Final Work Plan
Remedial Investigation/Feasibility Study

Lawrence Aviation Industries
Port Jefferson Station, New York

NYSDEC Site #1-52-016
Work Assignment #D002925-20.1

Prepared for:

New York State
Department Of Environmental Conservation
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Section 1
Introduction

The purpose of the this Remedial Investigation/Feasibility Study (RI/FS) process is to conduct an investigation to determine the nature and extent of surface and subsurface contamination at the Lawrence Aviation Industries Site (the site), identify other sources of groundwater contamination, and perform a feasibility study that will identify, evaluate and recommend a cost-effective, environmentally sound, long-term remedial action, if required.

The specific objectives of the Remedial Investigation (RI) will be to:

- Determine the nature and extent of contamination,
- Determine the potential for environmental and public health impacts, and
- Identify and develop an appropriate IRM, if warranted.

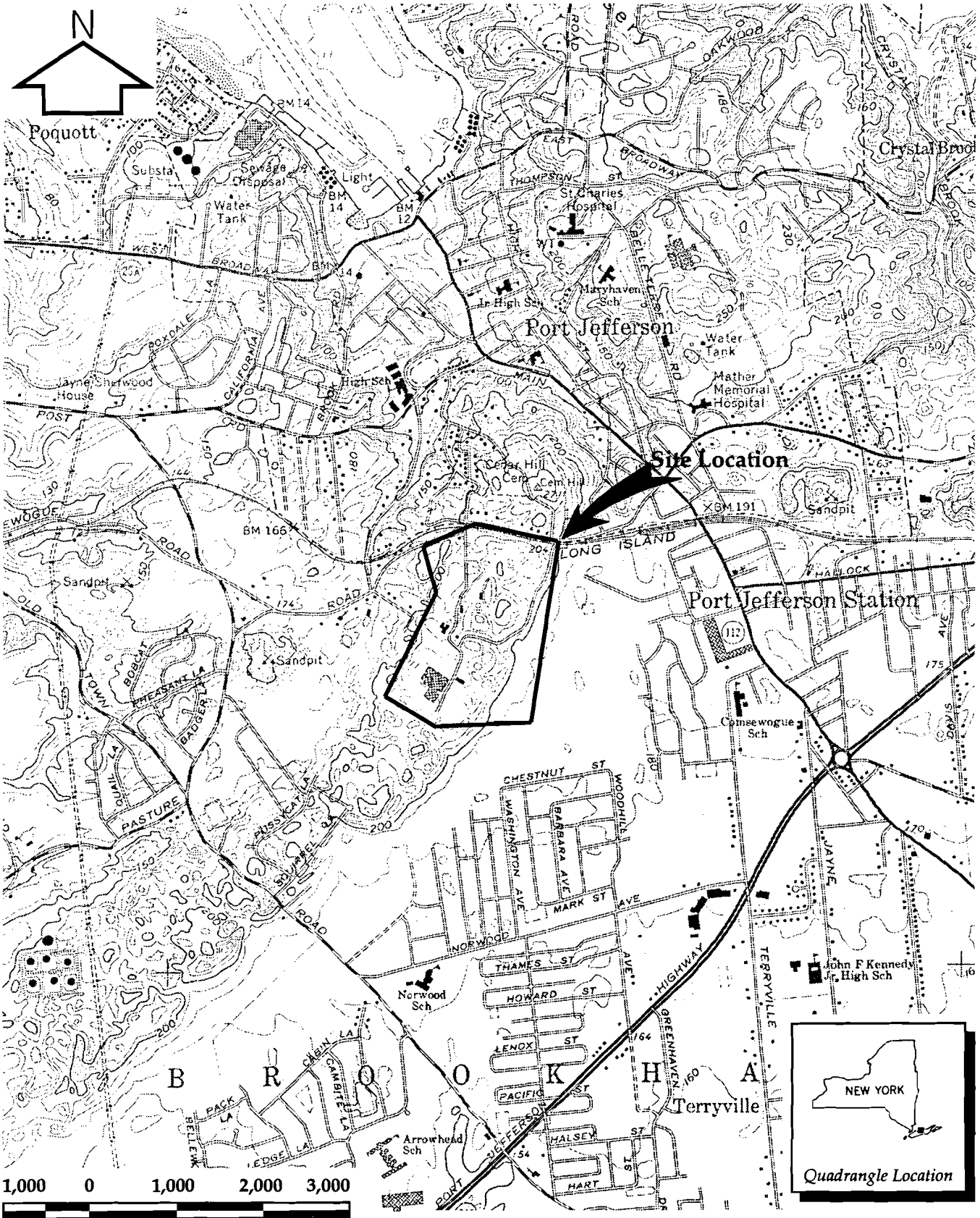
The findings of the RI will be used to develop and prepare the Feasibility Study (FS) in which potentially feasible remedial alternatives will be identified, screened and evaluated for their applicability and implementability at the site.

1.1 Site Description and History

The Lawrence Aviation Industries site is located in the Village of Port Jefferson Station in the Town of Brookhaven, Suffolk County, New York, shown in Figure 1-1, and is approximately 126 acres in size. The Long Island Railroad (LIRR) and Sheep Pasture Road form the northern border of the site, to the east and west are various residential single family houses and to the south is a wooded area beyond which is an apartment complex. The Port Jefferson Harbor, an outlet to the Long Island Sound lies approximately one mile to the north. The site is located on the Harbor Hill terminal moraine, a topographical high point within the study area, at an elevation between 200 and 220 feet above mean sea level. The local terrain is hilly and slopes towards the north in the direction of Long Island Sound.

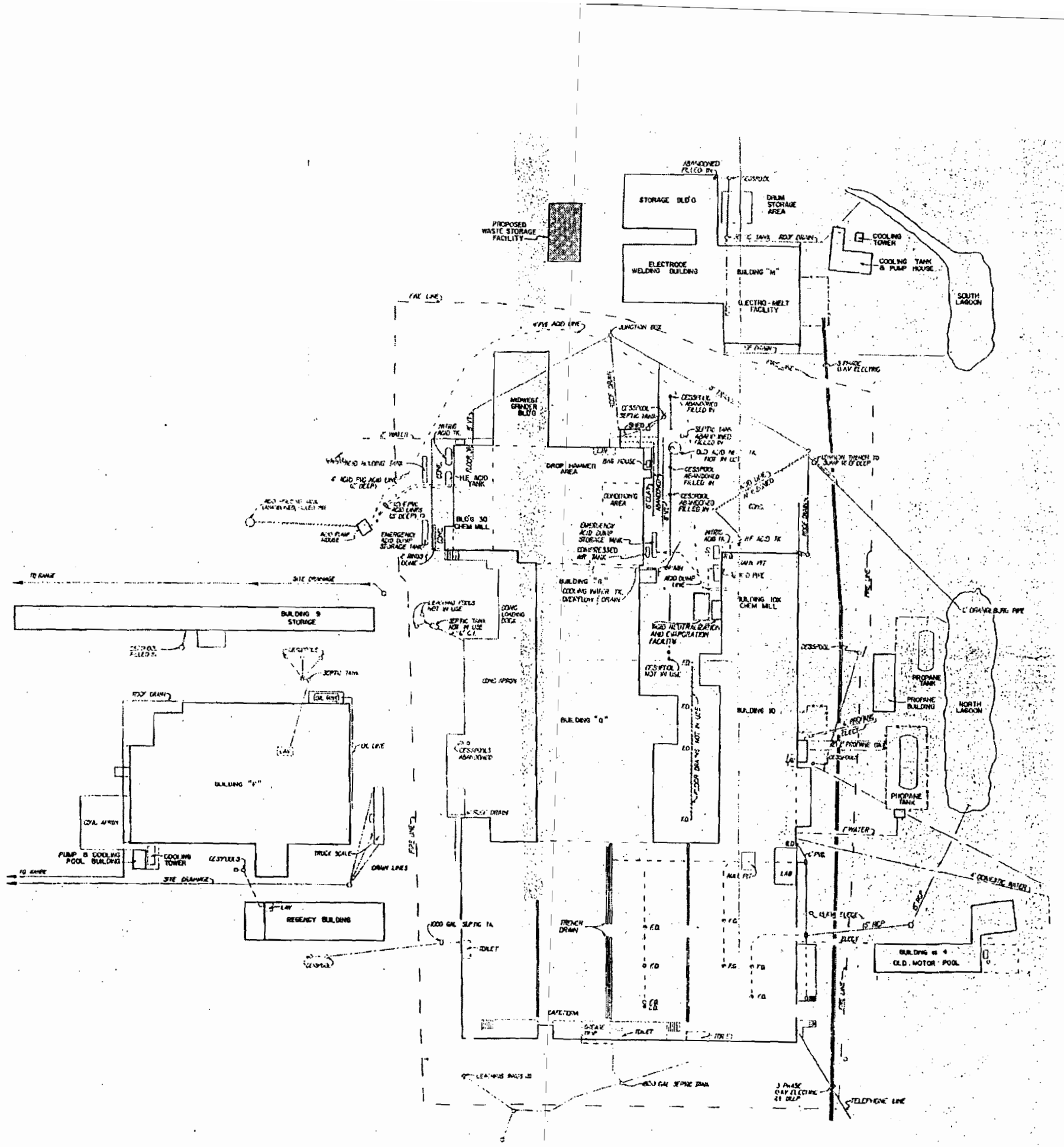
Lawrence Aviation Industries is an industrial manufacturing facility. The company was originally located in Brooklyn, New York and conducted business as Leadkote Products. Products produced by Lead Kote Products included lead gutters and spouts for roof drains. When the company moved to Port Jefferson Station in 1951, all the existing material from the original manufacturing processes were transferred to the new location. In 1959, Leadkote Products changed names to Lawrence Aviation Industries, Inc.

Based on review of available drawings, the Lawrence Aviation manufacturing facility is comprised of ten major buildings which are located on approximately 34 acres of the 126 acre site, as shown in Figure 1-2. According to current SCDHS storage tank registration records, there are ten above ground and 21 below ground process tanks containing various acids, caustic compounds and rinse waters currently in service. There are also three active above ground and one underground storage tank containing No. 2 fuel oil. Between 1992 and 1995, Lawrence Aviation removed a total of 18 tanks from the site, including industrial waste, waste oil, gasoline, diesel and fuel oil storage tanks.



MAP SOURCE: U.S.G.S., Port Jefferson, New York Quad, 1967.

Figure 1-1
Location Map
Lawrence Aviation Industries
Port Jefferson Station, New York



Not To Scale

CDM Camp Dresser & McKee

Figure 1-2
Site Map
Lawrence Aviation Industries
Port Jefferson Station, New York

Lawrence Aviation's main product currently is titanium sheet metal. These titanium sheets and other manufactured products are used in the aviation industry. The wastes generated from current and past operations include fluoride compounds, sludges, caustic acids, halogenated solvents and spent lubricating oils. Past site inspections also identified leaking transformer carcasses.

1.2 Areas of Environmental Concern

The following is a summary of significant issues and identification of areas of environmental concern based on a review of available Suffolk County Department of Health Services (SCDHS) and NYSDEC records:

Investigations of the site began in 1970 when a complaint from a residential property owner was received by the SCDHS. The owner indicated that his property was being affected by occasional Lawrence Aviation sump overflows. The overflow liquid did not freeze in the winter months, and was harming existing plant vegetation. SCDHS proceeded to sample the Lawrence Aviation sump and determined that the contents exceeded permissible discharge limits for pH, hexevalent chromium (Cr+6) and nitrates. A full inspection of site premises and processes was requested by the SCDHS at this time.

During the remainder of the 1970s, inspections performed by SCDHS and the Brookhaven Department of Environmental Protection (BDEP) of surrounding areas identified that adjacent residential wells were contaminated with fluoride, nitrates, trichloroethylene, 1,1-dichloroethylene, cis-1,2-dichloroethylene, tetrachloroethylene, and heavy metals.

On May 13, 1980, the SCDHS performed an investigation of the Lawrence Aviation site. The initial investigation was followed by aerial photography taken on May 22, 1980. Subsequent investigations were performed on June 25 and July 30, 1980, by SCDHS. SCDHS documented the results of these investigations in an official affidavit . The following areas of environmental concern were identified within the affidavit:

- Various areas of the site contained an accumulation of drums. The drums were improperly stored on the ground surface. Drums in general were uncovered and damaged with liquid contents leaking onto the ground surface. Stained ground surfaces and potential burial of drums were also identified in these areas. Drums reportedly contained acid sump sludges, salt waste, perchloroethylene (tetrachloroethylene), hydraulic oil, zyglo penetrant, solvents, whitish rectangular crystals, hydrofluoric acid, and trichloroethylene.

- Manual drum pump out operations were witnessed where drum contents were discharged directly to the ground surface.

- An evaporatory system was surrounded by a lake of liquid waste caused from an overflowing holding tank.

- Various process related effluents including quench water from titanium cutting operations, flush water from a smelter cooling system, and oily water from rolling mills, presses and fork lift maintenance areas, were discharged directly to the ground surface.

- Earthen lagoons were used to store liquid waste.
- A pile of old transformers was identified onsite. Oily liquid was visible leaking from some of the transformers.
- A leaking underground acid rinse waste tank was identified. Discarded tanks were noted to have bluish-green liquids leaking from them. Liquids had a measured pH of 1.

Related to the above environmental concerns, in the months of September, October and November 1980, SCDHS witnessed various "clean-up" activities at the site. Drums were roughly gathered with heavy machinery into piles positioned on a built up earthen area, causing liquid contents to leak onto the ground surface. Combined drum discharges caused spontaneous chemical reactions. Once piled, the drums were crushed and their liquid contents allowed to runoff the built up earthen area. The resulting drums and remaining sludges were disposed of in an out of state landfill. It was reported that 7,500 gallons of waste oils, 1,000 tons of sludges and some contaminated soil were removed from the site.

In conjunction with the SCDHS, the New York State Department of Environmental Conservation (NYSDEC), also investigated the site during the 1980s. Investigations included the preparation of a Phase I Environmental Assessment in January 1986. As documented from the SCDHS findings, the NYSDEC also identified numerous unpermitted discharges at the site, including carbon disulfide, phenols, fluoride, iron, 1,1,1 trichloroethane, toluene, and sludges. A work plan was developed as part of the Phase I investigations to collect additional field information and develop conceptual remedial design and cost estimates. Plans for field investigations included geophysical studies, monitoring well installation, and soil and aquifer sampling. However, this investigation apparently was never performed.

In March, 1987 NYSDEC requested that Federal Superfund emergency provisions be made to supply the residences with safe drinking water located north (downgradient) of the site, due to the presence of trichloroethylene, tetrachloroethylene, and cis-dichloroethylene within their private well water. The plan included temporary bottled water provisions and the extension of a nearby water main. The plan was granted and implemented.

Other SCDHS and NYSDEC documentation from 1986 to present identified additional potential environmental concerns including the identification of a battery storage pile and a construction and demolition debris landfill. Two former employees of Lawrence Aviation indicated that pits existed at the site for regular disposal of degreasing solvents, lube oils and heavy equipment insulating oils. The pits were 6 to 8 feet deep and were often covered with soil to hide the contents of the pits. It was also identified that approximately 100 drums were buried about 15 feet deep at the northeast section of the plant. Another dump apparently exists on the east side of the facility buildings.

The NYSDEC Region 1 Resource Conservation and Recovery Act (RCRA) Hazardous Substance Group oversaw a major drum removal action in 1991.

Between July 1991 and March 1992, 14 test wells were installed downgradient of the site by the SCDHS. The wells and nearby stream were sampled and found to be contaminated with trichloroethylene and tetrachloroethylene. NYSDEC reclassified the site in 1991 as a significant threat to the public due to the contamination of downgradient wells, a pond, and associated tidal creek.

In 1992, Lawrence Aviation filed a delisting petition which was denied for the following reasons:

- Disposal of hazardous waste had been documented by the SCDHS.
- Private water supply wells downgradient had been contaminated. The USEPA was implementing the private well Emergency Removal Action at that time.
- A pond and stream downgradient had been contaminated as confirmed by sampling done by the SCDHS.
- Monitoring wells installed downgradient of the site and sampled by the SCDHS exhibited contamination.

Additional sampling performed by SCDHS confirmed the presence of chlorinated solvents and fluoride within a downgradient pond and stream. The highest level of trichloroethene found in the pond and stream was 1,700 ppb with a guidance value of 11 ppb. The fluoride levels found in the pond and stream were not high enough to be violations, but they serve as a fingerprint for the source as no other industries in the area are known to use hydrofluoric acid.

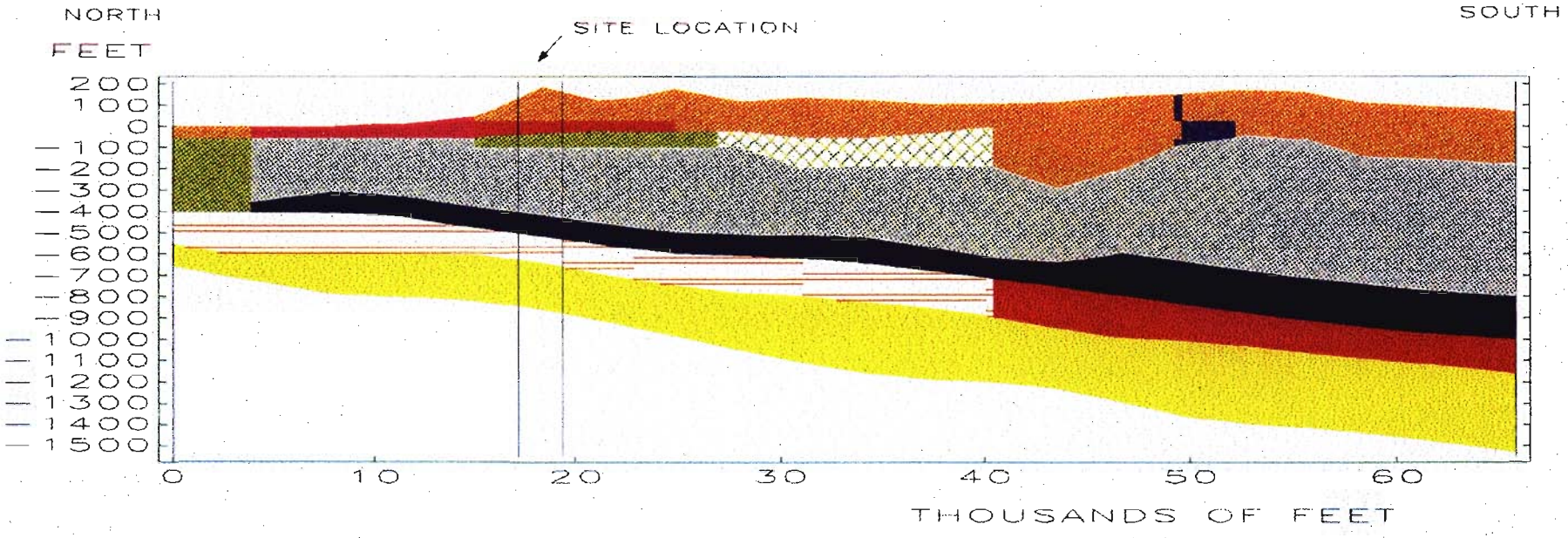
In January 1993, a NYSDEC memorandum requested that a State funded Interim Remedial Measure (IRM) be performed to further assess the contamination within the pond, stream and harbor. Due to shellfish harvesting within the Harbor, and human exposure to the pond, public health is a concern in these areas. Hazardous signs have been posted adjacent to the pond, stating: "Warning: Contaminated Waters. Do Not Drink. Avoid Prolonged Contact with Skin."

1.3 Regional Hydrogeology

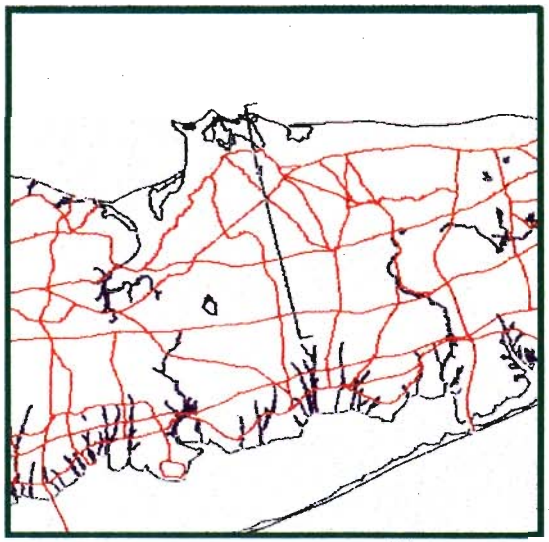
The site is underlain by a thick wedge of unconsolidated sediments which, in ascending order, comprise the Raritan, the Magothy and the Upper Glacial formations. The combined thickness of these formations beneath the study area ranges from 800 to 1000 feet, as shown in Figure 1-3.

As previously discussed, the site is located on the Harbor Hill Terminal moraine at an elevation between 200 and 220 feet above MSL. The Upper Glacial formations within the site include till deposits of terminal moraine and ground moraine origin, glaciofluvial deposits laid down by melt water streams in outwash plains and spill ways during the advance, stagnation and recession of glacial ice; and discontinuous bodies of silt and clay laid down by glacial lakes (Lubke 1964).

Review of well logs obtained from Suffolk County Department of Health Service's (SCDHSs) records, indicate glacial deposits within the site and surrounding areas, from ground surface to



CROSS SECTION EE



MATERIALS CROSS-SECTION EE

RON TRM MORAINE	MIDDLE MAGOTHY 65
RARITAN CLAY	BASAL MAGOTHY 125
REW MAGOTHY 60	UPPER GLACIAL 250
UPPER GLACIAL 185	REWORKED MAGOTHY
SMITHTOWN CLAY	RARITAN CLAY NORTH
HH GRD MORAINE	LLOYD AQUIFER
UPPER MAGOTHY 65	

Figure 1-3
Geologic Cross Section
Lawrence Aviation Industries
Port Jefferson Station, New York

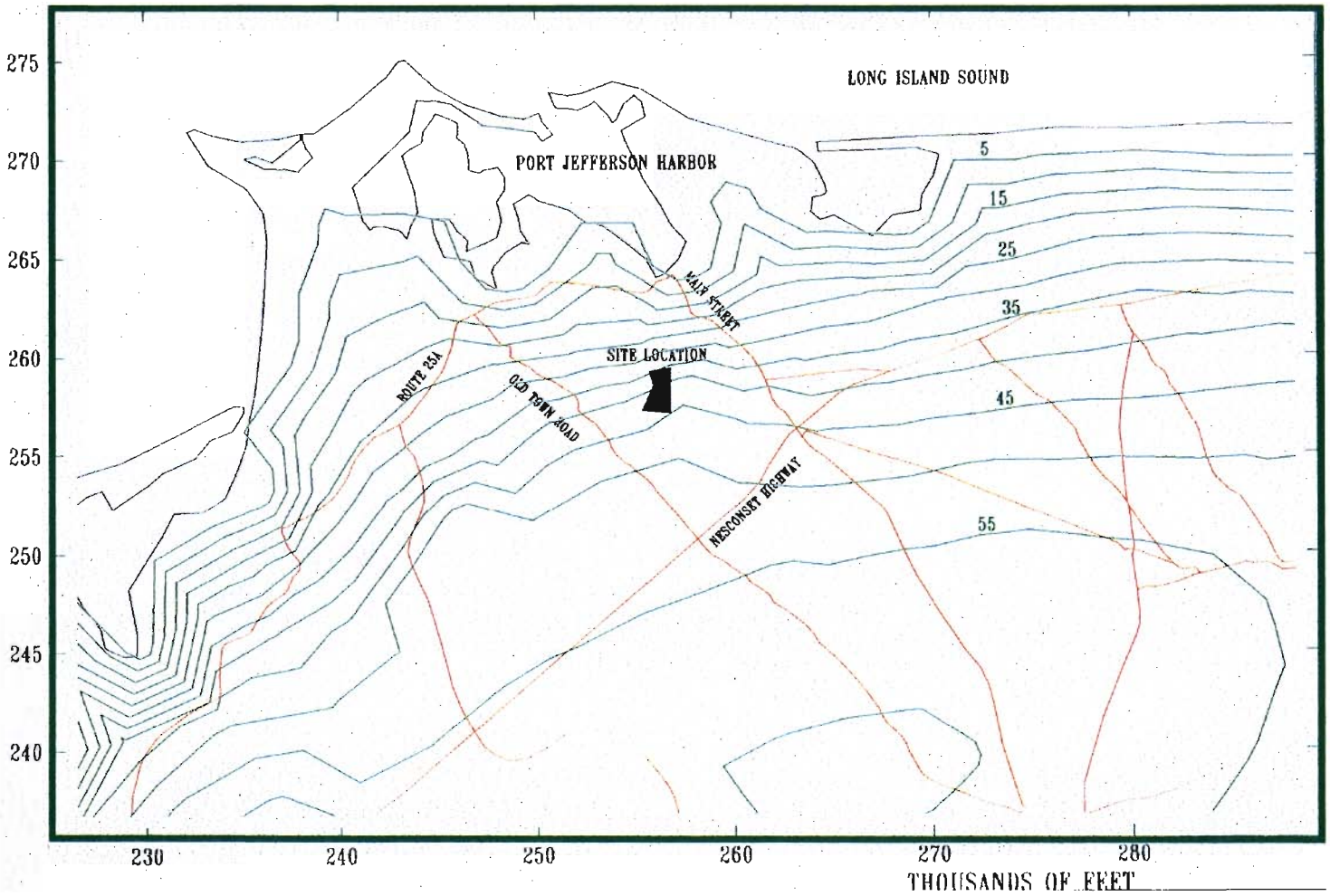


Figure 1-4
Water Table Contours - Upper Glacial Aquifer (Simulated March 1994 Contours)
Lawrence Aviation Industries
Port Jefferson Station, New York

approximately 200 feet below grade, consist of coarse sands and gravel. At approximately 200 feet below grade is a clay layer, approximately 50 feet thick, which is likely the glacial clay unit referred to as the Smithtown Clay. Review of Figure 1-3 indicates the Smithtown Clay is continuous throughout the site as well as being present north of the site, terminating somewhere within the area of Port Jefferson Harbor.

Where present, the Smithtown Clay acts as a confining unit between the upper and lower zones of the Upper Glacial Aquifer. Based on available boring logs, it appears that the upper surface of the clay unit intersects the water table, with the water table being below the clay surface in some areas and, in other areas, the water table will be above the unit by only several feet.

According to the available boring logs, below the Smithtown Clay lies a glacial formation described as brown to white sands of unknown thickness. This unit would comprise the lower zone of the Upper Glacial Aquifer.

Below the Upper Glacial aquifer lies the Magothy aquifer consisting of Cretaceous aged high to moderately permeable sands, silts, and gravels. The Magothy aquifer is approximately 500 feet thick within the site area and is the primary source of drinking water for Suffolk County residents. The Magothy aquifer has an estimated horizonal hydraulic conductivity of 350 gpd/ft^2 but individual sandy and gravelly beds may have values four to five times higher (Kimmel & Braids, USGS Prof. Pape 1085).

The Raritan Clay consisting of Cretaceous aged deltaic clay and silty clay beds underlie the Magothy aquifer and acts as an effective aquiclude or confining unit having a hydraulic conductivity of approximately 1.0×10^{-3} ft/day. Below the Raritan Clay is the Lloyd Sand member which lies unconformably on Pre-Cambrian aged bedrock and is of Cretaceous age. It is composed of highly variable sands, gravels, and clays of a deltaic origin and has a moderated hydraulic conductivity of 300 gpd/ft^2 (Kimmel & Braids, USGS Prof. Papr 1085).

According to the Upper Glacial aquifer groundwater contour map for the site area, shown as Figure 1-4, groundwater flows through the site and surrounding areas in a northerly direction, eventually discharging to Port Jefferson Harbor and/or Long Island Sound. However, the presence of the Smithtown Clay bisecting the water table within the site and surrounding areas may result in a more complicated flow system within the study area. Depth to water at the site likely ranges from 175 feet to 200 feet below grade.

1.4 Data Requirements and Remedial Investigation Approach

Due to the long history of environmental concerns associated with the site, the multiple areas of environmental concerns present and the relatively large size of the site (126 acres); a thorough - phased investigation approach is proposed, in order to obtain sufficient data to characterize the nature and extent of site contamination and to identify appropriate Interim Remedial Measures (IRMs). Additionally, the RI data will be needed to develop and prepare an FS for the site.

As discussed in Section 1.2, review of NYSDEC and SCDHS records concerning the site indicates:

- A potential for buried debris including chemical drums;
- Numerous locations of outside drum storage;
- Multiple documented cases of drummed wastes (including halogenated VOCs) being discharged to the ground;
- Documented organic and inorganic contamination present within onsite leaching pools and lagoon;
- Documented contamination of private wells by halogenated VOCs located less than one mile downgradient of the site; and
- Documented surface water and groundwater contamination by halogenated VOCs up to one mile from the site.

Given the documented cases of halogenated VOCs discharges at the site, there exists a significant potential for a pure VOC release or dense non-aqueous phase liquid (DNAPL) slug migrating through the unsaturated soil and reaching the water table. Having a greater density than water, the DNAPL slug would continue moving vertically through the Upper Glacial aquifer until reaching the Smithtown Clay unit, discussed in Section 1.3, where it may remain as a DNAPL pool on top and within the clay unit. This DNAPL pool along with any residual VOCs within the unsaturated and saturated zones will continue to be a source of significant groundwater contamination.

In order to adequately characterize areas of environmental concern, soil, groundwater, surface water and leaching pool sludge samples will be collected and analyzed for contaminants of concern. Site hydrogeology will be characterized in order to assess the fate and transport of contaminants identified within soil, groundwater and surface water. Identified contaminant concentrations will be compared to applicable standards and guidelines and possible exposure pathways will be identified to assess potential health risks. Sensitive environments such as wetlands and significant species will be identified which may be impacted by identified contamination.

In order to prioritize areas of concern and to select appropriate sample locations which will provide the most valuable data, CDM has organized the RI subtasks into the following phases:

- Pre-Field Investigation Subtasks
- Field Investigation Subtasks
- Post-Investigation Subtasks

The Pre-Field Investigation Subtasks include a thorough literature review of documents in order to identify all known and suspected areas of contamination. A review of aerial photographs will be conducted to locate drum storage areas, areas of possible filling and other potential concerns. Additionally, a site map will be developed so that areas of concern and sample points can be accurately located within the site. A groundwater model will be developed in order to determine groundwater flow patterns through out the 126 acre site and surrounding areas. Through particle tracking analysis, the model will be used to identify potential contaminant plume migration pathways within the site which will aid in the selection of appropriate sample locations. Upon completion of the Pre-Investigation Subtasks, a "work shop" meeting will be held at the CDM Woodbury, New York office in order to discuss the findings of the literature search and modeling studies and to select soil and boring locations.

Based on the findings of the Pre-Field Investigation and discussions with NYSDEC, soil boring, push probe and monitoring well locations will be selected. The planned Field Investigation Subtasks and data objectives of each subtask are as follows:

- Geophysical Investigation: To locate buried objects that may be a source of soil and groundwater contamination.
- Abandoned Discharge Lagoon Investigation: To assess the nature of material used to fill site discharge lagoons and determine if soil contaminants are present.
- Push Probe Investigation: To identify soil contaminant "hot spots" within the site. Note that soil borings and monitoring well locations may be modified based on the results of the push probe investigation.
- Soil Borings and Monitoring Well Installation: To further assess soil contamination identified by the push probe investigation (at greater depths); to assess soil and groundwater quality downgradient of identified hot spots and other potential areas of concern; obtain information on site hydrogeology and; identify possible DNAPL pools within the Smithtown Clay Unit.
- Groundwater and Surface Water Sampling: Assess the extent of groundwater contamination within and downgradient of the site and the extent of surface water contamination within a potentially impacted tidal creek and pond located less than one mile downgradient of the site.
- Dry Well Investigation: Assess if onsite drywells, leaching pools and septic systems are sources of soil and groundwater contamination.

The Post-Field Investigation Subtasks include analysis of samples collected as part of Field Investigation and summarizing all data in an RI Report. CDM will perform a qualitative exposure assessment to determine the potential human health impacts of identified contamination. CDM will identify recommendations for appropriate IRMs and/or additional investigations.

Section 2
Scope of Work

2.1 Task A - Rebid Standby Contracts

As part of this work assignment, CDM will develop a Request For Proposal (RFP) for analytical laboratories, drilling contractors and data validation services. Qualified firms will be provided the RFPs for review and reply. CDM will evaluate each submitted bid and select a firm or firms for award of each service. CDM will negotiate a subcontract agreement with each selected firm. CDM will provide NYSDEC with submitted RFPs, bid evaluations and subcontract agreements.

2.2 Task 1 - Work Plan Development

The Work Plan Development task has been divided into the following phases:

- Phase A: Scoping/Draft Work Plan
- Phase B: Final RI Work Plan, and
- Phase C: Securing Subcontractor Agreements

Subtask 1.1 - Phase A: Scoping/Draft Work Plan

This phase will include a review of the following information:

- Provided NYSDEC files,
- Provided Suffolk County Department of Health Services (SCDHS) files, and
- Information provided by Lawrence Aviation Industries (LAI).

A site visit will be conducted with NYSDEC and SCDHS representatives in order to become familiar with current site conditions and operations as well as identify general locations of past waste discharges. Immediately after the site visit, CDM will attend a scoping session with NYSDEC in order to formulate the general scope of work for the RI and to estimate project costs.

Within four weeks of the scoping meeting, CDM will submit a Draft Work Plan to the NYSDEC for review and comment. The Draft Work Plan will include:

- A statement of the overall Scope of Work, including proposed Immediate Remedial Actions (IRMs), if any;
- A brief summary of the known problems at the site and likely remedial alternative;
- A Preliminary Field Activities Plan that provides a general description of each field activity to be completed as part of the RI;
- Detailed Level of Effort (LOE) and budget for Task 1, Phase B: Preparation of the Final RI/FS Work Plan;
- Preliminary estimate of the LOE and budget for conducting the remaining tasks in this Work Assignment;
- Preliminary estimate of the Work Assignment progress schedule, including milestones and deliverables;

- Project Staffing Plan, identifying key management and technical staff members to be assigned to the Work Assignment, with resumes and a listing of their areas of responsibilities; and,
- Identification of work items to be subcontracted including a Minority/Women Owned Business Enterprise (MBE/WBE) Utilization Plan.

Subtask 1.2 - Phase B - Final RI Work Plan

Within three weeks of receiving NYSDEC comments on the draft Work Plan, CDM will submit the final RI/FS Work Plan.

The Final Work Plan will contain the following:

- Final detailed Field Activities Plan;
- Site Specific Health and Safety Plan;
- Site Specific Quality Assurance Project Plan (QAPP);
- Detailed Work Assignment Budget for all tasks;
- Final Progress Schedule for all tasks; and
- Citizen Participation Plan.

If necessary, a meeting between CDM and NYSDEC will be held in Albany to review comments and details of the Draft Work Plan.

Once the RI/FS Work Plan is approved by the NYSDEC, a notice to initiate field work will be issued to CDM for the completion of the RI/FS. It is assumed that NYSDEC will schedule a public information meeting to be held near the site. CDM will assist the NYSDEC and the NYSDOH with the preparation of hand outs and the presentation of the work plan at the public meeting.

Subtask 1.3 - Phase C - Securing Subcontract Agreements

Upon approval of the Final Work Plan by NYSDEC, CDM will finalize subcontract agreements with all required contractors and subcontractors. Subcontract agreements will be limited to the following services;

- Surveyor,
- Test Pit Contractor,
- Geoprobe Contractor,
- Well Driller,
- Geophysical Consultant,
- Analytical Laboratory
- Data Validator,
- Printer, and
- RI Field Support

Assumptions:

- Up to a maximum of six copies of the Draft Work Plan will be required by the NYSDEC.
- Up to a maximum of six copies of the Final Work Plan, with attachments, will be required by the NYSDEC. The Final Work Plan with attachments will not exceed 600 pages.

- Up to three copies of each executed subcontract agreement will be provided to NYSDEC.

2.3 Task 2 - Remedial Investigation

The remedial Investigation is comprised of 16 subtasks which have been grouped into three phases. The RI subtasks include:

Pre-Field Investigation Subtasks:

2.1 Literature Search
2.2 Mapping and Surveying
2.3 Groundwater Model Studies
2.4 Fish and Wildlife Impact Analysis

Field Investigation Subtasks:

2.5 Field Mobilization
2.6 Geophysical Investigation
2.7 Abandoned Discharge Lagoon Investigation
2.8 Push Probe Investigation
2.9 Soil Boring and Monitoring Well Installation
2.10 Dry Well Investigation
2.11 Groundwater and Surface Water Sampling

Post-Field Investigation Subtasks:

2.12 Sample Analysis
2.13 Data Validation/Usability Report
2.14 ARARs/SCGs and Human Exposure Assessment
2.15 RI Report Preparation
2.16 Public Participation

Subtask 2.1 - Literature Search

CDM will obtain all environmentally related historical information concerning the site from the following government agencies:

- NYSDEC
- SCDHS
- Town of Brookhaven Building and Planning Departments
- United States Geological Survey
- Suffolk County Water Authority

Additionally, CDM will review historical information provided by LAI.

Note that an initial review of NYSDEC and SCDHS files will be completed as part of Task 1 - Phase A: Scoping/Draft Work Plan.

Information to be reviewed includes; notices of violations, inspection reports, sampling reports, photographs, and site plans. Additionally, information concerning site and regional hydrogeology, climatological data, soil types will be reviewed. As part of this subtask, CDM will identify all operating public supply wells within a two mile radius of the site.

CDM will interview available LAI employees in order to locate areas of concern (i.e. leaching pools, areas of illicit dumping, etc.)

As part of this subtask, CDM will review historical aerial photographs of the site and surrounding areas, in order to identify potential areas of concern associated with past site practices. Additionally, CDM will obtain up to three 24" x 30" historical aerial photo enlargements of the site.

Assumptions:

- 60 hours have been estimated for a junior engineering/scientist to review all records, documents and aerial photographs.
- Information obtained in this subtask will be incorporated into the RI Report, Task 2.14.
- $550 has been budgeted in this subtask for the purchase of aerial photographs.

Subtask 2.2 - Mapping and Surveying

CDM will develop a base map for the site using ground control data (field surveying) in conjunction with digitizing existing aerial photograph data. The site map will be approximately 80 acres of the 126 acre site. All sample points will be located on the base map. Top of casing elevations of all existing and newly installed monitoring wells will be surveyed to the nearest 0.01 foot, based on USGS datum. A notch will be placed at the point of survey on each well casing to be used as a reference for future water level measurements.

The initial basemap for the site will be developed prior to undertaking field activities. All sample points will be surveyed at the completion of field activities.

Assumptions:

- The basemap will be developed by the survey subcontractor from an existing aerial photograph and ground control data obtained from one day in the field (8 hours/day) for a two person survey crew.

- Surveying of all RI sample points has been estimated to take three days (8 hrs./day) for a two person survey crew.

- CDM has budgeted 24 labor hours for CDM staff under this Subtask.

Subtask 2.3 - Groundwater Model Studies

CDM will develop a groundwater model for the site and potential downgradient receptors, including: the unnamed tidal creek and pond located in Port Jefferson Village, Port Jefferson Harbor and nearby public supply wells. The model will be developed from the currently existing

Suffolk County Regional Groundwater Model. The developed groundwater model will provide groundwater flow direction (horizontal and vertical) within the Upper Glacial and Magothy aquifers. The developed model will assist CDM in identifying possible RI monitoring well and soil boring locations through particle tracking analysis.

Upon completion of Subtasks 2.1 and 2.2 and completing the particle tracking analysis under Subtask 2.3, CDM will have a "work shop" meeting at CDM's Woodbury, New York office with NYSDEC to discuss our findings and to select boring and monitoring well locations.

As part of the RI, CDM will use the model to assess potential impacts (including past, present, and future), to public supply wells and sensitive environments. As part of the FS, CDM will use the model to evaluate possible IRMs.

Assumptions:

- CDM has budgeted 200 labor hours for a junior engineer and 32 labor hours for a senior engineer to complete this subtask.
- Findings of the Modeling Study will be included in the RI Report, Subtask 2.15.

Subtask 2.4 - Fish and Wildlife Impact Analysis

CDM will complete a "Step 1" Fish and Wildlife Impact Analysis in accordance with NYSDEC's Division of Fish and Wildlife document entitled: "Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites (FWIA)", dated October, 1994. This subtask will include:

- Obtaining a USGS topographic map of the site and determining site drainage;
- Obtaining information on vegetative communities including wetlands, aquatic habitats, sensitive environments etc. within a half mile radius of the site;
- Provide a description of the fish and wildlife located within one half mile radius of the site based on each cover type. Aquatic habitat, endangered, threatened and rare species will also be noted;
- Notation of stressed vegetation or biota observed onsite;
- Description of Fish and Wildlife Resource Value; and
- Identification of Applicable Fish and Wildlife Regulatory Criteria.

Assumptions:

- CDM has budgeted 24 labor hours for a junior scientist to complete this task.
- All required information will be obtained from the NYSDEC Region 2, Stony Brook, New York office.
- Findings of the Fish and Wildlife Analysis will be included in the RI Report, Subtask 2.15.

Subtask 2.5 - Field Mobilization

This activity addresses initial mobilization and final demobilization at the site for the field work included under Task 2. An office/storage trailer will be set up at the site for the duration of major

field work. Electrical service to the trailer will be provided by LAI. Toilet facilities and water will be made available by LAI.

As part of this subtask, the drilling subcontractor will construct a decontamination area for drilling and test pit equipment located within the general area of the field trailer.

Assumptions:

- CDM has budgeted $400 for solid waste disposal.
- Toilet facilities, electric and water service can be provided by LAI.
- LAI will not require payment for the use of toilet, electric and water.
- One 50 foot x 12 foot office trailer rented for 2 months by CDM.
- Costs related to connecting the office trailer to electrical service will not exceed $1,000.
- CDM has budgeted $450 for a portable field phone to be used for up to 8 weeks in the field.
- CDM has budgeted 24 labor hours for this Subtask.

Subtask 2.6 - Geophysical Investigation

A geophysical survey will be performed by CDM in the drum storage area, the closed lagoons, the historic drum storage area and possibly other areas that the initial site visit and Literature Search Subtask 2.1 determines as appropriate. The objective of the investigation is to locate any buried drums or landfilled materials that may be a contributing source of soil and groundwater contamination.

The geophysical survey will be accomplished using a magnetometer survey. Each suspect area will be marked out using a ten foot grid spacing. Any geophysical abnormalities will be further investigated using Ground Penetrating Radar (GPR).

When completed, CDM will discuss the findings of the geophysical survey with NYSDEC so that test pit locations can be selected.

Based on the results of the geophysical survey, test pits maybe undertaken to clarify any major geophysical abnormalities. CDM will screen test pit soils for the presence of volatile organic compounds (VOCs) using a photo ionization detection (PID).

Assumptions:

- All test pit and geophysical work can be performed in Level D PPE.
- Magnetometer Survey will include up to 8 acres of site property and will take a maximum of five days (10 hrs./day) to complete;
- Clearing of woods and brush will not be required to perform the geophysical survey.
- CDM has budgeted up to 90 labor hours for a junior engineer/geologist to complete this subtask.
- Task includes up to six test pits.
- Test pits will be a maximum of 30 feet long, 10 feet wide and 8 feet deep.
- Upon completion, all test pits will be backfilled with excavated soil, no compaction will be required.

- This task does not include the removal of contaminated soil, drums or other containers of potentially hazardous wastes from a test pit. If such a container is uncovered, its location will be marked and will be addressed under an IRM independent of this RI/FS contract.
- Up to 12 soil samples will be collected for TCL/TAL Analysis.
- Up to 2 shipments of samples will be made to the laboratory via overnight carrier.

Subtask 2.7 - Abandoned Discharge Lagoon Investigation

As discussed in Section 1.1, LAI maintained two lagoons which received process waste waters. The lagoons were reportedly closed by LAI in 1987 by backfilling. Up to four test pits will be completed within the abandoned lagoons to determine the nature of the backfill and to identify potential sources of soil and groundwater contamination. Soil samples will be collected from test pit bottoms and side walls.

Assumptions:

- Test pits can be completed in Level D PPE
- Task includes up to four test pits.
- Test pits will be a maximum of 30 feet long, 10 feet wide and 8 feet deep.
- CDM has budgeted 30 labor hours for a junior engineer/geologist to perform this subtask.
- Up to 8 soil samples will be collected for TCL/TAL analysis.
- Up to one shipment of samples will be made to the laboratory via overnight carrier.

Subtask 2.8 - Push Probe Sampling

Soil samples will be collected at up to 25 locations within the site using push probe soil sampling technology (push probes). The exact location of each sample point will be based on findings obtained through the Literature Search Subtask 2.1. Up to fifteen (15) probes will be 40 feet in depth and ten (10) will be 15 feet in depth. Soil samples will be collected continuously at four foot intervals using large diameter piston rod samplers and screened for the presence of VOCs using a photo ionization detector (PID). Upon completion, each push probe borehole will be abandoned through the use of a bentonite slurry poured into the open borehole. Any soil sample remaining after completion of each borehole will be spread on the ground.

Each soil sample collected will be further screened in the field for the presence of specific VOCs using a portable Gas Chromatograph (portable GC) operated by an experienced CDM technician/ environmental engineer. The portable GC will be set up onsite within the CDM field trailer. The portable GC will screen each recovered soil sample for the following contaminants of concern:

- Tetrachloroethane
- Trichloroethane
- 1,1-Dichloroethene
- 1,2-Dichloroethene
- Vinyl Chloride
- 1,1,1-Trichloroethane
- 1,1-Dichloroethane

Minimum detection limits for soil and groundwater samples will be 50 ppb.

If selected, CDM may also collect soil gas samples at four foot intervals at a number of the 25 probe locations (in lieu of soil sample collection) for portable GC screening.

Up to 20 soil samples will be selected for TCL VOCs in order to verify the portable GC results. An additional 20 soil samples will be selected for full TCL/TAL parameters.

Assumptions:

- CDM has estimated that the push probe investigation subtask will take 8 working days to complete.
- CDM will have one field geologist and one portable GC operator onsite for each day, 10 hrs./day, a total of 160 labor hours.
- Up to 6 shipments of samples will be made to the laboratory via overnight carrier.
- All field work will be executed in Level D PPE.
- No drilling wastes will require drumming during this activity.

Subtask 2.9 - Soil Borings and Monitoring Well Installation

Soil boring locations will be based on the results of the Literature Search, Groundwater Modeling and Push Probe subtasks and will be used to assess the nature and extent of soil and groundwater contamination within the site. Up to 12 soil borings will be completed using hollow stem auger drilling method (HSA) up to a maximum of 195 feet deep. Soil samples will be collected at 5 foot intervals and will be screened for the presence of VOCs in the field using a PID and a portable GC. The portable GC will be set up in the CDM field trailer and operated by a CDM technician/ environmental engineer experienced in the operation of the unit. VOCs to be screened using the portable GC are listed in the subtask 2.8 description. Upon reaching the water table, estimated at 190 feet below grade, one groundwater sample will be collected from each boring using the Hydropunch sample method. All 12 hydropunch samples will be screened for listed VOCs using the portable GC.

Up to 24 soil samples will be submitted to the contract laboratory for TCL volatiles. Twelve Hydropunch groundwater samples will be submitted for TCL volatiles and conventional parameters listed in Subtask 2.12.

Based on the results of the portable GC VOC results, seven of the 12 boring locations will be converted to groundwater monitoring wells. CDM will discuss the results of the VOC screening and other significant findings with NYSDEC in order to select which borings are converted to monitoring wells. Each well will be constructed of a 4-inch PVC riser connected to a ten foot length of PVC well screen. Maximum depth of each well will be 198 feet.

Subtask 2.9 will also include the completion of one deep boring, up to 300 feet in depth, in order to characterize site geology and obtain water quality data. The boring will be completed using direct mud rotary drilling method. Soil samples will be collected every ten feet for geologic characterization. Groundwater samples will be collected every 20 feet, starting at the top of the water table, using the Hydropunch sample method. Upon completion of the borehole, the borehole

will undergo downhole geophysical logging using Natural Gamma Log and SP Resistivity method. The boring will be converted to a deep monitoring well, approximately 250 feet deep. However, the actual depth of each well will be dependant on the VOC screening, other significant findings and discussions with NYSDEC personnel. Construction will be consistent will the shallow monitoring wells.

All newly installed monitoring wells will be developed by the drilling contractor using a submersible pump. It is anticipated that all drill cuttings and development water can be discharged to the ground. However, if contaminated groundwater is encountered during sampling and well development, it will be drummed and staged on site for future disposal by NYSDEC independent of this assignment.

Assumptions:

- Shallow well and boring depths are based on an estimated average depth to water of 190 feet.
- CDM has estimated that the 12 shallow soil borings will take 22 days to complete with one geologist and one portable GC technician present each day (10 hrs./day) for a total of 440 labor hours.
- CDM has estimated that installation of the 7 shallow monitoring wells will take 10 days to complete with one geologist present for each day (10 hrs./day) for a total of 100 labor hours.
- CDM has estimated that completion of the one deep boring and conversion to a well will take 5 days to complete with one geologist present for each day (10 hrs./day) for a total of 50 labor hours.
- All field work will be preformed in Level D PPE.
- Well development is estimated at 3 hours per well.
- Well development water will be discharged to the ground surface, except in those locations where contaminated water is evidenced through field screening or visual observations, in which case the water will be drummed.
- For contingency purposes, CDM has budgeted for up to 20, 55-gallon, DOT drums under this subtask for contaminated water.
- Drill cuttings and drilling mud will be disposed of onsite in the area adjacent to the well or boring.
- Drill cuttings, drilling mud, decontamination water, or well development water will not be characterized or transported offsite.
- Downhole equipment will be steam cleaned between boring/well locations. Water from decontamination procedures will be discharged to the ground.
- All well locations will be accessible by truck-mounted rigs.
- Split spoon samplers will be decontaminated by Liquinox wash and distilled/deionized water rinse after each use. Water generated from decontamination procedures will be discharged to the ground.
- Up to 8 shipments of samples will be made to the laboratory via overnight carrier.

Subtask 2.10 - Dry Well Investigation

Based on the information obtained from the Literature Search subtask, up to 20 site cesspools and/or leaching pools will be sampled. Samples will be collected using a hand operated Ponar Dredge Sampler. Up to 20 sludge samples will be analyzed for full TCL/TAL parameters.

Assumptions:

- CDM has estimated that sampling of 20 drywells will take 4 days to complete with two sampling technicians (10 hrs./day) for a total of 80 hours.
- All field work will be performed in Level D PPE.
- Up to 2 shipments of samples will be made to the laboratory via overnight carrier.

Subtask 2.11 - Groundwater and Surface Water Sampling

Up to two rounds of groundwater and surface water samples will be collected by CDM. Up to 10 existing and 8 "new" RI groundwater monitoring wells will be sampled during each round. Existing wells could include onsite supply wells in addition to monitoring wells previously installed by SCDHS. Water level measurements will be collected at each well during each sample round. Up to 8 surface water samples will be collected during each sample round. The first round groundwater and surface water samples will be analyzed for full TAL/TCL pollutant list and conventional parameters listed in Subtask 2.12. Analysis of the second round will be limited to TCL volatiles and conventionals.

Sampling of each well will be initiated within a minimum of two weeks after the final well is installed and developed. Immediately prior to sampling, each well will be purged using a submersible pump and small generator. Purging of a well will consist of the evacuation of 3 to 5 well volumes or until the well goes dry. Depending on the turbidity of the samples, the wells may be sampled immediately for TCL organic analyses and allowed to stand overnight before collecting samples for TAL metals and conventional parameters. It is anticipated that purge water will be discharged directly to the ground surface. However if previous investigations have determined a well to be highly contaminated, the purge water will be drummed and staged on-site.

Surface water samples will be collected from the unnamed tidal creek and associated ponds running through Port Jefferson Village at up to eight different locations.

In order to avoid the potential influence of surface runoff, surface water samples will be collected during a period of dry weather, with no precipitation occurring within 48 hours prior to the collection event.

All surface water samples that may be tidally influenced will be collected during the period starting two hours before mean low tide and ending before mean low tide in order to collect samples when groundwater recharge would be expected to be greatest. Surface water samples will be collected by submerging the sample containers below the surface of the water and allowing water to slowly flow into the containers.

Assumptions:

- All work can be accomplished in Level D PPE.
- Disposable dedicated bailers will be used to collect groundwater samples.
- Wells can be purged with 2" submersible well pumps or via hand bailing.
- Purge water can be discharged to the ground surface unless it is highly contaminated, in which case it will be drummed.
- Three field staff will be required for 10 hrs./day for 4 days (includes sample preparation for shipment) for each round of sampling, a total of 240 labor hours.
- Up to 10 shipments of samples to the lab via overnight carrier will be made.

Subtask 2.12 - Sample Analysis

Laboratory analysis of selected soil, groundwater, surface water and sludge samples will be performed by H2M Analytical Laboratories, Melville, New York, under subcontract to CDM. Analysis will be in accordance with NYSDEC Analytical Services Protocol (ASP), 1995 with a Category B deliverable data package. Table 2-1 provides a summary of the number of samples to be analyzed, parameters to be tested for and the number of QA/QC samples to be collected.

In addition to the standard ASP TCL/TAL parameters, groundwater and surface water samples will be analyzed for the following "indicator" parameters:

- Nitrate
- Nitrite
- Fluoride
- Chloride
- Hardness
- Alkalinity
- TDS

Additionally the following field measurements will be taken:

- pH
- Conductivity
- Dissolved oxygen

All metals analysis, including soil and aqueous samples, will include titanium. Soil and groundwater samples collected within and downgradient of the abandoned discharge lagoons will also include hexavalent chromium given historical records indicated the presence of this element within samples collected from the lagoons.

CDM will provide NYSDEC with a Data Summary Report summarizing all "raw" analytical data and will include a comparison of applicable standards and clean up guidelines within one week of receiving the final lab data package. The data summary tables will be revised based on the data validation/usability analysis to be conducted as part of subtask 2.13 and will be incorporated into the RI Report under subtask 2.15.

Table 2-1
Sample Analytical Summary
Lawrence Aviation Industries Site
Work Assignment No. D002925-20.1

Parameter Group	No. of Samples	No. of QA/QC Samples				Total No. Samples
		Blind Duplicates	MS/ MSD	Field Blank	Trip Blank	
Geophysical Investigation (soil) (a)						
TCL Volatiles + 10	16	1	1	1	1	20
TCL Semi-Volatiles + 20	16	1	1	1	0	19
TCL Pesticides/PCBs	16	1	1	1	0	19
TCL Metals (1)	16	1	1	1	0	19
Abandoned Discharge Lagoon (a)						
TCL Volatiles + 10	8	0	0	0	0	8
TCL Semi-Volatiles + 20	8	0	0	0	0	8
TCL Pesticides/PCBs	8	0	0	0	0	8
TCL Metals (1)(3)	8	0	0	0	0	8
Push Probe Sampling (soil)						
TCL Volatiles + 10	40	2	2	2	2	48
TCL Semi-Volatiles + 20	20	1	1	1	0	23
TCL Pesticides/PCBs	20	1	1	1	0	23
TCL Metals (1)	20	1	1	1	0	23
Boring Installation Deep and Shallow (soil)						
TCL Volatiles + 10	24	1	1	1	1	28
TCL Semi-Volatiles + 20	0	0	0	0	0	0
TCL Pesticides/PCBs	0	0	0	0	0	0
TCL Metals (1)	0	0	0	0	0	0
Monitoring Well Installation Deep and Shallow (groundwater)						
TCL Volatiles + 10	19	2	1	1	1	24
TCL Semi-Volatiles + 20	0	0	0	0	0	0
TCL Pesticides/PCBs	0	0	0	0	0	0
TCL Metals (1)	0	0	0	0	0	0
Conventionals (2)(3)	19	2	0	0	0	21
Dry Well Investigation (sludge)						
TCL Volatiles + 10	20	1	1	1	1	24
TCL Semi-Volatiles + 20	20	1	1	1	0	23
TCL Pesticides/PCBs	20	1	1	1	0	23
TCL Metals (1)	20	1	1	1	0	23
Surface and Ground Water Sampling (groundwater)						
TCL Volatiles + 10	36	2	2	2	2	44
TCL Semi-Volatiles + 20	18	1	1	1	0	21
TCL Pesticides/PCBs	18	1	1	1	0	21
TCL Metals (1)	18	1	1	1	0	21
Conventionals (2)(3)	36	2	0	0	0	38

Table 2-1
Sample Analytical Summary
Lawrence Aviation Industries Site
Work Assignment No. D002925-20.1

Parameter Group	No. of Samples	No. of QA/QC Samples				Total No. Samples
		Blind Duplicates	MS/ MSD	Field Blank	Trip Blank	
Surface and Ground Water Sampling (surface water)						
TCL Volatiles + 10	16	2	2	2	2	24
TCL Semi-Volatiles + 20	8	1	1	1	0	11
TCL Pesticides/PCBs	8	1	1	1	0	11
TCL Metals (1)	8	1	1	1	0	11
Conventionals (2)(3)	16	2	0	0	0	18

Notes:
(1) Includes Titanium
(2) Conventionals will Include:
pH
Total Dissolved Solids
Alkalinity
Chloride
Nitrate
Nitrite
Hardness
Fluoride
(3) Half of the samples will include Hexavalent Chromium
(a) Soil samples collected as part of the Geophysical and Abandoned Discharge Lagoon Investigations are considered one sample delivery group.

Assumptions:

- Turnaround for lab data packages will be four weeks from receipt of last sample by the lab.
- 40 hours have been budgeted for a junior engineer for the development of data summary tables.

Subtask 2.13 - Data Validation/Usability Report

All data collected from the first round sampling, including soil, groundwater, surface water and sludge samples will undergo third party data validation. Based on the results of the first round data validation, NYSDEC will make a determination on the level of data validation necessary for any second round sampling conducted under the RI. Based on the data validation report, CDM developed a Data Usability Summary Report which will be submitted to the NYSDEC for review. A Final Data Usability Summary Report which addresses any NYSDEC comments will be incorporated into the RI Report under Task 2.15.

Assumptions:

- A data validation report will be made available to CDM within two weeks of receiving the lab data package.
- CDM has budgeted 40 labor hours to complete the Data Usability Summary Report.
- Up to six copies of the draft Data Usability Summary Report will be provided to NYSDEC within two weeks of receiving the data validation report.

Subtask 2.14 - Identification of ARARs/SCGs and Human Exposure Assessment

Applicable or Relevant and Appropriate Requirements (ARARs) and Standards Criteria and Guidance (SCGs) for each contaminate detected will be selected and compared to identified contaminant concentrations.

CDM will prepare a qualitative exposure assessment that will evaluate current and potential future exposure pathways assuming no remediation. The exposure assessment will identify the types and amounts of up to 10 chemicals of concern for soil and groundwater and surface water samples and summarize their toxicological effects, and compare the observed contaminant concentrations to risk based ARARs.

Assumptions:

- The human exposure assessment will be incorporated into the RI Report and a separate deliverable will not be required.
- One person (66) hours will be required to identify ARARs/SCGs and perform the assessment.
- All comments from NYSDEC and NYSDOH will be composited into a single review document provided to CDM.
- Only one round of comments is anticipated from NYSDEC/NYSDOH.
- The final assessment report which addresses any comments will be incorporated into the RI Report under Subtask 2.15.

Subtask 2.15 - RI Report Preparation

Upon completion of all RI activities, CDM will summarize investigation findings in a Remedial Investigation Report (RI Report). The report will include the following:

- Discussion of RI field and laboratory sample analysis;
- Nature and extent of soil and groundwater contamination;
- Up to 2 water level contour maps will be prepared;
- Up to 2 geologic cross sections;
- Groundwater modeling study findings;
- Discussion of the Qualitative Exposure Assessment; and
- Conclusions and recommendations, including: summary of any completed IRMs; summary of recommendations for further IRMs, operable units and additional (Phase II RI) investigations.

The RI Report will also include information regarding present site conditions, site history and regional background data, and fish and wildlife data, obtained in the Literature Search subtask.

After the draft RI Report is reviewed by the NYSDEC, a meeting will be held at the NYSDEC headquarters in Albany to determine whether additional RI activities are required or the scope of work for the FS needs to be adjusted.

Assumptions:

- The RI Report will consist of no more that 750 pages, including appendices.
- Up to one round of comments from NYSDEC will be incorporated into the draft RI prior to distribution to the public.
- A total of seven draft copies and seven final copies of the RI Report will be submitted to NYSDEC by CDM. All modifications resulting from the incorporation of public comments will be handled as an addendum to the RI Report.

Subtask 2.16 - Public Participation

At the completion of the RI, a public information meeting will be scheduled by NYSDEC to be held near the site. CDM will assist the NYSDEC and the NYSDOH with the preparation and the presentation of the RI data at the meeting.

Assumptions:

- CDM has budgeted up to 24 hours for this subtask.
- CDM will provide up to three poster size figures for presentation purposes.

2.4 Task 3 - Preparation of Feasibility Study

The major objectives of the FS will be to support an informed risk management decision regarding which remedy appears to be the most appropriate, cost-effective and protective of public health and the environment. The FS will be conducted in accordance with the most recent versions of the

guidance documents specified in the NYSDEC Division of Hazardous Waste Remediation's Technical and Administrative Guidance Memorandum (TAGM) #4025 entitled "Guidelines for Remedial Investigations/Feasibility Studies under CERCLA."

The FS will include the following subtasks:

Subtask 3.1 - Development of Remedial Alternatives

Using information generated in Tasks 1 and 2, CDM will develop a list of potential remedial technologies and alternatives that may be used to remediate the site.

Subtask 3.2 - Screening of Alternatives

The alternatives will be screened based on effectiveness, implementability and cost. The initial list of alternatives and the screened list, along with discussion and justification, will be submitted in the form of a preliminary draft FS Report to the NYSDEC for review.

Subtask 3.3 - Detailed Analysis of Alternatives

Following authorization from the NYSDEC, CDM will perform a detailed analysis of up to four remedial alternatives including the no-action alternative. Each alternative will be evaluated against the following criteria:

- Overall protection of public health and the environment;
- Compliance with SCGs;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility and volume of hazardous waste;
- Short-term effectiveness and potential impacts during remediation;
- Implementablility and technical reliability;
- Community acceptance; and
- Cost.

Subtask 3.4 - Report Preparation and Recommendations

CDM will prepare a draft FS Report which will include findings from the above subtasks and recommend a remedial alternative that is protective of human health and the environment, attains SCGs, satisfies the preference for treatment that significantly and permanently reduces toxicity, mobility, or volume of hazardous waste as a principle element, and is cost effective.

Assumptions:

- The FS will include the detailed evaluation of up to four remedial alternatives including the no-action alternative
- CDM will provide up to six copies of the preliminary draft FS Report under Subtask 3.2 to NYSDEC. The preliminary draft FS will not exceed 50 pages in length.
- A total of seven draft and final FS Reports copies will be provided to NYSDEC. Each report will not exceed 350 pages including appendices.
- Up to one round of comments from NYSDEC will be incorporated into the draft FS Report prior to distribution to the public.

2.5 Task 4 - Interim Remedial Measures/Phase II RI

Based on the information collected during the RI, the need for implementation of IRMs will be evaluated. If IRMs are recommended, CDM will prepare a scoping document outlining the proposed remedies. Should the results of the RI indicate that additional data are required to fill data gaps, CDM will develop a scope of work to perform a Phase II investigation. A draft and final scoping document for any required Phase II RI/IRM will be completed by CDM within two weeks of authorization from NYSDEC and will not exceed 12 pages.

Assumptions:

- The current project budget does not include funds to perform any IRM or Phase II RI activities.
- Bid solicitations, evaluation, and selection of subcontractors are not included for scoping of the Phase II RI/IRM.
- No scoping meeting with NYSDEC in Albany is required.
- No cost estimates will be provided.

Section 3
Schedule

Figure 3-1 presents tentative completion dates for conducting various tasks of the RI/FS. The tentative project schedule is based on the original NYSDEC schedule provided in the NYSDEC April 1997 scope of work for the Lawrence Aviation Industries site RI/FS.

It is anticipated that a Notice to Proceed with the RI will be issued by NYSDEC in early August 1997. A number of Pre-Field Investigation activities described in Subtask 2.1 through 2.4 will take approximately three weeks to complete. Upon completion of the Pre-Investigation Subtasks, a "work shop" meeting will be held at the CDM Woodbury, New York office in order to discuss the findings of the literature search and modeling studies and to select soil and boring locations. Field efforts, subtask 2.5 through 2.11, are estimated to require approximately two months to complete and will start in early September 1997. A second groundwater and surface water sampling round will be conducted in November of 1997.

The draft RI Report is scheduled for completion in February of 1998. Considering NYSDEC review periods, the Final RI report will be completed in May of 1998. The public information meeting for the RI would be scheduled several weeks after submission of the Final RI report, sometime in mid to late-April 1998.

Preparation of the Preliminary Draft FS Report (Subtask 3.2) will begin immediately following submission of the draft RI Report and is expected to be completed by May 1998, with completion of the draft Feasibility Study Report (Subtask 3.4) anticipated by August 1998. Considering NYSDEC review periods, the Final FS report will be completed by October of 1998.

Based on the results of the RI, it may be necessary to scope out a Phase II RI if additional data are needed to proceed with the development of potential remedial alternatives. Should additional field investigations be required, the tentative delivery dates of the FS Report and subsequent work elements will be revised.

Figure 3-1
Tentative Project Schedule
Lawrence Aviation Industries site RI/FS (Revised July 8, 1997)

Project Milestone	Date	Elapsed Time
Issuance of Work Assignment to the NYSDEC Standby Consultant	March 20, 1997	
Acknowledge Receipt of Work Assignment (WA)	March 30, 1997	10 days after issuing WA
Site Visit	May 14, 1997	62 days after WA
Scoping Session	May 14, 1997	Held immediately after site visit
*Submit Draft RI Work Plan	June 13, 1997	4 weeks after scoping session
Comments on Draft Work Plan	June 27,1997	2 weeks after draft submittal
**Submit Final Work Plan	July 18, 1997	3 weeks after comments received on draft
*Public Information Meeting- RI Work Plan	August 1, 1997	2 weeks after submittal of Final WP
Final RI Work Plan Approval, Notice to Proceed (NTP)***	August 4, 1997	158 days after issue of WA
Complete Pre-Field Investigation RI Subtasks, 2.1 through 2.4	Sept. 4, 1997	4 weeks after NTP
Complete Field Investigation RI Subtasks, 2.5 through 2.11(Note 2nd Round Groundwater\Surface Water Sampling to be completed by Dec. 5, 1997)	Nov. 3, 1997	12 weeks after NTP
Complete Post-Field Investigation Subtasks, 2.12 through 2.14 (Data Validation\Usability and Risk Assessment Reports)	Feb. 13, 1998	25 weeks after NTP
IRM Identification (Task 4)	Feb. 13, 1998	25 weeks after NTP
Submit Draft RI Report (Subtask 2.15 Deliverable)	Feb. 27, 1998	27 weeks after NTP
Comments on RI Report	April 9, 1998	1 ½ months after draft RI Report received
**Submit Final RI Report and preliminary Draft FS (Subtask 3.2 Deliverable)	May 14, 1998	14 months after issuance of WA, 10 months after NTP
*Public Information Meeting- RI Results	June 19, 1998	11 months after NTP
***Comments on preliminary Draft FS and meeting at NYSDEC (HQ)	June 27, 1998	11 months after NTP

Figure 3-1
Tentative Project Schedule
Lawrence Aviation Industries site RI/FS (Revised July 8, 1997)

Item/Milestone	Date	Elapsed Time
Submit Draft FS Report	August 20, 1998	13 months after NTP
Approve Final RI Report	Sept. 19,1998	14 months after NTP
Comments on the Draft FS	Sept. 19, 1998	14 months after NTP
**Submit Final FS Report	October 20, 1998	1 month after all FS comments received, 15 months after NTP
Approve Final FS Report	Nov. 20, 1998	16 months after NTP

Notes:

WA Work Assignment
NTP Notice to Proceed
* Project Milestone
** Project Milestone requiring Performance Evaluation
*** May Be Delayed by OCS
**** Meeting at NYSDEC Option

File: LAI.WPD

Section 4
Staffing Plan

The staffing plan identifies CDM management and technical staff to be assigned to complete the tasks outlined in Section 2 and their areas of responsibility.

4.1 Program Manager - Michael Memoli, P.E.

The primary responsibilities for program management activities rest with the Program Manager (PRM). The Program Manager, Mr. Michael Memoli, will have ultimate contract responsibility for the project, including responsibility for the technical content of all engineering work. Mr. Memoli will direct, review, and approve all project deliverables, schedule staff and resources, resolve scheduling conflicts, and identify and solve potential program problems. He will be directly accountable to NYSDEC's Division of Hazardous Waste Remediation for program execution as well as to CDM's Officer-In-Charge. He has authority to assign staff, negotiate and execute contracts and amendments, and execute subcontracts. The PRM will communicate directly with CDM's Project Manager.

4.2 Deputy Program Manager - D. Lee Guterman

The Deputy Program Manager, Ms. Lee Guterman, will assist the Program Manager in all aspects of program administration. Ms. Guterman will be directly responsible for: 1) continuous contact with NYSDEC technical and contract administration staff, 2) technical, financial and administrative management on individual tasks and the overall program, 3) standardization of procedures, 4) implementation and oversight of cost control procedures for all assigned activities, and 5) implementation and maintenance of a resource and schedule reporting system. Ms. Guterman will be directly accountable to CDM's Program Manager and directly responsible for the performance of the contract on a day-to-day basis.

4.3 Program Quality Assurance Officer - Drew Bennett

The Program Quality Assurance Officer, Mr. Drew Bennett, will monitor QC activities of program management and technical staff, and identify and report needs of corrective action to the Program Manager. Mr. Bennett will also serve as senior groundwater model specialist for this project. He will also conduct an internal review of all project deliverables prepared by CDM staff and sign-off on the final reports.

4.4 Project Manager/Project Geologist - Thomas Fox

The Project Manager, Mr. Thomas Fox, will have overall responsibility for the technical and financial aspects of this project. He will assign technical staff, maintain control of the project budget and schedule, prepare monthly progress reports, review and approve project invoices, evaluate the technical quality of project deliverables and adherence to QA/QC procedures, and manage subcontractors. He will serve as CDM's point of contact for NYSDEC on this project.

As, Project Geologist, Mr. Thomas Fox, will oversee all hydrogeologic aspects of this project. He will oversee the monitoring well installation program, well sampling and push probe testing. He will also provide technical guidance throughout the project.

Mr. Fox will serve as the site Health and Safety Coordinator, ensuring that the site HASP is consistently implemented during field activities and that a copy of the site-specific HASP and the CDM Health and Safety Manual are maintained at the site at all times. He will also be responsible for upgrading or downgrading personnel protection based on actual site conditions at the time of the investigation. The Coordinator will also present an overview of the HASP to field personnel prior to initiating any field activities. He will contact the CDM Program Health and Safety Officer if any questions or issues arise during the conductance of field activities, that he cannot answer.

4.5 Health and Safety Officer - Chris Marlowe

The Program Health and Safety Officer, Mr. Chris Marlowe, will review and make recommendations to the subcontractors on health and safety plans for compliance with OSHA requirements. He will review the site HASP, evaluate the performance of health and safety officers, and maintain required health and safety records. He will report to the Program Manager and Deputy Program Manager.

4.6 Portable Gas Chromatagraph Operator - Carole A. Kaslick

Ms. Kaslick's sole responsibility will be to operate the portable gas chromatograph (Portable GC) as part of subtasks 2.8 and 2.9 of the RI field investigation. Ms. Kaslick has over five years of experience operating portable GCs under field conditions. Ms. Kaslick has performed field analysis of soil, groundwater and soil gas samples using the portable GC at over seven hazardous waste sites located within New York, Massachusetts and Maine.

4.7 Feasibility Study Manager - Kenneth Smith

Mr. Smith will be responsible for the management and technical aspects of the Feasibility Study. He will be responsible for the initial selection of remedial alternatives base on the findings of the RI and input from NYSDEC. Mr. Smith will be responsible for the preparation of the preliminary, draft and final FS Reports.

4.8 Other Project Staff

Below is a listing of additional CDM staff members who we anticipate to be assigned to this project and their respective responsibilities. NYSDEC will be notified, in advance, of any modifications or substitutions of key personnel.

Raquel Sabogel - Risk Assessment Specialist
Bruce Weinstein - FS Technical Reviewer
Patricia Forgang - RI Technical Reviewer
Thomas Horn - Field Sampling Assistant
Ira Bickoff (YEC) - Field Sampling Assistant

Mark Mecca (YEC)	-	Field Sampling Assistant
Patrick Jamgocian	-	Field Sampling Assistant/Data Processing
Dennis Grove	-	Equipment Maintenance
Vince Eugene	-	Alternate Field Technician or Equipment Maintenance
John Boyer	-	Groundwater Modeler

4.9 Project Subcontractors

The following subcontractors and subconsultants will be used for the following services:

- NAEVA Geophysics Inc. - Geophysical Investigation
- Zebra Environmental Corp. - Push Probe Investigation
- SJB Services - Soil Boring and Monitoring Well Installation
- H2M Laboratories - Sample Analysis
- Nancy Potak - Data Validation/Usability Report
- National Reprographics - Photocopying and Blueprints
- YEC Inc. - Surveying and Field Support Services

Section 5
Proposed MBE/WBE Utilization Summary Table

As currently proposed, we anticipate using qualified MBE/WBE participation as follows during the RI/FS:

Total Work Assignment Budget:	$684,926

I. Minority Business Enterprise:

Name of Subcontractor	Services to be Performed	Contract Amount
YEC, Inc	Field support/surveying	$56,786

II. Women Owned Business Enterprise:

Name of Subcontractor	Services to be Performed	Contract Amount
Nancy Potak	Data Validation	$9,864
National Reprographics	Photocopying Services	$2,868
Gibney Leasing Corp.	Trailer Rental	$893
MBE Goal/Amount (15%)		$102,739
WBE Goal /Amount (5%)		$34,246
Work Assignment MBE Amount (8.3%)		$56,786
Work Assignment WBE Amount (2%)		$13,625

Section 6
Budget Estimate

The following section presents a breakdown of the total cost for each task outlined in Section 2 of this workplan. The attached schedules have been prepared in accordance with NYSDEC's memo entitled Project Management Work Plans, dated August 21, 1995.

Schedule 2.11(a)
Summary of Work Assignment Price
Lawrence Aviation Site
Work Assignment Number D002925-20.1

1.	Direct Salary Costs (Schedules 2.10(a) and 2.11(b))	$120,591
2.	Indirect Costs (Schedule 2.10(g))	$200,904
3.	Direct Non-Salary Costs (Schedules 2.11(c)(d))	$31,688

Subcontract Costs

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

	Name of Subcontractor	Services To Be Performed	Subcontract Price
A.	YEC, Inc.	Surveying/Field Support	$56,786
4.	Total Cost-Plus-Fixed-Fee Subcontracts		$56,786

Unit Price Subcontracts (Schedule 2.11(f))

	Name of Subcontractor	Services To Be Performed	Subcontract Price
1.	Gibney Leasing Corp.	Trailer Rental/Installation	$893
2.	NAEVA Geophysics Inc.	Geophysical Investigation	$8,455
3.	Aqua Terra Geophysics	Borehole Logging	$665
4.	ZEBRA	Push Probe Installation	$11,330
5.	SJB Services	Monitoring Well/Boring Installation	$148,473
6.	H2M	Sample Analysis	$65,090
7.	Nancy Potak	Data Validation/Usability Report	$9,864
8.	National Reporgraphics	Photocopying and Blueprints	$2,868
5.	Total Unit Price Subcontracts		$247,638
6.	Subcontract Mangement Fee (Schedule 2.11(f))		$11,245
7.	Total Subcontract Costs (lines 4+5+6)		$315,669
8	Fixed Fee (Schedule 2.11 (h))		$16,075
9.	Total Work Assignment Price (Lines 1+2+3+7+8)		$684,926

Engineer: Camp Dresser McKee
Project Name: Project Management Plan
Lawrence Aviation Site
Remedial Investigation/Feasibility Study
Work Assignment No. D002925-20.1

Schedule 2.11(b)
Direct Labor Hours Budgeted

NSPE		IX	VIII	VII	VI	V	IV	III	II	I	Technical Report Typing	Admin./ Support	Total Est. Hours	Total Est. LOE
Average Salary Rates	1997	$55.23	$49.67	$41.20	$37.29	$30.80	$28.83	$23.50	$21.15	$17.95	$17.81	$17.81		
Average Salary Rates	1998	$57.99	$52.15	$43.26	$39.15	$32.34	$30.28	$24.68	$22.21	$18.85	$18.70	$18.70		
		Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	$
A.	**Rebid Standby Contracts**	6	32	0	0	0	0	0	64	0	8	0	110	$3,416.90
Task 1	**Work Plan Development (1997 rate schedule)**	8	0	12	12	320	0	0	120	60	50	40	622	$16,457.62
Task 2	**Remedial Investigation (1997/1998 rate schedule)**	42	6	112	32	900	360	497	270	166	124	120	2629	$72,759.08
Task 3	**Feasibility Study (1998 rate schedule)**	10	4	124	14	268	32	48	362	12	76	40	990	$27,956.98
Subtotal 1997 Hours		14	32	54	36	752	320	416	290	226	98	40	3361	
Subtotal 1998 Hours		52	10	194	22	736	72	129	526	12	160	160	990	
Estmated Labor Hours		66	42	248	58	1488	392	545	816	238	258	200	4351	
Estimated Cost		$3,788.70	$2,110.94	$10,617.24	$2,203.74	$46,963.84	$11,405.76	$12,959.72	$17,815.96	$4,282.90	$4,737.38	$3,704.40		$120,590.58

Engineer: Camp Dresser McKee
Project Name: Project Management Plan
Lawrence Aviation Site
Remedial Investigation/Feasibility Study
Work Assignment No. D002925-20.1

Schedule 2.11(b-1)
Direct Administrative Hours Budgeted

NSPE		IX	VIII	VII	VI	V	IV	III	II	I	Technical Report Typing	Admin./ Support	Total Est. Hours	Total Est. LOE
Average Salary Rates	1997	$55.23	$49.67	$41.20	$37.29	$30.80	$28.83	$23.50	$21.15	$17.95	$17.81	$17.81		
Average Salary Rates	1998	$57.99	$52.15	$43.26	$39.15	$32.34	$30.28	$24.68	$22.21	$18.85	$18.70	$18.70		
		Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	$
A.	**Rebid Standby Contracts**	6	4	0	0	0	0	0	0	0	8	0	18	$672.54
Task 1	**Work Plan Development (1997 rate schedule)**	8	0	6	0	16	0	0	0	0	50	40	120	$2,784.74
Task 2	**Remedial Investigation (1997/1998 rate schedule)**	42	0	34	0	16	0	0	0	0	152	120	380	$9,937.62
Task 3	**Feasibility Study (1998 rate schedule)**	10	4	16	0	16	0	0	0	0	76	40	162	$3,029.40
Subtotal 1997 Hours		14	4	16	0	38	0	0	0	0	98	40	518	
Subtotal 1998 Hours		52	4	40	0	26	0	0	0	0	188	160	162	
Estmated Labor Hours		66	8	56	0	64	0	0	0	0	286	200	680	
Estimated Cost		$3,788.70	$407.28	$2,389.60	$0.00	$2,011.24	$0.00	$0.00	$0.00	$0.00	$5,260.98	$3,704.40	$680.00	$16,424.30

Schedule 2.11(c)
Direct Non-Salary Costs
Lawrence Aviation Site
Work Assignment Number D002925-20.1

Item	Max. Reimbursement Rate		Est. No. of Units	Units	Total Estimated Cost
Mailings	$0.32	/letter	60	letters	$19.20
Federal Express/Airborne					
	$11.00	/package	19	shipments	$209.00
	$20.00	/package	22	shipments	$440.00
	$30.00	/package	12	shipments	$360.00
	$40.00	/cooler/canister	4	shipments	$160.00
	$80.00	/cooler	12	shipments	$960.00
	$50.00	/shipment	12	shipments	$600.00
	$80.00	/shipment	6	shipments	$480.00
Poster boards	$30.00	/board	3	boards	$90.00
Aerial Photographs	$183.33	/photograph	3	photographs	$550.00
Phone/Fax	$5.25	/call	150	calls	$787.50
Per diem (meals & lodging)	$195.00	/day	40	days	$7,800.00
Mileage to Site	$0.23	/mile	7200	miles	$1,656.00
Tolls	$10.00	/trip	10	trips	$100.00
Electrical Connection for Trailer	$1,000.00	Lump Sum			$1,000.00
				TOTAL:	**$15,211.70**

Schedule 2.11(d)2
Maximum Reimbursement Rates for Consultant/Subconsultant - Owned Equipment
Lawrence Aviation Site
Work Assignment Number D002925-20.1

Item	Purchase Price x 85% (3)	Capital Recovery and Usage Rate (1)(2) ($/Unit of Time)	Maximum Days for Usage Rate	Estimated Usage (Unit of Time)	Estimated Usage Cost (Col.3 x Col.4)	Non-Billable Amount
OVM	$3,800	$23 /day	165 days	79 days	$1,817.00	
Draeger Pump	$250	$2 /day	125 days	65 days	$130.00	
Turbidimeter	$760	$6 /day	127 days	25 days	$150.00	
Water Level Meter	$250	$2 /day	125 days	79 days	$158.00	
Sludge Sampler	$150	$3 /day	50 days	5 days	$15.00	
2" Submersible Pump	$375	$3 /day	125 days	42 days	$126.00	
Generator - 5000 w.	$1,450	$32 /day	45 days	28 days	$896.00	
pH - Temp - Conductivity Meter	$320	$3 /day	107 days	45 days	$135.00	
				TOTAL	**$3,427.00**	**$0.00**

(1) Usage Rate = Capital Recovery Rate + O&M Rate
(2) The maximum usage rate for an item of equipment reverts to the O&M rate when the total recovery reimbursement
(3) The purchase price x 85% values are based on NYSDEC Schedule 2.10(c)2.

Schedule 2.11(d)3
Maximum Reimbursement Rates for Vendor-Rented Equipment
Lawrence Aviation Site
Work Assignment Number D002925-20.1

Item	Maximum (1) Reimbursement Rate	Estimated Usage (Period of Time)	Estimated Usage Cost (Col.2 x Col.3)
Portable GC Equipment	$487.50 /week	10 weeks	$4,875.00
Van rental	$200.00 /week	8 weeks	$1,600.00
Van mileage	$0.18 /mile	300 miles	$54.00
Two way radios	$140.00 /month	2 months	$280.00
Portable phone	$300.00 /month	2 months	$600.00
		TOTAL:	**$7,409.00**

(1) Reimbursement will be paid at the Maximum Reimbursement rate or the actual rental rate, whichever is less.

Schedule 2.11(d)5
Consumable Supplies
Lawrence Aviation Site
Work Assignment Number D002925-20.1

Lump Sum = $5,640.50

	Item	Estimated Quantity		Unit Cost		Total Budget Cost (Col. 2 x Col. 3)
1.	Dreager Tubes	12	each	$6.00	/each	$72.00
2.	OVM Calibration Gas (Isobutylene 25ppm)	1	each	$150.00	/each	$150.00
3.	PPE (Level D)	40	man-days	$11.00	/man-days	$440.00
4.	GC Calibration Gas	2	each	$600.00	/each	$1,200.00
5.	Plastic Sheeting	2	rolls	$12.00	/rolls	$24.00
6.	Survey Stakes	60	each	$0.45	/each	$27.00
7.	Survey Flags	60	each	$0.40	/each	$24.00
8.	Plastic Bags	2	boxes	$8.00	/boxes	$16.00
9.	Disposable Beakers	12	each	$1.00	/each	$12.00
10.	Utility Knifes	2	each	$5.00	/each	$10.00
11.	Duct Tape	2	rolls	$7.00	/rolls	$14.00
12.	Shipping Tape	4	rolls	$2.00	/rolls	$8.00
13.	Polyethelyne 1" Black Hose	9000	feet	$0.15	/feet	$1,350.00
14.	Disposable Teflon Bailers	44	each	$17.50	/each	$770.00
15.	Disposable Poly Cord	90	linear feet	$3.75	/linear feet	$337.50
16.	5 gallon buckets	4	each	$7.75	/each	$31.00
17.	Vermiculite	10	bags	$10.00	/bags	$100.00
18.	First Aid Kit	1	each	$27.00	/each	$27.00
19.	Tick Spray	1	each	$6.00	/each	$6.00
20.	Stainless Steel Bowls	4	each	$10.00	/each	$40.00
21.	Stainless Steel Trowels	4	each	$10.00	/each	$40.00
22.	Disposable Trowels	120	each	$0.50	/each	$60.00
23.	Generator Gasoline	4	gallons	$8.00	/gallons	$32.00
24	300 feet well tape	1	each	$100.00	/each	$100.00
25.	Miscellaneous Supplies (1)	NA		NA		$750.00
					TOTAL:	**$5,640.50**

(1) Miscellaneous Supplies are expected to include:

Log books
Liquinox
Paper towels
DI water
1/8 inch poly rope
1/4 inch poly rope
Zip lock bags
Disposable cameras/developing
Ice
GC Disposable Items

Schedule 2.11(e)
Cost Plus-Fixed-Fee Subcontracts
Lawrence Aviation Site
Work Assignment Number D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE
YEC, Inc.	**Surveying/Field Support**	**$56,785.97**

A. Direct Salary Costs

Professional Responsibility Level	Labor Classification	Year	Average Reimbursement Rate ($/Hr.)	Year	Maximum Reimbursement Rate ($/Hr.)	Estimated Number of Hours	Total Estimated Direct Salary Cost ($)
Principle	VIII	1997	43.67	1997	47.16	25	$1,091.75
Senior Geologist/ Scientist/Engineer	V	1997	28.87	1997	31.76	76	$2,194.12
Licensed Surveyor/ Staff Geologist/ Scientist/Engineer	IV	1997	25.09	1997	27.6	0	$0.00
Staff Geologist/ Scientist/Engineer/ Senior Draftsperson	III	1997	21.78	1997	24.18	436	$9,496.08
Senior Technician/ Staff Engineer/ Scientist/Geologist	II	1997	16.12	1997	18.05	350	$5,642.00
Technician/ Draftsperson	1	1997	14.6	1997	16.35	0	$0.00
Total direct Salary Costs:						**887**	**$18,423.95**

Footnotes:

1) The 1997 rates will be held firm until 10/31/97.

2) Reimbursement will be limited to the lesser of either individuals actual hourly rate or the maximum rate for each labor category.

3) Reimbursement will be limited to the maximum reimbursement rate for the professional responsibility level of the actual work performed.

4) Only those labor classifications indicated with an asterisk will be entitled to overtime.

5) Reimbursement for technical time of principals, owners and officers will be limited to the maximum reimbursement rate of that labor category, the actual hourly labor rate paid, or the Federal GS-18 rate, whichever is lower.

Schedule 2.11(e)
Cost Plus-Fixed-Fee Subcontracts
Lawrence Aviation Site
Work Assignment Number D002925-20.1

6) The maximum rates in each labor category can be modified only by mutual agreement and approved by both the Department and the Comptroller.

7) This Footnote applies to Schedules for years 4 through 7 only. If the U.S. cost-of-living index increases at a rate greater than 6% compounded annually, the maximum salary rates will be subject to renegotiation for future years of the contract. There shall be no retroactive adjustments of payment as a result of renegotiated salary schedules.

B. Indirect Costs

Indirect costs shall be paid based on a percentage of direct salary costs incurred which shall not exceed a maximum of 117% or the actual rate calculated in accordance with 48 CFR Federal Acquisition Regulation, whichever is lower.

Amount budgeted for indirect costs is: **$21,556.02**

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

Item	Max. Reimbursement Rate		Est. No. of Units	Total Estimated Cost ($)	
1. Travel					
Travel/Meals/Lodging	$122.00	/day	62	$7,564.00	
Van Rental	$70.00	/day	5	$350.00	
Gas & Tolls	$42.00	/day	5	$210.00	
2. Expenses					
Survey Equipment Rental	$65.00	/day	5	$325.00	
Level D Protection	$11.00	/manday	70	$770.00	
CAD Computer	$15.00	/hour	16	$240.00	
Photocopies	$0.05	/copy	100	$5.00	
Postage	$15.00	lump sum	1	$15.00	
Telephone	$10.00	lump sum	1	$10.00	
Reproduction	$2.00	/print	10	$20.00	
3. Subcontractor					
* Subcontractor	$1,300.00	lump sum	1	$1,300.00	
Total Direct Non-Salary Costs				**$10,809.00**	**$10,809.00**

D. Fixed Fee **$5,997.00**

The fixed fee profit factor is
15% of Total direct and Indirect Salary Costs.

See Schedule 2.10(h) for claiming the fixed fee.

* Subcontractor will develop site map from aerial photography, see Appendix A for price quotes.

Schedule 2.11(f)1
Unit Price Subcontract
Lawrence Aviation Site
Work Assignment Number D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MGMT. FEE
Gibney Leasing Corp.	**Site Investigation Field Support/ Mobilization**	**$893.06**	**$0.00**

Item		Max. Reimbursement Rate (Specify Unit)		Est. No. of Units	Duration of Rental	Total Estimated Cost
1.	**General Charges**					
1a	Mobilization/Demobilization	$150.00	LS	1	1	$150.00
1b	Trailer Rental	$225.00	/month	1	3	$675.00
1c	Sales Tax (8.25%)	$68.06	LS	1	1	$68.06
			TOTAL			**$893.06**

(1) Electrical conditions and existing service will be determined in the field.

Schedule 2.11(f)2
Unit Price Subcontract
Lawrence Aviation Site
Work Assignment Number D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MGMT. FEE
NAEVA Geophysics Inc.	**Geophysical Investigation and Sampling**	**$8,455.00**	**$0.00**

Item		Max. Reimbursement Rate		Est. No. of Units	Total Estimated Cost
1.	**General Charges**				
1a	Mobilization/Demobilization	$400.00	/each	1	$400.00
2.	**Geophysical Investigation**				
2a	Field Work	$1,988.75	/day	4	$7,955.00
3.	**Report**				
3a	Letter report preparation	$100.00	LS	1	$100.00
				Subtotal - Subcontract Price	$8,455.00
				TOTAL	**$8,455.00**

Schedule 2.11(f)3
Unit Price Subcontract
Lawrence Aviation Site
Work Assignment Number D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MGMT. FEE
Aqua Terra Geophysics Inc.	**Borehole Logging**	**$665.00**	**$0.00**

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. of Units	Total Estimated Cost
1. Borehole Logging	$665.00 /each	1	$665.00
	Subtotal - Subcontract Price		$665.00
	TOTAL		**$665.00**

Schedule 2.11(f)4
Unit Price Subcontract
Lawrence Aviation Site
Work Assignment Number D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MGMT. FEE
ZEBRA	**Push Probe Installation and Sampling**	**$11,330.00**	**$566.50**

Item	Max. Reimbursement Rate (Specify Unit)		Est. No. of Units	Total Estimated Cost
1. General Charges				
1a Mobilization/Demobilization	$650.00	/each	1	$650.00
1b Decontamination	$50.00	/hour	25	$1,250.00
1c Standby Time	$40.00	/hour	8	$320.00
2. Geoprobe Installation				
2a Probe Installation	$7.00	/foot	930	$6,510.00
2b Borehole Abandonment	$2.00	/foot	400	$800.00
3. Sampling				
3a Soil Samples	$9.00	/each	200	$1,800.00
		Subtotal - Subcontract Price		$11,330.00
		Subcontract Management Fee*		$566.50
		TOTAL		**$11,896.50**

* A subcontract management fee of 5% has been included for subcontracts over $10,000.

Schedule 2.11(f)5
Lawrence Aviation Site
Unit Price Subcontracts
Work Assignment Number D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MGMT. FEE
SJB Services	**Well Installation and Development**	**$148,472.50**	**$7,423.63**

Item	Contract Item No.		Max. Reimbursement Rate		Est. No. of Units		Total Estimated Cost
1.		**General Charges**					
1a	N/A	Mobilization/Demobilization	$1,000.00	/each	1		$1,000.00
1b	164	Brush Clearing	$100.00	/day	2		$200.00
1c	148	Standby Time	$130.00	/hour	24		$3,120.00
1d	1	Level D PPE	$0.00	/per/day	80		$0.00
						Subtotal:	$4,320.00
2.		**Shallow Borings and Monitoring Wells**					
2a	14	3.25 ID Hollow stem auger drilling	$18.00	/foot	2554		$45,972.00
2b	16	6.25 ID Hollow stem auger drilling	$25.00	/foot	1433		$35,825.00
2c	83	4-in PVC riser, sch. 40	$3.50	/foot	1375		$4,812.50
2d	58	4-in PVC well screen, 10 slot	$7.00	/foot	70		$490.00
2e	94	Well screen sand pack	$10.00	/foot	84		$840.00
2f	112	Riser backfill (bentonit grout)	$8.00	/foot	1365		$10,920.00
2g	103	Bentonite seal (pellets)	$16.00	/foot	22		$352.00
2h	133	Steel protective stickup	$150.00	/each	7		$1,050.00
2i	51	2-in split spoons	$15.00	/each	530		$7,950.00
2j	151	Hydropunch groundwater samples	$130.00	/each	12		$1,560.00
2k	141	Well development (submersible pump)	$150.00	/hour	30		$4,500.00
						Subtotal:	$114,271.50
3.		**Deep Borings and Wells**					
3a	21	8-in. mud rotary drilling	$35.00	/foot	310		$10,850.00
3b	83	4-in. PVC riser, sch. 40	$3.50	/foot	250		$875.00
3c	58	4-in. PVC screen, sch. 40, 10 slot	$7.00	/foot	10		$70.00
3d	94	Well screen sand pack	$10.00	/foot	10		$100.00
3e	112	Riser backfill (bentonite grout)	$8.00	/foot	238		$1,904.00
3f	103	Bentonite seal (pellets)	$16.00	/foot	2		$32.00
3g	133	Steel protective stickup	$150.00	/each	1		$150.00
3h	51	2-in split spoons	$15.00	/each	30		$450.00
3i	151	Hydropunch groundwater samples	$130.00	/each	7		$910.00
3i	141	Well development	$150.00	/hour	4		$600.00
						Subtotal:	$15,941.00
4.		**Miscellaneous**					
4a	N/A	Test Pits	$600.00	/day	5		$3,000.00
4b	171	Borehole abandonment (grout)	$8.00	/foot	300		$2,400.00
4c	145	Steam cleaning	$130.00	/hour	38		$4,940.00
4d	137	Clean DOT drums and staging area	$35.00	/each	20		$700.00
4e	138	Fill, transport, and stage DOT drums	$120.00	/each	20		$2,400.00
4f	144	Construct Decon Pad	$500.00	/lump	1		$500.00
						Subtotal:	$13,940.00
					Subtotal - Subcontract Price		$148,472.50
					Subcontract Management Fee*		$7,423.63
					TOTAL		**$155,896.13**

* A subcontract management fee of 5% has been included for subcontracts over $10,000.

Schedule 2.11(f)6
Unit Price Subcontract
Lawrence Aviation Site
Work Assignment D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MGMT. FEE
H2M	**Sample Analysis**	**$65,090.00**	**$3,254.50**

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. of Units	Total Estimated Cost
Geophysical Investigation (soil)			
TCL Volatiles + 10 (95-1)	$110.00 /each	20	$2,200.00
TCL Semi-Volatiles + 20 (95-2)	$160.00 /each	19	$3,040.00
TCL Pesticides/PCBs (95-3)	$125.00 /each	19	$2,375.00
TCL Metals w/ titanium (200.7 CLP-M)	$50.00 /each	19	$950.00
		Subtotal:	$8,565.00
Abandon Discharge Lagoon			
TCL Volatiles + 10 (95-1)	$110.00 /each	8	$880.00
TCL Semi-Volatiles + 20 (95-2)	$160.00 /each	8	$1,280.00
TCL Pesticides/PCBs (95-3)	$125.00 /each	8	$1,000.00
TCL Metals w/ titanium (200.7 CLP-M)	$50.00 /each	8	$400.00
Hexavalent Chromium	$40.00 /each	8	$320.00
		Subtotal:	$3,880.00
Push Probe Sampling (soil)			
TCL Volatiles + 10 (95-1)	$110.00 /each	48	$5,280.00
TCL Semi-Volatiles + 20 (95-2)	$160.00 /each	23	$3,680.00
TCL Pesticides/PCBs (95-3)	$125.00 /each	23	$2,875.00
TCL Metals w/ titanium (200.7 CLP-M)	$50.00 /each	23	$1,150.00
		Subtotal:	$12,985.00
Boring Installation Deep and Shallow (soil)			
TCL Volatiles + 10 (95-1)	$110.00 /each	28	$3,080.00
TCL Semi-Volatiles + 20 (95-2)	$160.00 /each	0	$0.00
TCL Pesticides/PCBs (95-3)	$125.00 /each	0	$0.00
TCL Metals w/ titanium (200.7 CLP-M)	$50.00 /each	0	$0.00
		Subtotal:	$3,080.00
Monitoring Well Installation Deep and Shallow (groundwater)			
TCL Volatiles + 10 (95-1)	$100.00 /each	24	$2,400.00
TCL Semi-Volatiles + 20 (95-2)	$150.00 /each	0	$0.00
TCL Pesticides/PCBs (95-3)	$110.00 /each	0	$0.00
TCL Metals w/ titanium (200.7 CLP-M)	$50.00 /each	0	$0.00
Titanium	$20.00 /each	11	$220.00
Total Dissolved Solids	$10.00 /each	21	$210.00
Alkalinity	$10.00 /each	21	$210.00
Chloride	$10.00 /each	21	$210.00
Nitrate	$10.00 /each	21	$210.00
Nitrite	$10.00 /each	21	$210.00
Hardness	$10.00 /each	21	$210.00

Schedule 2.11(f)6
Unit Price Subcontract
Lawrence Aviation Site
Work Assignment D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED		SUBCONTRACT PRICE		MGMT. FEE
H2M	**Sample Analysis**		**$65,090.00**		**$3,254.50**
Fluoride	$15.00	/each	21		$315.00
Hexavalet Chromium	$30.00	/each	11		$330.00
				Subtotal:	$4,525.00
Dry Well Investigation (sludge)					
TCL Volatiles + 10 (95-1)	$110.00	/each	24		$2,640.00
TCL Semi-Volatiles + 20 (95-2)	$160.00	/each	23		$3,680.00
TCL Pesticides/PCBs (95-3)	$125.00	/each	23		$2,875.00
TCL Metals w/ titanium (200.7 CLP-M)	$50.00	/each	23		$1,150.00
				Subtotal:	$10,345.00
Surface and Ground Water Sampling (groundwater)					
TCL Volatiles + 10 (95-1)	$100.00	/each	44		$4,400.00
TCL Semi-Volatiles + 20 (95-2)	$150.00	/each	21		$3,150.00
TCL Pesticides/PCBs (95-3)	$110.00	/each	21		$2,310.00
TCL Metals w/ titanium (200.7 CLP-M)	$50.00	/each	21		$1,050.00
Total Dissolved Solids	$10.00	/each	38		$380.00
Alkalinity	$10.00	/each	38		$380.00
Chloride	$10.00	/each	38		$380.00
Nitrate	$10.00	/each	38		$380.00
Nitrite	$10.00	/each	38		$380.00
Hardness	$10.00	/each	38		$380.00
Fluoride	$15.00	/each	38		$570.00
Hexavalet Chromium	$30.00	/each	19		$570.00
				Subtotal:	$14,330.00
Surface and Ground Water Sampling (surface water)					
TCL Volatiles + 10 (95-1)	$100.00	/each	24		$2,400.00
TCL Semi-Volatiles + 20 (95-2)	$150.00	/each	11		$1,650.00
TCL Pesticides/PCBs (95-3)	$110.00	/each	11		$1,210.00
TCL Metals w/ titanium (200.7 CLP-M)	$50.00	/each	11		$550.00
Titanium	$20.00	/each	11		$220.00
Total Dissolved Solids	$10.00	/each	18		$180.00
Alkalinity	$10.00	/each	18		$180.00
Chloride	$10.00	/each	18		$180.00
Nitrate	$10.00	/each	18		$180.00
Nitrite	$10.00	/each	18		$180.00
Hardness	$10.00	/each	18		$180.00
Fluoride	$15.00	/each	18		$270.00
				Subtotal:	$7,380.00
			Subtotal - Subcontract Price		$65,090.00
			Subcontract Management Fee*		$3,254.50

Schedule 2.11(f)6
Unit Price Subcontract
Lawrence Aviation Site
Work Assignment D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MGMT. FEE
H2M	**Sample Analysis**	**$65,090.00**	**$3,254.50**
	TOTAL**		**$68,344.50**

* A subcontract management fee of 5% has been included for subcontracts over $10,000.
** Surcharge for 2-week turnaround is 150 percent per sample

Schedule 2.11(f)7
Unit Price Subcontract
Lawrence Aviation Site
Work Assignment Number D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MGMT. FEE
Nancy Potak	**Data Validation**	**$9,864.00**	**$0.00**

Item	Max. Reimbursement Rate	Est. No. of Units	Total Estimated Cost
Geophysical Investigation (soil)			
TCL Volatiles + 10 (95-1)	$15.00 /each	20	$300.00
TCL Semi-Volatiles + 20 (95-2)	$19.00 /each	19	$361.00
TCL Pesticides/PCBs (95-3)	$23.00 /each	19	$437.00
TCL Metals (200.7 CLP-M)	$22.00 /each	19	$418.00
		Subtotal:	$1,516.00
Abandon Discharge Lagoon (soil)			
TCL Volatiles + 10 (95-1)	$15.00 /each	8	$120.00
TCL Semi-Volatiles + 20 (95-2)	$19.00 /each	8	$152.00
TCL Pesticides/PCBs (95-3)	$23.00 /each	8	$184.00
TCL Metals (200.7 CLP-M)	$22.00 /each	8	$176.00
		Subtotal:	$632.00
Push Probe Sampling (soil)			
TCL Volatiles + 10 (95-1)	$15.00 /each	48	$720.00
TCL Semi-Volatiles + 20 (95-2)	$19.00 /each	23	$437.00
TCL Pesticides/PCBs (95-3)	$23.00 /each	23	$529.00
TCL Metals (200.7 CLP-M)	$22.00 /each	23	$506.00
		Subtotal:	$2,192.00
Boring Installation Deep and Shallow (soil)			
TCL Volatiles + 10 (95-1)	$15.00 /each	28	$420.00
TCL Semi-Volatiles + 20 (95-2)	$19.00 /each	0	$0.00
TCL Pesticides/PCBs (95-3)	$23.00 /each	0	$0.00
TCL Metals (200.7 CLP-M)	$22.00 /each	0	$0.00
		Subtotal:	$420.00
Monitoring Well Installation Deep and Shallow (groundwater)			
TCL Volatiles + 10 (95-1)	$14.00 /each	24	$336.00
TCL Semi-Volatiles + 20 (95-2)	$18.00 /each	0	$0.00
TCL Pesticides/PCBs (95-3)	$22.00 /each	0	$0.00
TCL Metals (200.7 CLP-M)	$22.00 /each	0	$0.00
		Subtotal:	$336.00
Dry Well Investigation (sludge)			
TCL Volatiles + 10 (95-1)	$15.00 /each	24	$360.00
TCL Semi-Volatiles + 20 (95-2)	$19.00 /each	23	$437.00
TCL Pesticides/PCBs (95-3)	$23.00 /each	23	$529.00
TCL Metals (200.7 CLP-M)	$22.00 /each	23	$506.00
		Subtotal:	$1,832.00
Surface and Ground Water Sampling (groundwater)			
TCL Volatiles + 10 (95-1)	$14.00 /each	44	$616.00
TCL Semi-Volatiles + 20 (95-2)	$18.00 /each	21	$378.00
TCL Pesticides/PCBs (95-3)	$22.00 /each	21	$462.00
TCL Metals (200.7 CLP-M)	$22.00 /each	21	$462.00
		Subtotal:	$1,918.00

Schedule 2.11(f)7
Unit Price Subcontract
Lawrence Aviation Site
Work Assignment Number D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MGMT. FEE
Nancy Potak	**Data Validation**	**$9,864.00**	**$0.00**

Item	Max. Reimbursement Rate		Est. No. of Units	Total Estimated Cost
Surface and Ground Water Sampling (surface water)				
TCL Volatiles + 10 (95-1)	$14.00	/each	24	$336.00
TCL Semi-Volatiles + 20 (95-2)	$18.00	/each	11	$198.00
TCL Pesticides/PCBs (95-3)	$22.00	/each	11	$242.00
TCL Metals (200.7 CLP-M)	$22.00	/each	11	$242.00
			Subtotal:	$1,018.00
		Subtotal - Subcontract Price		$9,864.00
		TOTAL		**$9,864.00**

* A subcontract management fee of 5% has been included for subcontracts over $10,000 for WA.
Note: No data validation is included for conventional analysis.

Schedule 2.11(f)8
Unit Price Subcontract
Lawrence Aviation Site
Work Assignment Number D002925-20.1

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MGMT. FEE
	RI Report		
National Reprographics	**Photocopying and Blueprints**	**$2,649.00**	**$0.00**

Item	Max. Reimbursement Rate: Photocopying/ Blueprints	Max. Reimbursement Rate: Binding	Est. No. of Books or Sets	Est. No. of Pages/Sheets per book or set	Total Estimated Cost
RI Reports and Work Plans					
Photocopying (8 1/2" x 11")	$0.05 /page	$1.50 /book	20	800	$830.00
Photocopying (11" x 17")	$0.15 /sheet	$1.50 /book	20	3	$39.00
Blueprints (24" x 30")	$0.25 /page	$0.25 /set	20	6	$35.00
FS Reports					
Photocopying (8 1/2" x 11")	$0.05 /page	$1.50 /book	20	500	$530.00
Photocopying (11" x 17")	$0.15 /sheet	$1.50 /book	20	1	$33.00
Blueprints (24" x 30")	$0.25 /sheet	$0.25 /set	40	6	$70.00
Miscellaneous Copies					
Photocopying (8 1/2" x 11")	$0.05 /page	$1.50 /book	80	200	$920.00
Photocopying (11" x 17")	$0.15 /sheet	$1.50 /book	80	6	$192.00
Blueprints (24" x 30")	$0.25 /sheet	$0.25 /set	80	6	$140.00
		Subtotal - Subcontract Price			$2,649.00
		Sales Tax (8.25%)			$218.54
		TOTAL			**$2,867.54**

* A subcontract management fee of 5% has been included for subcontracts over $10,000.

Engineer Camp Dresser & McKee
Project Name Lawrence Aviation
Work Assignment No. D002925-20.1
Task #/Name A
Complete 0%

Date Prepared
Billing Period
Invoice No.

Schedule 2.11(g)
MONTHLY COST CONTROL REPORT
A - REBID STANDBY CONTRACTS

Expenditure Category	A Costs Claimed This Period	B Paid to Date	C Total Disallowed to Date	D Total Costs Incurred to Date (A+B+C)	E Estimated Costs to Completion	F Estimated 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	$3,416.90	$3,416.90	$3,416.90	$0.00
2. Indirect Costs 166.6 %	$0.00	$0.00	$0.00	$0.00	$5,692.56	$5,692.56	$5,692.56	$0.00
3. Subtotal Direct Salary Costs and Indirect Costs	$0.00	$0.00	$0.00	$0.00	$9,109.46	$9,109.46	$9,109.46	$0.00
4. Travel	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
5. Other Non-Salary Costs	$0.00	$0.00	$0.00	$0.00	$500.00	$0.00	$500.00	$500.00
6. Subtotal Direct Non-Salary Costs	$0.00	$0.00	$0.00	$0.00	$500.00	$500.00	$500.00	$0.00
7. Subcontractors	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
7a. Subcontract Mgt. Fee	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
8. Total Work Assignment Cost	$0.00	$0.00	$0.00	$0.00	$9,609.46	$9,609.46	$9,609.46	$0.00
9. Fixed Fee	$0.00	$0.00	$0.00	$0.00	$455.39	$455.39	$455.47	$0.08
10. Total Work Assignment Price	$0.00	$0.00	$0.00	$0.00	$10,064.93	$10,064.93	$10,064.93	$0.00

Project Manager _____ Date _____
Tom Fox

Engineer Camp Dresser & McKee
Project Name Lawrence Aviation
Work Assignment No. D002925-20.1
Task #/Name Task 1
Complete 0%

Date Prepared
Billing Period
Invoice No.

Schedule 2.11(g)
MONTHLY COST CONTROL REPORT
Task 1 - Work Plan

Expenditure Category	A Costs Claimed This Period	B Paid to Date	C Total Disallowed to Date	D Total Costs Incurred to Date (A+B+C)	E Estimated Costs to Completion	F Estimated 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	$16,457.62	$16,457.62	$16,457.62	$0.00
2. Indirect Costs 166.6 %	$0.00	$0.00	$0.00	$0.00	$27,418.39	$27,418.39	$27,418.39	$0.00
3. Subtotal Direct Salary Costs and Indirect Costs	$0.00	$0.00	$0.00	$0.00	$43,876.01	$43,876.01	$43,876.01	$0.00
4. Travel	$0.00	$0.00	$0.00	$0.00	$60.00	$60.00	$60.00	$0.00
5. Other Non-Salary Costs	$0.00	$0.00	$0.00	$0.00	$540.00	$540.00	$540.00	$0.00
6. Subtotal Direct Non-Salary Costs	$0.00	$0.00	$0.00	$0.00	$600.00	$600.00	$600.00	$0.00
7. Subcontractors 7a. Subcontract Mgt. Fee	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00
8. Total Work Assignment Cost	$0.00	$0.00	$0.00	$0.00	$44,476.01	$44,476.01	$44,476.01	$0.00
9. Fixed Fee	$0.00	$0.00	$0.00	$0.00	$2,193.80	$2,193.80	$2,193.80	$0.00
10. Total Work Assignment Price	$0.00	$0.00	$0.00	$0.00	$46,669.82	$46,669.82	$46,669.82	$0.00

Project Manager _____ Date _____
Tom Fox

Engineer Camp Dresser & McKee
Project Name Lawrence Aviation
Work Assignment No. D002925-20.1
Task #/Name Task 2
Complete 0%

Date Prepared
Billing Period
Invoice No.

Schedule 2.11(g)
MONTHLY COST CONTROL REPORT
Task 2 - Remedial Investigation

Expenditure Category	A Costs Claimed This Period	B Paid to Date	C Total Disallowed to Date	D Total Costs Incurred to Date (A+B+C)	E Estimated Costs to Completion	F Estimated 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	$72,759.08	$72,759.08	$72,759.08	$0.00
2. Indirect Costs 166.6 %	$0.00	$0.00	$0.00	$0.00	$121,216.63	$121,216.63	$121,216.63	$0.00
3. Subtotal Direct Salary Costs and Indirect Costs	$0.00	$0.00	$0.00	$0.00	$193,975.71	$193,975.71	$193,975.71	$0.00
4. Travel	$0.00	$0.00	$0.00	$0.00	$8,290.00	$8,290.00	$8,290.00	$0.00
5. Other Non-Salary Costs	$0.00	$0.00	$0.00	$0.00	$21,598.00	$21,598.00	$21,598.00	$0.00
6. Subtotal Direct Non-Salary Costs	$0.00	$0.00	$0.00	$0.00	$29,888.00	$29,888.00	$29,888.00	$0.00
7. Subcontractors	$0.00	$0.00	$0.00	$0.00	$304,424.00	$304,424.00	$304,424.00	$0.00
7a. Subcontract Mgt. Fee	$0.00	$0.00	$0.00	$0.00	$11,245.00	$11,245.00	$11,245.00	$0.00
8. Total Work Assignment Cost	$0.00	$0.00	$0.00	$0.00	$539,532.71	$539,532.71	$539,532.71	$0.00
9. Fixed Fee	$0.00	$0.00	$0.00	$0.00	$9,698.79	$9,698.79	$9,698.79	$0.00
10. Total Work Assignment Price	$0.00	$0.00	$0.00	$0.00	$549,231.49	$549,231.49	$549,231.49	$0.00

Project Manager _____ Date _____
Tom Fox

Engineer Camp Dresser & McKee
Project Name Lawrence Aviation
Work Assignment No. D002925-20.1
Task #/Name Task 3
Complete 0%

Date Prepared
Billing Period
Invoice No.

Schedule 2.11(g)
MONTHLY COST CONTROL REPORT
Task 3 - Feasibility Study

Expenditure Category	A Costs Claimed This Period	B Paid to Date	C Total Disallowed to Date	D Total Costs Incurred to Date (A+B+C)	E Estimated Costs to Completion	F Estimated 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	$27,956.98	$27,956.98	$27,956.98	$0.00
2. Indirect Costs 166.6 %	$0.00	$0.00	$0.00	$0.00	$46,576.33	$46,576.33	$46,576.33	$0.00
3. Subtotal Direct Salary Costs and Indirect Costs	$0.00	$0.00	$0.00	$0.00	$74,533.31	$74,533.31	$74,533.31	$0.00
4. Travel	$0.00	$0.00	$0.00	$0.00	$120.00	$120.00	$120.00	$0.00
5. Other Non-Salary Costs	$0.00	$0.00	$0.00	$0.00	$580.00	$580.00	$580.00	$0.00
6. Subtotal Direct Non-Salary Costs	$0.00	$0.00	$0.00	$0.00	$700.00	$700.00	$700.00	$0.00
7. Subcontractors 7a. Subcontract Mgt. Fee	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00
8. Total Work Assignment Cost	$0.00	$0.00	$0.00	$0.00	$75,233.31	$75,233.31	$75,233.31	$0.00
9. Fixed Fee	$0.00	$0.00	$0.00	$0.00	$3,726.67	$3,726.67	$3,726.67	$0.00
10. Total Work Assignment Price	$0.00	$0.00	$0.00	$0.00	$78,959.97	$78,959.97	$78,959.97	$0.00

Project Manager _____
Tom Fox

Date _____

Engineer Camp Dresser & McKee
Project Name Lawrence Aviation
Work Assignment No. D002925-20.1
Task #/Name SUMMARY
Complete 0%

Date Prepared
Billing Period
Invoice No.

Schedule 2.11(g)
MONTHLY COST CONTROL REPORT
SUMMARY

Expenditure Category	A Costs Claimed This Period	B Paid to Date	C Total Disallowed to Date	D Total Costs Incurred to Date (A+B+C)	E Estimated Costs to Completion	F Estimated 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	$120,590.58	$120,590.58	$120,590.58	$0.00
2. Indirect Costs 166.6 %	$0.00	$0.00	$0.00	$0.00	$200,904.00	$200,904.00	$200,904.00	$0.00
3. Subtotal Direct Salary Costs and Indirect Costs	$0.00	$0.00	$0.00	$0.00	$321,494.58	$321,494.58	$321,494.58	$0.00
4. Travel	$0.00	$0.00	$0.00	$0.00	$8,470.00	$8,470.00	$8,470.00	$0.00
5. Other Non-Salary Costs	$0.00	$0.00	$0.00	$0.00	$23,218.00	$23,218.00	$23,218.00	$0.00
6. Subtotal Direct Non-Salary Costs	$0.00	$0.00	$0.00	$0.00	$31,688.00	$31,688.00	$31,688.00	$0.00
7. Subcontractors 7a. Subcontract Mgt. Fee	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$304,424.00 $11,245.00	$304,424.00 $11,245.00	$304,424.00 $11,245.00	$0.00 $0.00
8. Total Work Assignment Cost	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00	$668,851.58	$668,851.58	$668,851.58	$0.00
9. Fixed Fee	$0.00	$0.00	$0.00	$0.00	$16,074.73	$16,074.73	$16,074.73	$0.00
10. Total Work Assignment Price	$0.00	$0.00	$0.00	$0.00	$684,926.31	$684,926.31	$684,926.31	$0.00

Project Manager _____ Date _____
Tom Fox

Engineer: Camp Dresser McKee
Project Name: Project Management Plan
Lawrence Aviation Site
Remedial Investigation/Feasibility Study
Work Assignment No. D002925-20.1

MONTHLY COST CONTROL REPORT (SCHEDULE 2.11 [h])
SUMMARY OF LABOR HOURS
NUMBER OF DIRECT LABOR HOURS EXPENDED TO DATE / ESTIMATED NUMBER OF DIRECT LABOR HOURS TO COMPLETION

LABOR CLASSIFICATION	IX EXP/EST	VIII EXP/EST	VII EXP/EST	VI EXP/EST	V EXP/EST	IV EXP/EST	III EXP/EST	II EXT/EST	I EXT/EST	Tech Report Typing EXT/EST	Admin./ Support EXT/EST	Total Est. LOE EXT/EST
A. Rebid Standby Contracts	0 / 6	0 / 32	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 64	0 / 0	0 / 8	0 / 0	0 / 110
Task 1 Work Plan Development	0 / 8	0 / 0	0 / 12	0 / 12	0 / 320	0 / 0	0 / 0	0 / 120	0 / 60	0 / 50	0 / 40	0 / 622
Task 2 Remedial Investigation	0 / 42	0 / 6	0 / 112	0 / 44	0 / 962	0 / 400	0 / 497	0 / 290	0 / 166	0 / 152	0 / 140	0 / 2811
Task 3 Feasibility Study	0 / 10	0 / 4	0 / 124	0 / 14	0 / 268	0 / 32	0 / 48	0 / 362	0 / 12	0 / 76	0 / 40	0 / 990
TOTAL HOURS	0 / 66	0 / 42	0 / 248	0 / 70	0 / 1550	0 / 432	0 / 545	0 / 836	0 / 238	0 / 286	0 / 220	0 / 4533

Appendix A
Cost Quotes/Supporting Documentation

NYSDEC Lawrence Aviation Site
Trailer Bid Summary

Site Investigation Field Support/Mobilization

Item		Unit	No. of Units	Duration of Rental (months)	Williams Scotsman		ABC Trailer		Gibney Leasing Corp.	
					Rate	Cost	Rate	Cost	Rate	Cost
1	Mobilization/Demobilization	LS	1	1	$750.00	$750.00	$1,800.00	$1,800.00	$150.00	$150.00
2	Set up and removal	LS	1	1	$320.00	$320.00	Included	NA	NA	NA
3	Electrical Cable/Service Connection	/foot	50	1	NA	NA	NA	NA	NA	NA
4	Steps/railings	/each	2	3	$37.50	$225.00	LS	$625.00	NA	NA
5	Desks	/each	2	3	$96.00	$576.00	Included	NA	NA	NA
6	Trailer rental	/month	1	3	$335.00	$1,005.00	$450.00	$1,350.00	$225.00	$675.00
7	Sales Tax (8.25%)	NA	1	NA	-	$237.27	-	$311.44	-	$68.06
	TOTAL					$3,113.27		$4,086.44		**$893.06**

...N S.KEARNY TEL:1 201 ...

WILLIAMS SCOTSMAN
A Division of The Scotsman Group, Inc.
...ile Offices And More.

QUOTATION

800-782-1500

61 JACOBUS AVENUE
S. KEARNY, NJ 07032
(201) 589-1234
Fax (201) 589-3434

CHRISTINE VITT
CAMP DRESSER & MCKEE
100 CROWSSWAYS PARK WEST
WOODBURY, NY 11797

CAMP DRESSER & MCKEE
LAWRENCE, NY

CUSTOMER PHONE (516) 496-8400 CUSTOMER FAX (516) 496-8864

SALESPERSON	JOB	DATE	
STEVE DEL BENE 500	*	05/30/97	Quote Good for 30 Days

DESCRIPTION

50 X 12 (BOX SIZE 46' X 12')MOBILE OFFICE
AS PER THE STANDARD LAYOUT WHICH INCLUDES:
- BOCA CODE CONSTRUCTION
- EIGHT FOOT CEILING
- ALUMINUM SIDING
- AIR CONDITIONING & ELECTRIC HEAT
- ONE STANDARD HALF BATH
- 1/4" WOODGRAIN PANELING
- 3/32" VINYL COMPOSITION TILE
- 1" MINI BLINDS
- TWO BUILT-IN DESKS w/FILE CABINETS
- ONE BUILT-IN PLAN TABLE
- 100 AMP 120/240V 1 PHASE SERVICE

ATTACHMENTS WES01 QUOTE FLOOR PLAN
*TERMS ARE BASED UPON SATISFACTORY CREDIT APPROVAL. PAYMENTS ARE TO BE MADE MONTHLY IN ADVANCE UNLESS OTHERWISE SPECIFIED.

The items described above comprise the Equipment which the Customer desires to lease from The Scotsman Group, Inc. ("Williams Scotsman"). Physical Damage Commercial Liability Insurance coverage are required beginning on the date of the Equipment's delivery. Prices quoted below do not include any local state or federal tax any fees. Permits, footings, steps, site preparation, electrical and plumbing connections are not included in the quoted price unless stated. The prices quoted are effecti thirty (30) days from the above date, and delivery assumes ready access to site by truck.

SALES PRICE: N/A
LEASE RATE: $335.00
MINIMUM TERM: 3 Months

DELIVERY: $375.00
BLOCK AND LEVEL: $200.00
KNOCK DOWN: $60.00
RETURN FREIGHT: $375.00
STEPS: see below

WILLIAMS SCOTSMAN NO BIDS ALL UTILITY SERVICE CONNECTINS.
SECRETARIAL DESKS W/CHAIRS- $96.00 PER MONTH
SECURITY SCREENS AND DOOR BARS: $36.00 PER MONTH
OSHA ALUMINUM STEPS W/HANDRAILS AND PLATFORM: $37.50 PER MONTH, PER SET. $35.00 INSTALLATION FEE: $25.00 DISMANTLING FEE

Customer hereby agrees to the above quoted prices and specifications. Customer further authorizes Williams Scotsman to make appropriate arrangements for the de of the above described Equipment. Upon delivery, and until a subsequent Lease Agreement is executed by Williams Scotsman (as Lessor) and Customer (as Lessee Standard Williams Scotsman Leasing Terms and Conditions, which are incorporated by reference herein, will govern this transaction.

	BY		

ABC TRAILER

SALES & RENTAL INC.

P.O. BOX 5482 • 31-96 COLLEGE POINT BOULEVARD • FLUSHING, NEW YORK 11354-2585
(718) 358-5100 • FAX (718) 359-1375

Att: Christine

INQUIRY

DATE 5/30/97

NAME/COMPANY Camp Dresser & McKee

PHONE 516 496 8400 FAX 516 496 2055

SITE Pt. Jefferson, LI

LENGTH OF LEASE 3 mos PURCHASE

SIZE/SPECIFICATIONS 12x40 (We have only 12x60' units Available)

DATE REQUIRED UNIT LAYOUTS

PROPOSAL

UNITS WILL NOT BE RELEASED WITHOUT RECEIPT OF: (1) COMPLETED CREDIT APPLICATION; (2) ACCEPTABLE INSURANCE COVERAGE; (3) CUSTOMER CONFIRMATION OF CHECK ON SITE AND SOMEONE ON SITE TO ACCEPT AND SIGN FOR UNIT. WE REQUIRE A COPY OF YOUR DRIVER'S LICENSE ON FILE.

WE REQUIRE FULL INSURANCE COVERAGE FOR *FIRE, THEFT, VANDALISM AND MALICIOUS MISCHIEF* NAMING ABC TRAILER SALES & RENTAL INC. AS LOSS PAYEE AND FULL LIABILITY NAMING ABC TRAILER SALES & RENTAL INC. AS ADDITIONAL INSURED. SEE DETAILS OF REQUIREMENTS AND SAMPLE CERTIFICATE ATTACHED. YOUR BROKER CAN FAX COPIES OF THE CERTIFICATES TO US TO EXPEDITE.

MONTHLY RENTAL	450
SECURITY (plus local tax)	one Mos.
DELIVERY/BLOCKING/SETUP/PICKUP (includes cost of overwidth road permits, where applicable - this is a one time charge)	1350
TOLLS (round trip)	NA

OTHER REQUIREMENTS (SPECIFY) (2) sets Steps 625 each + Are for purchase only

We do NOT do any electrical hookups or provide Cable

UNLESS OTHERWISE SPECIFIED, ABOVE PRICING DOES NOT INCLUDE: STEPS, PLATFORMS, RAMPS OR SKIRTING. THESE ARE PRICED SEPARATELY AND ARE FOR SALE ONLY.

RETURNED CHECKS WILL INCUR A $25. HANDLING FEE.

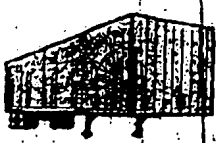
THIS PROPOSAL IS SUBJECT TO UNIT AVAILABILITY, LOCAL SALES TAX AND RECEIPT AND ACCEPTABILITY OF INSURANCE COVERAGE PROVIDED.

We request the opportunity to meet or beat any written competitive quote.

For office use only

UNIT # CONTRACT # INVOICE #

RECEIVED: CREDIT APPLICATION ____, INS. CERT. ____ SIGNED LEASE AGREEMENT ____ OTHER ____




Gibney Leasing Corp.

"a company you'll like doing business with"

800 332-8766

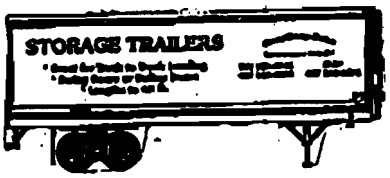
MAIN OFFICE:

5620 EAST W.T. HARRIS BLVD.
SUITE 103
CHARLOTTE, NC 28215
FAX # (704) 535-7984

YARDS ONLY

1158 JERICHO TPKE.
COMMACK, NEW YORK

ROCK ROAD
FORT PIERCE, FLORIDA



FAX COVER SHEET

DATE: 6/30/97

PHONE: (800) 332-8766
FAX : (704) 535-7984

PAGES: 4 (INCLUDING COVER)

TO: Tom Fox

FROM: Virginia Gibney

COMMENTS: The closest size we have is 8 x 40 it is 2 rooms. A 16 ft office w/ a/c + heat + 8 ft long desk top w/ 2 drawer file cabinet in center, providing 2 work stations. The balance of 24 ft is a storage area. If you feel it may work please call. Thank You

Ground Level Storage Containers - Storage Trailers

Mobile Field Offices - Change Rooms

Gibney Leasing

"a company you'll like doing business with"

800 332-8766

t
MAIN OFFICE:

5820 EAST W.T. HARRIS BLVD.
SUITE 103
CHARLOTTE, NC 28215
FAX # (704) 535-7984

YARDS ONLY

1158 JERICHO TPKE.
COMMACK, NEW YORK

ROCK ROAD
FORT PIERCE, FLORIDA

JUNE 30, 1997

TO: CAMP DRESSER & MCKEE

ATTN: TOM FOX

FROM: VIRGINIA GIBNEY

AS WE DISCUSSED, FOLLOWING IS THE INFORMATION ON OUR OFFICE UNITS. WE HAVE TWO SIZES TO CHOOSE FROM. OFFICES COME COMPLETE WITH DESK TOP, PLAN TABLE, AND MANY OTHER STANDARD FEATURES.

FIELD OFFICES:

8 X 40 FT COMBO UNIT..... $ 225.00 PER MONTH
16 FT OFFICE WITH 24 FT STORAGE
PURCHASE PRICE.....$6500.00

8 X 20 FT FIELD OFFICE.....$ 125.00 PER MONTH
PURCHASE PRICE.....$4500.00

OPTIONAL: (IF AVAILABLE)
SECURITY BARS.....$ 30.00 PER MONTH

PURCHASE PRICE INCLUDES DELIVERY. ALL SALES REQUIRE PAYMENT BY CASH OR BANK CHECK ON DELIVERY. PLEASE CALL FOR APPOINTMENT.

DELIVERY IS BASED UPON LOCATION UNIT IS BEING DELIVERED.
IMMEDIATE DELIVERY IS AVAILABLE.

ROUND TRIP TRANSPORTATION: TO PORT JEFFERSON IS $150.00

PLEASE NOTE OUR LENGTHS ARE INSIDE DIMENSIONS. THESE OFFICES ARE GROUND LEVEL. MEANING NO BLOCK & LEVEL CHARGES OR STAIRS ARE NEEDED.

RENTALS ARE ON A MONTH TO MONTH BASIS WITH A TWO MONTH MINIMUM AND NO PRO-RATING.

THANK YOU FOR CONTACTING GIBNEY LEASING CORP., AND WE LOOK FORWARD TO DOING BUSINESS WITH YOU.

* WOMAN OWNED BUSINESS

Ground Level Storage Containers - Storage Trailers
Mobile Field Offices - Change Rooms

Gibney Leasing Corp.

"a company you'll like doing business with"

800 332-8766

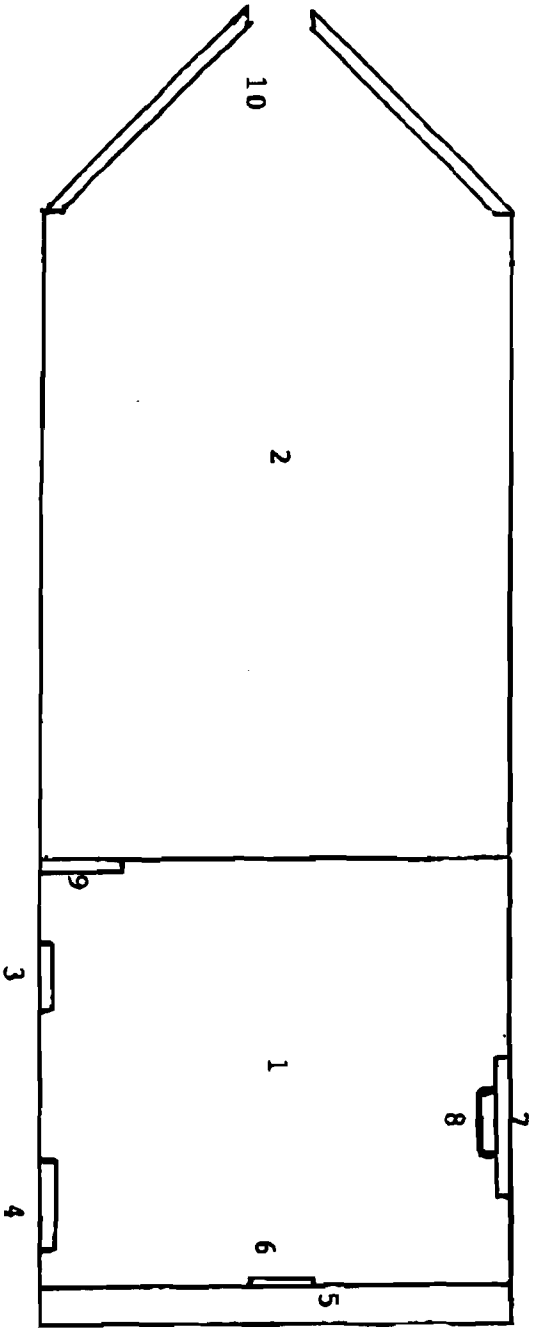
MAIN OFFICE:

5820 EAST W.T. HARRIS BLVD.
SUITE 103
CHARLOTTE, NC 28215
FAX # (704) 535-7984

YARDS ONLY

1158 JERICHO TPKE.
COMMACK, NEW YORK

ROCK ROAD
FORT PIERCE, FLORIDA



1) OFFICE SPACE 8X16
2) STORAGE SPACE 8X24
3) FRONT OFFICE DOOR
4) WINDOW
5) DESK TOP 8FT
6) FILE CABINET 2 DRAWER
7) WINDOW
8) PLAN TABLE
9) DIVIDER DOOR
10) SWING DOORS TO STORAG

Ground Level Storage Containers - Storage Trailers
Mobile Field Offices - Change Rooms

JUN. 30. 1997 11:45AM CAMP DRESSER MCKEE NO. 644 P. 2/3

CAMP DRESSER & MCKEE
CLIENT CAMP DRESSER MCKEE JOB NO. COMPUTED BY F.
PROJECT DATE CHECKED DATE
DETAIL CHECKED BY PAGE NO.

TRAILER RENTAL

SCOPE OF WORK

PLEASE PROVIDE A QUOTATION FOR THE RENTAL OF A TRAILER MEETING THE FOLLOWING CRITERIA:

SIZE: APPROXIMATELY 12' x 50'
EXTERIOR: PROVIDE STEPS AND RAILINGS OFF EACH ENTRANCE / EXIT
INTERIOR: PROVIDE 2 DESKS
HVAC: ELECTRIC HEATING AND AIR CONDITIONING
ELECTRIC: PROVIDE COST TO INSTALL 50 FEET OF SERVICE CABLE FROM EXISTING ELECTRICAL SOURCE TO TRAILER. CABLE SHALL BE BELOW GRADE. INCLUDE ALL INTERIOR OUTLET AND EQUIPMENT CONNECTIONS.

Not Part of Price

PERIOD: ~~2~~ MONTH RENTAL (SEPTEMBER TO ~~NOVEMBER~~ OCTOBER, 1997).

2

IN ACCORDANCE WITH THE ABOVE, FURNISH ALL MATERIALS, AND WORK UNDER THE CONDITIONS REQUIRED AT THE PRICES BELOW.

MOBILIZATION/ DEMOBILIZATION $ 150.00

SET UP/REMOVAL $ 0

~~ELECTRICAL CABLE/SERVICE~~ $ _____ PER FOOT x 50 FEET = $ _____

~~ELECTRICAL EQUIPMENT~~ $ _____

STEPS/RAILINGS $ _____ EACH x _____ # UNITS = $ 0

DESKS $ _____ EACH x 2 DESKS = $ 0

TOTAL MONTHLY RENTAL $ 225

x 2 MONTHS

2 MONTH RENTAL $ 450

NYSDEC Lawrence Aviation Site
Pushprobe Bid Summary

Pushprobe Subcontracting

Item	Unit	No. of Units	Environmental Probing Investigations		SJB Services, Inc		ZEBRA		Terra Probe, Inc.		Tracer Research Corporation	
			Rate	Cost	Rate	Cost	Rate	Cost	Rate	Cost	Rate	Cost
1a Mobilization/Demobilization	LS	1	$500.00	$500.00	$2,000.00	$2,000.00	$650.00	$650.00	$150.00	$150.00	$990.00	$990.00
1b Decontamination	/hour	25	$95.00	$2,375.00	$130.00	$3,250.00	$50.00	$1,250.00	$25.00	$625.00	$111.22	$2,780.50
1c Stand by time	/hour	8	$135.00	$1,080.00	$130.00	$1,040.00	$40.00	$320.00	$100.00	$800.00	$111.22	$889.76
2a Total LF of Driving Probe	/LF	800	$15.75	$12,600.00	$10.00	$8,000.00	$7.00	$5,600.00	$13.65	$10,920.00	$11.13	$8,904.00
2b Borehole Abandonment	/LF	400	$1.00	$400.00	$2.00	$800.00	$2.00	$800.00	$1.00	$400.00	Included	$0.00
3a Soil Sampling	/sample	200	$3.15	$630.00	$25.00	$5,000.00	$9.00	$1,800.00	$1.00	$200.00	$12.00	$2,400.00
TOTAL				$17,585.00		$20,090.00		**$10,420.00**		$13,095.00		$15,964.26

Item Nº	Estimated Quantity	Brief Description of Items With Unit Prices In Words	Unit Price	Total Maximum Amount
1.0		GENERAL CHARGES		
1a.	Lump Sum	Mobilization/Demobilization *Six hundred fifty dollars*	$650.00	$650.00
1b.	25 hours	Decontamination *Fifty dollars per hour*	$50./hr	$1,250.00
1c.	8 hours	Standby Time *Forty dollars per hour*	$40./hr	$320.00
		SUBTOTAL MAXIMUM GENERAL CHARGES		**$2,220.00**
2.0		PROBE INSTALLATION		
2a.	800 ft.	Total Linear Feet of Driving Probe *Seven dollars per linear foot*	$7./ft	$5,600.00
2b.	400 ft.	Borehole Abandonment by Grout Method *Two dollars per linear foot*	$2./ft	$800.00
		SUBTOTAL MAXIMUM PROBE INSTALLATION CHARGES		**$6,400.00**
3.0		SAMPLING		
3a.	200 samples	Soil Sampling (4ft. tube samples) *Nine dollars per sample*	$9./smpl	$1,800.00
		SUBTOTAL MAXIMUM FOR SAMPLING		**$1,800.00**
	COST SUMMARY			
		SUBTOTAL GENERAL CHARGES (MAXIMUM)		**$2,220.00**
		SUBTOTAL - PROBE DRIVING (MAXIMUM)		**$6,400.00**
		SUBTOTAL - SAMPLING		$1,800.00
		TOTAL AMOUNT OF MAXIMUM BID		$10,420.00
		Ten thousand four hundred twenty and 00/100 dollars.		

Company Name Terra Probe, Inc. Date May 30, 1997 Page 1 of 3

BID SHEET

In accordance with the above understanding, the undersigned proposes to furnish all materials, and perform and complete the Work in its entirety in the manner and under the conditions required, at the prices listed below. All blank spaces must be completed by the Subcontractor.

Item No.	Estimated Quantity[1]	Brief Description of Items with Unit Prices in Words	Unit Bid Price in Figures	Total Maximum Amount in Figures
1.0		GENERAL CHARGES		
1a.	Lump Sum	Mobilization and Demobilization lump sum	$ 150.00	$ 150.00
1b.	25 hours	Decontamination per hour	$ 25.00	$ 625.00
1c.	8 hours	Standby time per hour	$ 100.00	$ 800.00
SUBTOTAL MAXIMUM GENERAL CHARGES				$ 1,575.00
2.0		PROBE INSTALLATION		
2a.	800 ft.	Total Linear Feet of Driving Probe per linear foot	$ 13.65	$ 10,920.00
2b.	400 ft.	Borehole abandonment by grout method per linear foot	$ 1.00	$ 400.00
SUBTOTAL MAXIMUM PROBE INSTALLATION CHARGES				$ 11,320.00

Company Name Terra Probe, Inc. Date May 30, 1997 Page 2 of 3

Item No.	Estimated Quantity	Brief Description of Items with Unit Prices in Words	Unit Bid Price in Figures	Total Maximum Amount in Figures
3.0		SAMPLING		
3a.	200 samples	Soil Sampling (4 ft tube samples)		
		per sample	$ 1.00	$ 200.00
SUBTOTAL MAXIMUM FOR SAMPLING				$ 200.00

COST SUMMARY

SUBTOTAL - GENERAL CHARGES (MAXIMUM)	$ 1575.00
SUBTOTAL - PROBE INSTALLATION (MAXIMUM)	$ 11,320.00
SUBTOTAL - SAMPLING	$ 200.00
TOTAL AMOUNT OF MAXIMUM BID	$ 13,095.00

TOTAL MAXIMUM BID IN WORDS: Thirteen Thousand ninety five dollars and cents and 00/100 dollars

Notes:

1. Estimated quantities, where given, are approximate and are only for the purpose of rating the proposals.
2. The Engineer reserves the right to delete in its entirety any one or more items of this Contract without forfeiture of Contract or claims for loss of anticipated profits or any other claims by the Subcontractor on account of such deletions.

Company Name TRACER RESEARCH Date 6/2/97 Page 1 of 3

BID SHEET

In accordance with the above understanding, the undersigned proposes to furnish all materials, and perform and complete the Work in its entirety in the manner and under the conditions required, at the prices listed below. All blank spaces must be completed by the Subcontractor.

Item No.	Estimated Quantity[1]	Brief Description of Items with Unit Prices in Words	Unit Bid Price in Figures	Total Maximum Amount in Figures
1.0		GENERAL CHARGES		
1a.	Lump Sum	Mobilization and Demobilization 990 00 lump sum	$ 990 00	$ 990 00
1b.	25 hours	Decontamination $ 111 22 per hour	$ 111 22	$ 2780 50
1c.	8 hours	Standby time 111 22 per hour	$ 111 22	$ 889 76
SUBTOTAL MAXIMUM GENERAL CHARGES				$ 4,660 26
2.0		PROBE INSTALLATION		
2a.	800 ft.	Total Linear Feet of Driving Probe 11 13 per linear foot	$ 11 13	$ 8,898 00
2b.	400 ft.	Borehole abandonment by grout method INCLUDED per linear foot	$ INCLUDED	$ —
SUBTOTAL MAXIMUM PROBE INSTALLATION CHARGES				$ 8,988 00

Company Name TRACER RESEARCH Date 6/2/97

Item No.	Estimated Quantity[1]	Brief Description of Items with Unit Prices in Words	Unit Bid Price in Figures	Total Maximum Amount in Figures
3.0		SAMPLING		
3a.	200 samples	Soil Sampling ([redacted])		
		$ [redacted] 12.00 per sample	$ 12.00	$ 2,400.00
SUBTOTAL MAXIMUM FOR SAMPLING				$ 2400.00

COST SUMMARY

SUBTOTAL - GENERAL CHARGES (MAXIMUM)	$ 4,660.26
SUBTOTAL - PROBE INSTALLATION (MAXIMUM)	$ 8,988.00
SUBTOTAL - SAMPLING	$ 2,400.00
TOTAL AMOUNT OF MAXIMUM BID	$ 16,048.00

TOTAL MAXIMUM BID IN WORDS: Sixteen thousand / forty eight dollars and cents

Notes:

1. Estimated quantities, where given, are approximate and are only for the purpose of rating the proposals.
2. The Engineer reserves the right to delete in its entirety any one or more items of this Contract without forfeiture of Contract or claims for loss of anticipated profits or any other claims by the Subcontractor on account of such deletions.

ENVIRONMENTAL PROBING INVESTIGATIONS, INC.

EPI will perform this work as described above in accordance with the following pricing schedule.

Pricing Schedule

Item	Unit	Unit Price	Total
1.0			
1a. Mobilization/Demob	1	$ 500.00	$ 500.00
1b. Decontamination of Equipment	25 hrs.	$ 95.00 per hr.	$ 2,375.00
1c. Standby	8 hrs.	$ 135.00 per hr.	$ 1,080.00
2.0			
2a. Total Linear Feet of Driving Probe/Sampling	800 ft.	$ 15.75 per ft.	$ 12,600.00
2b. Borehole Abandonment			
A. 2" diameter hole	400 ft.	$ 1.00 per ft.	$ 400.00
B. 3 1/2" diameter hole	X	$ 2.75 per ft.	X
3.0			
3a. Soil Sampling			
A. 2" diameter x 48" Split Spoon Sampler	X	$ N/C	$ N/C
B. 4 ft. Macrocore with Tube	200	$ 3.15 each	$ 630.00
C. Discrete Sampler 1 1/4" x 2 ft. and/or 3 ft.	X	$ 0.85 each	X

BID SHEET

In accordance with the above understanding, the undersigned proposes to furnish all materials, and perform and complete the Work in its entirety in the manner and under the conditions required, at the prices listed below. All blank spaces must be completed by the Subcontractor.

Item No.	Estimated Quantity[1]	Brief Description of Items with Unit Prices in Words	Unit Bid Price in Figures	Total Maximum Amount in Figures
1.0		GENERAL CHARGES		
1a.	Lump Sum	Mobilization and Demobilization		
		Two Thousand lump sum	$ 2,000.00	$ 2,000.00
1b.	25 hours	Decontamination		
		One Hundred Thirty per hour	$ 130.00	$ 3,250.00
1c.	8 hours	Standby time		
		One Hundred Thirty per hour	$ 130.00	$ 1,040.00
SUBTOTAL MAXIMUM GENERAL CHARGES				$ 6,290.00
2.0		PROBE INSTALLATION		
2a.	800 ft.	Total Linear Feet of Driving Probe		
		Ten Dollars per linear foot	$ 10.00	$ 8,000.00
2b.	400 ft.	Borehole abandonment by grout method		
		Two Dollars per linear foot	$ 2.00	$ 800.00
SUBTOTAL MAXIMUM PROBE INSTALLATION CHARGES				$ 8,800.00

Item No.	Estimated Quantity[1]	Brief Description of Items with Unit Prices in Words	Unit Bid Price in Figures	Total Maximum Amount in Figures
3.0		SAMPLING		
3a.	200 samples	Soil Sampling (4 ft. tube samples)		
		Twenty-Five Dollars per sample	$ 25.00	$ 5,000.00
SUBTOTAL MAXIMUM FOR SAMPLING				$ 5,000.00

COST SUMMARY

SUBTOTAL - GENERAL CHARGES (MAXIMUM)	$ 6,290.00
SUBTOTAL - PROBE INSTALLATION (MAXIMUM)	$ 8,800.00
SUBTOTAL - SAMPLING	$ 5,000.00
TOTAL AMOUNT OF MAXIMUM BID	$ 20,090.00

TOTAL MAXIMUM BID IN WORDS: Twenty Thousand Ninty Dollars & 00/100 dollars and cents

Notes:

1. Estimated quantities, where given, are approximate and are only for the purpose of rating the proposals.
2. The Engineer reserves the right to delete in its entirety any one or more items of this Contract without forfeiture of Contract or claims for loss of anticipated profits or any other claims by the Subcontractor on account of such deletions.

NYSDEC Lawrence Aviation Site
Monitoring Well/Boring Installation Bid Summary

Monitoring Well/Boring Installation

	Contract Item No.	Item	Units	Est. No. of Units	American Auger & Ditch		Parratt Wolff		SJB Services	
					Rate	Cost	Rate	Cost	Rate	Cost
1.		**General Charges**								
1a	N/A	Mobilization/Demobilization	/each	1	$30,000.00	$30,000.00	$35,000.00	$35,000.00	$1,000.00	$1,000.00
1b	164	Brush Clearing	/day	2	$1,000.00	$2,000.00	$700.00	$1,400.00	$100.00	$200.00
1c	148	Standby Time	/hour	24	$125.00	$3,000.00	$175.00	$4,200.00	$130.00	$3,120.00
1d	1	Level D PPE	/per/day	80	$35.00	$2,800.00	$0.00	$0.00	$0.00	$0.00
2.		**Shallow Borings and Monitoring Wells**								
2a	14	3.25 ID Hollow Stem Auger	/foot	2554	$19.00	$48,526.00	$18.00	$45,972.00	$18.00	$45,972.00
2b	16	6.25 ID Hollow stem auger drilling	/foot	1433	$26.00	$37,258.00	$20.00	$28,660.00	$25.00	$35,825.00
2c	83	4-in PVC riser, sch. 40	/foot	1375	$10.00	$13,750.00	$10.00	$13,750.00	$3.50	$4,812.50
2d	58	4-in PVC well screen, 10 slot	/foot	70	$4.00	$280.00	$25.00	$1,750.00	$7.00	$490.00
2e	94	Well screen sand pack	/foot	84	$8.00	$672.00	$10.00	$840.00	$10.00	$840.00
2f	112	Riser backfill (bentonit grout)	/foot	1365	$5.00	$6,825.00	$10.00	$13,650.00	$8.00	$10,920.00
2g	103	Bentonite seal (pellets)	/foot	22	$15.00	$330.00	$10.00	$220.00	$16.00	$352.00
2h	133	Steel protective stickup	/each	7	$150.00	$1,050.00	$150.00	$1,050.00	$150.00	$1,050.00
2i	51	2-in split spoons	/each	530	$15.00	$7,950.00	$40.00	$21,200.00	$15.00	$7,950.00
2j	151	Hydropunch groundwater samples	/each	12	$175.00	$2,100.00	$150.00	$1,800.00	$130.00	$1,560.00
2k	141	Well development (submersible pump)	/hour	30	$85.00	$2,550.00	$90.00	$2,700.00	$150.00	$4,500.00
3.		**Deep Borings and Wells**								
3a	21	8-in. mud rotary drilling	/foot	310	$24.00	$7,440.00	$20.00	$6,200.00	$35.00	$10,850.00
3b	83	4-in. PVC riser, sch. 40	/foot	250	$10.00	$2,500.00	$10.00	$2,500.00	$3.50	$875.00
3c	58	4-in. PVC screen, sch. 40, 10 slot	/foot	10	$4.00	$40.00	$25.00	$250.00	$7.00	$70.00
3d	94	Well screen sand pack	/foot	10	$8.00	$80.00	$10.00	$100.00	$10.00	$100.00
3e	112	Riser backfill (bentonite grout)	/foot	238	$5.00	$1,190.00	$10.00	$2,380.00	$8.00	$1,904.00
3f	103	Bentonite seal (pellets)	/foot	2	$15.00	$30.00	$10.00	$20.00	$16.00	$32.00
3g	133	Steel protective stickup	/each	1	$150.00	$150.00	$150.00	$150.00	$150.00	$150.00
3h	51	2-in split spoons	/each	30	$15.00	$450.00	$40.00	$1,200.00	$15.00	$450.00
3i	151	Hydropunch groundwater samples	/each	7	$175.00	$1,225.00	$150.00	$1,050.00	$130.00	$910.00
3i	141	Well development	/hour	4	$85.00	$340.00	$90.00	$360.00	$150.00	$600.00
4.		**Miscellaneous**								
4a	N/A	Test Pits	/day	5	$1,000.00	$5,000.00	$900.00	$4,500.00	$600.00	$3,000.00
4b	171	Borehole abandonment (grout)	/foot	300	$12.00	$3,600.00	$10.00	$3,000.00	$8.00	$2,400.00
4c	145	Steam cleaning	/hour	38	$85.00	$3,230.00	$150.00	$5,700.00	$130.00	$4,940.00
4d	137	Clean DOT drums and staging area	/each	20	$50.00	$1,000.00	$40.00	$800.00	$35.00	$700.00
4e	138	Fill, transport, and stage DOT drums	/each	20	$30.00	$600.00	$30.00	$600.00	$120.00	$2,400.00
4f	144	Construct Decon Pad	/lump	1	$700.00	$700.00	$400.00	$400.00	$500.00	$500.00
TOTAL						$186,666.00		$201,402.00		**$148,472.50**

Fish
SJB SERVICES, INC.
Contract Drilling and Testing

1951-1 Hamburg Turnpike
Buffalo, NY 14218
Phone: (716) 821-5911
Fax: (716) 821-0163

55 Oliver Street
Cohoes, New York 12047
Phone: (518) 238-1145
Fax: (518) 238-1249

P.O. Box 416 • 208 Le Fevre Road
Stockertown, PA 18083
Phone: (610) 746-2670
Fax: (610) 746-2669

TOLL FREE: 1-800-821-5911

June 10, 1997

Camp Dresser & McKee
100 Crossways Park West - 4th Floor/Suite #415
Woodbury, New York 11797-2012

Attention: Todd Fox
(516)496-8400 / Fax:(516)496-8864

Reference: **Drilling and Well Installation Services -**
Lawrence Aviation RI/FS
Proposal No. ALD-1284

Dear Todd,

Pursuant to your request, we are hereby transmitting our Mobilization and Demobilization cost for the Lawrence Aviation Site at Port Jefferson Station, New York.

We understand that this is a project that will utilize the New York State DEC Superfund Contract Unit Rates. The work scope in summary as we understand it will be as follows:

A. 12 Test Pits - Estimated Time 5 Days

B. Soil Borings/Monitoring Wells
1. 12 Borings to 190' with Augers - Estimated Time 24 Rig Days
2. Install 8 Shallow Wells to 190' with Augers - Estimated Time 16 Rig Days
3. 2 Borings to 300' with Mud Rotary - Estimated Time 6 Rig Days
4. 2 Wells to 250' with Mud Rotary - Estimated Time 6 Rig Days

- TOTAL ESTIMATED TIME - 52 Rig Days
- WITH 2 RIGS - 26 Working Days

The work is to begin in late August or early September and will require two (2) rigs.

Our cost for Mobilization and Demobilization will be $1,000.00 Lump Sum.

American Auger & Ditching Co., Inc.

453 Route 23 • Constantia, NY 13044
(315) 623-7496 • FAX: 623-7189

FAX TRANSMITTAL

DATE: 6-10-97 FAX #: 516 496 8864

TO: CDM FROM: Judy Baye

ATTN: Tom Fox No. of Pages: 1

RE: RF Mob/Demob Drilling Services

COMMENTS: NYSDEC - Lawrence Aviation Site
Mob/Demob $30,000.

Fisher Road, East Syracuse, New York 13057
Phone: 800-782-7260 Fax: 315-437-1770

Parratt-Wolff, Inc.

Fax

To: Tom Fox | From: Bill Morrow

Fax: (516) 496-2055 | Pages: 1

Phone: (516) 496-8400 | Date: 6/10/97

Re: Lawrence Aviation Industries

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

● Comments:

Tom -

In order to properly test two rigs for this project and cover our travel, we would require a mobilization / demobilization of $35,000 for this project.

Bill Morrow

NYSDEC Lawrence Aviation Site
Geophysical Bid Summary

Geophysical Subcontracting

Item	Unit	No. of Units	Hager GeoScience, Inc		NAEVA Geophysics Inc.		Gartner Lee, Inc.		Subsurface Consulting Ltd.		KayVer Group, Inc.	
			Rate	Cost	Rate	Cost	Rate	Cost	Rate	Cost	Rate	Cost
1 Mobilization/demobilization	LS	1	$1,950.00	$1,950.00	$400.00	$400.00	$2,600.00	$2,600.00		$0.00		$0.00
2 Field Work	/day	4	$1,575.00	$6,300.00	$1,988.75	$7,955.00	$1,600.00	$6,400.00		$0.00		$0.00
3 Letter Report	LS	1	$925.00	$925.00	$100.00	$100.00	$3,700.00	$3,700.00		$0.00		$0.00
4 Alternate for borehole Logging		1	$2,450.00	$2,450.00	$2,940.00	$2,940.00	$0.00	$0.00		$0.00		$0.00
TOTAL				$9,175.00		**$8,455.00**		$12,700.00		$0.00		$0.00

NYSDEC Lawrence Aviation Site
Borehole Bid Summary

Borehole Logging

Item	Unit	No. of Units	Hager GeoScience, Inc		NAEVA Geophysics Inc.		Aqua Terra Geophysics	
			Rate	Cost	Rate	Cost	Rate	Cost
1 Borehole Logging	/each	1	$1,225.00	$1,225.00	$1,470.00	$1,470.00	$665.00	$665.00
TOTAL				$1,225.00		$1,470.00		**$665.00**

Gartner Lee Limited

Consultants In The Environment

Toronto • Vancouver • Whitehorse
St. Catharines • Kuala Lumpur

Job No.:	7834	**Date:**	06/02/97
To:	Christine Vitt / Tom Fox- Camp Dresser & McKee	**To Fax:**	516-496-8864
CC:		**CC Fax:**	
From:	David Leask	**From Fax:**	(905) 477-1456

Re: **NYSDEC Lawrence Aviation Site Geophysical Costs**

As per your request (attached) we are pleased to provide the following cost estimate. The total cost for the installation of a grid, the completion of a magnetometer survey over an 8 acre site at 10 foot line spacing and two days of ground penetrating radar (GPR) surveying is $12,700. The price per day of grid installation and magnetic surveying is $1,500. The price per day of GPR surveying is $1,700. The unit price for interpretation and reporting is $3,700. The grid installation and magnetometer survey will take 2 days to complete. Mobilization costs are $2,600.

Regards; Dave Leask

No. of Pages Including This Cover Sheet: 2

Original Of This Fax Should Be:
(please check one of the following)

	Copied and Mailed	X	*Returned to Sender*
	Copied and Sent By Courier		*Admin. Copy Not Required*

File Name: fx1-prop.doc

If you have any problems receiving this fax, please contact either extension 260 or 269 at (905) 477-8400.

HAGER GEOSCIENCE, INC.
63 GREGORY STREET, WALTHAM, MASSACHUSETTS 02154
TELEPHONE: (617) 893-9700 FAX: (617) 893-8465

Memo

To: Christine Vitt

From: Jutta Hager

CC:

Date: May 30, 1997

Re: Lawrence Aviation Site Proposal Addendum

In rereading the borehole logging section of the proposal we faxed this morning, I realize that I omitted a key assumption relating to the cost. Please note that the cost quoted assumes that both boreholes will be ready for logging when we arrive on site, and that they can be logged sequentially during a single mobilization.

Please call me at (617) 893-9700 if you have any questions or need additional information.

Jutta Hager

30-97 FRI

Hager GeoScience, Inc.

May 30, 1997
File P-97040

Camp Dresser & McKee
100 Crossways Park West - 4th Floor/Suite #415
Woodbury, New York 11797-2012
Attention: Christine Vitt

Via Fax and hard copy: (516) 496-8864

Subject: Geophysical Investigation
Lawrence Aviation Site
Port Jefferson Station, New York

Dear Ms. Vitt:

Hager GeoScience Inc. (HGI) is pleased to submit this proposal to Camp Dresser & McKee (CDM) to perform a geophysical investigation at the Lawrence Aviation Site in Port Jefferson Station, Long Island, New York. We understand that the objective of the investigation is to locate buried drums or landfilled materials that may be contributing to soil and groundwater contamination at the site using magnetics (MAG) supplemented by ground penetrating radar (GPR). We understand from your fax that the survey may cover up to 8 acres, each suspect area will be marked out using a 10-foot grid, and no brush clearing will be required. We have not seen the site, however, and base our proposal on the information provided by you.

METHODOLOGY AND PROCEDURE

Three different types of geophysical techniques are typically used to locate buried drums: GPR, magnetics, and EM. While your faxed material specifies a magnetometer survey, it is our judment that the combination of EM terrain conductivity and GPR would be more effective than magnetics and GPR. We therefore propose either combination for this investigation, for the same cost.

Magnetometer Survey

If a magnetometer is used, we will collect magnetic data using a Geometrics G-858 portable cesium magnetometer with gradiometer option. The unit consists of a belt-mounted display/logging console connected to a cesium sensor mounted on a hand-held counterbalanced staff. The gradiometer configuration will be used to widen the search radius of the magnetometer. Based on the assumption that the survey areas are clear and open, we expect to collect magnetic data continuously along traverses no more than 10 feet apart. Data will be digitally recorded, downloaded to computer, and contoured. We estimate that the magnetometer survey will take 2-1/2 to 3 days to complete. This estimate includes time for analysis of magnetic

63 Gregory Street • Waltham, MA 02154
Tel (617) 893-9700 • Fax (617) 893-8465

data in the field and generation of contour plots in order to determine the requirements for the supplementary GPR survey.

GPR Survey

HGI will collect GPR data in areas of magnetic anomalies using GSSI's state-of-the-art SIR 2 radar system with a 400 or 200 MHz antenna. The SIR 2 system uses real-time filtering to eliminate noise attributed to conductive soils (clay) and "stacking" of GPR data to increase signal penetration by increasing the signal-to-noise ratio. Data are displayed on a color monitor and simultaneously recorded on a 500-Mbyte hard drive for later processing if necessary. A portable thermal printer may be used to provide a hard copy of the records in the field. Although the GPR field time will depend on the results of the magnetometer survey, for budget purposes we assume that the survey will takel to 1 to 1-1/2 field days to complete.

Optional EM Terrain Conductivity Survey

If a terrain conductivity survey is performed instead of magnetics, we propose to use Geonics' EM61 time domain metal detector, an instrument developed for the detection and mapping of buried metal at industrial sites and the detection of unexploded ordnance. EM61 overcomes most of the disadvantages of magnetometers while providing the spatial resolution of GPR. The two-receiver coil configuration of the EM61 permits the suppression of near-surface targets that can screen of complicate detection of deeper targets. Approximate depth to targets can be estimated or calculated with the DAT 61 program. Data collection is fast and the unit can operate over rough terrain.

We propose to collect data continuously along survey lines 10 feet apart over the survey area. The data will be downloaded to computer and contoured.

SURVEY COSTS

We have broken down our estimated cost for the geophysical survey as requested in your fax. The cost assumes that 1) all work is performed under the same mobilization/demobilization; 2) HGI provides a two-person field crew; 3) CDM lays out a 10-foot grid at each suspect area as specified in the RFP; 4) the survey areas are clear of brush or obstructions; 5) the survey is performed at Level D personal protection.

Geophysical Investigation:

	Unit	Unit Price	No. Units	Total
Mobilization/Demobilization	LS	$1,950	1	$1,950
Field Work	Day	$1,575	4	$6,300

Letter Report	LS	$ 925	1	$ 925
Total Not-To-Exceed Cost				$9,175

This price is firm for a period of 60 days.

GEOPHYSICAL BOREHOLE LOGGING

You have also requested a lump sum cost to conduct SP and natural gamma logging on two 300-foot mud rotary boreholes. We can perform this work for the following cost:

	Unit	Unit Price	No. Units	Total
Mobilization/Demobilization	LS	$1,175	1	$1,175
Borehole Geophysical Logging	LS	$2,450	1	$2,450
Total Not-To-Exceed Cost (excluding Mob/demob)				$2,450*
Total Not-To-Exceed (includingMob/demob)				$3,625

*If the borehole logging can be performed under the same mobilization as the MAG/GPR surveys, there will be no mobilization charge.

SCHEDULE AND DELIVERABLES

You have not specified when you wish this work to take place. We can generally mobilize within 5 days after receiving written notice to proceed. We estimate that the surface geophysical field work will take four (4) days to complete, and the borehole logging will take one (1) day. HGI will provide a written report of results to CDM within 21 days after completing all field work. The report will include the following:

- Description of methods and procedures for the survey.
- Description of survey results.
- Contour plot of MAG/EM61 data with interpretation of locations of buried drums
- Discussion of limitations of the method
- Plotted locations of drums and other targets.
- Copies of borehole logs with interpretation.
- Description of limitations of the methods.

The hard copy of this submittal includes some information about our firm. Our Standard Conditions, copy appended, are incorporated into this proposal by reference.

PERSONNEL

We will perform the investigation using a two-person team composed of a Senior Geophysicist and Field Technician. The Team Leader will be either Jutta Hager, Ph.D., or Mario Carnevale, M.A.

The President of HGI, **Jutta Hager, Ph.D.**, has over 25 years of professional experience, almost 20 of them in the applications of geology and geophysics to environmental, geotechnical and hydrogeological problems. During her 8-1/2 years as Principal of the New Hampshire firm that still bears her name, she was responsible for various aspects of numerous geophysical projects in ground penetrating radar, EM terrain conductivity, VLF, magnetics, seismic refraction, and borehole logging, ranging from preparing cost estimates and budgets and writing proposals to data collection, interpretation, and preparation of reports. She has continued and expanded this work at her new firm, which she founded in 1993.

The HGI Vice President of Operations, **Mario Carnevale, M.S.**, has over 25 years of professional experience in engineering geology, geophysics, resource evaluation, and computer modeling. He has provided expertise on a broad range of projects -- ranging from the exploitation of unconventional gas resources to field mapping in Africa and the Amazon Valley of Brazil. Projects have ranged from local, site-specific geotechnical and geophysical investigations to broad-scale regional investigations in both the U.S. and abroad. Since joining HGI, Mr. Carnevale has concentrated on the techniques of ground penetrating radar and EM terrain conductivity, with particular emphasis on innovative applications.

RELEVANT PROJECTS

Since its founding in 1993, HGI has performed numerous magnetic and electromagnetic surveys in Massachusetts and elsewhere in New England. One of our GPR surveys, in which GPR was used to determine bedrock topography at a contaminated site, is highlighted as a case history on HGI's web site (http://tiac.net/users/hagergeo). Relevant projects include:

NJDOT Sites in New Jersey, 1995-1996. Client: Dresdner Robin Environmental Management, Inc. EM, GPR, and a pipe and cable locator were used to locate utilities, USTs and other targets (both metal and nonmetal) at seven active NJDOT Maintenance Facilities in New Jersey as part of a contamination assessment. Data were collected mainly on paved areas around garages and office buildings. The EM technique provided useful data everywhere except next to buildings and on reinforced concrete pads, where GPR was more effective.

Needham, Massachusetts, 1996. Client. GZA GeoEnvironmental, Inc. GPR and EM surveys were performed at a former industrial site to locate possible USTs, drums, or other obstructions to drilling. A number of utilities and other possible obstructions were detected and mapped for the client.

Davisville, Rhode Island, 1996. Client: EA Engineering, Science, & Technology. GPR, EM, and magnetic surveys were performed to locate suspected septic tanks and associated piping at 15 sites at a former U.S. Navy Base. The combination of techniques proved very effective in delineating both the tanks and piping.

MHD Hopkinton Facility #33, Hopkinton, Massachusetts, 1996. Client: CDW Consultants. An EM terrain conductivity survey was performed to locate metal and the extent and thickness of fill at a former MHD landfill. The technique was successfully used in areas of high brush and uneven terrain to locate areas of buried metal, as well as delineating the boundary between fill and natural material. Fill thickness was estimated by correlating conductivity values with boring information.

Gould Island Naval Facility, Jamestown, Rhode Island, 1996. Client: Quad 3 Group. GPR and EM surveys were conducted on an island in Narragansett Bay to locate underground storage tanks, utilities, and other subsurface structures possibly associated with contamination at the site. The combination of the two techniques delineated one UST and located six former concrete fuel storage vaults that had been demolished and buried in place.

Winning Farm Site, Winchester, Massachusetts, 1996. Client: Vertex. GPR and EM terrain conductivity surveys were performed at a former horse farm to detect metal in fill and delineate fill extent and thickness of fill. The survey results showed good correlation with subsequent excavation at the site.

Please call us at (617) 893-9700 if you have any questions of need additional formation.

Sincerely,
HAGER GEOSCIENCE, INC.

Jutta L. Hager, Ph.D.
President

STANDARD CONDITIONS AND SCHEDULE OF FEES

HAGER GEOSCIENCE, INC., referred to hereafter as HGI, proposes to perform for Client the services described in the Proposal under the conditions and circumstances and at the charge as given in the Schedule of Fees as set forth below.

RIGHT OF ENTRY Client hereby grants to HGI, or represents and warrants (if the project location is not owned by Client), that permission has been duly granted for a Right of Entry from time to time by HGI, the firm's employees, representatives, agents, staff, consultants, and any contractors or subcontractors, upon the project location for the purpose of performing all acts of study, data collection, and research, including without limitation the making of test borings and other soil sampling, taking of rock samples, assembly and installation of instrumentation, and the making of observations and measurements pursuant to the Scope of Work proposed.

Client hereby recognizes that exploration activities may unavoidably alter the terrain and affect vegetation in the area being studied. Client accepts the fact that this is inherent to the work proposed and will not hold HGI liable for any reasonable damage.

SITE ACCESS Unless otherwise stated in the proposal, Client agrees to provide marked locations for explorations that are suitably accurate for Client's purpose. HGI agrees to conduct field explorations in locales agreed upon with Client, with locations marked for later engineering survey location by Client or his representatives. Unless otherwise stated, Client also agrees to provide access to exploration locales (roads, trails, or cleared alignments) suitable for conduct of the proposed work.

RELATED DATA To aid in interpretation of data collected in the exploratory work proposed, Client agrees to provide HGI with copies of prior, concurrent, or post-facto data and information related to the project available to the Client, as related to the Scope of Work, including but not limited to the following:

A. Contract documents, including contract specifications, contract drawings and shop drawings;
B. Test data and/or reports;
C. Geological, geophysical, topographic and property maps;
D. Geological and geophysical profiles;
E. Test pit and boring logs.

Unless otherwise stated in the proposal, all such pertinent information shall be provided to HGI prior to submittal of a final report of findings for the proposed Scope of Work.

PUBLIC LIABILITY HGI represents and warrants the firm has coverage under Public Liability and Property Damage insurance policies that the firm deems adequate. Insurance certificates shall be provided to Client upon request. Within the limits and conditions of such insurance, HGI agrees to indemnify and save Client harmless from and against any loss, damage, or liability arising from any negligent acts by the firm, its agents, staff, and consultants engaged by the firm. HGI shall not be responsible for any loss, damage, or liability arising from any loss, including but not limited to fire and explosion, beyond the amounts, limits, and conditions of such insurance or excluded under the coverage of such insurance.

SCHEDULE OF FEES (AS IDENTIFIED IN THE PROPOSAL)

LIMITED WARRANTY Client recognizes that, unless otherwise stated, the services proposed by HGI are exploratory and interpretational in character and any results, findings, or recommendations arising from the work proposed may include decisions that are judgmental in nature and not necessarily based solely upon pure science or engineering. HGI shall perform the services proposed in accordance with current practice generally accepted by the geological and geophysical communities. Client agrees that such services shall be rendered without any other warranty, expressed or implied, and that HGI shall be solely responsible for the firm's own negligence.

LIMITATION OF LIABILITY Liability for damages due to HGI's professional negligence shall be limited to an amount not to exceed $10,000 or the fee for the proposed effort, whichever is greater. Client agrees to notify any contractor, including lower tier subcontractors, who may perform work in connection with any design, report, or study prepared by

HGI of such limitation of professional liability for design defects, errors, omissions, or professional negligence, and to require as a condition precedent to their performing their work, a like indemnity and limitation of liability on their part as against HGI.

OWNERSHIP OF DOCUMENTS All reports, logs, field data, field notes, test data, calculations, estimates, and other documents prepared by HGI as instruments of service shall remain the property of the firm. Client agrees that all reports and other work furnished to the Client or Client agents, which is not paid for, will be returned upon demand and will not be used by the Client for any purpose whatever. HGI will retain all pertinent records relating to services performed for a period of three (3) years following submission of final report, during which period the records will be made available to the Client at all reasonable times upon written request.

INVOICES HGI will submit invoices to Client monthly and a final billing upon completion of services. Payment is due within thirty (30) days of presentation of invoice unless other terms are agreed upon with Client beforehand and is past due more than forty-five (45) days from the invoice date. Client agrees to pay a finance charge of one percent (1%) per month, or the maximum rate allowed by law, whichever is larger, on past due accounts for work performed under this Agreement.

TERMINATION AND ASSIGNS This Agreement may be terminated by either party upon seven (7) days' written notice of substantial failure by the other party to perform in accordance with the terms thereof. Such termination shall not be effective if that substantial failure has been remedied before expiration of the period specified in the written notice. In the event of termination, HGI shall be paid for services performed to the termination notice date plus reasonable termination expenses. In the event of termination, or suspension for more than thirty (30) days, prior to completion of the reports contemplated by this Agreement, HGI may complete analysis of information collected to date of termination or suspension and submit to Client a report of findings to that date. Client agrees to pay all direct cost and charges for completion of such analysis and report. Neither Client nor HGI may delegate, assign, sublet, or transfer his/her duties or interest in this Agreement without written consent of the other party.

DISPUTES In the event that a dispute should arise relating to the performance of services to be provided under this Agreement, and should that dispute result in litigation, it is agreed that the prevailing party shall be entitled to recover from the other party all reasonable costs incurred in the defense of claim, including staff time, court costs, attorney's fees, and other claim-related expenses.

HGI of such limitation of professional liability for design defects, errors, omissions, or professional negligence, and to require as a condition precedent to their performing their work, a like indemnity and limitation of liability on their part as against HGI.

OWNERSHIP OF DOCUMENTS All reports, logs, field data, field notes, test data, calculations, estimates, and other documents prepared by HGI as instruments of service shall remain the property of the firm. Client agrees that all reports and other work furnished to the Client or Client agents, which is not paid for, will be returned upon demand and will not be used by the Client for any purpose whatever. HGI will retain all pertinent records relating to services performed for a period of three (3) years following submission of final report, during which period the records will be made available to the Client at all reasonable times upon written request.

INVOICES HGI will submit invoices to Client monthly and a final billing upon completion of services. Payment is due within thirty (30) days of presentation of invoice unless other terms are agreed upon with Client beforehand and is past due more than forty-five (45) days from the invoice date. Client agrees to pay a finance charge of one percent (1%) per month, or the maximum rate allowed by law, whichever is larger, on past due accounts for work performed under this Agreement.

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NAEVA GEOPHYSICS INC.
A SUBSIDIARY OF NORTH AMERICAN EXPLORATION OF VIRGINIA INC.
Subsurface Geophysical Surveys

GPR
MAGNETICS
ELECTROMAGNETICS
SEISMICS
RESISTIVITY
UTILITY LOCATION
BOREHOLE LOGGING
BOREHOLE CAMERA
STAFF SUPPORT

June 25, 1997

Mr. Tom Fox
Camp, Dresser & McKee
100 Crossways Park West
4th Floor, Suite 415
Woodbury, New York 11797-2012

RE: Revised Proposal for Geophysical Survey Investigation

Dear Mr. Fox:

NAEVA Geophysics Inc. is pleased to submit for your review the following estimated costs associated with a geophysical investigation on a site occupying approximately 8 acres in Port Jefferson, Long Island, New York. The purpose will be to identify any buried drums or land-filled materials that might be a contributing source of soil or groundwater contamination at the site. It is our understanding that the area to be investigated is level and clear of obstructions.

We propose to use magnetic and electromagnetic (EM) methods for this investigation. Additionally, ground penetrating radar (GPR) will be used to further characterize any suspect anomalies identified by the magnetics or EM data. A Scintrex Envi-Mag proton precession magnetometer will be used to collect total field magnetics data at 10-foot intervals along lines spaced 10 feet apart. The Envi-Mag measures to a total intensity of the earth's magnetic field at a specific measurement station. The method is well-suited for locating ferromagnetic objects buried in the subsurface. These objects distort the magnetic field, resulting in localized magnetic anomalies that can be readily identified through contouring or profiling the data.

An electromagnetic survey will be conducted using a Geonics EM-31 DL equipped with a Hewlett Packard palmtop computer for data storage. EM-31 data would be collected at 5-foot stations along lines spaced 10 feet apart. The EM-31 provides an output of both quadrature-phase (conductivity) and in-phase components of the induced electromagnetic field, which would be recorded simultaneously. The in-phase component is primarily used in searching for buried metal, measuring in relative parts per thousand (ppt) units. A negative response is expected over areas containing shallow buried metal debris. The quadrature-phase measures electrical conductivity in milliSiemens per meter (mS/m). The EM-31 instrument measures to a maximum depth of 18 feet, as defined by the manufacturer.

NEW YORK
P.O. Box 576
Tappan
New York 10983
(914) 268-1800
(914) 268-1802 Fax

VIRGINIA
P.O. Box 7325
Charlottesville
Virginia 22906
(804) 978-3187
(804) 973-9791 Fax

Both the magnetics and the EM-31 data will be processed on-site and used to generate total field intensity, terrain conductivity, and in-phase contour maps. Significant anomalies identified from the contoured data will be marked on the ground and further investigated with GPR.

It is estimated that one day will be required to establish the survey grid across the area of investigation. The magnetics and EM surveying will be conducted simultaneously by the two-man crew, and it is expected that two days will be required to collect the data. Ground penetrating radar (GPR) will be employed as a follow-up method to further characterize anomalies. For this purpose, a total of four hours is proposed, although the time required is contingent on the number of anomalies detected by the magnetics and EM methods.

Below are the estimated costs for the above scope of work.

Item	Rate	Cost
8 hours travel time	$50/hour	$ 400.
32 hours labor	$190/hour	6,080.
1 day surveyor's transit	$75/day	75.
2 days magnetometer	$250/day	500.
2 days EM-31	$250/day	500.
4 hours GPR	$175/hour	700.
Letter report	-	100.
Materials charge	-	100.
	Estimated Total:	**$ 8,455.**

Considerations

The above costs, based on the information provided us, assume these normal field conditions: smooth and level ground; sparse vegetation; and easy vehicle access.

Magnetics Investigations

- The ability to detect buried ferromagnetic features is often a function of the quality of the data collected. Data quality is adversely affected when collected near ferromagnetic objects (cars, dumpsters, stored materials, etc.), which complicates data interpretation. We suggest that such ferromagnetic objects be removed from the survey area prior to our arrival on site.

- The National Atmospheric and Oceanic Administration is called each day that magnetics data is collected to determine the expected geomagnetic activity. In rare instances, the activity may be too high to obtain good quality data. In these instances, we will look to you for flexibility in rescheduling and travel reimbursement.

Terrain Conductivity Investigations

- The ability to detect subsurface contrasts in electrical conductivity is often a function of the quality of the data collected. Data quality is adversely affected when collected near metallic objects (cars, stored materials, etc.), which complicates data interpretation. We suggest that such metallic objects can be removed from the survey area prior to our arrival on-site.

Ground Penetrating Radar Investigations

- GPR is negatively affected by site conditions such as the heterogeneity of near-surface soil types, varied ground cover materials, and unknown soil moisture. Thus the depth of penetration and usefulness of GPR data cannot be known until our arrival on site and a 5-minute test of applicability is performed.

- GPR will be used in the effort to characterize suspected magnetics anomalies. If no suspected anomalies are detected and GPR is not used, or if GPR depth of penetration is clearly insufficient to yield useful data, then a minimum stand-by charge of $100.00 will apply.

DOWNHOLE GEOPHYSICAL INVESTIGATION

The following scope of work and estimated costs are associated with a borehole geophysical investigation as requested by Camp, Dresser & McKee for logging two 300 foot mud rotary boreholes. NAEVA will conduct downhole geophysical logging using two methods: Spontaneous Potential (SP) and Natural Gamma. The drill holes are assumed to be completed and accessible so that logging can be done once our equipment is on-site.

Upon completion of the field work, the logs will be submitted along with a brief report documenting the field work and providing an interpretation of the logs.

The above cost estimated is based on no higher than Level D conditions. A lump sum cost to conduct the downhole survey is $2,940.

Contractual Arrangements

- If NAEVA is awarded this contract and a subcontract with your company is required, please fax a copy of the agreement to:

Mr. John J. Breznick
NAEVA Geophysics Inc.
Post Office Box 7325
Charlottesville, Virginia 22906
(804) 978-3187
(804) 973-9791 Fax

Please allow adequate time for contract negotiation.

- The terms and conditions on the reverse side of purchase orders are considered contracts and sufficient time should be allowed for their negotiation.

- No purchase orders which include terms and conditions or subcontracts will be accepted after the field work begins.

- Once field work has commenced, no additional terms or conditions may be appended to this proposal.

Billing

- This estimate does not include stand-by time, which will be charged at the normal labor rate.

- Payment terms are net 30 days.

- Unless otherwise notified, this project will be billed on a time and materials basis. The cost estimate for this project was calculated using weekend labor rates.

Thank you for the opportunity to submit this proposal. We look forward to working with you soon, and please call me if I may answer any questions.

Sincerely,

Mark J. Howard

Mark J. Howard
Project Manager

Quotation

Aqua Terra Geophysics Inc.
16 Station Rd. # 8
P.O. Box 250
Bellport, NY 11713

Quote Number: 120

Quote Date: Jun 3, 1997

Quoted to:

Camp Dresser & McKee
100 Crossways Park West
Woodbury, NY 11797
USA

Customer ID	Good Thru	Payment Terms	Sales Rep
CDM	8/3/97	Net 30 Days	

Quantity	Item	Description	Unit Price	Extension
		Quote based on two mud rotary boreholes each 300 feet deep per attached price list		
2.00	Mobilization	Transport of logging equipment to job site, first 50 miles. Includes 1 hr. standby.	150.00	300.00
2.00	Gamma Open Hole	Natural Gamma Ray log run in an open hole to a depth of 200 ft.	260.00	520.00
100.00	Gamma Feet	Natural Gamma Log run in an open borehole between 200 and 1000 feet.	0.60	60.00
2.00	SP-Res Open	SP-Single Point Resistance log run in an open hole to a depth of 200 ft.	200.00	400.00
100.00	SP-Res Feet	SP-Single Point Resistance Log run in an open borehole between 200 and 1000 feet.	0.50	50.00

Subtotal	1,330.00
Sales Tax	
Total	1,330.00

CAMP DRESSER & McKEE INC.

MEMORANDUM

TO: CHRIS VITT

FROM: DENNIS GROVE

PROJECT: N.Y. DEC. STANDBY CDM #

SUBJECT: PRICING

DATE: 6/2/97

PORTABLE G.C.

	WEEKLY	MONTHLY
RESPONSE RENTALS	800.00	2000.00
PHOTOVAC 10S PLUS		
1-800-242-3910		
HAZCO		
PHOTOVAC 10S PLUS	950.00	2250.00
1-800-332-0435		
E.I.S.	750.00	1950.00
PHOTOVAC 10S PLUS	okay { $97.50/day	
1-800-532-7474	{ $487.50/week	

Greg - good for 6 weeks

CDM UNIT

CARGO VAN 8'

	DAILY	WEEKLY	MILEAGE
RYDER	40.00	200.00	.18
BUDGET	49.99	299.90	~~DAILY 100 MILES~~ WEEKLY 200' FREE .30 } PER .30 } MILE
AVIS	63.00	315.00	WEEKLY 500 FREE .20 PER AFTER; DAILY 100 FREE .20 PER AFTER

CAMP DRESSER & McKEE INC.

MEMORANDUM

TO:

FROM:

PROJECT: CDM #

SUBJECT:

DATE:

TWO WAY RADIOS

	DAILY	WEEKLY	MONTH
HAZCO			
MAXON 2 WAY RADIOS	30.00	54.00	173.00
1-800-332-0435			
BINC ENVI. INC.			
800-301-9663			
MOTOROLA TWO-WAY RADIO	10.00	35.00	140.00
ALL COMM TECH			
MOTOROLA SP50 TWO WAY	N/A	60.00	190.00

CAL GASES

SCOTT GASES

MATHESON GASES

MIDDLESEX WELDING

H2M

PRICE QUOTATION SCHEDULE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
STATE SUPERFUND STANDBY CONTRACT
ANALYTICAL SERVICES

TREATABILITY STUDY AND LEACHATE PARAMETERS

Type of Analysis	Analytical Method	COST PER SAMPLE: Aqueous Sample Category A	COST PER SAMPLE: Non-Aqueous Sample Category A
Acidity	305.1	$ 10.	$ 10.
Ammonia	350.2	$ 10.	$ 10.
Total Organic Carbon	415.1	$ 30.	$ 30.
Total Dissolved Solids	160.1	$ 10.	$ 10.
Alkalinity	310.1	$ 10.	$ 10.
Chloride	325.3	$ 10.	$ 10.
Total Kjedahl Nitrogen	351.2	$ 15.	$ 18.
Nitrate	352.1	$ 10.	$ 10.
Nitrite	354.1	$ 10.	$ 10.
BOD	405.1	$ 15.	$ 20.
COD	410.1	$ 20.	$ 20.
Sulfate	375.4	$ 10.	$ 10.
Hexavalent Chromium (selected samples)	218.5	$ 30.	$ 40.
MBAS	425.1	$ 15.	$ 15.
Color	110.2	$ 10.	$ - - -
Odor	140.1	$ 10.	$ 10.
Hardness	130.2	$ 10.	$ 10.
Total Volatile Solids	160.4	$ 10.	$ 10.
Phenols (total)	420.2	$ 20.	$ 20.
Boron	212.3	$ 15.	$ 15.
Total Halogens	*ASTM D1317	$ 50.	$ 50.
BTU Value/Lb	*ASTM D240	$ 50.	$ 50.
Sulfur Content	*ASTM D129 D1552, D622	$ 50.	$ 50.
Water Content	*ASTM E203	$ 10.	$ 20.
Density	*ASTM E213	$ 10.	$ 20.
Bromide	320.1	$ 20.	$ 20.
Chlorine (Total Residual)	330.1	$ 10.	$ 10.
Fluoride	340.2	$ 15.	$ 15.
Oil & Grease	413.1	$ 35.	$ 35.
Total Suspended Solids	160.2	$ 10.	$ 10.

Revised 10/96

H2M

PRICE QUOTATION SCHEDULE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
STATE SUPERFUND STANDBY CONTRACT
ANALYTICAL SERVICES

NYSDEC ANALYTICAL SERVICES PROTOCOL
(Superfund CLP Methods)

Type of Analysis	Analytical Method	COST PER SAMPLE — AQUEOUS SAMPLE: Category A Reporting	AQUEOUS SAMPLE: Superfund Category Reporting	NON-AQUEOUS SAMPLE: Category A Reporting	NON-AQUEOUS SAMPLE: Superfund Category Reporting
1) TCL Volatiles+10	95-1	$ 85.	$ 100	$ 95.	$ 110.
2) TCL Semi-Volatile+20	95-2	$ 140.	$ 150.	$ 150	$ 160.
3) TCL Pesticides/PCBs	95-3	$ 100.	$ 110.	$ 115.	$ 125.
4) TAL Metals*					
i) ICAP	200.7 CLP-M	$ 50.	$ 50.	$ 50.	$ 50.
ii) AA (furnace)	202.2-289.2 CLP-M	$ 35.	$ 35.	$ 35.	$ 35.
iii) AA (flame)	202.1-289.1 CLP-M	$ N/A	$ N/A	$ N/A	$ N/A
5) Arsenic	206.2 CLP-M	$ 15.	$ 20.	$ 15.	$ 20.
6) Lead	239.2 CLP-M	$ 15.	$ 20.	$ 15.	$ 20.
7) Selenium	270.2 CLP-M	$ 15.	$ 20.	$ 15	$ 20.
8) Thallium	279.2 CLP-M	$ 15.	$ 20.	$ 15.	$ 20.
9) Mercury	245.1/245.2/ 245.5 CLP-M	$ 20	$ 25.	$ 20.	$ 25.
10) Cyanide	335.2 CLP-M	$ 25.	$ 25	$ 25.	$ 25.
11) TCL Volatiles (low conc.)	95-4	$ 135	$ 140.	$ N/A	$ N/A
12) TAL METALS ICAP (22)	CLP.M	$ 80.	$ 80.	$ 80.	$ 80.

*NYSDEC-ASP 10/95 pages D-V-1 through D-V-182 including costs of digestion.

Indicate, as a percentage of the above quoted costs, the cost for expedited testing and turnaround time for:

24 hour turnaround	N/A %		Cost increase if contract is
48 hour turnaround	50VOA %	ONLY	extended for second 12-month
1 week turnaround	30 %		period 5 %
2 week turnaround	25 %		

Revised 10/96

NANCY POTAK

PRICE QUOTATION SCHEDULE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
STATE SUPERFUND STANDBY CONTRACT
DATA VALIDATION SERVICES

NYSDEC ANALYTICAL SERVICES PROTOCOL
(Superfund CLP Methods)

Type of Analysis	Analytical Method	COST PER SAMPLE: AQUEOUS SAMPLE — Category A Reporting	AQUEOUS SAMPLE — Superfund Category Reporting	NON-AQUEOUS SAMPLE — Category A Reporting	NON-AQUEOUS SAMPLE — Superfund Category Reporting
1) TCL Volatiles+10	95-1	$ 3	$ 14	$ 3	$ 15
2) TCL Semi-Volatile+20	95-2	$ 3	$ 19	$ 3	$ 19
3) TCL Pesticides/PCBs	95-3	$ 4	$ 22	$ 4	$ 23
4) TAL Metals+ full TAL + CN		5	22	5	23
i) ICAP	200.7 CLP-M	$ 0.10	$ 0.50	$ 0.10	$ 0.60
ii) AA (furnace)	202.2-289.2 CLP-M	$ 0.10	$ 0.50	$ 0.10	$ 0.60
iii) AA (flame)	202.1-289.1 CLP-M	$ 0.10	$ 0.50	$ 0.10	$ 0.60
5) Arsenic	206.2 CLP-M	$ 0.10	$ 0.50	$ 0.10	$ 0.60
6) Lead	239.2 CLP-M	$ 0.10	$ 0.50	$ 0.10	$ 0.60
7) Selenium	270.2 CLP-M	$ 0.10	$ 0.50	$ 0.10	$ 0.60
8) Thallium	279.2 CLP-M	$ 0.10	$ 0.50	$ 0.10	$ 0.60
9) Mercury	245.1/245.2/ 245.5 CLP-M	$ 0.10	$ 0.50	$ 0.10	$ 0.60
10) Cyanide	335.2 CLP-M	$ 0.10	$ 0.50	$ 0.10	$ 0.60
11) TCL Volatiles (low conc.)	95-4	$ 0.10	$ 15	$ N/A	$ N/A

Revised 10/96

COSCO/CPC Site in Spring Valley, New York NATIONAL KEEFE

Bid prices shall remain in effect for one calendar year from March 14, 1997. In accordance with this understanding, the undersigned proposes to furnish all materials and perform and complete in its entirety in the manner and under the conditions required, at the prices listed below. Turnaround for all items below is expected to be 24 hours, unless otherwise noted.

Item No.	Brief Description	Unit	Approximate Quantity	Unit Bid Price	Total Bid Price
1.	8-1/2" x 11" xerox	1 sheet	3,000	$ .05 each	$ 150.00
2.	11" x 17" xerox	1 sheet	25	$ .15 each	$ 3.75
3.	24" x 30" Blue/Black Line Printing	1 sheet	90	$ .25 each	$ 22.50
4	xerox, bond	sq. ft	15	$ .75 sq ft.	$ 11.25
5.	Strip Stapling (24"x 30" copies) in sets	set	15	$ .25 per 25	$ 3.75
6.	3-hole punch	per book	15	$ 0	$ 0
7.	Screw and Post Binding- 2"	per book	15	$ 1.50	$ 22.50
8.	Screw and Post Binding - 3"	per book	15	$ 1.50	$ 22.50
9.	GBC Binding	per book	15	$ 2.00	$ 30.00
10.	Acetate Covers (8-1/2" x 11")	each	15	$ .50	$ 7.50
11.	Premium for less than 24 hour turnaround, or weekend work	As % added to job	1 event	45 weekdays 10% weekend	_____ %
TOTAL*					$ 271.75

COSCO/CPC Site in Spring Valley, New York

Action Letter

Bid prices shall remain in effect for one calendar year from March 14, 1997. In accordance with this understanding, the undersigned proposes to furnish all materials and perform and complete in its entirety in the manner and under the conditions required, at the prices listed below. Turnaround for all items below is expected to be 24 hours, unless otherwise noted.

Item No.	Brief Description	Unit	Approximate Quantity	Unit Bid Price	Total Bid Price
1.	8-1/2" x 11" xerox	1 sheet	3,000	$ .06	$ 180 -
2.	11" x 17" xerox	1 sheet	25	$ .12	$ 3.00
3.	24" x 30" Blue/Black Line Printing	1 sheet	90	$ .50	$ 45.00
4	xerox, bond	sq. ft	15	$ .75	$ 11.25
5.	Strip Stapling (24"x 30" copies) in sets	set	15	$ 1.00	$ 15.00
6.	3-hole punch	per book	15	$ N/C	$ 0
7.	Screw and Post Binding- 2"	per book	15	$ 1.50	$ 22.50
8.	Screw and Post Binding - 3"	per book	15	$ 1.50	$ 22.50
9.	GBC Binding	per book	15	$ 1.50	$ 22.50
10.	Acetate Covers (8-1/2" x 11")	each	15	$ 1.00	$ 15.00
11.	Premium for less than 24 hour turnaround, or weekend work	As % added to job	1 event	100 %	100 %
TOTAL*					$ 336.75

ADM
American Document Mgt

COSCO/CPC Site in Spring Valley, New York

Bid prices shall remain in effect for one calendar year from March 14, 1997. In accordance with this understanding, the undersigned proposes to furnish all materials and perform and complete in its entirety in the manner and under the conditions required, at the prices listed below. Turnaround for all items below is expected to be 24 hours, unless otherwise noted.

Item No.	Brief Description	Unit	Approximate Quantity	Unit Bid Price	Total Bid Price
1.	8-1/2" x 11" xerox PER SIDE	1 sheet	3,000	$ .048	$ 144.00
2.	11" x 17" xerox PER SIDE	1 sheet	25	$ .25	$ 6.25
3.	24" x 30" Blue/Black Line Printing	1 sheet	90	$ .48	$ 43.20
4	xerox, bond PER SIDE	sq. ft	15	$ 1.15	$ 17.25
5.	Strip Stapling (24"x 30" copies) in sets	set 50 LEAVES	15	$ 1.75	$ 26.25
6.	3-hole punch	per book	15	$ 3.00	$ 45.00
7.	Screw and Post Binding- 2"	per book	15	$ 2.90	$ 43.50
8.	Screw and Post Binding - 3"	per book	15	$ 4.50	$ 67.50
9.	GBC Binding	per book	15	$ 3.85	$ 57.75
10.	Acetate Covers (8-1/2" x 11")	each	15	$ 1.00	$ 15.00
11.	Premium for less than 24 hour turnaround, or weekend work	As % added to job	1 event	100 %	100. %
TOTAL*					$ 931.40

465.70

Messenger Pick up or delivery @ 75.00/each

YEC, INC.
Clarkstown Executive Park
612 Corporate Way
Suite 4M
Valley Cottage, NY 10989
(914) 268-3203

July 2, 1997

Thomas Fox
Camp, Dresser & McKee
100 Crossways Park West
Woodbury, New York 11797

RE: Cost Estimate for Survey and Mapping Services
Lawrence Aviation Industries

Dear Mr. Fox:

Attached please find Schedule 2.11(e) cost estimates for survey and field support services for the above-referenced project. Also included are the quotes received for aerial photo mapping. Geomaps was the lowest quote and used as the subcontractor cost in the estimate. The following is a summary of quotes received:

Company	Quote
Geomaps International	$1,300
LaFave, White & McGivern, L.S., P.C.	$1,630
TVGA Engineering, Surveying, P.C.	$2,150

Please feel free to contact me if you have any questions.

Yours very truly,

Y.S. Ed Chen, Ph.D., P.E.
President, YEC, Inc.

Geomaps INTERNATIONAL
385 CENTRAL AVENUE, BETHPAGE, NEW YORK 11714
(516) 827-9100 FAX (516) 827-9101

July 1, 1997

Mrs. Edward Chen
YEC, Inc.
Clarkstown Executive Park
612 Corporate Way
Suite 4 M
Valley Cottage, New York 10989

RE: **Lawrence Avation Industries Site**
Proposal # 97-47

Dear Mr Chen. :

Regarding your fax dated July 1, 1997, we are pleased to submit the following proposal for furnishing photogrammetric services for the above mapping project.

For your consideration, we present the following:

AREA TO BE MAPPED - Approximately 80 acres at the Lawrence Avation Site in Port Jefferson, New York (as outlined on map supplied with your fax).

MAP SCALE - 1" = 100' showing 5 foot contours

AERIAL PHOTOGRAPHY - Library aerial photography taken in 1995 will be used to map the site. The site will be covered by 2 stereo model.

FIELD CONTROL - Geomaps will supply a written description and picture pinprick for each field control location. Field control measurements are not covered by this proposal.

PHOTOGRAMMETRY - All visible 1"=100 scale detail will be digitized on a DSR-14 analytical stereo plotter.

DELIVERABLES - All mapping will be delivered as final edited sheets, plotted in color on paper and on MS DOS diskettes in AutoCAD format to your specifications.

FEE - Our fee for supplying the above : $1,300.

Thank you for considering us on this project. Trusting we may be of service to you.

Sincerely yours,

William Crawbuck
President

YEC, Inc. accepts the contents, conditions and payment terms of this proposal and authorizes Geomaps International, Inc. to proceed with the work outlined herein.

Authorized Signature _____ Title _____ Date _____

Robert C. White, P.L.S., President
Daren L. Morgan, P.L.S., Vice-President

Aziel LaFave, P.L.S. (Ret. Consultant)
Robert F. McGivern, P.E. (Ret. Consultant)

LW &M

LaFave, White & McGivern, L.S., P.C.

LAND SURVEYORS & PHOTOGRAMMETRISTS

THERESA · BOONVILLE · ROME

July 1, 1997

MR. ED CHEN
YEC, Inc.
Clarkstown Executive Park
612 Corporate Way
Suite 4M
Valley Cottage, NY 10989

Re: Lawrence Aviation Industries Site
Port Jefferson Station, NY

Dear Ed,

LaFave, White & McGivern, L.S., P.C. is pleased to submit our proposal for mapping the above site.

Existing black and white aerial photography flown at the nominal scale of 1" = 100' (6000' AMT) in the spring of 1995 shall be used to map from.

Digital mapping shall be compiled by stereo-photogrammetric methods in Autocad Version 12. The mapping shall be prepared at the scale of 1" = 100' with a 5 foot contour interval of only 80 acres of the 126 acre site. A mylar sheet shall also be furnished.

Our lump sum fee for the above scope of services is as follows:

Aerial Photography	$300.00
Mapping	1,330.00
TOTAL:	$1,630.00

Thank you for requesting a proposal.

If you have any questions please do not hesitate to contact me at 1-800-427-9036.

Very truly yours,
LaFave, White & McGivern, L.S., P.C.

Edward P. McKinney

Edward P. McKinney, L.S., C.P. (ASP&RS)
Director of Marketing

EPM/jas

TVGA ENGINEERING, SURVEYING, P.C.
ENGINEERS • SURVEYORS • PHOTOGRAMMETRISTS

State Route 207 P.O. Box 197 Lanse, PA 16849-0197 Office: (814) 345-5507
Fax: (814) 345-5031
1-800-291-9366

July 1, 1997

YEC, Inc.
Clarkstown Executive Park
612 Corporate Way, Suite 4M
Valley Cottage, NY 10989

ATTN: Ed Chen

RE: LAWRENCE AVIATION INDUSTRIES

Dear Mr. Chen:

TVGA Engineering, Surveying, P.C. is pleased to submit the enclosed proposal for professional services on the referenced project. If you have any questions on the proposal as presented, please contact our Project Manager, Mr. Ronald W. Henry.

Please be aware that we use a two (2) contract system. A countersigned original will be returned in approximately one (1) week after receipt of the two (2) signed contracts from you. Please note if any changes are required on the contract documents; new documents will be prepared and returned to you only if we are in agreement with all the changes. Receipt of a signed contract will be required prior to the start of any work.

Also note the contract expiration date and payment terms in the contract. The expiration date listed on the last page is our cut-off date for the fee quoted. If additional time is necessary, please let us know so that a revised contract can be issued. We do, however, reserve the right to adjust the fees on all contracts extended beyond or received after this date.

Services will be invoiced by contract item as shipped. Payment on those invoices will be due "Thirty (30) days net". Should a invoice remain unpaid beyond forty-five (45) days, all work on a project will cease until the account is brought up-to-date. If you foresee payment extending beyond the 30 day period, please contact us. Finance charges are added to all invoices outstanding beyond thirty (30) days.

We are also pleased to announce that we accept Master Card and VISA for payment of invoices. Please supply the account name, number and card expiration date. For new clients, please leave time for credit approval; if time is not available, pre-payment will be required. Pre-payment is required for all invoices less than $ 0.00.

We would like to thank you for this opportunity to provide you the enclosed professional services, and look forward to working with you in the near future.

Very truly yours,

Scott A. Brown, P.E.
Regional Manager

Enclosures

L1\Brown\ 696\ct.pr

TVGA ENGINEERING, SURVEYING, P.C.
ENGINEERS • SURVEYORS • PHOTOGRAMMETRISTS

State Route 2035 P.O. Box 197 Lanse, PA 16849-0197 Office: (814) 345-5607
Fax: (814) 345-5031
1-800-291-9366

TVGA Engineering, Surveying, P.C.
CONTRACT FOR PROFESSIONAL SERVICES

TO: YEC, Inc.
Yorkstown Executive Park
612 Corporate Way, Suite 4M
Valley Cottage, NY 10989

ATTN: Ed Chen

TVGA PROPOSAL NO:. 97P4-302
TVGA PROJECT NO.:
CLIENT PROJECT NO.:
CLIENT P.O. NO.:

THIS AGREEMENT

Made this *1st* day *July* of the year Nineteen Hundred and *97* **BY AND BETWEEN** *YEC, Inc.* hereinafter called the **CLIENT**, and **TVGA Engineering, Surveying, P.C.**, engaged in Professional Engineering, Land Surveying and Photogrammetric Services, with offices at State Route 2035, Lanse, Pennsylvania 16849, hereinafter called the **PHOTOGRAMMETRIST**, **WITNESSETH**, that whereas the **CLIENT** has requested Professional Services, and the **PHOTOGRAMMETRIST** has agreed to furnish said services in accordance with the terms and conditions herein contained, **NOW THEREFORE**, the **CLIENT** and the **PHOTOGRAMMETRIST** for the considerations hereinafter set forth agree as follows:

CONTRACT SPECIFICATIONS

1. The **PHOTOGRAMMETRIST** agrees to render its professional services to the **CLIENT**, in connection with

NAME OF PROJECT OR PROPERTY: Lawrence Aviation Industries

LOCATION OF WORK

TOWN, COUNTY, AND STATE: Port Jefferson Station, Suffolk County, NY

QUADRANGLE MAP: Port Jefferson, NY

and to furnish the following services:

2. **PROFESSIONAL SERVICES TO BE PERFORMED**

A. VERTICAL BLACK AND WHITE AERIAL PHOTOGRAPHY (EXISTING 1995)

Normal Scale: 1" = 1000 '(6000 'AMT), 6 " Lens
60 % Forward Lap — % Side Lap
1 Set(s) of Contact Prints
— Photographic Enlargements

B. PHOTC CONTROL SURVEY

__ _X_____ To be furnished by "Client"
__ _____ To be furnished by "Photogrammetrist"
H r zontal Datum: As Provided
V r ical Datum: As Provided

Unless r ore accurately specified by your client horizontal & vertical control is to be completed to the followir) guidelines:

Ho ontal control traverses require a minimum closure of third order class 1 or 1 part in 10,000. All ide shots should have a check on their position to guarantee an accuracy within 0.3 of a foot. Ver cal control requires that the error of closure does not exceed one tenth of the contour int val and that all points be turned through in a level run.

C. MA PPING

Th mapping will be compiled by stereophotogrammetric methods as follows:

M pping Scale: 1" = 100 ' Contour Interval: 5 '
Contour Method: Conventional _____
DTM (Points & Breaklines) X
X __ Ballpoint manuscript on paper Liquid ink manuscript on mylar _____
__ __ Liquid ink on titled formal sheets
(TVGA Sheets: X Client Furnished Sheets: _____)
X __ Digital Data Digital Format: Autocad.DWG
S eet Size: As Required " by _____ " Neat Sheet Size: _____ " by _____ "
M pping Area: 80± acres Band width & approximate length: _____
M pping Limits: As outlined on faxed RFP received 7/1/97.

Cu tural or Planimetric features normal to the 1" = 100 ' scale mapping content as defined in Att chment A shall be shown which are visible or identifiable on, or are interpretable from the ae al photography. Please note, a field check for missing detail must be completed prio to en ineering design and/or computations.

Ma ping accuracies shall be as follows:

1. The horizontal map accuracy shall be such that ninety (90) percent of all well defined map features shall be accurate to within at least one-fortieth (1/40) of an inch at map scale of their true coordinate position and none of the map features shall be misplaced by more than one-twentieth (1/20) of an inch at map scale from their true coordinate position.

2. The vertical map accuracy shall be such that ninety (90) percent of the elevations determined from the solid-line contour shall have an accuracy with respect to true elevation of one-half (1/2) contour interval or better and the remaining ten (10) percent of such elevations shall not be in error by more than one contour interval. In areas where the ground is obscured by dense vegetation, the contours will be dashed so as to indicate that they are approximate form lines only and are of doubtful accuracy.

3. Spot elevations placed on the maps shall be such that ninety (90) percent of such elevations shall be accurate in respect to true elevation to within one-fourth (1/4) of the contour interval.

4. The map's vertical accuracy shall be based on the respective contour interval of 5 feet.

5. Additional services caused as a result of the CLIENT'S errors during control surveys or misidentification of the control points shall be invoiced as extra compensation hereto and made as an addendum to this Agreement.

3. **CONTRACT DELIVERABLES**

The following items will be delivered to client or client's representative as a product of the services provided under this agreement:

1 ___ Set(s) of Contact Prints
1 ___ Set(s) Hard Copy Mapping
x Ballpoint Manuscript on Paper
_____ Liquid Ink on Titled Formal Sheets
_____ Liquid Ink Manuscript on Mylar
1 ___ Set(s) Digital Data Digital Format Autocad.DWG
___ ___ Photographic Enlargement Approx. Scale _____

Deliverables to be Sent to:

YEC, Inc.
Clarkstown Executive Park, 612 Corporate Way, Suite 4M
Valley Cottage, NY 10989
Attn: Ed Chen

4. **LUMP SUM FEES**

Photo Products	$	350.00
Control Survey	$	CLIENT
Analytical Triangulation	$	N/A
Mapping	$	1,800.00
Total Fee	$	2,150.00

If at the request of the client the schedule is accelerated, TVGA reserves the right to invoice for all additional overtime charges.

An initial payment of Zero dollars ($ 0) shall be made upon execution of this Agreement and credited to the Client's account at the time of final payment.

5. **ESTIMATED COMPLETION DATE:**
AERIAL PHOTOGRAPHY: Existing.
MAPPING: One (1) to three (3) weeks after receipt of Control Survey.

6. THE CLIENT'S responsibility for payment of the PHOTOGRAMMETRIST'S fee will NOT be relieved because of failure to complete work by the agreed date IF such failure was due to weather conditions, OR the CLIENT'S failure to deliver specified documents, OR for any other reason beyond the control of the PHOTOGRAMMETRIST. The completion date is estimated only, but every effort will be made by the PHOTOGRAMMETRIST to comply with this date.

7. Use of ENGINEER'S Drawings, Specifications and Other Documents

The drawings, specifications and other documents prepared by the PHOTOGRAMMETRIST for this Project are instruments of the PHOTOGRAMMETRIST'S services for use solely with respect to this Project and, unless otherwise indicated, the PHOTOGRAMMETRIST shall be deemed the author of these documents and shall retain all common law, statutory and other reserved rights, including the copyright. The CLIENT shall be permitted to retain copies, including reproducible copies, of the PHOTOGRAMMETRIST'S drawings, specifications and other documents for information and reference use in connection with the CLIENT'S use and occupancy of the Project. The PHOTOGRAMMETRIST'S drawings, specifications or other documents shall not be used by the

CLIENT or others on other projects, for additions to this Project or for completion of this Project by others except by agreement in writing and with appropriate compensation to the PHOTOGRAMMETRIST.

8. Payment

CLIENT agrees to pay PHOTOGRAMMETRIST the fees indicated in Section 4, for services specified. Invoices will be submitted at the completion of each phase of the work. Unless modified in Section 4, FULL PAYMENT of invoiced amounts is due within 30 days of the invoice date. A 2% discount may be taken on invoice payments received at our offices within 20 days of the invoice.

The lump sum fees specified in Section 4 are predicated upon timely payment of invoiced amounts. If a payment schedule different from that specified above is anticipated, it is the CLIENT's responsibility to notify the PHOTOGRAMMETRIST so that acceptable payment arrangements can be made prior to execution of this agreement. Please note that a change in payment terms may affect the lump sum fees specified in Section 4.

9. Permission to Enter

The CLIENT agrees to obtain any necessary permissions in writing to allow the PHOTOGRAMMETRIST'S employees to enter upon lands of others if necessary to complete the work called for in this Agreement, and to save and hold harmless the PHOTOGRAMMETRIST, its agents, servants, and employees from any claims for damages for trespass on adjoining lands, if necessary to complete the work called for by this Agreement.

The CLIENT and the PHOTOGRAMMETRIST hereby agree to the full performance of the covenants contained herein.

CLIENT is defined as a person signing this Agreement, whether this person is the property owner, agent or company representative, and as such, by the signing of this Agreement, hereby acknowledges responsibility for the payment of the above stated fee, and authority to contract for same.

This Agreement shall be binding upon the parties hereto, their Executors, Administrators, and Assigns. All prices will be binding for a period of forty-five (45) days from document date. The executed agreement must be returned to TVGA prior to the end of this forty-five (45) day period.

IN WITNESS WHEREOF, they have executed this Agreement, the day and year first above written.

AGREED BY:

CLIENT **BILLING ADDRESS:**

YEC, INC
CLARKSTOWN EXECUTIVE PARK
612 CORPORATE WAY, SUITE 4M
VALLEY COTTAGE, NY 10989

SIGNATURE: _____ DATE: _____

NAME/TITLE: _____

PHOTOGRAMMETRIST

TVGA ENGINEERING, SURVEYING, P.C.
STATE ROUTE 2035, P.O. BOX 197
LANSE, PA 16849-0197

SIGNATURE: _____ _____
SCOTT A. BROWN, P.E. DATE
REGIONAL MANAGER

ATTACHMENT A
TVGA ENGINEERING, SURVEYING, P.C.
MAPPING CONTENT

Description	Map Scale 1"=400'	Map Scale 1"=200'	Map Scale 1"=100'	Map Scale 1"=50' and Larger
Planimetric Features				
Edge of Pav ment	x	x	x	x
Unpaved Rc d	x	x	x	x
Road Cente ine (Optional)	x	x	x	x
Sidewalk				x
Driveway			x	x
Parking	x	x	x	x
Bridges	x	x	x	x
Buildings	x	x	x	x
Bldgs under Construction	x	x	x	x
Mob. home/ Trailer			x	x
Lakes/Pond	x (>5 ac)	x (>5ac)	x	x
River/Strear	x	x	x	x
Drain/Ditch		x (Opt.)*	x	x
Swamp	x (> 5ac)	x (>5ac)	x	x
Airport	x	x	x	x
Railroad	x	x	x	x
Transmissic Pylons	x	x	x	x
Transforme Station	x	x	x	x
Property Fe ces, Walls	x(>200ft)	x (>100ft)	x	x
Single Tree large) as reference				x
Woodlands	x	x	x	x
Bushes				x
Pool			x	x
Other Featu es *				
Utility Feat res				
Poles, Light Power		x (Opt.)*	x	x
Poles, Sign , Guy, Transformer				x
Traffic Cont l, Parking Meter *				x
Manhole			x(Opt.)*	x
Catch basir (optional)			x (Opt.)*	x
Hydrant			x (Opt.)*	x
Vault			x (Opt.)*	x
Other Feat es *			x	x
Topograph c Features (opt.)				
Index Cont r	x	x	x	x
Intermediat Contour	x	x	x	x
Spot Elevat n	x	x	x	x
Spot Elevat n spec. Location *	x	x	x	x
Various Ar otation (opt.)				
Road Nam *	x	x	x	x
Hydrograph c Name *	x	x	x	x

* subject t additional fee

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