Work Plan includes a detailed description of the project tasks, a project schedule and budget for the project. In addition, key project milestones are identified and D&B project team organization is presented.



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CUBA LANDFILL SITE
VILLAGE OF CUBA, NEW YORK

SITE LOCATION MAP

FIGURE 1-1

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2.0 SITE DESCRIPTION AND HISTORY

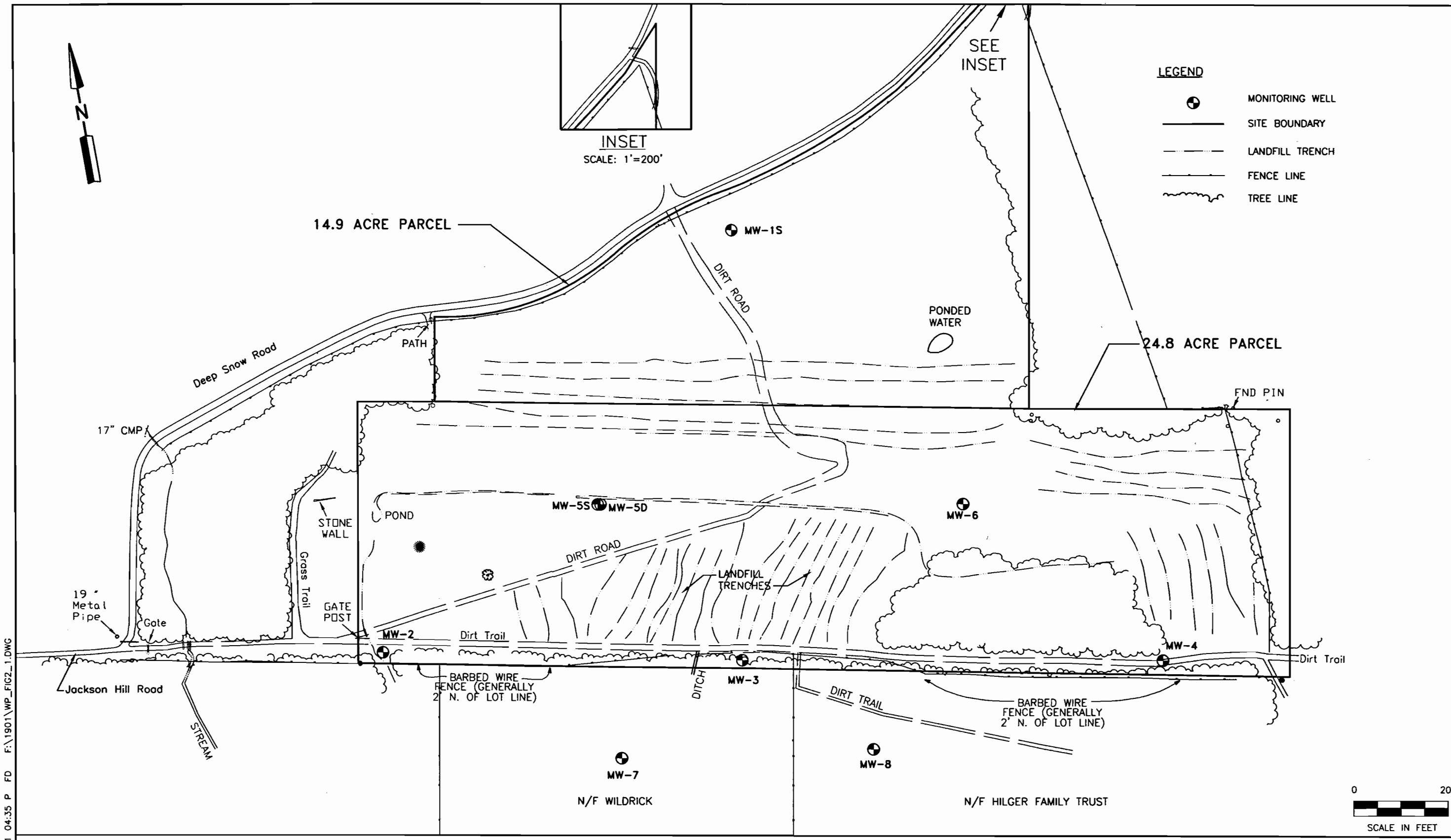
The Cuba Landfill Site is located in the Town of Cuba, Allegany County, New York (Figure 1-1). The site is composed of two contiguous parcels of property totaling approximately 40 acres. The Village of Cuba currently owns both parcels. The site is bordered on the west and the north by Deep Snow Road (Figure 2-1). An unnamed intermittent tributary of the North Branch of Van Campen Creek closely parallels the eastern border, and forested private property borders the south side. The site slopes steeply from north to south and consists mainly of tall grasses and brush. Several dozen partially settled disposal trenches are evident running both east-west and north-south across the site. Access to the site is from the unpaved Deep Snow Road off Jackson Hill Road.

From the early 1950s until 1981, the Cuba Municipal Waste Disposal Site accepted household, commercial and industrial waste, including industrial waste from the Acme Electric Corporation. Acme Electric has identified several listed hazardous wastes generated by the facility and disposed at the landfill between 1952 and 1981. These wastes included spent halogenated solvents used in degreasing operations, plating bath sludges and cleaning bath solutions from electroplating operations, PCB capacitors and paint sludges. No records of the quantities of the wastes disposed of by Acme Electric are available.

The Village of Cuba has owned the property since November 1967. Prior to 1967, the property was leased by the village from Ida Barber. The facility was issued a sanitary landfill permit in 1979 by NYSDEC and was inspected on a regular basis by NYSDEC until the village completed an approved closure plan in 1987.

Site Surface Features

The Cuba Landfill is situated on the steep south-facing slope of Jackson Hill, which is one of the most prominent hills in the region, at elevations of over 2,100 feet above mean sea level. The upper portion of the site is over 100 feet higher than the southern toe of the slope of the landfill. Landfilling was performed by depositing waste in trenches which were excavated in the side of the hill. The trenches, which are oriented both north-south and east-west, were



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CUBA LANDFILL SITE
VILLAGE OF CUBA, NEW YORK

SITE PLAN

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FIGURE 2-1

approximately 10 to 15 feet wide by 4 to 10 feet deep and range from 100 to 1,200 feet long. Filled trenches were covered by 6 to 24 inches of site-derived silty soils. Differential settlement (1-3 feet) of the trenches, that maximizes infiltration, erosion and exposure of waste, has occurred. Surface water flowing down hill to the south is retained by the trenches causing leachate seeps at the toe of the slope. In general, the soil cover on the hill slope is thin. Bedrock outcrops with groundwater springs are apparent immediately south of the landfill.

Site Geology and Hydrology

Overburden thickness at the site is variable. Generally, the thickness of the soils is thin and ranges from 2 to 10 feet. Unconsolidated soil consists of silt with little gravel and trace sand. Soil thickness increases down-slope and south of the site. Borings into the bedrock beneath the site confirmed that the bedrock is highly fractured, thinly bedded brown, gray and green-gray shale with less common siltstone. Most fractures are horizontal and are parallel to the bedrock bedding planes. Groundwater flow is generally to the south; however, groundwater flow is dominated by bedrock fractures and precipitation/recharge events and is therefore complex.

Summary of Site Assessments and Remedial Investigation

In October 1990, URS Consultants, Inc. prepared a Phase 1 – Preliminary Site Assessment (PSA) for the NYSDEC to determine if the site qualified for the NYS Registry of Inactive Hazardous Waste Disposal Sites. The report recommended additional sampling be conducted in order to determine if the site should be classified as a Class 2. In January 1994, Engineering Science, Inc. prepared a Phase II PSA report for NYSDEC. The Phase II PSA included installation and sampling of four (4) monitoring wells, and sampling of surface water, leachate, and surface soils. The results indicated the presence of VOCs in on-site groundwater and leachate. Based on the results from the Phase II investigation, and the confirmed disposal of hazardous waste including solvents, plating wastes, PCB capacitors and paint sludges, the site was reclassified from Class 2a to a Class 2 site in 1994. A Class 2 site is defined by the NYSDEC as posing a significant threat to human health and/or the environment.

A Remedial Investigation Report was completed for the Cuba Landfill Site in July 1999. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted in two phases. Phase I was conducted during the summer and fall of 1997. Phase II of the investigation was conducted during spring 1998 under high groundwater conditions. The RI included the following activities:

- Installation of soil borings and monitoring wells for analysis of soils and groundwater as well as physical properties of soil and hydrogeologic conditions;
- Excavation of test pits to observe subsurface conditions and collect landfill leachate for analysis;
- Surface soil sampling, groundwater seep sampling and sediment sampling from two nearby streams;
- Residential well sampling conducted by the New York State Department of Health to ensure that existing residential wells have not been impacted by the site;
- Fish and wildlife impact analysis; and
- Qualitative health risk assessment to evaluate potential risks to human health.

Based on the RI results, in comparison to the standards, criteria and guidance values (SCGs) and potential public health and environmental exposure routes, certain areas and media of the site require remediation as summarized below.

Groundwater

Two rounds of groundwater samples were collected from 10 monitoring wells. All wells were screened in the upper weathered bedrock due to the thin non-water bearing overburden at the site. Groundwater samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), PCBs, pesticides and metals. Ten VOCs were detected in the groundwater above NYSDEC Class GA standards. Monitoring wells with the highest total VOCs were MW-3 (723 ppb), MW-4 (164 ppb) and MW-6 (353 ppb). MW-3 and MW-4 are located on the downgradient edge of the landfill property, and MW-6 is located within the interior of the landfill.

PCB compounds were found above SCGs (0.09 ppb) at MW-6 and MW-7. MW-7 is a deeper bedrock well located downgradient (south) of the site. Aroclor 1016 was found in MW-6 at 0.42 ppb. Aroclor 1242 at 0.46 ppb and Aroclor 1254 at 0.27 ppb were identified in samples from MW-7. No SVOCs, or pesticides were detected in groundwater above SCGs.

Leachate

Twenty test pits were excavated to accumulate leachate for sampling and 12 leachate samples were collected during the RI. Leachate samples were identified as liquid exhibiting orange staining that accumulated in downgradient landfill trenches. Samples consisting of relatively clear, unstained surface water collected off-site and downgradient of the landfill, were reported as groundwater springs.

The 12 leachate samples were collected from the downgradient side of the landfill (toe of slope). VOCs were detected in exceedance of SCGs in five of the 12 samples. Total VOCs concentration in leachate ranged from 10 to 100 ppb. The highest individual concentration for a single VOC was 63 ppb for 1,1,1-trichloroethane. No SVOCs and only one pesticide compound, endrin at 14 ppb, was detected above SCGs. Three PCB compounds were detected above SCGs in four of the 12 leachate samples. The maximum reported PCB concentration for a leachate sample was Aroclor 1260 at 19 ppb. The results of the inorganic (metal) analysis for the leachate samples demonstrated exceedances for iron, lead and manganese.

Groundwater Springs

Ten groundwater springs were sampled downgradient of the landfill during the RI. The springs are wet areas of bedrock outcropping, are generally low flow (< 1 gpm) and are somewhat isolated by the heavily wooded area. The springs are not used as a source of potable water. Analysis of samples collected from springs SP-1 and SP-2, located 200 feet southeast of the landfill, exhibited concentrations above SCGs for several compounds. Total VOCs detected were 228 ppb at SP-1 and 368 ppb at SP-2. The pesticide endrin (SCG of nondetect) at a

concentration of 0.021 ppb was detected at SP-1 and the PCB compound Aroclor-1260 was detected above the SCG of 0.09 ppb at a concentration of 0.93 ppb at both SP-1 and SP-2. This was the only PCB compound detected at either location and no PCBs were detected at the remaining spring sampling locations. Inorganic analyses of the spring samples exhibited exceedance of SCGs for iron and manganese at most sampling locations.

Surface Water Sediment

Surface water sediment samples were collected at five locations in nearby creeks. Both upgradient and downgradient sampling results did not exhibit contamination by any contaminant above SCGs.

Surface Soils

Twelve surface soil samples were collected during the RI. No VOCs were detected at any of the soil sampling locations. Only one SVOC and one PCB compound were detected slightly above SCGs at one sampling location. No other SVOCs and PCBs were detected at any of the other surface soil sampling locations. Inorganic analyses of the surface soil samples detected concentrations of metals that are generally comparable to background soil samples.

Subsurface Soil

Subsurface soil samples were collected from the interior of the site from borings at MW-5 and MW-6. These samples were selected because they are located outside of or between landfill trenches and are representative of unsaturated overburden from the interior of the landfill. No VOCs, SVOCs, PCBs, or pesticides were detected above SCGs. Metals were found to be consistent with site background concentrations. Each subsurface sampling location, including the subsurface borings and the test pit locations, were screened for organic vapors with a photoionization detector and a combustible gas indicator. The results indicate that methane gas generation does not currently pose a problem at the landfill.

Residential Wells

One residential water supply was sampled in 1998 during the RI. In August 1999, the New York State Department of Health (DOH) collected samples from the five nearest private drinking water wells located downgradient of the site. The nearest well is located over 1,000 feet southwest of the landfill and over 800 feet from the nearest spring exhibiting site contamination. Based on the analytical results of the samples the DOH determined that all the private supplies are suitable for all domestic purposes.

Based on an assessment of human exposure pathways, the RI sampling has confirmed that the concentrations of landfill contaminants are of concern for groundwater springs, leachate and groundwater only in close proximity to the landfill. Although the potential for human exposure to these contaminants exists, it is not expected that they present a significant health risk under current conditions. However, should conditions change or new private groundwater wells be installed near the landfill, exposures could become a concern under current conditions.

3.0 SCOPE OF WORK

In addition to preparation of this work plan, the services to be provided by Dvirka and Bartilucci Consulting Engineers (D&B) as part of this work assignment include implementing and reporting on predesign activities; preparation of plans and specifications (contract documents) for procurement of a construction contractor; preparation of a construction cost estimate; preparation of a draft operations and maintenance manual, and long-term monitoring plan; providing assistance to NYSDEC with citizen participation activities; and pre-award services including attendance at a pre-bid conference. Presented below is a description of each task to be performed in connection with the remedial design work assignment.

3.1 Task 1 - Work Plan Preparation

The work under this task includes information review, a site visit and scoping session, and work plan development as described below.

3.1.1 Subtask 1.1 – Information Review

Under this subtask existing information, including site plans, the Remedial Investigation Report (RI), Feasibility Study Report (FS) and Record of Decision (ROD), will be reviewed to determine whether the areas to be remediated have been adequately delineated and characterized for design purposes and if additional waste delineation and/or sampling is required for incorporation into the scope of work.

3.1.2 Subtask 1.2 – Site Visit and Scoping Session

The work under this subtask includes a site visit and attendance at a scoping session with representatives of the Department. The site visit and scoping session will be attended by D&B's Project Director, Project Manager and Field Manager for the work assignment.

3.1.3 Subtask 1.3 –Work Plan Development

Under this subtask a draft work plan that includes a description and purpose of the major tasks and subtasks (i.e., scope of work), a budget for each task, a schedule with milestones and deliverables, a site-specific health and safety plan (HASP) which includes a community air monitoring plan, a site-specific quality assurance/quality control (QA/QC) Plan, a description of pre-design studies, a MBE/WBE utilization plan and a project management plan, including an organization chart showing the lines of responsibility for the remedial design effort, and a list of subcontractors and subconsultants, will be prepared and submitted for Department approval.

In addition, under this subtask D&B will prepare scopes of work, solicit prices from and procure subcontractor and subconsultants, including obtaining Department approval for and preparing subconsultant/subcontractor agreements, as needed to perform the scope of work.

The scope of work includes submittal of three (3) copies of the draft work plan to the Department for review and comment and eight (8) double-sided copies of the final work plan.

3.2 Task 2 - Pre-design Studies

The work under this task includes pre-design data and information collection, and preparation of reports as described below.

3.2.1 Subtask 2.1 – Pre-Design Data and Information Collection

Aerial Photography, Surveying and Mapping

A property survey and physical survey will be prepared under this subtask. The property survey will be prepared to confirm the boundaries of the two parcels owned by the Village of Cuba which comprise the site and will identify easements and rights of way, if any, in connection

with the two parcels. The physical survey will include the site and the surrounding area extending 700 feet beyond the property boundaries in all directions and a portion of the stream corridors adjacent to and downgradient of the site. The physical survey shall show topographic contours (at 1-foot intervals on the site and the 700-foot surrounding area and at 2-foot intervals along the stream corridors), surface water bodies, storm water drainage structures, waste disposal trenches when identifiable and known existing utilities. The locations of test pits, test trenches, monitoring wells, and leachate samples collected as part of the pre-design investigation described below will be surveyed and shown on the site map.

Predesign Investigation

The predesign investigation will include excavation of test pits and test trenches to further delineate the extent of buried waste and evaluate waste consolidation. In addition, surface water, leachate and groundwater samples will be collected and analyzed as described below and shown on Figure 3-1. Also, in support of the design of the phytoremediation system, soil samples will be collected and analyzed for soil nutrients and moisture retention capacity. To the extent that site-specific descriptions of sample collection activities are not presented below, the protocols presented in the RI/FS Work Plan will be followed.

Test Pits and Test Trenches

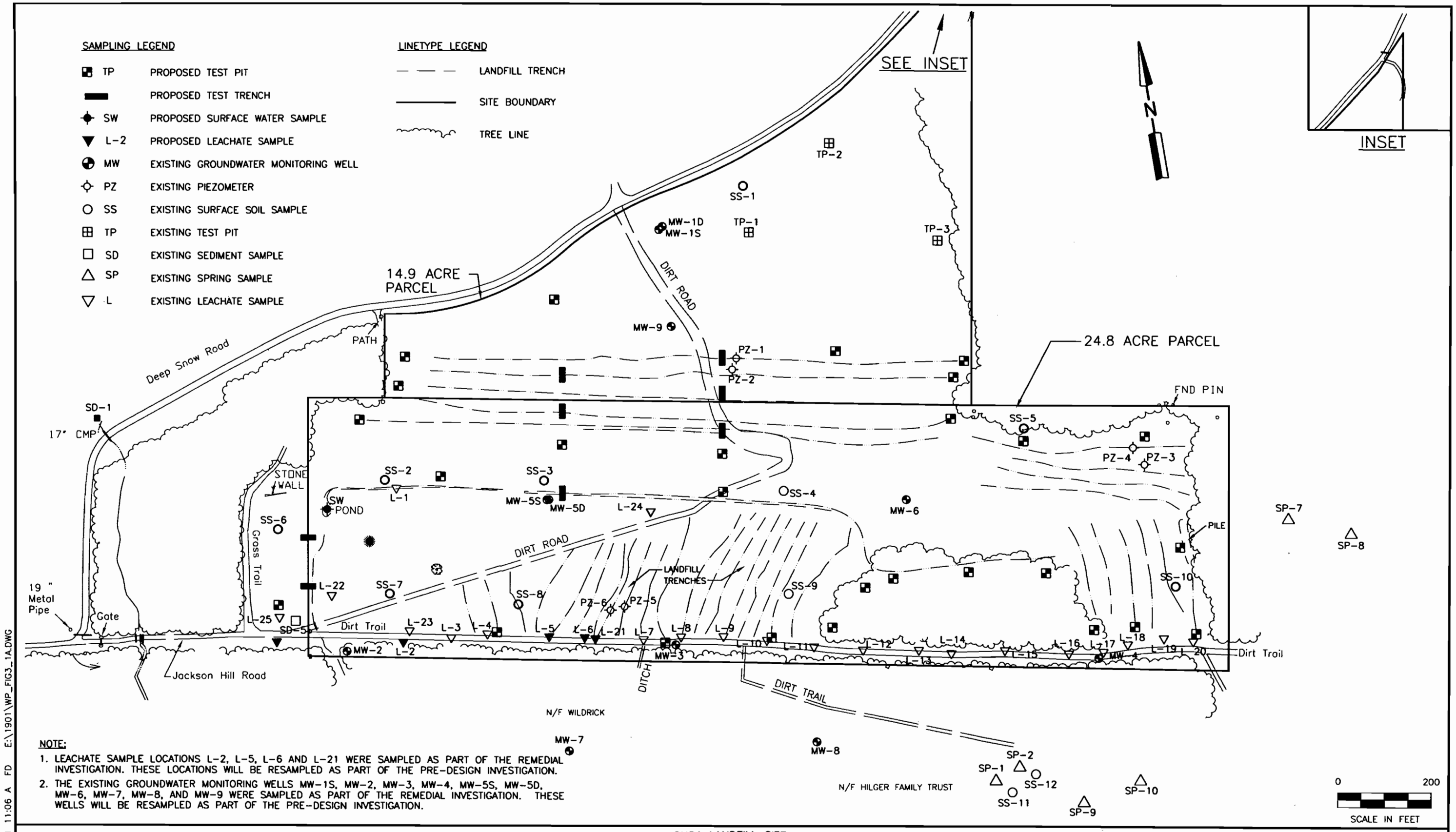
Twenty seven (27) test pits will be excavated at the locations shown on Figure 3-1. The primary purpose of the test pits is to define the limits of buried waste at the site. In addition, the two test pits in the northern-most portion of the site and up to three test pits within the tree line in the southeastern portion of the site will be excavated to the bedrock surface to determine depth of overburden in these areas. The information obtained from the test pit excavations will be used to establish the limits of the cap on the closure design drawings. Additionally, a total of five soil samples will be collected for grain size distribution, including sieve and hydrometer analysis. Three samples will be collected from the northernmost proposed test pits and test trench shown on Figure 3-1 and two samples will be collected from test pits located within the tree line near

SAMPLING LEGEND

TP	PROPOSED TEST PIT
	PROPOSED TEST TRENCH
SW	PROPOSED SURFACE WATER SAMPLE
L-2	PROPOSED LEACHATE SAMPLE
MW	EXISTING GROUNDWATER MONITORING WELL
PZ	EXISTING PIEZOMETER
SS	EXISTING SURFACE SOIL SAMPLE
TP	EXISTING TEST PIT
SD	EXISTING SEDIMENT SAMPLE
SP	EXISTING SPRING SAMPLE
L	EXISTING LEACHATE SAMPLE

LINETYPE LEGEND

- LANDFILL TRENCH
- SITE BOUNDARY
- TREE LINE



NOTE:

1. LEACHATE SAMPLE LOCATIONS L-2, L-5, L-6 AND L-21 WERE SAMPLED AS PART OF THE REMEDIAL INVESTIGATION. THESE LOCATIONS WILL BE RESAMPLED AS PART OF THE PRE-DESIGN INVESTIGATION.
2. THE EXISTING GROUNDWATER MONITORING WELLS MW-1S, MW-2, MW-3, MW-4, MW-5S, MW-5D, MW-6, MW-7, MW-8, AND MW-9 WERE SAMPLED AS PART OF THE REMEDIAL INVESTIGATION. THESE WELLS WILL BE RESAMPLED AS PART OF THE PRE-DESIGN INVESTIGATION.

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CUBA LANDFILL SITE
VILLAGE OF CUBA, NEW YORK

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EXISTING AND PROPOSED SAMPLING LOCATIONS

FIGURE 3-1

the southeast corner of the site. Samples will be obtained from the backhoe bucket immediately after retrieval. Personnel will not enter the test pits to collect samples. Grain size analyses will be performed in accordance with ASTM D422. The results of the grain size analyses will be used to assess the suitability of the on-site soils for constructing the cap subgrade. In addition, the results of the grain size analyses will be included in a Limited Site Data document included with the bid package.

Eight test trenches will be constructed at the locations shown on Figure 3-1. The purpose of the test trenches oriented north/south on the central part of the property is primarily to profile the existing waste disposal trenches (i.e., determine depth and width of waste and amount of soil cover), since the waste in this area of the site is being considered for excavation and consolidation. The purpose of the test trenches beyond the western perimeter of the property is to determine if waste is buried in this area, and if so, to determine the amount of waste. Coordination with adjacent property owners for access will be provided by the Department.

The protocol for test pit and test trench excavation, sampling and backfill will be the following:

- Vegetation and topsoil from the surface of the test pit/trench will be removed and temporarily stored on one side of the test pit/trench.
- Deeper excavated soil and waste will be placed on the side of the pit/trench in a separate location from the vegetation and topsoil.
- A log of excavation and sample collection will be maintained by a geologist. In general, excavations will be terminated when virgin soil or bedrock is encountered. Waste delineation test pits will be staked to show the limits of waste and the extent of the trenches will be staked. The staked locations will be surveyed and mapped as part of this subtask. In addition, each test pit will be photographed during excavation.
- The excavations will be filled in the reverse order of soil/waste removal.
- Final cover will use the soil initially removed and placed separately. If this is not sufficient, clean soil from the surrounding area will be placed on top of the pit/trench to cover replaced waste.

In general, only the backhoe bucket, which will come into contact with contaminated soil, will require decontamination. Decontamination of the bucket will be performed upon arrival at the site, prior to commencing any excavation beyond the site property boundaries, and prior to departure of the backhoe from the site. Decontamination water will be disposed of on-site.

Leachate and Surface Water Sampling

Leachate samples will be collected from five on-site locations as shown on Figure 3-1. Seeps have been observed at each of these locations. Locations L-2, L-5, L-6 and L-21 were previously sampled during the RI and each of the samples collected from these locations exhibited the presence of contaminants above SCGs. These locations, will be resampled to confirm the RI results. At the new proposed leachate sample location near the southwest corner of the property (see Figure 3-1), a significant leachate seep was observed during the April 26, 2001 site visit. One surface water sample will be collected from the small pond near the western perimeter of the property. The leachate samples and the surface water sample will be analyzed for TCL +30 organic parameters, TAL metals and cyanide. Standard laboratory turnaround time will be provided for analyses. Leachate sample locations will be staked for surveying and mapping.

Groundwater Sampling

Groundwater level measurements will be obtained from each of the wells and piezometers included in the water level measurements collected during the RI. Groundwater level measurements of all wells will be made using an electronic water level indicator or similar instrument within an 8-hour period of uniform weather conditions.

All water level measurements will be made using a fixed reference point at each measurement location. Down hole instruments will be decontaminated between each measurement location. The static water level will be measured to the nearest 0.01-foot.

Groundwater level data will be used to confirm groundwater potentiometric surface maps, local horizontal flow direction, and vertical gradients determined as part of the RI.

Samples will be collected for analysis from groundwater monitoring wells MW-1S, MW-2, MW-3, MW-4, MW-5S, MW-5D, MW-6, MW-7, MW-8 and MW-9. MW-1D was found to be dry during both RI sampling rounds; however, if possible, a sample will also be collected from this well. All groundwater samples will be analyzed for TCL +30 organic parameters, TAL metals and cyanide. Standard laboratory turnaround time will be provided for analyses. Purge water will be recharged on-site.

Ambient Air Monitoring

Air monitoring for fugitive dusts and organic vapors will be conducted during all field activities. Fugitive dusts will be monitored using a portable dust indicator and organic vapors will be screened using a PID or FID. Explosive gases will be monitored using a combustible gas indicator.

Refer to section 3.3.1 for a description of reporting regarding the results of the predesign investigation.

3.2.2 Subtask 2.2 - Stability Analysis

Two geometric cross sections of the landfill will be analyzed for overall global stability and stability of the landfill side slopes. Each analysis will be performed for normal and seismic loading conditions. If the proposed slope geometry does not provide an adequate factor of safety against failure, additional analyses will be performed and the maximum slope that provides the required factor of safety will be determined. A letter report will be prepared presenting the results of the analyses including the input and output data for the analyses for each geometric cross-section. The report will also include recommendations for an alternate slope grade for

proposed slopes that do not provide the required factor of safety, if required, for use in the design of the grading plan for the landfill.

3.3 Task 3 – Plans and Specifications (Contract Documents)

Draft and final drawings and specifications will be prepared for the purpose of competitively bidding the proposed work in conformance with the Department's Standard Contract Documents. The contract documents will include drawings and specifications for materials and construction of:

- Site grading
- Landfill capping system
- Hybrid poplar tree phytoremediation system
- Upgradient surface water and shallow overburden groundwater diversion system
- Site access and perimeter roadways and entrance gates
- Groundwater monitoring systems to evaluate effectiveness of cap and phytoremediation system and provide for early detection for private water supply wells
- Landfill gas vents
- Storm water management and erosion control systems including on-site storm water conveyance and diversion facilities. (Concentrated discharges will be minimized and most of the storm water will be managed by overland sheet flow towards the southern perimeter of the site. The remaining flow will be diverted to existing stream channels located near the southeast and southwest corners of the site. As a result, it has been assumed that modifications to existing stream channels downgradient of the site will not be required.)
- Management of contaminated liquids, including contaminated leachate seeps during construction.

In addition, the contract documents will specify requirements for mobilization, demobilization, site preparation, clearing and grubbing, field offices and support areas, survey

control of the work, temporary utilities, storage and staging of materials, security, and contractor preparation of a work plan, health and safety plan (HASP) and construction quality assurance and quality control (CQA/CQC) plan.

3.3.1 Subtask 3.1 – Preliminary Design

The first design submittal (Preliminary Draft Design Submittal) to the Department will represent approximately 30 percent completion. The Preliminary Draft Design Submittal will consist of drawings showing surveyed site property boundaries, existing site conditions and utilities, subgrade grading plans, proposed limits of cap, and the locations of access and perimeter roads, upgradient diversion trench, phytoremediation plantings and major storm water management facilities (i.e., storm water diversion trenches, etc.). Six copies of the Preliminary Draft Design Submittal drawings will be submitted to the Department for review and comment. In addition, a letter report presenting the results of the predesign investigation and a letter report presenting the results of the stability analysis will be submitted to the Department as part of the Preliminary Draft Design Submittal.

Following receipt of comments from the Department on the Preliminary Draft Design Submittal, a 60 percent complete (Draft Design Submittal) will be prepared. The Draft Design Submittal will consist of drawings for all of the components of the landfill capping system, including subgrade and final grading plans, cap cross sections and details for each element of the project identified in the 30 percent design submittal. Six copies of the Draft Design Submittal drawings and a table of contents for the specifications will be submitted to the Department for review and comment.

3.3.2 Subtask 3.2 – Final Design

Following receipt of comments from the Department on the Draft Design Submittal, a 95 percent complete bid package (Draft Final Design Submittal) will be prepared. This submittal will comprise drawings, specifications, measurement and payment section, bid forms and other

section of the contract documents as required. Six copies of the Draft Final Design Submittal will be submitted to the Department for review and comment.

After receipt of Department approval of the Draft Final Design Submittal, D&B will submit 70 copies of the final contract documents, including the Department's Standard Contract Documents, to the Department for bidding. The drawings and specifications will be stamped and signed by a New York State Licensed Professional Engineer.

3.3.3 Subtask 3.3 – Construction Cost Estimate

A construction cost estimate will be prepared under this subtask. The estimate will be prepared on a bid item basis as provided in the bid schedule in the contract documents in order to provide an estimate for each bid item. The estimated quantities on the bid schedule in the final contract documents will be utilized to provide a total engineering cost estimate for the remedial construction project. Price quotations from local contractor and suppliers and bid prices furnished by the Department for similar projects will be used to the extent available in preparing the cost estimate.

3.3.4 Subtask 3.4 – Draft Operations and Maintenance Manual, and Long Term Monitoring Plan

A draft operations and maintenance manual will be prepared based on the design. The manual will include:

a. Site-specific health and safety issues;

b. Site and project descriptions, drawings and diagrams;

c. Performance monitoring, testing and record keeping requirements;

d. Site and equipment inspection and maintenance schedules;

e. Waste management guidelines;

f. Reporting schedule;

g. Citizen participation plan; and

h. Anticipated site-specific standard operating procedures (SOPs).

The monitoring plan will be developed as a separate document for the site. Data generated from the monitoring plan will be of sufficient quality and detail to allow future decisions for the modification or continuation of operation of the remedy and provide early detection of downgradient off-site migration. Of particular significance is the monitoring and system effectiveness evaluation of the phytoremediation system.

Four copies of the draft operations and maintenance manual will be furnished to the Department. The monitoring plan will be provided as an appendix to the manual.

3.4 Task 4 - Citizen Participation

Assistance will be provided to the Department in citizen participation activities, such as public meetings as requested by the Department. Summary documents, maps, sketches and other handouts for these meetings will be prepared. D&B will answer questions raised at the public meeting that concern the design of the project, construction techniques and the project scheduling. The existing mailing list of interested citizens and public officials will be used for the mailing of public meeting notices and fact sheets as needed. For cost estimating purposes, one mailing, attendance at one meeting and preparation of presentation materials for one meeting have been assumed.

3.5 Task 5 - Pre-award Services

Under this task pre-award services will be provided to the Department in conjunction with the competitive bidding of the remedial construction project. The work under this task has

been organized into two subtasks as described below. Advertising for bids and distribution of bid documents and addenda will be performed by the Department.

3.5.1 Subtask 5.1 - Pre-Bid Conference

Assistance will be provided to the Department in conducting the pre-bid conference and site visit with prospective bidders. D&B will respond to technical questions regarding the contract plans and specifications and prepare and submit to the Department meeting minutes for the pre-bid conference. It is assumed that the pre-bid conference will be held at the Cuba Landfill Site.

3.5.2 Subtask 5.2 - Addenda

Written responses to questions raised at the pre-bid conference will be prepared and any necessary addenda to the plans and specifications will be prepared, for the timely transmittal by the Department to the prospective bidders. Electronic files of addenda will be provided to the Department for printing and distribution by the Department.

4.0 PROJECT MANAGEMENT

4.1 Project Schedule and Key Milestones/Reports

A project schedule is provided in Figure 4-1. Key milestones are identified in order to monitor work progress. Specific deadlines for completion of tasks and subtasks are established throughout the project to ensure timely completion of work. The following is the list of the milestones for this project:

1. Submittal of Draft Work Plan
2. Submittal of Draft Contract Documents
3. Submittal of Construction Cost Estimate

4.2 Project Management, Organization and Key Technical Personnel

Dvirka and Bartilucci Consulting Engineers will be the prime consultant responsible for the remedial design. The following subcontractors will be used on the project:

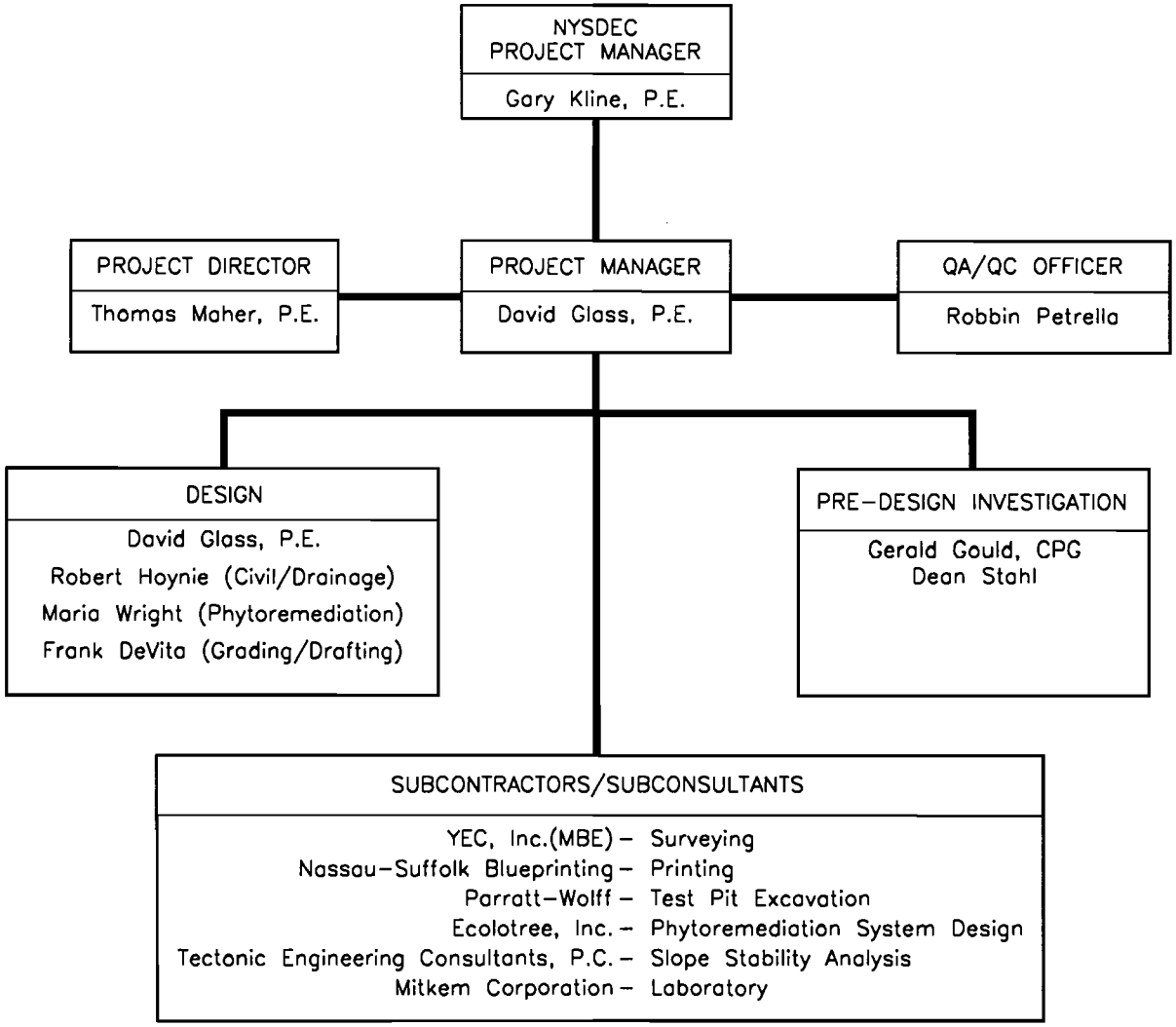
- YEC, Inc. (MBE) - Surveying
- Ecolotree, Inc. – Phytoremediation System Design
- Tectonic Engineering Consultants, P.C. – Slope Stability Analysis
- Parratt-Wolff, Inc. – Test Pit Excavation
- Mitkem Corporation – Analytical Laboratory
- Nassau-Suffolk Blueprinting Co., Inc. (WBE) - Printing/Copying

Project organization illustrating both management and project responsibility functions for the project team and key personnel, is provided in Figure 4-2.

FIGURE 4–2

PROJECT TEAM ORGANIZATION CHART

FOR
REMEDIAL DESIGN
CUBA LANDFILL SITE
VILLAGE OF CUBA, NEW YORK



Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

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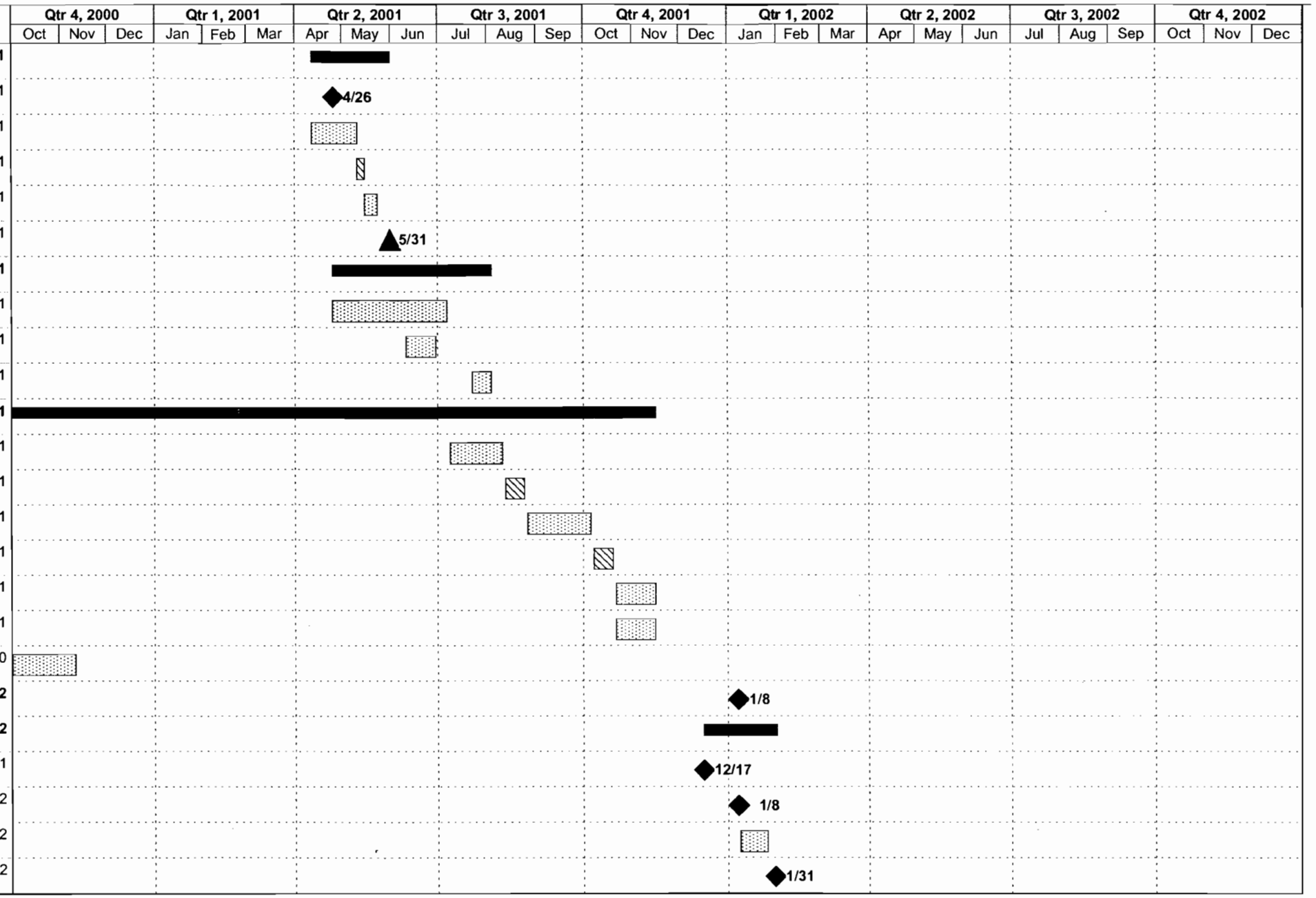
CUBA LANDFILL SITE
REMEDIAL DESIGN
POJECT SCHEDULE

Task	Task Name	Duration	Start	Finish
1.0	**Work Plan**	**36d**	**4/12/01**	**5/31/01**
1.1	Site Visit / Scoping Session	1d	4/26/01	4/26/01
1.2	Draft Work Plan	21d	4/12/01	5/10/01
1.3	Department Review	3d	5/11/01	5/15/01
1.4	Final Work Plan	6d	5/16/01	5/23/01
1.5	Final Work Plan Approval	6d	5/24/01	5/31/01
2	**Pre-Design Studies**	**73d**	**4/25/01**	**8/3/01**
2.1	Aerial Photography, Surveying and Mapping	53d	4/25/01	7/6/01
2.2	Pre-Design Investigation	15d	6/11/01	6/29/01
2.3	Stability Analysis	10d	7/23/01	8/3/01
3	**Plans and Specifications**	**294d**	**10/2/00**	**11/15/01**
3.1	Preliminary Draft Design Submittal (30%)	25d	7/9/01	8/10/01
3.2	Department Review	10d	8/13/01	8/24/01
3.3	Draft Design Submittal (60%)	30d	8/27/01	10/5/01
3.4	Department Review	10d	10/8/01	10/19/01
3.5	Final Design	19d	10/22/01	11/15/01
3.6	Construction Cost Estimate	19d	10/22/01	11/15/01
3.7	Draft Operations and Maintenance Manual and Long Term Monitoring Plan	30d	10/2/00	11/10/00
4	**Citizens Participation**	**1d**	**1/8/02**	**1/8/02**
5	**Pre-Award Services**	**34d**	**12/17/01**	**1/31/02**
5.1	Advertise for Bids	1d	12/17/01	12/17/01
5.2	Pre-Bid Conference	1d	1/8/02	1/8/02
5.3	Addenda	13d	1/9/02	1/25/02
5.4	Bid Due Date	1d	1/31/02	1/31/02



Project: Cuba Landfill Site
Date: May 2001

Subtask | Department Review | Task | Meeting/Milestone | Approval

5.0 SITE-SPECIFIC QUALITY ASSURANCE AND QUALITY CONTROL PLAN

All sample analysis for the Cuba Landfill Site will be conducted in accordance with the New York State Department of Environmental Conservation Analytical Services Protocol (ASP). All other information which is not provided below regarding detailed sampling procedures and protocols, as well as other quality assurance and quality control (QA/QC) requirements, is provided in the RI/FS Work Plan.

5.1 Sampling Program Design and Rationale

Presented below is a summary of the predesign sampling to be conducted.

- Five soil samples will be collected from test pits and analyzed for grain size and soil classification to characterize site soil for use in constructing the landfill cap subgrade.
- Five leachate samples will be collected from leachate seeps and analyzed for TCL +30 organic parameters, TAL metals and cyanide to confirm prior leachate sampling results.
- One surface water sample will be collected from the small on-site pond and analyzed for TCL +30 organic parameters, TAL metals and cyanide to characterize the on-site surface water.
- Groundwater samples will be collected from monitoring wells MW-1S, MW-1D, MW-2, MW-3, MW-4, MW-5S, MW-5D, MW-6, MW-7, MW-8 and MW-9, and analyzed for TCL +30 organic parameters, TAL metals and cyanide to confirm prior groundwater sampling results.

In addition to the above, the following QA/QC samples will be collected and analyzed:

- One trip blank will be sent with each shipment of leachate samples.
- One trip blank will be sent with each shipment of groundwater samples.
- One liquid matrix spike/matrix spike duplicate sample will be collected and analyzed.

Table 5-1 presents a summary of the parameters/sample fractions to be analyzed together with the sample location, type of sample, sample matrix, number of samples, frequency of sample collection, type of sample container, method of preservation, holding time and analytical method.

Table 5-1

SUMMARY OF MONITORING PARAMETERS

Sample Location	Sample Type	Sample Matrix	Sample Fraction	# Samples	Frequency of Sample Collection	Container Type/Size/No.	Sample Preservation	Maximum Holding Time*	Analytical Method
Monitoring Well	Grab	Groundwater	Volatile Organics	11	1	Glass, clear/ 40 mL/2 ICHEM 300 series or equivalent	Cool to 4°C	7 days after VTSR for analysis	10/95 NYSDEC ASP, Method 95-1
	Grab	Groundwater	Base Neutral and Acid Extractable Organics	11	1	Glass, amber/ 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C	5 days after VTSR for extraction, 40 days after extraction for analysis	10/95 NYSDEC ASP, Method 95-2
	Grab	Groundwater	Pesticides/PCBs	11	1	Glass, amber/ 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C	5 days after VTSR for extraction, 40 days after extraction for analysis	10/95 NYSDEC ASP, Method 95-3
	Grab	Groundwater	Metals	11	1	Plastic 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C HNO_3 to pH <2	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	10/95 NYSDEC ASP, Superfund CLP Inorganics
	Grab	Groundwater	Cyanide	11	1	Plastic 250 mL/1 ICHEM 300 series or equivalent	Cool to 4°C NaOH to pH >12	14 days after VTSR for analysis	10/95 NYSDEC ASP, Method 335.2

VTSR - Verified Time of Sample Receipt at the laboratory.

*Holding times based on the 10/95 NYSDEC ASP.

Table 5-1 (continued)

SUMMARY OF MONITORING PARAMETERS

Sample Location	Sample Type	Sample Matrix	Sample Fraction	# Samples	Frequency of Sample Collection	Container Type/Size/No.	Sample Preservation	Maximum Holding Time*	Analytical Method
On-Site Pond	Grab	Surface Water	Volatile Organics	1	1	Glass, clear/ 40 mL/2 ICHEM 300 series or equivalent	Cool to 4°C	7 days after VTSR for analysis	10/95 NYSDEC ASP, Method 95-1
	Grab	Surface Water	Base Neutral and Acid Extractable Organics	1	1	Glass, amber/ 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C	5 days after VTSR for extraction, 40 days after extraction for analysis	10/95 NYSDEC ASP, Method 95-2
	Grab	Surface Water	Pesticides/PCBs	1	1	Glass, amber/ 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C	5 days after VTSR for extraction, 40 days after extraction for analysis	10/95 NYSDEC ASP, Method 95-3
	Grab	Surface Water	Metals	1	1	Plastic 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C HNO_3 to pH <2	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	10/95 NYSDEC ASP, Superfund CLP Inorganics
	Grab	Surface Water	Cyanide	1	1	Plastic 250 mL/1 ICHEM 300 series or equivalent	Cool to 4°C NaOH to pH >12	14 days after VTSR for analysis	10/95 NYSDEC ASP, Method 335.2

VTSR - Verified Time of Sample Receipt at the laboratory.

*Holding times based on the 10/95 NYSDEC ASP.

Table 5-1 (continued)

SUMMARY OF MONITORING PARAMETERS

Sample Location	Sample Type	Sample Matrix	Sample Fraction	# Samples	Frequency of Sample Collection	Container Type/Size/No.	Sample Preservation	Maximum Holding Time*	Analytical Method
Leachate Seeps	Grab	Leachate	Volatile Organics	5	1	Glass, clear/ 40 mL/2 ICHEM 300 series or equivalent	Cool to 4°C	7 days after VTSR for analysis	10/95 NYSDEC ASP, Method 95-1
	Grab	Leachate	Base Neutral and Acid Extractable Organics	5	1	Glass, amber/ 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C	5 days after VTSR for extraction, 40 days after extraction for analysis	10/95 NYSDEC ASP, Method 95-2
	Grab	Leachate	Pesticides/PCBs	5	1	Glass, amber/ 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C	5 days after VTSR for extraction, 40 days after extraction for analysis	10/95 NYSDEC ASP, Method 95-3
	Grab	Leachate	Metals	5	1	Plastic 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C HNO_3 to pH <2	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	10/95 NYSDEC ASP, Superfund CLP Inorganics
	Grab	Leachate	Cyanide	5	1	Plastic 250 mL/1 ICHEM 300 series or equivalent	Cool to 4°C NaOH to pH >12	14 days after VTSR for analysis	10/95 NYSDEC ASP, Method 335.2

VTSR - Verified Time of Sample Receipt at the laboratory.

*Holding times based on the 10/95 NYSDEC ASP.

Table 5-1 (continued)

SUMMARY OF MONITORING PARAMETERS

Sample Location	Sample Type	Sample Matrix	Sample Fraction	# Samples	Frequency of Sample Collection	Container Type/Size/No.	Sample Preservation	Maximum Holding Time*	Analytical Method
Test Pit Locations	Grab	Soil	Grain Size	5	1	Glass, amber/ 250 mL/2 ICHEM 300 series or equivalent	Cool to 4°C	6 months	ASTM D422

VTSR - Verified Time of Sample Receipt at the laboratory.

*Holding times based on the 10/95 NYSDEC ASP.

Table 5-1 (continued)

SUMMARY OF MONITORING PARAMETERS

Sample Location	Sample Type	Sample Matrix	Sample Fraction	# Samples	Frequency of Sample Collection	Container Type/Size/No.	Sample Preservation	Maximum Holding Time*	Analytical Method
Monitoring Well	Matrix Spike/Matrix Spike Duplicate	Groundwater	Volatile Organics	1**	1	Glass, clear/ 40 mL/2 ICHEM 300 series or equivalent	Cool to 4°C	7 days after VTSR for analysis	10/95 NYSDEC ASP, Method 95-1
	Matrix Spike/Matrix Spike Duplicate	Groundwater	Base Neutral and Acid Extractable Organics	1**	1	Glass, amber/ 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C	5 days after VTSR for extraction, 40 days after extraction for analysis	10/95 NYSDEC ASP, Method 95-2
	Matrix Spike/Matrix Spike Duplicate	Groundwater	Pesticides/PCBs	1**	1	Glass, amber/ 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C	5 days after VTSR for extraction, 40 days after extraction for analysis	10/95 NYSDEC ASP, Method 95-3
	Matrix Spike/Matrix Spike Duplicate	Groundwater	Metals	1**	1	Plastic 1 L/2 ICHEM 300 series or equivalent	Cool to 4°C HNO_3 to pH <2	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	10/95 NYSDEC ASP, Superfund CLP Inorganics
	Matrix Spike/Matrix Spike Duplicate	Groundwater	Cyanide	1**	1	Plastic 250 mL/1 ICHEM 300 series or equivalent	Cool to 4°C NaOH to pH >12	14 days after VTSR for analysis	10/95 NYSDEC ASP, Method 335.2

VTSR - Verified Time of Sample Receipt at the laboratory.

*Holding times based on the 10/95 NYSDEC ASP.

**One set of MS/MSDs to be collected.

Table 5-1 (continued)

SUMMARY OF MONITORING PARAMETERS

Sample Location	Sample Type	Sample Matrix	Sample Fraction	# of Samples	Frequency of Sample Collection	Container Type/Size/No.	Sample Preservation	Maximum Holding Time	Analytical Method
Site	Trip Blank	Water	Volatile Organics	2*	1	Glass, clear/ 40 mL/l ICHEM 300 series or equivalent	Cool to 4°C	7 days after VTSR for analysis	10/95 NYSDEC ASP, Method 95-1

VTSR - Verified Time of Sample Receipt at the laboratory.

*One trip blank will be shipped with the leachate samples and one trip blank will be shipped with the groundwater samples.

6.0 SITE-SPECIFIC HEALTH AND SAFETY PLAN

The following site-specific information comprises information not included in the RI/FS Work Plan Site-Specific Health and Safety Plan for the Cuba Landfill Site. The following information will be utilized in conjunction with the RI/FS Work Plan Site-Specific Health and Safety Plan. Information with regard to contaminants of concern, personal protective equipment, exposure limits and monitoring requirements are provided in the site-specific HASP.

Site Name:	Cuba Landfill Site
Address:	Deep Snow Road
	Village of Cuba, New York
Telephone:	None
Dates of Field Investigations:	June 2001
Entry Objectives:	Waste delineation, groundwater sampling, surface water sampling and leachate sampling.

Site Organization Structure:	Name	Phone
Project Director:	Thomas Maher	516-364-9890
Project Manager:	David Glass	516-364-9890
Health and Safety Officer (HSO)	William Ryan	516-364-9890
Field Operations Manager/Alternate HSO	Gerald Gould	315-437-1142
Field Team Staff:	Dean Stahl	315-437-1142

	Name	Phone
Subcontractors:	YEC, Inc.	914-268-3203
	Parratt-Wolff, Inc.	315-437-1429
	Ecolotree, Inc.	319-358-9753

Name of Hospital: Cuba Memorial Hospital

Telephone: 716-968-2000

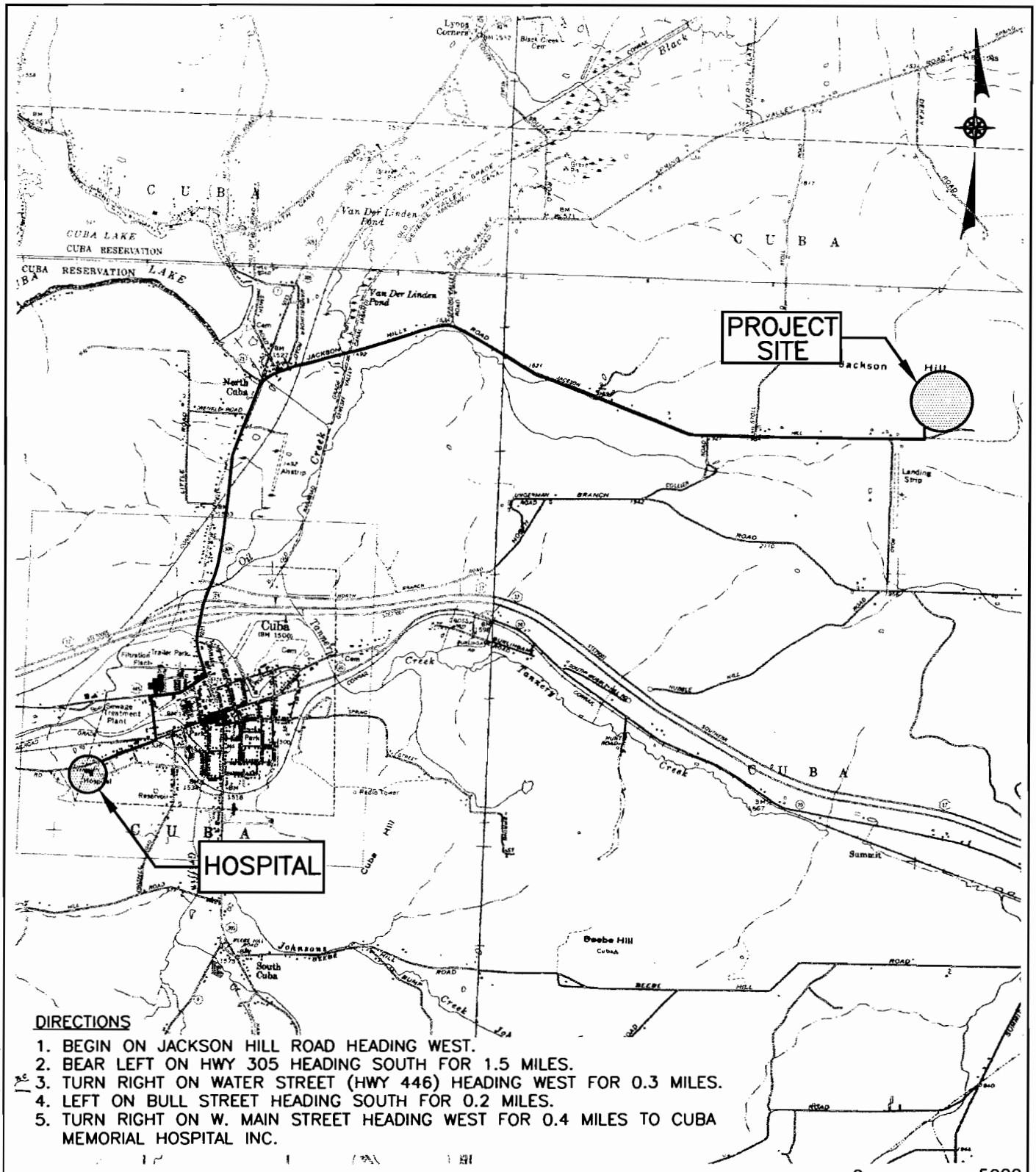
Address: 104 West Main Street

Cuba, NY

Directions: See Figure 6-1.

Emergency Telephones:

Agent/Facility	Telephone	Emergency Number
EMS - Ambulance	716-968-2000	911
Police Department	--	911
Fire Department	--	911
Hospital	716-968-2000	--



DIRECTIONS

1. BEGIN ON JACKSON HILL ROAD HEADING WEST.
2. BEAR LEFT ON HWY 305 HEADING SOUTH FOR 1.5 MILES.
3. TURN RIGHT ON WATER STREET (HWY 446) HEADING WEST FOR 0.3 MILES.
4. LEFT ON BULL STREET HEADING SOUTH FOR 0.2 MILES.
5. TURN RIGHT ON W. MAIN STREET HEADING WEST FOR 0.4 MILES TO CUBA MEMORIAL HOSPITAL INC.

0 5000

SCALE IN FEET

SOURCE: USGS CUBA, RAWSON, BLACK CREEK AND FRIENDSHIP QUADRANGLES

CUBA LANDFILL SITE
VILLAGE OF CUBA, NEW YORK

ROUTE TO CUBA MEMORIAL HOSPITAL

Dvirka and Bartilucci Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 6-1

FRI, MAY 18, 2001 01:53 P FD E:\1901\WP_FIG6_1.DWG

Additional site-related information (including, special hazards, site control, waste storage and disposal, personal protective equipment, decontamination area location, special engineering controls, etc.).

See attached Community Air Monitoring Plan.

New York State Department of Health
Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a **continuous** basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored **continuously** at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

June 20, 2000

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7.0 SCHEDULE 2.11s

Cuba Landfill Site
Work Assignment No. D003600-26
Remedial Design

Labor Estimate

		Hourly Rate as of		Task 1 - Work Plan Preparation								Task 2 - Pre-Design Studies					
				Subtask 1.1 Information Review		Subtask 1.2 Site Visit & Scoping Session		Subtask 1.3 Work Plan Development		Total Task 1		Subtask 2.1 Pre-Design Data and Information Collection		Subtask 2.2 Stability Analysis		Total Task 2	
NAME/TITLE	NSPE Level	Jul-00	Jul-01	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost
Thomas Maher Principal	IX	$60.04	$61.84	2	$120	8	$480	2	$120	12	$720	4	$247	0	$0	4	$247
David Glass Senior Engineer	VII	$48.89	$50.36	16	$782	8	$391	40	$1,956	64	$3,129	24	$1,209	8	$403	32	$1,612
Edward Reilly Senior Engineer	VII	$48.89	$50.36	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
Michael Neuberger Senior Engineer	V	$33.10	$34.09	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
Maria Wright Assistant Engineer	V	$33.10	$34.09	0	$0	0	$0	4	$132	4	$132	4	$136	0	$0	4	$136
Gerald Gould Senior Geologist	V	$33.10	$34.09	0	$0	8	$265	12	$397	20	$662	72	$2,454	0	$0	72	$2,454
Robbin Petrella Senior Scientist	V	$33.10	$34.09	0	$0	0	$0	2	$66	2	$66	16	$545	0	$0	16	$545
Richard Avanzini Associate Technician	V	$33.10	$34.09	0	$0	0	$0	2	$66	2	$66	0	$0	0	$0	0	$0
Robert Haynie Assistant Engineer	IV	$27.95	$28.79	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
Dean Stahl Assist. Geologist	III	$25.37	$26.13	0	$0	0	$0	0	$0	0	$0	120	$3,136	0	$0	120	$3,136
Frank DeVita Associate Technician	II	$22.02	$22.68	0	$0	0	$0	24	$528	24	$528	0	$0	2	$45	2	$45
Lydda Glubiak Junior Drafter	II	$22.02	$22.68	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
Ginger Passalacqua Administrative Assistant	II	$22.02	$22.68	0	$0	0	$0	8	$176	8	$176	8	$181	0	$0	8	$181
Allyson Manz Word Processor	II	$22.02	$22.68	0	$0	0	$0	12	$264	12	$264	0	$0	0	$0	0	$0
Labor Subtotal (Direct Salary)				18	$902	24	$1,136	106	$3,707	148	$5,746	248	$7,909	10	$448	258	$8,358
Indirect Cost (1.583)					$1,428		$1,799		$5,868		$9,095		$12,521		$710		$13,230
Profit (0.084)					$196		$247		$804		$1,247		$1,716		$97		$1,813
Total Labor				18	$2,527	24	$3,182	106	$10,379	148	$16,087	248	$22,146	10	$1,255	258	$23,401

		Task 3 - Plans and Specifications (Contract Documents)										Task 4 Citizens Participation		Task 5 Pre-Award Services		Remedial Design Work Assignment Total	
		Subtask 3.1 Preliminary Design[1]		Subtask 3.2 Final Design[2]		Subtask 3.3 Construction Cost Estimate		Subtask 3.4 O&M Manual and Long Term Monitoring Plan		Total Task 3							
NAME/TITLE	NSPE Level	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost
Thomas Maher Principal	IX	16	$989	4	$247	2	$124	2	$124	24	$1,484	0	$0	2	$124	42	$2,576
David Glass Senior Engineer	VII	240	$12,086	80	$4,029	40	$2,014	24	$1,209	384	$19,338	16	$806	32	$1,612	528	$26,496
Edward Reilly Senior Engineer	VII	8	$403	4	$201	0	$0	0	$0	12	$604	0	$0	0	$0	12	$604
Michael Neuberger Senior Engineer	V	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
Maria Wright Assistant Engineer	V	16	$545	4	$136	4	$136	16	$545	40	$1,364	0	$0	0	$0	48	$1,632
Gerald Gould Senior Geologist	V	16	$545	4	$136	8	$273	40	$1,364	68	$2,318	0	$0	0	$0	160	$5,435
Robbin Petrella Senior Scientist	V	0	$0	0	$0	0	$0	4	$136	4	$136	0	$0	0	$0	22	$748
Richard Avanzini Associate Technician	V	4	$136	0	$0	0	$0	4	$136	8	$273	4	$136	0	$0	14	$475
Robert Haynie Assistant Engineer	IV	40	$1,152	12	$345	0	$0	0	$0	52	$1,497	0	$0	0	$0	52	$1,497
Dean Stahl Assist. Geologist	III	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	120	$3,136
Frank DeVita Associate Technician	II	400	$9,072	100	$2,268	40	$907	80	$1,814	620	$14,062	16	$363	40	$907	702	$15,906
Lydda Glubiak Junior Drafter	II	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
Ginger Passalacqua Administrative Assistant	II	16	$363	8	$181	4	$91	8	$181	36	$817	4	$91	8	$181	64	$1,446
Allyson Manz Word Processor	II	16	$363	40	$907	0	$0	32	$726	88	$1,996	0	$0	8	$181	108	$2,442
Labor Subtotal (Direct Salary)		772	$25,655	256	$8,453	98	$3,545	210	$6,236	1336	$43,889	40	$1,396	90	$3,005	1872	$62,393
Indirect Cost (1.583)			$40,612		$13,380		$5,612		$9,871		$69,476		$2,209		$4,757		$98,768
Profit (0.084)			$5,566		$1,834		$769		$1,353		$9,523		$303		$652		$13,538
Total Labor		772	$71,834	256	$23,667	98	$9,926	210	$17,460	1336	$122,887	40	$3,908	90	$8,415	1872	$174,698

SCHEDULE 2.11 (a)

Summary of Work Assignment Price
Cuba Landfill Site

Work Assignment Number: D003600-26

1.	Direct Salary Costs (Schedules 2.10 (a) and 2.11(b))		$62,393
2.	Indirect Costs (Schedule 2.10 (g))		$98,768
3.	Direct Non-Salary Costs (Schedules 2.11 (c) and (d))		$7,463
4.	Cost-Plus-Fixed-Fee Subcontracts (Schedules 2.11(e))		
	Name of Subcontractor	Services To Be Performed	Subcontract Price
	1. YEC, Inc. (MBE)	Surveying & Mapping	$40,310
	2. Tectonic Engineering Consultants, P.C.	Slope Stability Analysis	$7,851
	3. Ecolotree, Inc.	Phytoremediation System Design	$13,931
5.	Total Cost-Plus-Fixed-Fee Subcontractors		$62,093
6.	Unit Price Subcontracts (Schedules 2.11(f))		
	Name of Subcontractor	Services To Be Performed	Subcontract Price
	1. Parratt-Wolff, Inc.	Test Pit Excavation	$6,640
	2. Mitkem Corporation (MBE)	Analytical Laboratory	$12,070
	3. Nassau-Suffolk Blueprinting Co., Inc. (WBE)	Printing of Drawings and Specifications	$5,787
7.	Total Unit Price Subcontracts		$24,497
8.	Subcontract Management Fee		$422
9.	Total Subcontract Costs (lines 5 + 7+ 8)		$87,012
10.	Fixed Fee (Schedule 2.10 (h))		$13,538
11.	Total Work Assignment Price (lines 1 + 2 + 3 + 9 + 10)		$269,174

SCHEDULE 2.11 (b)1
SUMMARY
Cuba Landfill Site
Work Assignment Number: D003600-26

NSPE	IX	VIII	VII	VI	V	IV	III	II	I	TOTAL HOURS
as of July 1, 2000 as of July 1, 2001	$60.04 $61.84	$56.25 $57.94	$48.89 $50.36		$33.10 $34.09	$27.95 $28.79	$25.37 $26.13	$22.02 $22.68		
Task 1	12	0	64	0	28	0	0	44	0	148
Task 2	4	0	32	0	92	0	120	10	0	258
Task 3	24	0	396	0	120	52	0	744	0	1336
Task 4	0	0	16	0	4	0	0	20	0	40
Task 5	2	0	32	0	0	0	0	56	0	90
Subtotal 2000 Hours	12	0	64	0	28	0	0	44	0	148
Subtotal 2001 Hours	30	0	476	0	216	52	120	830	0	1724
Total Hours	42	0	540	0	244	52	120	874	0	1872
Total Direct Labor Cost	$2,576	$0	$27,101	$0	$8,290	$1,497	$3,136	$19,794	$0	$62,393

SCHEDULE 2.11(b)2
Cuba Landfill Site
Work Assignment Number: D003600-26
BREAKDOWN OF ADMINISTRATIVE
LOE HOURS

ADMIN ACTIVITY	WORK PLAN DEVELOPMENT														REVIEW WORK ASSIGNMENT (WA) PROGRESS																							
	Conflict of Interest Checks						Prepare 2.11 Schedules								Conduct Progress Reviews						Prepare Monthly Report & Update Schedules							MBE/WBE Activities								Program Management					
NSPE	IX	VIII	VII	VI	V	IV	VIII	VII	VI	V	IV	III	II	I	VIII	VII	VI	V	IV	III	VIII	VII	VI	V	IV	III	II	I	VIII	VII	VI	V	IV	III	II	I	IX	VIII	VII	VI	V	IV
TASK 1	0.5							8.0					2.0			0.5						1.0													1.0		0.5					
TASK 2																0.5						1.0															0.5					
TASK 3																0.5						1.0																				
TASK 4																0.5						1.0																				
TASK 5																0.5						1.0																				
TOTAL	0.5	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0

ADMIN ACTIVITY	CAP PREPARATION												MISCELLANEOUS																							
	Prepare Monthly Cost Control Report & CAP								Oversee CAP				Update NSPE List								Equipment Use and Inventory				Word Processing and Report Preparation				Total Adm. LOE (hrs)							
NSPE	VIII	VII	VI	V	IV	III	II	I	IX	VIII	VII	VI	VIII	VII	VI	V	IV	III	II	I	IV	III	II	I	IV	III	II	I	IX	VIII	VII	VI	V	IV	III	II	I
TASK 1							4		0.5																		12.0		1.5	0.0	9.5	0.0	0.0	0.0	0.0	19.0	0.0
TASK 2							4		0.5													2.0					0.0		1.0	0.0	1.5	0.0	0.0	0.0	2.0	4.0	0.0
TASK 3							8									0.5											92.0		0.0	0.0	1.5	0.0	0.5	0.0	0.0	100.0	0.0
TASK 4							2																				0.0		0.0	0.0	1.5	0.0	0.0	0.0	0.0	2.0	0.0
TASK 5							2																				8.0		0.0	0.0	1.5	0.0	0.0	0.0	0.0	10.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	112.0	0.0	2.5	0.0	15.5	0.0	0.5	0.0	2.0	135.0	0.0

SCHEDULE 2.11 (c)1
DIRECT NON-SALARY COSTS
Cuba Landfill Site
Work Assignment Number: D003600-26

ITEM	MAXIMUM REIMBURSEMENT RATE	UNIT	ESTIMATED NUMBER OF UNITS	TOTAL ESTIMATED COSTS
OUTSIDE SERVICES				
Sample Shipping	$50.00	package	5	$250
Express Mail	$50.00	package	12	$600
Photographs/Slides	$25.00	lump sum	1	$25
Printing	$50.00	report	5	$250
Hotel	$55.00	night	15	$825
Meals	$30.00	day	20	$600
TRAVEL				
Transportation (Personal Car)	$0.345	mile	1652	$570
Tolls	$5.00	trip	6	$30
Van Rental	$425.00	week	2	$850
Car Rental	$125.00	day	4	$500
Gas	$75.00	week	2	$150
Air Fare	$300.00	trip	5	$1,500
Parking	$20.00	day	3	$60
TOTAL DIRECT NON-SALARY COSTS				$6,210

Schedule 2.11 (c)2
Direct Non-Salary Costs
Cuba Landfill Site
Work Assignment Number: D003600-26

Item	Reimbursement* Rate	Task 1 Est. No. of Units	Task 1 Total Cost	Task 2 Est. No. of Units	Task 2 Total Cost	Task 3 Est. No. of Units	Task 3 Total Cost	Task 4 Est. No. of Units	Task 4 Total Cost	Task 5 Est. No. of Units	Task 5 Total Cost	Total Estimated No. of Units	Total Estimated Cost
A. Miscellaneous (Travel)													
1. Transportation	$0.345 /mile	362	$124.89	1210	$417.45	0	$0.00	40	$13.80	40	$13.80	1652	$570
2. Tolls	$5.00 /trip	1	$5.00	5	$25.00	0	$0.00	0	$0.00	0	$0.00	6	$30
3. Van Rental	$425.00 /week	0	$0.00	2	$850.00	0	$0.00	0	$0.00	0	$0.00	2	$850
4. Car Rental	$125.00 /day	1	$125.00	1	$125.00	0	$0.00	1	$125.00	1	$125.00	4	$500
5. Gas	$75.00 /week	0	$0.00	2	$150.00	0	$0.00	0	$0.00	0	$0.00	2	$150
6. Air Fare	$300.00 /trip	2	$600.00	1	$300.00	0	$0.00	1	$300.00	1	$300.00	5	$1,500
7. Parking	$20.00 /day	0	$0.00	1	$20.00	0	$0.00	1	$20.00	1	$20.00	3	$60
Subtotal (Travel)			$854.89		$1,887.45		$0.00		$458.80		$458.80		$3,660
B. Miscellaneous (Expenses)													
1. Sample Shipping	$50.00 /package	0	$0.00	5	$250.00	0	$0.00	0	$0.00	0	$0.00	5	$250
2. Express Mail	$50.00 /package	1	$50.00	1	$50.00	10	$500.00	0	$0.00	0	$0.00	12	$600
3. Photographs/Slides	$25.00 Lump Sum	0	$0.00	0	$0.00	0	$0.00	1	$25.00	0	$0.00	1	$25
4. Printing	$50.00 /report	0	$0.00	0	$0.00	5	$250.00	0	$0.00	0	$0.00	5	$250
5. Hotel	$55.00 /night	0	$0.00	15	$825.00	0	$0.00	0	$0.00	0	$0.00	15	$825
6. Meals	$30.00 /day	2	$60.00	16	$480.00	0	$0.00	1	$30.00	1	$30.00	20	$600
Subtotal (Misc. Expenses)			$110.00		$1,605.00		$750.00		$55.00		$30.00		$2,550
TOTAL			$964.89		$3,492.45		$750.00		$513.80		$488.80		**$6,210**

* See Schedule 2.10(b) for rates.

SCHEDULE 2.11 (d)1

EQUIPMENT PURCHASED UNDER THE CONTRACT
Cuba Landfill Site
Work Assignment Number: D003600-26

ITEM	ESTIMATED PURCHASE PRICE	O&M RATE ($/per month)	TERM OF USAGE (MONTHS)	ESTIMATED USAGE COST (COL. 2 + [3X4])
None			TOTAL	$0

SCHEDULE 2.11 (d)2
EQUIPMENT
CONSULTANT OWNED
Cuba Landfill Site
Work Assignment Number: D003600-26

ITEM	PURCHASE PRICE X 85%	USAGE RATE ($/day)	CAPITAL RECOVERY RATE ($/Unit of Time)	O & M RATE ($/Unit of Time)	ESTIMATED USAGE (days)	ESTIMATED USAGE COST (Col. 3x6)
None						
					TOTAL	$0

Notes:
Usage Rate = Capital Recovery Rate + O&M Rate

The maximum usage rate for an item of equipment reverts to the O&M rate when the total usage reimbursement exceeds 85% of the purchase price.

SCHEDULE 2.11 (d)3
EQUIPMENT
VENDOR RENTED
Cuba Landfill Site
Work Assignment Number: D003600-26

ITEM	MAXIMUM REIMBURSEMENT RATE	UNIT OF MEASURE	ESTIMATED USAGE (period of time)	ESTIMATED USAGE COST (Col. 2 X 4)
Methane Gas Detector	$165.00	Week	3	$495.00
Methane Gas Detector Shipping	$80.00	Event	2	$160.00
Calibration Gas Kit (Including Shipping)	$98.00	Event	1	$98.00
			Total	$753

SCHEDULE 2.11 (d)4

EXPENDABLE SUPPLIES
Cuba Landfill Site
Work Assignment Number: D003600-26

ITEM	ESTIMATED QUANTITY	UNITS	UNIT COST	TOTAL BUDGETED COST (COL. 2 X 3)
None				
			TOTAL	$0

SCHEDULE 2.11 (d)5
CONSUMABLE SUPPLIES
Cuba Landfill Site
Work Assignment Number: D003600-26

ITEM	ESTIMATED QUANTITY	UNIT COST	TOTAL BUDGETED COST (COL. 2 X 3)
Miscellaneous Supplies	1	$500.00 Lump sum	$500.00
		TOTAL	$500.00

Schedule 2.11 (e)
Cost Plus Fixed-Fee Subcontracts

Total Budget (Tasks 1 & 2)
Cuba Landfill Aerial Photography, Boundary Survey, Digital Mapping, Utilities & Test Pits/Trenches Survey

May 10, 2001

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE
YEC, INC.	Cuba Landfill Survey & Mapping	$40,310.35

A. Direct Salary Costs

Professional Responsibilty Level	Labor Classi-fication	Average Reimbursement Rate ($/Hr.)		Maximum Reimbursement Rate ($/Hr.)		Estimated Number of Hours	Total Estimated Direct Salary Cost ($)
Principal	VIII	2001	52.07	2001	56.24	34	1,770.38
Senior Geologist/Scientist/ Engineer/ Licensed Surveyor	V	2001	34.43	2001	37.88	36	1,239.48
Staff Geologist/ Scientist/Engineer	IV	2001	29.93	2001	32.92	0	0.00
Staff Geologist/ Scientist/Engineer/CAD Operator	III	2001	25.97	2001	28.82	30	779.10
Senior Technician/Staff Engineer/Scientist/Geologist	II	2001	19.22	2001	21.53	0	0.00
Technician/Draftsperson	I	2001	17.41	2001	19.50	0	0.00
						Total Direct Salary Costs:	3,788.96

B. Indirect Costs - 117% of direct salary cost

Indirect Costs:	4,433.08

C. Maximum Reimbursement Rates for Direct Non-Salary Costs:

Item	Maxium Reimbursement Rate	Estimated No. of Units
GPS Ground Control Survey for Aerial Photography		9,000.00
Aerial Photography (Landfill @1"=400, Stream @ 1"=700')		3,090.00
Color Aerial Photography Enlargement (2)		540.00
Digital Mapping (Landfill @ 1"=50', 1' Contour; Stream Area I @ 1"=100', 2' Contour)		4,500.00
Certified Boundary Survey, Field Editting, Utilities Survdey, Test Pits & Test Trenches		13,725.00
	Total Direct Non Salary Costs:	30,855.00

D. Fixed Fee (15% of Total Direct and Indirect Salary Costs)

Fixed Fee:	1,233.31

Schedule 2.11 (e)2
Cost Plus Fixed-Fee Subcontracts

Cuba Landfill Site

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE
Tectonic Engineering Consultants, P.C.	Slope Stability Analysis	$7,851

A. Direct Salary Costs

Professional Responsibility Level	Labor Classification	Reimbursement Rate ($/Hr.)	Hours	Cost
Principal Engineer	IX	54.00	2	$108
Senior Engineer	VIII	50.00	4	$200
Senior Engineer	VI	37.98	12	$456
Senior Engineer	VI	36.06	40	$1,442
Staff Engineer	II	22.11	40	$884
Total Direct Salary Cost				**$3,091**

B. Indirect Salary Costs - 128% of Direct Salary Cost **$3,956**

C. Maximum Reimbursement Rates for Direct Non-Salary Costs

Item	Unit of Measure	Maximum Reimbursement Rate	No. of Units	Total Cost
Misc. Expenses	Lump Sum	100	1	100
Total Direct Non-Salary Cost				**$100**

D. Fixed Fee (10% of Direct and Indirect Salary Costs) **$705**

Schedule 2.11 (e)3
Cost Plus Fixed-Fee Subcontracts

Cuba Landfill Site

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE
Ecolotree, Inc.	Phytoremediation System Design	$13,931

A. Direct Salary Costs

Professional Responsibility Level	Labor Classification	Average Reimbursement Rate ($/Hr.)	Hours	Cost
Principal Engineer	III	23.60	176	$4,154
Principal Engineer	III	23.20	10	$232
Senior Drafter	II	15.20	20	$304
Administrative Assistant	I	11.20	8	$90
Technician	I	9.20	16	$147
Total Direct Salary Cost				**$4,926**

B. Indirect Salary Costs - 117% of Direct Salary Cost **$5,764**

C. Maximum Reimbursement Rates for Direct Non-Salary Costs

Item	Unit of Measure	Maximum Reimbursement Rate	No. of Units	Total Cost
Mileage	Mile	0.345	50	$17
Air Fare	Round Trip	900	1	900
Parking	Day	20	2	40
Car Rental	Day	130	2	260
Fuel	Day	25	2	50
Hotel	Night	55	2	110
Meals	Day	30	2	60
Misc. Field Supplies	Lump Sum	200	1	200
Total Direct Non-Salary Cost				**$1,637**

D. Fixed Fee (15% of Direct and Indirect Salary Costs) **$1,604**

SCHEDULE 2.11 (f) 1
UNIT PRICE SUBCONTRACTS
CUBA LANDFILL SITE
Work Assignment No. D003600-26

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MANAGEMENT FEE
Parratt-Wolff, Inc.	**Test Pit Excavation**	**$6,640**	**$0**

Item	Unit	Unit Price	Estimated No. of Units	Total Estimated Costs
16a. Mobilization and Demobilization for Tracked Excavator	Lump Sum	600	1	$600
16c. Tracked Excavator	Hour	130	40	5200
16d. Decontamination Between Locations	Event	130	3	390
18c. Water Hauling	Hour	90	5	450
	SUBTOTAL			**$6,640**
	SUBCONTRACT MANAGEMENT FEE			**$0**
	TOTAL			**$6,640**

SCHEDULE 2.11 (f) 2
UNIT PRICE SUBCONTRACTS
CUBA LANDFILL SITE
Work Assignment No. D003600-26

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MANAGEMENT FEE
Mitkem Corporation	**Chemical Sample Analysis**	**$12,070**	**$422**

Item	Method	Unit Rate	Estimated No. of Units	Total Estimated Costs
Subsurface Soil				
Grain Size	ASTM D422	$50.00 /sample	5	$250
Leachate				
VOCs	95-1	$110.00 /sample	5	$550
SVOCs	95-2	$220.00 /sample	5	$1,100
Pest/PCB	95-3	$140.00 /sample	5	$700
TAL Metals	CLP-M	$90.00 /sample	5	$450
Cyanide	335.2	$20.00 /sample	5	$100
Surface Water				
VOCs	95-1	$110.00 /sample	1	$110
SVOCs	95-2	$220.00 /sample	1	$220
Pest/PCB	95-3	$140.00 /sample	1	$140
TAL Metals	CLP-M	$90.00 /sample	1	$90
Cyanide	335.2	$20.00 /sample	1	$20
Ground Water (Monitoring Wells)				
VOCs	95-1	$110.00 /sample	11	$1,210
SVOCs	95-2	$220.00 /sample	11	$2,420
Pest/PCB	95-3	$140.00 /sample	11	$1,540
TAL Metals	CLP-M	$90.00 /sample	11	$990
Cyanide	335.2	$20.00 /sample	11	$220
QA/QC Samples				
Trip Blanks (VOCs)	95-1	$110.00 /sample	2	$220
Groundwater				
Matrix Spike				
VOCs	95-1	$110.00 /sample	1	$110
SVOCs	95-2	$220.00 /sample	1	$220
Pest/PCB	95-3	$140.00 /sample	1	$140
TAL Metals	CLP-M	$90.00 /sample	1	$90
Cyanide	335.2	$20.00 /sample	1	$20
Matrix Spike Duplicate				
VOCs	95-1	$110.00 /sample	1	$110
SVOCs	95-2	$220.00 /sample	1	$220
Pest/PCB	95-3	$140.00 /sample	1	$140
TAL Metals	CLP-M	$90.00 /sample	1	$90
Cyanide	335.2	$20.00 /sample	1	$20
Matrix Spike Blank				
VOCs	95-1	$110.00 /sample	1	$110
SVOCs	95-2	$220.00 /sample	1	$220
Pest/PCB	95-3	$140.00 /sample	1	$140
TAL Metals	CLP-M	$90.00 /sample	1	$90
Cyanide	335.2	$20.00 /sample	1	$20
		SUBTOTAL		**$12,070**
		SUBCONTRACT MANAGEMENT FEE		**$422**
		TOTAL		**$12,492**

Schedule 2.11 (f)3
Unit Price Subcontracts

Cuba Landfill Site

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE
Nassau-Suffolk Blueprinting Co., Inc.	Printing of Drawings and Specifications	$5,787

Item	Unit	Unit Price	Estimated No. of Units	Total Price
1. 8 Sets of Bound 30" by 42" Blue Prints, Each Set Consisting of 15 Sheets	LS	97.20	1	$97
2. 8 Sets of Bound 30" by 42" Blue Prints, Each Set Consisting of 25 Sheets	LS	162.00	1	162
3. 8 Sets of Bound 30" by 42" Blue Prints, Each Set Consisting of 30 Sheets	LS	194.40	1	194
4. 72 Sets of Bound 30" by 42" Blue Prints, Each Set Consisting of 30 Sheets	LS	1749.60	1	1,750
5. 8 GBC Bound Documents, Each Consisting of 500 Double-Sided Sheets	LS	334.00	2	668
6. 72 GBC Bound Documents, Each Consisting of 500 Double-Sided Sheets	LS	2916.00	1	2,916
SUBTOTAL				**$5,787**
SUBCONTRACT MANAGEMENT FEE				**$0**
TOTAL				**$5,787**

Project Name: Cuba Landfill Site
Work Assignment Number: D003600-26
Task No./Name: All Tasks
Complete: 0.00%

SCHEDULE 2.11 (g)
MONTHLY COST CONTROL REPORT
SUMMARY

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	62,393	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	98,768	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	161,161	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	3,660	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	3,803	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	7,463	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	87,012	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	255,636	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	13,538	0.00
10. Total Price	0.00	0.00	0.00	0.00	0.00	0.00	269,174	0.00

Project Manager (Engineer) _____ Date _____

Engineer: Dvirka & Bartilucci
Work Assignment Number: D003600-26
Project Name: Cuba Landfill Site

SCHEDULE 2.11(g) SUPPLEMENTAL
MONTHLY COST CONTROL REPORT
SUBCONTRACTS

Date Prepared:
Billing Period:
Invoice No.:

Subcontract Name	Subcontract Costs Claimed this Application Including Resubmittals	Subcontract Costs Approved for Payment on Previous Application	Total Subcontract Costs to Date (A plus B)	Subcontract Approved Budget	Management Fee Budget	Management Fee Paid	Total Costs to Date
1. YEC, Inc.	0.00	0.00	0.00	40,310.35	0.00	0.00	0.00
2. Tectonic Engineering Consultants, P.C.	0.00	0.00	0.00	7,851.12	0.00	0.00	0.00
3. Ecolotree, Inc.	0.00	0.00	0.00	13,931.08	0.00	0.00	0.00
4. Parratt-Wolff, Inc.	0.00	0.00	0.00	6,640.00	0.00	0.00	0.00
5. Mitkem Corporation	0.00	0.00	0.00	12,070.00	422.45	0.00	0.00
6. Nassau-Suffolk Blueprinting Co., Inc.	0.00	0.00	0.00	5,787.20	0.00	0.00	0.00
Total	0.00	0.00	0.00	86,589.76	422.45	0.00	0.00

SCHEDULE 2.11 (g)

Project Name: Cuba Landfill Site
Work Assignment Number: D003600-26
Task No./Name: 1/ Work Plan Preparation
Complete: 0.00%

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	5,746	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	9,095	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	14,841	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	855	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	110	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	965	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	15,806	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	1,247	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	17,052	0.00

Project Manager (Engineer) _____ Date _____

Project Name: Cuba Landfill Site
Work Assignment Number: D003600-26
Task No./Name: 2/ Pre-Design Studies
Complete: 0.00%

SCHEDULE 2.11(g)

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	8,358	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	13,230	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	21,588	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	1,887	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	2,858	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	4,745	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	72,583	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	98,916	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	1,813	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	100,730	0.00

Project Manager (Engineer) _____ Date _____

Project Name: Cuba Landfill Site
Work Assignment Number: D003600-26
Task No./Name: 3/ Plans and Specifications (Contract Documents)
Complete: 0.00%

SCHEDULE 2.11(g)

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	43,889	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	69,476	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	113,365	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	750	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	750	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	14,429	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	128,544	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	9,523	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	138,066	0.00

Project Manager (Engineer) _____ Date _____

Project Name: Cuba Landfill Site
Work Assignment Number: D003600-26
Task No./Name: 4/ Citizens Participation
Complete: 0.00%

SCHEDULE 2.11(g)

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	1,396	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	2,209	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	3,605	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	459	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	55	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	514	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	4,119	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	303	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	4,422	0.00

Project Manager (Engineer) _____ Date _____

Project Name: Cuba Landfill Site
Work Assignment Number: D003600-26
Task No./Name: 5/ Pre-Award Services
Complete: 0.00%

SCHEDULE 2.11(g)

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	3,005	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	4,757	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	7,763	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	459	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	30	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	489	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	8,251	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	652	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	8,904	0.00

Project Manager (Engineer) _____ Date _____

SCHEDULE 2.11 (h)

Date Prepared:

Project Name: Cuba Landfill Site

Billing Period

Work Assignment Number: D003600-26

Invoice No.

Monthly Cost Control Report
Summary of Labor Hours
Expended to Date/Estimated To Completion

NSPE Labor Classification	IX EXP/EST	VIII EXP/EST	VII EXP/EST	VI EXP/EST	V EXP/EST	IV EXP/EST	III EXP/EST	I & II EXP/EST	ADMIN/ SUPPORT	TOTAL NUMBER OF DIRECT LABOR HOURS EXP/EST
Task 1	0/ 12	0/ 0	0/ 64	0/ 0	0/ 28	0/ 0	0/ 0	0/ 44	0/ 0	0/ 148
Task 2	0/ 4	0/ 0	0/ 32	0/ 0	0/ 92	0/ 0	0/ 120	0/ 10	0/ 0	0/ 258
Task 3	0/ 24	0/ 0	0/ 396	0/ 0	0/ 120	0/ 52	0/ 0	0/ 744	0/ 0	0/ 1336
Task 4	0/ 0	0/ 0	0/ 16	0/ 0	0/ 4	0/ 0	0/ 0	0/ 20	0/ 0	0/ 40
Task 5	0/ 2	0/ 0	0/ 32	0/ 0	0/ 0	0/ 0	0/ 0	0/ 56	0/ 0	0/ 90
Total Hours	0/ 42	0/ 0	0/ 540	0/ 0	0/ 244	0/ 52	0/ 120	0/ 874	0/ 0	0/ 1872

MBE/WBE
UTILIZATION PLAN
Cuba Landfill Site
Work Assignment Number: D003600-26

Areas to be Subcontracted	Subcontractor Name	MBE/WBE	Total Subcontract Value	% MBE/WBE Utilization
1. Mitkem Corporation	Laboratory Services	MBE	$12,070.00	4.48%
2. YEC, Inc.	Surveying	MBE	$40,310.35	14.98%
3. Nassau-Suffolk Blueprinting Co., Inc.	Printing	WBE	$5,787.20	2.15%
Total MBE Utilization	MBE Subcontract Value / Total Contract Value	=	$52,380 / $269,174	19.46%
Total WBE Utilization	WBE Subcontract Value / Total Contract Value	=	$5,787 / $269,174	2.1%