11/1/04

11/2/04 APPROVED

Work Plan for Remedial Construction Management for the Davis-Howland Oil Company Site City of Rochester Monroe County, New York

Site Number 8-28-088

WA 23 - December 2000

WA 23.1 - Revision May 2001

WA 23.2 - Revision November 2002

WA 23.3 - Revision March 2003

WA 23.4 - Revision June 2004

WA 23.5 – Revision October 2004

Prepared for:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Hazardous Waste Remediation
50 Wolf Road
Albany, New York 12233-7010

Prepared by:
Ecology and Environment Engineering, P. C.
368 Pleasant View Drive
Lancaster, New York 14086

ecology and environment engineering, p.c.

BUFFALO CORPORATE CENTER 368 Pleasant View Drive, Lancaster, New York 14086
Tel: 716/684-8060, Fax: 716/684-0844

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Introduction

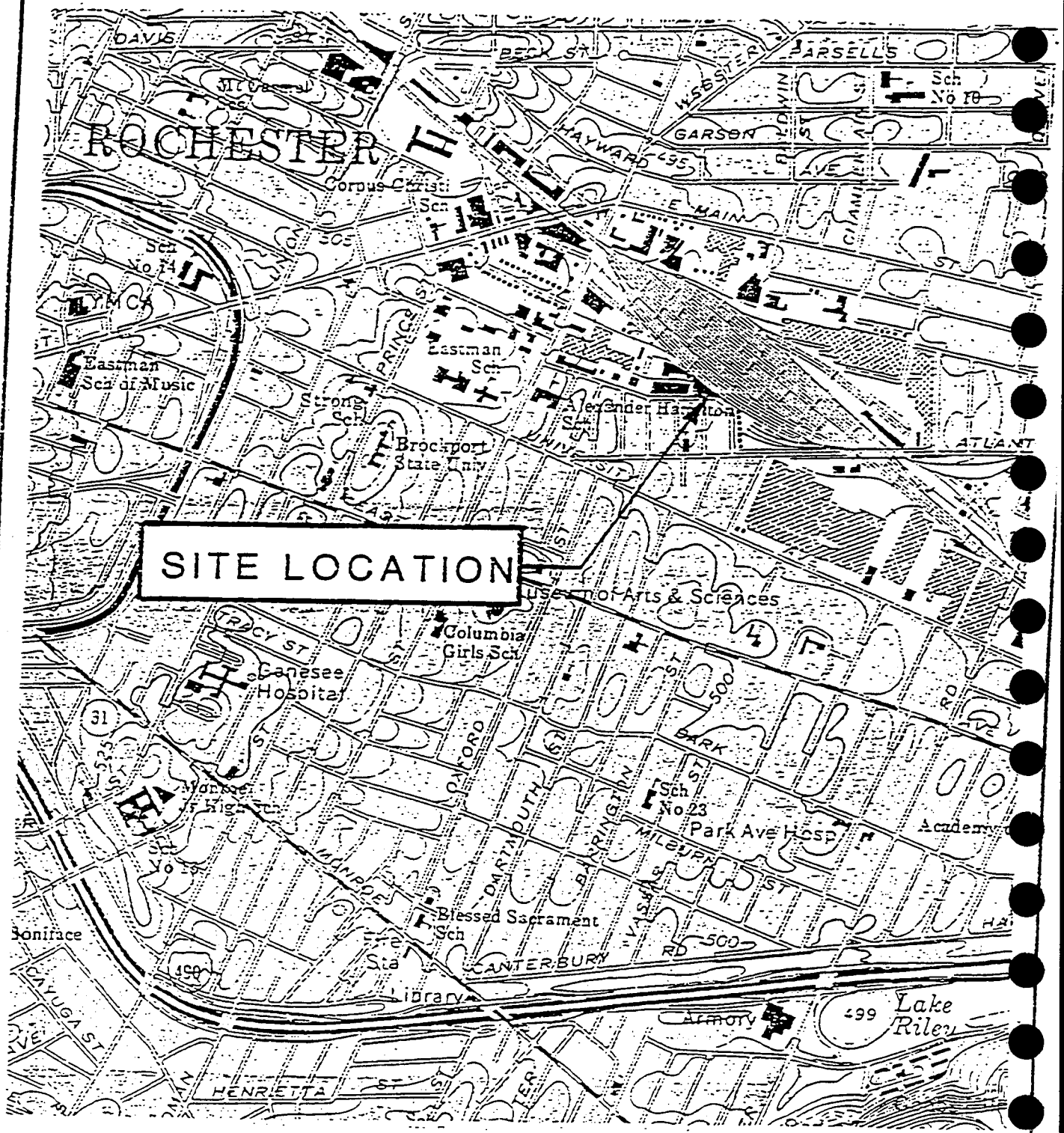
Pursuant to Work Assignment No. D003493-23, received on October 6, 2000, Ecology and Environment Engineering, P.C. EEEPC) is submitting to the New York State Department of Environmental Conservation (NYSDEC), Division of Hazardous Waste Remediation (DHWR), this revised work plan, WA 23.5, for new Task 6 – a soil gas survey and indoor air quality survey downgradient of the Davis-Howland Oil Company site in the city of Rochester, Monroe County, New York (see Figures 1 and 2).

Section 2 of this work plan details the updates of major tasks and subtasks to be performed. Section 3 presents a discussion of the revised major milestones of the project and a project schedule. Section 4 discusses the opportunities for subcontracting within this work assignment. Section 5 provides a detailed budget prepared in accordance with contractual reporting requirements, including the contract 2.11 forms. Section 6 presents the staffing plan of our key team members. Section 7 presents the Minority-owned Business Enterprise/Woman-owned Business Enterprise (MBE/WBE) utilization plan.

FIGURE 1

LOCATION PLAN

DAVIS-HOWLAND OIL CORPORATION, ROCHESTER, NY (NYSDEC SITE. NO. 8-28-08



LOCATION PLAN

NOT TO SCALE

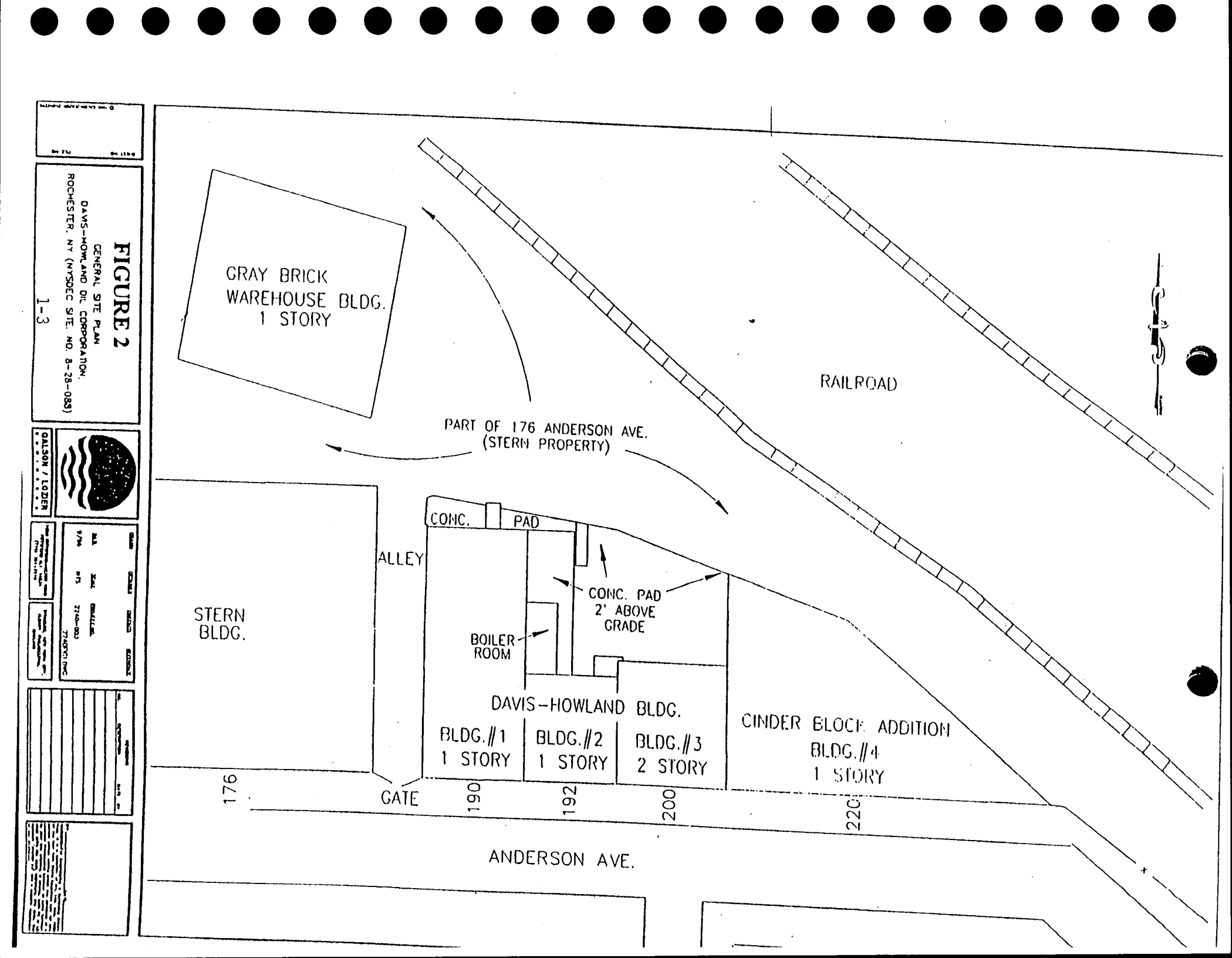


FIGURE 2

GENERAL SITE PLAN

DAVIS-HOWLAND OIL CORPORATION,
ROCHESTER, NY (NYSDEC SITE NO. 8-28-083)

1-3

GALSON / LOZIER

2

Major Tasks and Subtasks

The tasks and requirements of this work assignment are specified in Schedule 1, Work Element III (Task III - Pre-Award Services, Subtask C - Bid Review, Part 4 - Review of Post-Bid and Pre-Award Contractor Submissions) and Work Element IV (Engineering Services During Remedial Construction, Tasks I, II, III, IV, and VII - Attend Pre-Construction Meeting, Review of Contractor Submissions, Project Inspection, Construction Records and Reports, and Final Remediation and Operation and Maintenance Reports).

Task 1: Work Plans and Background Review

Subtask 1.1: Project Work Plan. Within one week of notification of the original work assignment request from the NYSDEC Project Manager, the project cover letter was signed and returned by the Program Manager, Mr. Stephen Blair, acknowledging receipt of the proposed work assignment.

EEEPC's program manager, project manager, and director had a telephone discussion with NYSDEC's project manager regarding the components of the work assignment and any required scope and schedule changes. A level of effort (LOE) estimate and the associated cost for completing all tasks and deliverables are submitted for negotiation with this work plan.

Within the required 30 days of issuance of the work assignment, EEEPC prepared and submitted six copies of the original Work Plan for Remedial Construction Management. The purpose of this work plan was to:

1. Provide more detail of the scope of work, where necessary, to support EEEPC's LOE estimates in the project budget; and

2. Present a work plan that includes a Statement of Work, which describes and explains the purpose of the major tasks and subtasks; a detailed schedule with milestones and deliverables; a staffing plan; a MBE/WBE and Equal Employment Opportunity (EEO) utilization plan; and a proposed list of subcontractors.

NYSDEC accepted this original work plan and issued a Notice to Proceed (NTP) to EEEPC.

Subtask 1.2: Background Review and Site Visit. EEEPC will review the OU-1 and OU-2 Records of Decision (ROD); prepared by NYSDEC, dated March 1997 and March 1998, the Phase I and Phase II Remedial Investigation (RI) Reports, dated October 1996 and October 1997, the September 2000 Contract Documents, and Addendum #1 for the site, and other site-related documents to gain a thorough understanding of site conditions and the components of the selected remedy. This task also includes a one-day site visit by the project manager and project director. Site-related documents will be provided by NYSDEC.

Task 2: Pre-Award Services

Subtask 2.1: Pre-Bid Conference. EEEPC and the Site Representative (SR) attended the pre-bid meeting at the site with prospective bidders. At the pre-bid conference, EEEPC's project manager and the SR assisted the Department in recording attendance, answering technical questions, and preparing draft minutes of the meeting.

Subtask 2.2: Addenda. EEEPC assisted the Department in answering questions from prospective bidders and shall assist the Department in preparing the addenda to the September 2000 contract documents. The Department will be responsible for finalizing, stamping and sealing, copying, and distributing the addenda.

The Department asked EEEPC to prepare Addendum #3 to answer additional questions asked by contractors during the bid walks. The work and development of Addendum #3 included additional field sampling, meetings, and discussions with the design engineer, ENSR, preparation of the addendum modification of construction details, sign and sealing the addendum, and reproduction and shipping of 80 copies of Addendum #3 for distribution by the Department.

Task 3: Remedial Construction Management

The purpose of remedial construction management was to provide professional engineering services to properly manage and inspect remedial construction projects. These services included acting as liaison between NYSDEC and the Contractor on all issues related to the project, construction quality assurance, monitoring health and safety conditions, and completing record-keeping of all construction activities.

Subtask 3.1: Review of Contractor Submissions - 5-Day and 14-Day Submittals. After bids were opened and a Notice of Intent to Award was issued, the apparent low bidder was required to provide NYSDEC with a set of post-bid 5-day and 14-day submissions. These are in accordance with Section III, Article 5 and Section XI of the Supplementary Specifications, Section 01011, Parts 1.02 and 1.03 of the September 2000 contract documents.

EEEPC reviewed the following 5-day technical submittals for contract compliance:

- Plan of Operations (Work Plan)
- Progress schedule;
- Site-specific Health and Safety Plan (HASP);
- Sampling plan;
- Quality Assurance/Quality Control (QA/QC) plan;
- Blasting plan;
- Excavation and disposal of contaminated materials work plan; and
- Transportation plan.

EEEPC reviewed the following 14-day submittals for contract compliance:

- Final Plan of Operations (Work Plan);
- Final progress schedule;
- Final site-specific HASP;

- Final Sampling Plan;
- Final QA/QC Plan;
- Final blasting plan;
- Final Excavation and Disposal of Contaminated Materials Work Plan; and
- Final transportation plan.

Before the Contractor was given a Notice to Proceed, EEEPC and the SR logged and reviewed each of the written submissions. EEEPC estimated that each Contractor submittal required a minimum of three cycles of review and resubmission before each submittal was in compliance with the contract requirements. At that time, any electrical, process-control, or mechanical submittals were reviewed by EEEPC's MBE subconsultant, Joseph C. Lu Engineering and Land Surveying, P.C. (Lu Engineers). This review anticipated the submission of technical information on the air sparging/soil vapor extraction system at the conceptual phase only.

The Department also requested a post-bid document review meeting in Albany, New York, to discuss directly with the apparent low-bid contractor, TYREE Organization, Ltd. The meeting required the attendance of the project manager (PM) and SR.

Subtask 3.2: Attend Preconstruction Meeting. EEEPC's PM and the SR attended the preconstruction meeting, where a thorough review was made of the scope of work, the HASP, the comments made on the plans submitted with the bid and 5- and 14-day post-bid submissions, and the project schedule. In addition, lines of communication and reporting were established for technical and contractual matters. This meeting was held in the Department's Albany Offices. EEEPC prepared, revised, and distributed meeting minutes to all parties in attendance.

Subtask 3.3: Review of Contractor Submissions Following Contractor's Notice to Proceed. Under Section VIII, Article 1.4, of the Contract Documents, EEEPC reviewed the following Contractor submittals required 10 days after notice of award:

- Interim progress schedule by the Contractor for the first three months of work;

- Interim schedule of shop drawings, material, soil characteristics, sampling and analytical test result submission, for the first three months of work; and

- An interim schedule of values on forms provided by EEEPC for the first three months of work.

These submissions were coordinated and reviewed with NYSDEC. EEEPC assumed review and acceptance of these post- award submittals after two review cycles.

Following the Contractor's Notice to Proceed but before construction started, the Contractor submitted to EEEPC all submissions required by the contract under Section XI - Supplementary Specifications, Section 01011 Project Submittals, Part 1.04. EEEPC recorded all submissions to the log system (see Subtask 3.5) and tracked them through the review process. EEEPC evaluated submittals according to project objectives and requirements and forwarded them to NYSDEC with written recommendations.

The electrical, process control, and mechanical shop drawing submittals for the air sparging/soil vapor extraction system were reviewed by EEEPC's MBE subconsultant, Lu Engineering. This review anticipated the submission of technical information with a final submission for construction.

EEEPC obtained and reviewed shop drawings, soil test results, material test results, and record drawings for the duration of the project and made recommendations for acceptance or rejection.

At the request of the Department, EEEPC's PM and SR performed an on-site review of the treatment unit being manufactured for the project. This review included one trip for two people to Providence, Rhode Island, where the unit was manufactured.

EEEPC reviewed analytical results generated during construction according to Section 01425 of the Technical Specifications, including quality assurance (QA) of analytical data and review of waste-character profile sheets. EEEPC assumed that the QA of the analytical data would be similar to the continuous effort provided to NYSDEC for the Haight Farm Site and that similar review forms could be pre-approved for use. Copies of similar review forms are included for review (see pages 2-15 and 2-16). The QA review was be performed on an ongoing basis and samples were required for general cleanup and clearance status. According to the bid sheets (Items UC26A to UC26X), a total of 340 samples were to be

taken for analysis. The data usability review and summary was subcontracted by EEEPC. This review was be performed by Chemworld Environmental, Inc., and submitted to SR for review and discussion with the Contractor.

EEEPC signed, as agent for NYSDEC, manifests and bills of lading for disposal of hazardous and non-hazardous wastes. Proper shipping requirements were the responsibility of the Contractor, even though EEEPC personnel signed the manifests. EEEPC ensured that the waste was properly disposed of by collecting copies of the Contractor's disposal documentation from the disposal facility(s). This documentation of disposal was forwarded to NYSDEC.

EEEPC continually monitored the Contractor's progress, reviewed the Contractor's progress schedule at the bi-weekly project meetings (notifying the Contractor of its status), and, where necessary, reviewed recovery schedules.

EEEPC reviewed all Contractor Applications for Payment (CAP) on the NYSDEC job forms provided to ascertain that the quantities were accurate and line item extensions were correct. Furthermore, the engineer provided recommendations for CAP processing based upon the Contractor's compliance with performance criteria prior to payment, as stated in the contract documents.

Subtask 3.4: Project Inspections. EEEPC assisted NYSDEC in enforcing all requirements of the contract documents by providing an experienced SR during all construction activities. EEEPC's SR was on site a total of 48 weeks during the construction phase and during the startup, shakedown, and O & M phases. Per the contract, when the SR worked more than the standard 40-hour work week, the Contractor was required to compensate the Department's consultant, EEEPC for the overtime incurred. EEEPC's PM was on site for 11 semi-monthly project meetings, one substantial completion inspection, one final inspection, and occasionally (a maximum of five visits) during the startup and shakedown of the O & M phases of construction.

As a result of a number of project delays caused by the contractor, the project inspection schedule has increased drastically. The delays caused by the contractor included:

- Delays in project startup mobilization (3 weeks);

- Difficulties in obtaining a subcontractor shoring plan (5 weeks);

- Subcontractor delays in providing Occupational Safety and Health Administration (OSHA) trained staff for excavation work (3 weeks); and

- Delay caused by the need for an additional shoring plan for the second trench excavation (2 weeks).

As a result of these 13 weeks of contractor delay, additional project inspection time was required by EEEPC. Further, these delays by the contractor caused the project to be pushed into the cold-weather season, necessitating demobilization and remobilization in the next construction year.

Following approval of a revised construction schedule, the contractor further delayed work on the constructed treatment system and performance trials. Further project inspection was required to obtain substantial completeness. Approximately 200 calendar days, or an additional 29 weeks of inspection, were required to complete the project.

EEEPC's SR notified, using nonconformance forms, the Contractor and NYSDEC once the Contractor failed to perform the work specified by the contract. The SR recommended to NYSDEC the acceptance, disapproval, or rejection of the Contractor's work. EEEPC issued instructions, field orders, interpretations, or clarification of contract language to the Contractor with NYSDEC's prior knowledge. Once a change order was required, EEEPC's PM negotiated, developed, and submitted the change order to NYSDEC along with an independently developed, detailed cost estimate and other pertinent documentation. EEEPC's PM, with the assistance of the SR, documented, evaluated, and recommended a course of action for all claims and disputes with the Contractor. EEEPC's PM and SR attended meetings required by the Department, including those with the public. It was assumed that two public hearings regarding the project were to be held during the contract period.

EEEPC discussed any discrepancies of the Contractor's Site-Specific HASP with the Contractor's Site Safety Officer and documented them in the daily or weekly log. EEEPC requested revisions to the HASP when inconsistencies were identified between the HASP and the Contractor's actions. EEEPC attended the daily and weekly site safety meetings required by the Contrac-

tor's Site Safety Officer. In the event that the Contractor continued to perform inconsistently with the HASP, NYSDEC was consulted and EEEPC recommended that a stop work order be issued. If the work continued and the SR considered the work to be dangerous, the SR contacted the NYSDEC project manager and advised that the job be shut down until HASP requirements were met.

EEEPC and the SR conducted an inspection when Parts A, B, and C Substantial Completion of the Work certificates were submitted and Part A, B, and C Final Completion were submitted, as identified in Appendix A, Section VI of the contract documents for the Davis-Howland project. When Substantial Completion certificates were issued, EEEPC prepared a detailed list of work items unfinished and estimated the value of the work that must be completed.

EEEPC participated in the final inspection to determine whether all work had been completed and met the requirements of the contract. After these inspections, EEEPC delivered to the Department written notice of the disposition of the project. EEEPC determined that the project had been satisfactorily completed according to the contract, and certification of this fact was made to the Department by EEEPC. One complete set of original files, reports, and all other documentation is to be turned over to the Department at the completion of the project. In addition, EEEPC will produce one (1) copy on microfilm for the Department.

Subtask 3.5: Construction Records and Reports. Through the effort of the other tasks, EEEPC maintained complete and detailed records associated with all construction-related activities for the duration of the project. The master file for these records was kept at the site project office and in EEEPC's Buffalo offices. The effort costed for this task was for the weekly and monthly narrative status reports (to be submitted to the NYSDEC project manager) and for the compilation and microfilming of all records. These records and reports included, but are not limited to, the following:

- Daily work completed, reports, visitors on site, and important conversations (prepared by EEEPC);
- Copies of the Contractor's daily report of personnel, material, and equipment used (verified by EEEPC);
- Proposed change orders (PCOs);

- All nonconformance forms documenting the Contractor's deviation from work specified in the contract, and any instructions issued regarding deviations (prepared by EEEPC);
- Requests for further information (RFIs) or clarifications to the contract;
- Event reports documenting unusual circumstances (weather conditions, labor disputes, environmental health and safety hazards, etc.) (prepared by EEEPC);
- Copies of the Contractor's daily site visitors log, security log, health and safety log, drum log, air monitoring log, and sampling log (verified by EEEPC);
- Contractor's progress record of the work schedule (prepared by EEEPC);
- General files, including correspondence, and other documentation related to the project (maintained by EEEPC);
- Job meeting minutes (prepared by EEEPC);
- Weekly and monthly narrative status reports (prepared by EEEPC and submitted to the NYSDEC project manager);
- Logs and records of Contractor's submittals, including shop drawings, change orders, soil tests, material tests, and actions taken (e.g., approval) (maintained by EEEPC);
- Copies of analytical data obtained, data usability reports, and analytical results for clearance, operations and maintenance and closure (verified by EEEPC);
- Digital construction photos (approximately 50 photographs per month placed on CD-ROM for NYSDEC review) (prepared by EEEPC);
- Record drawings (maintained by Contractor, verified by EEEPC);
- Records of telephone conversations (prepared by EEEPC);
- Copies of Contractor's manifests and bills of lading for disposal of wastes (verified by EEEPC);

- Copies of Contractor's certification of disposal (verified by EEEPC); and

- Copies of certifications of substantial and final completion along with identification of incomplete work items (prepared by EEEPC).

Subtask 3.6A: Final Remedial Construction. EEEPC will prepare a final remediation report for approval by NYSDEC. The report will include a description of the objectives of the project, all variations from it, and a performance evaluation of the air sparging and soil vapor extraction system. A rough outline of the report follows:

1. Background
- 1.1 Site Description and History
- 1.2 Summary of Design Objectives

2. Summary of Remedial Work
- 2.1 General Overview
- 2.2 Variations from Contract
- 2.3 Quantity and Cost Adjustments
- 2.4 Change Order Summary
- 2.5 Evaluation of Treatment System

3. Engineer's Certification

Appendix

A Change Orders

B Summary of Analytical Data

C Record Drawings

D Photo Index

All digital photos taken will include the date and a brief log description of the work photographed. EEEPC proposes putting the report and photos on a CD-ROM. The report will also summarize the volume of hazardous soil and solid waste disposed of and the verification sample results.

Subtask 3.6B: Final Engineering Report - O & M. EEEPC will prepare an addendum to the remedial construction certification report for the Department following Part C final completion. The

report shall include a performance evaluation of the recovery and treatment system installed and operated by the Contractor. The engineering report will evaluate the Contractor's operation and maintenance of the treatment systems, verify that they were operated and maintained according to the September 2000 contract and addendums, and describe all variations from the contract.

Task 4: O & M – 2003-2004

The purpose of the operations and maintenance task is to provide professional engineering services for proper management, inspection, operation, and maintenance of the soil vapor extraction (SVE), air sparging (AS), groundwater pumping and treatment systems for a maximum of 12 months at the Davis Howland Oil Company Site.

EEEPC, Lu Engineers, and Niagara Environmental Dynamics, Inc. (NEDI) will maintain, operate, and report on the systems' operations for a period of 12 months after restarting the treatment system. The SVE, AS, and groundwater pumping and treatment systems consist of a set of eight interior SVE points, 47 air injection points, three groundwater extraction wells, two groundwater pumping wells, a trailer-mounted treatment system to treat shallow and bedrock groundwater beneath the site, and a catalytic thermal oxidizing unit for the oxidation/incineration of volatile organic compounds (VOCs) from the air stripping unit.

The site and treatment system will be managed in accordance with the September 2000 Remedial Construction Contract Documents and Addendums and the site O & M manual, with the exception of initial sampling and monitoring, which will occur biweekly after the first month of monitoring (instead of weekly).

NEDI will initially conduct a review of the overall system and will have an understanding of the overall remedial system. Also as a part of the initial review, NEDI will review and perform any balancing of the system to improve its performance. The initial review will also include evaluation of any equipment that needs cleaning, removal, and replacement. All O & M work will be performed with oversight from Lu Engineers who inspected and observed the installation of the entire treatment system.

NEDI and Lu Engineers will provide staff members for weekly system maintenance. Weekly system maintenance will include, at a minimum, items noted in the O & M program procurement. System measurements will include temperature, water levels, pressure, and vacuum and flow rates at the AS/SVE points.

At the start of this program, NEDI will collect influent and effluent air samples from the CatOX unit and influent and effluent groundwater samples for performance and discharge monitoring. Sampling and analysis will follow the schedule provided in Attachment A of the O & M program procurement. All laboratory analyses will be performed by EEEPC's laboratory in accordance with the latest edition of the New York State Department of Health (NYSDOH) Analytical Services Protocol (ASP) and per the requirements in the original contract documents.

For overall budgeting purposes, O & M work consist of 24 field visits to perform O & M services without sampling. Twenty-eight site visits will be conducted to perform O & M services with sampling. O & M data and activities will be detailed in monthly reports to NYSDEC per the same requirements in the Contract Documents. The reports will include all field measurements, operating charts, O & M performed, and evaluation of the system performance data.

For treatment equipment reliability purposes, eight unscheduled site visits have been included to evaluate and maintain system operational shutdowns.

The first report is expected to be submitted in April (assuming that EEEPC will take over the system in late March). EEEPC will prepare a final yearly system report for the overall treatment and evaluation of the system.

Task 5: Operations and Maintenance - 2004 - 2005.

Subtask 5.1: Remedial System Operations and Maintenance. The purpose of the operations and maintenance task is to provide continued professional engineering services for proper management, inspection, operation, and maintenance of the SVE, AS, and groundwater pumping and treatment systems for another 12 months at the Davis Howland Oil Company Site.

EEEPC, Lu Engineers, and NEDI will continue to maintain, operate, and report on the systems' operations for another 12 months. As previously stated in Task 4 above, the SVE, AS, and groundwater pumping and treatment systems consist of a set of eight interior SVE points, 47 air injection points, three groundwater extraction wells, two groundwater pumping wells, a trailer-mounted treatment system to treat shallow and bedrock groundwater beneath the site,

and a catalytic thermal oxidizing unit for the oxidation/incineration of volatile organic compounds (VOCs) from the air stripping unit.

The site and treatment system will continue to be managed in accordance with the September 2000 Remedial Construction Contract Documents and Addendums and the updated site O & M manual, with the exception of the revised permit from the County of Monroe, Division of Pure Waters, for monthly sampling and analysis.

NEDI will continue to review and perform any balancing of the system to improve its performance. All O & M work will be performed with limited oversight from EEEPC and Lu Engineering, who inspected and observed the installation of the entire treatment system.

NEDI provide staff members for weekly system maintenance. Weekly system maintenance will include, at a minimum, items noted in the revised O & M program procurement. System measurements will include temperature, water levels, pressure, and vacuum and flow rates at the AS/SVE points.

NEDI will continue to collect influent and effluent air samples from the CatOX unit and influent and effluent groundwater samples for performance and discharge monitoring. Sampling and analysis will follow the schedule provided in Attachment A of the original O & M program procurement. All laboratory analyses will be performed by EEEPC's laboratory in accordance with the latest edition of the New York State Department of Health (NYSDOH), United States Environmental Protection Agency (USEPA) Analytical Services Protocol (ASP) and per the requirements in the original contract documents.

For overall budgeting purposes, O & M work will consist of 40 field visits to perform O & M services without sampling, and 12 site visits will be conducted to perform O & M services with sampling. O & M data and activities will be detailed in monthly reports to NYSDEC per the same requirements in the Contract Documents. The reports will include all field measurements, operating charts, O & M performed, and evaluation of the system performance data.

For treatment equipment reliability purposes, eight unscheduled site visits have been included to evaluate and maintain system operational shutdowns. The equipment manufacturer of the catalytic oxidizing unit, Global Environmental, Inc., will also perform a

preventative maintenance evaluation (PME) and servicing to ensure continued operation of the treatment equipment at a high operating percentage.

The continuing O & M program will to pay the utility service invoices for electrical, gas, and sewer district facilities.

The next monthly compliance report for the renewal of O & M services is expected to be submitted in June 2004, assuming that EEEPC will continue to operate and maintain in April 2004. EEEPC will prepare a final yearly system report for the overall treatment and evaluation of the system.

Subtask 5.2: Groundwater Well Sampling and Analysis. Part of the next year's O & M program is an evaluation of how well groundwater around the site was cleaned up by operation of the remedial system over the last two years. This work assignment revision proposes to evaluate the current monitoring, purge and sample the existing and new on-site wells, analyze the groundwater, and review the results against prior analytical information.

After the results of analysis have been received, EEEPC will prepare a report that discusses the results of the findings. The report will evaluate the current analytical information against the historical information provided in the Remedial Investigation and Limited Site Data.

Task 6: Soil Gas Survey and Indoor Air Quality Review

As a result of VOCs detected in the 2004 Groundwater Study around the Davis Howland Oil Company site, an active soil gas survey and property ambient air monitoring program off site and downgradient of the site will be conducted. The purpose of the soil gas survey is to determine the current location and concentrations of subsurface VOC contamination that may impact the downgradient properties and receptors. The purpose of the ambient air monitoring is to determine and evaluate the concentrations of VOC contamination within buildings and facilities surrounding the site as a result of on-site contamination. The information developed from the survey and analysis will be utilized for future planning efforts and possible mitigation purposes.

Subtask 6.1: Active Soil Gas Survey. Active soil gas sampling will be conducted for VOC analysis in the upper overburden layer (6 to 12 feet below ground surface) surrounding buildings, facilities, or vacant properties at exterior locations on a grid with an approximate 55-foot station and line spacing. The active soil gas

sampling will be conducted at 50 exterior locations including five duplicates. The general spacing grid will allow for coverage of the area downgradient of the site to confirm the presence or absence of VOCs in soil.

Subtask 6.2: Indoor Air Quality Survey. In response to the revised NYSDOH criteria for indoor air quality, 10 residences or facilities downgradient of the site will be selected for indoor air quality sampling. The residences will be selected based on accessibility provided by NYSDEC. One sub-slab basement and two ambient air samples will be collected from each residence/facility. In addition, one outdoor ambient air sample will be collected each day that sampling is conducted within the residences/facilities. Also, as a part of the study, samples will be taken from the six SVE points installed under the remedial project inside the 200 Anderson Avenue facility. If standing water is observed in the facilities or sumps, samples will be taken.

All air samples will be analyzed at EEEPC's Analytical Service Center (ASC) for the selected chlorinated VOCs via USEPA Compendium Method TO-14A using selective ion monitoring. A detection limit of 1 microgram per square meter ($\mu g/m^3$) must be obtained. A 3-day turnaround time (TAT) will be provided for all air analyses. Water samples will be analyzed for USEPA 40 CFR 136 Methods 601 and 602 for purgeable halocarbons and aromatics. Water samples will be performed using a 14-day TAT.

After the completion of the fieldwork and once all the analytical results have been received, EEEPC will produce a brief letter report summarizing the soil gas survey and indoor air quality information. Analytical results for two primary contaminants of interest and total VOCs will be presented as color concentration maps utilizing Surfer software for mapping.

Figure 3 Data Usability Summary Report (DUSR) Form

Ecology and Environment, Inc., (E & E) Data Usability Summary Report (DUSR)	
Prepared by:_____	**Date Prepared:**_____
Project Name/E & E #:_____	**Lab Name:**_____
Lab Report No.(s): _____ **Report Date (s):** _____ **Date Sample(s) Taken:** _____	**Sample Matrices:** ? Water ? Soil **Field QC Samples:** _____
The analytical data provided by the laboratory were reviewed for precision, accuracy, and completeness per NYSDEC Division of Environmental Remediation Guidance for the Development of DUSRs (June 1999). Specific criteria for QC limits were obtained from the Contractor QAPP. Compliance with the project QA program is indicated on the attached checklist and any major or minor concerns are listed below. The checklist also indicates whether data qualification is required and/or the type of qualifier assigned. The contractor should add data qualifiers to the sample results. Any data qualified "R" as rejected must be re-sampled and re-analyzed.	
Sample Summary	
Major Concerns:	
Minor Concerns:	

Figure 4 DUSR Checklist for Laboratory Report

DUSR CHECKLIST FOR LABORATORY REPORT #: _____ LABORATORY:		CIRCLE ONE	QUALI-FIERS
1)	Statements made in the Analytical Data Case Narrative supported by the analytical data or indicated severe concerns?	Yes No NA	
2)	Coolers received properly with no discrepancies?	Yes No NA	
3)	Chain of custody records present and completed correctly?	Yes No NA	
4)	Samples correctly preserved and documented at lab?	Yes No NA	
5)	Analysis run as per the method in the work plan?	Yes No NA	
6)	Holding times met for all matrices and analytical parameters?	Yes No NA	
7)	Instrument performance checks within acceptance criteria?	Yes No NA	
8)	Initial calibrations run correctly and within acceptance criteria?	Yes No NA	
9)	Daily calibrations run correctly and within acceptance criteria?	Yes No NA	
10)	Method blanks ≤ reporting limit and at rate of 1/20 samples?	Yes No NA	
11)	Field blanks ≤ reporting limit and run per work plan?	Yes No NA	
12)	Compounds found in blanks common lab and field contaminants?	Yes No NA	
13)	Surrogates within the acceptance limits?	Yes No NA	
14)	MS/MSD or MS/D analyzed at rate of 1/20 samples?	Yes No NA	
15)	MS/MSD or MS/D meet the %R and RPD acceptance criteria?	Yes No NA	
16)	LCS or LSCD analyzed at rate of 1/20 samples?	Yes No NA	
17)	LCS/LCSD's meet the %R and RPD acceptance criteria?	Yes No NA	
18)	Internal standards meet the acceptance criteria for GC/MS?	Yes No NA	
19)	Field duplicate results ≤ 40 RPD waters and ≤ 70 RPD soils?	Yes No NA	
20)	Dilutions made as required and were reporting levels elevated?	Yes No NA	
21)	Discrepancies noted when review of raw data (instrument printouts and chromatograms) was performed?	Yes No NA	
22)	Did discrepancies noted above significantly impact the usability of the data based on data needs and objectives of the project?	Yes No NA	

Comments: _____

_____

Completed by: _____ **Date:** _____

3 Progress Schedule (Revised)

The attached revised schedule was developed using the target dates presented by EEEPC's Project Manager and through discussions with NYSDEC's Project Manager.

Work Assignment Elements	Schedule
Initial consultant site visit	October 24, 2000
Consultant submits draft work plan	December 4, 2000
NYSDEC's comments on work plan received	December 14, 2000
Consultant submits final work plan	December 21, 2000
Contract pre-bid meeting	January 17, 2001
EEEPC submits addendum to NYSDEC	February 20, 2001
NYSDEC issues addendum to prospective bidders	February 21, 2001
Davis-Howland bids opened	February 28, 2001
Consultant reviews pre-award submittals	March 13-30, 2001
Post-bid submittal review meeting	April 11, 2001
Contractor issued Notice to Proceed	April 30, 2001
Preconstruction meeting	May 8, 2001
Construction begins (22 weeks)	May 14, 2001

3. Progress Schedule

Work Assignment Elements	Schedule
Review of shop drawings	May 14, 2001 to August 24, 2002
Part A, substantial completion	June 24, 2002
Part B, substantial completion	August 24, 2002 (Actual - 9/21/02)
Submit final construction report	November 30, 2002
O & M Period (26 weeks)	February 24, 2003
Part C, substantial completion	March 21, 2003
Submit final O & M report	May 6, 2003
Treatment System Operation and Maintenance 12-Month Program - 2003-2004	May 2003 to May 2004
Treatment System Operation and Maintenance 12-Month Program - 2004-2005	May 2004 to May 2005
Groundwater Well Sampling and Analysis	June 2004
Report and Evaluation of Analytical Groundwater Results	August 2004
Prepare work plan for acceptance in the scope of services to be provided	October 2004
Perform field work in obtain active soil gas and indoor air quality data	November 2004
Prepare draft report of analytical findings	December 2004
Final submission of report	December 2004

4

Subcontracting Plan

Construction management work assignments present many opportunities for subcontracting. EEEPC examined the scope of this project and determined that the best use of subcontractors would be microfilming project records, analyzing QA/QC data usability, reviewing electrical/control and mechanical submissions of the air sparging/soil vapor extraction system, and construction and O & M oversight.

EEEPC proposes to use an MBE firm for electrical/control and mechanical equipment reviews, and oversight of the construction and O & M work under the contract.

EEEPC also proposes to use a WBE firm for the QA/QC review of analytical data required under the contract's scope of work (see Section 7).

EEEPC proposes to use Lu Engineers, an MBE firm, to oversee the O & M subcontractor for the 24 months of O & M work (2003-2005).

EEEPC proposes to use NEDI for the O & M services under EEEPC's scope of work. NEDI was selected after competitive bidding for the project. Copies of the bids are provided at the end of the Work Plan (see Appendices A and B).

Microfilming will be performed on all post-construction documents per NYSDEC scope of services. This work is intended to be subcontracted to Biels Information Technology Systems, Inc. Currently, no MBE/WBE firms are certified for microfilming in New York State (see Appendix C).

EEEPC proposes to use its Analytical Service Center for all analyses under the O & M task. Pricing and quotes for analyses is provided in Appendices D and E.

EEEPC proposes to use Lu Engineers to perform the soil gas and indoor air quality work. Support staff from EEEPC will be on site to ensure that quality is maintained and to support field operations in transport of samples to EEEPC's ASC.

5 Cost Assumptions and Budget

EEEPC's proposed revised budget for Work Assignment Modification 23.5 is $991,711, with the budget for the next soil gas/IAQ survey task as $110,782. The budget and tasks are predicated on the following assumptions:

- EEEPC will receive the ROD for OU1, the ROD for OU2, Contract Documents, Limited Site Data, addenda, and other pertinent design documents for initial background review and understanding of the intent of the project;
- The initial scoping session with NYSDEC will be a conference call;
- The site visit will be made by two members of EEEPC's staff and will be performed under the background review phase;
- The preconstruction meeting will take place in the NYSDEC offices in Albany. EEEPC's Project Manager and SR will attend;
- The revised inspection sub-task includes 50 weeks of full-time inspection and 26 weeks of part-time O & M inspection.
- EEEPC will provide disposable protective clothing for two people during the initial site visit and bid walk;
- The inspection task does not include costs for protective clothing. It is expected disposable protective clothing will be provided daily to the SR by the Contractor;
- The post-bid submittal review meeting in Albany, New York, will be attended by EEEPC's PM and SR.

- Preparation of three addenda that will identify additional sampling locations and modifications to construction details, as requested by the Department;

- Signing, sealing, reproduction, and shipping of the addenda;

- At the request of the Department, EEEPC will attend a meeting to review the manufacturing of the treatment unit being manufactured for this project. The meeting will require one day of travel for two people to Providence, Rhode Island;

- EEEPC will review analytical data of the analyses performed by the Contractor. According to the bid schedule, 340 analyses are proposed for the Contractor to perform. This review will be performed under the inspection task by Chemworld Environmental, which will provide Data Usability Summary Report (DUSR) reviews of the analytical data from the project;

- The inspection and O & M subtasks include travel costs for 28 visits to the site by EEEPC's PM and 163 daily visits by EEEPC's SR;

- The inspection sub-task includes the purchase of a digital camera, which will be turned over to NYSDEC when the work assignment has been completed; and

- The inspection task includes digital internet cable access for 50 weeks during operation of the field office.

O & M Services

- Analytical requirements will be reduced to sampling by the subcontractor every other week during the 12-month period.

- Oversight services will include only reviewing and reporting of the subcontractor's O & M work.

- Contingency costs applied are expected to be used only in the case of major equipment repair problems.

Task 5

- Analytical services will be performed by EEEPC's ASC.

Task 6

- NYSDEC will obtain access to all properties proposed under the new task work.
- The report will be submitted draft for internal review and comment prior to finalizing.
- All sample analyses will be performed at EEEPC's ASC.

Section 5
Schedule 2.11(a) Summary of Work Assignment Price

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

1.	Direct Salary Costs (Schedule 2.11(b))			$100,995
2.	Indirect Costs			$186,841
3.	Direct Non-Salary costs (Schedules 2.11(c) and (d))			$132,790
	Subcontract Costs			
	Cost-Plus-Fixed-Fee Subcontracts (Schedule 2.11(e))			
	Name of Subcontractor	Services to be Performed	Subcontract Price	
	A. Joseph C. Lu Engineering and Land Surveying, P.C.	Document Review	$4,430	
	B. Joseph C. Lu Engineering and Land Surveying, P.C.	Document Review	$2,362	
	C. Joseph C. Lu Engineering and Land Surveying, P.C.	Additional Document Review	$1,231	
	D. Joseph C. Lu Engineering and Land Surveying, P.C.	Initial 5 Day Electrical / Mechanical Review	$4,045	
	E. Joseph C. Lu Engineering and Land Surveying, P.C.	Review of Contractor General Submittals	$125,208	
	F. Joseph C. Lu Engineering and Land Surveying, P.C.	Additional Submittal Review	$3,611	
	G. Joseph C. Lu Engineering and Land Surveying, P.C.	PC Oversight	$126,580	
	H. Joseph C. Lu Engineering and Land Surveying, P.C.	O&M Oversight	$43,000	
	I. Niagara Environmental Dynamics		$0	
	J. Lu Engineers		$9,514	
	K. Anguil Env.	Annual Catox Maintenance	$6,500	
	G. Joseph C. Lu Engineering and Land Surveying, P.C.	Soil Gas and Indoor Air Sampling	$25,155	
	H. Joseph C. Lu Engineering and Land Surveying, P.C.	Report Review	$1,600	
4.	Total Cost-Plus-Fixed-Fee Subcontracts		$353,236	
	Unit Price Subcontracts (Schedule 2.11(f))			
	Name of Subcontractor	Services to be Performed	Subcontract Price	
	A. Chemworld	Analytical Data Usability	$6,246	
	B. Biel's Information Technology	Micro-filming Services	$767	
	C. Niagara Environmental Dynamics	O&M Services	$56,642	
	D. Telephone - Autodialer Service per month	Services	$600	
	E. Gas Utilization per month - RG&E	Services	$7,200	
	F. Electric Utilization per month	Services	$13,200	
	G. Frontier Communication	Telephone Service	$900	
	H. RG&E	Gas Service	$15,800	
	I. RG&E	Electric Service	$12,000	
	J. County of Monroe	Pretreatment Charges '03-'04	$5,600	
	K. County of Monroe	Pretreatment Charges '04-'05	$5,800	
	I. Niagara Environmental Dynamics	O&M Services	$65,000	
5.	Total Unit Price Subcontracts		$189,755	
6.	Subcontract Management Fee		6,506	
7.	Total Subcontract Costs (Lines 4+5+6)			549,497
8.	Fixed Fee			21,588
9.	Total Work Assignment Price (Lines 1+2+3+7+8)			$991,711

NOTE: Rates are in accordance with Section 2.10 of the State Superfund Standby Contract #D003493

Section 5
Schedule 2.11(b) Direct Labor Hours Budgeted

ECOLOGY AND ENVIRONMENT ENGINEERINGg, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

DIRECT LABOR HOURS BUDGETED - BY NSPE GRADE

Rates for Year Ending February 1, 2001

	IX	VIII	VII	VI	V	IV	III	II	I		Labor	Overhead		Fee	
NSPE Grade	IX	VIII	VII	VI	V	IV	III	II	I	Total	Cost	185%	SUBTOTAL	7.50%	TOTAL
Task 1-3 Rate/Hour	$67.65	$46.43	$37.50	$33.83	$27.96	$23.56	$20.90	$18.53	$14.22	Hours					
Task 4 Rate/Hour	$73.88	$54.21	$46.87	$39.85	$34.15	$28.14	$25.12	$22.40	$17.49						
TASK DESCRIPTION															
Task 1. Work Plan and Background Review	0	0	64	0	54	4	10	8	0	140	$4,361	$8,068	$12,429	$932	$13,361
Task 2: Pre-Award Services	0	3.5	68	0	150	9	41	50	5	327	8,973	16,600	25,573	1,918	27,491
Task 3: Remedial Construction Management	0	3	117	475	660	95	65	64	113	1,592	45,439	84,062	129,501	9,713	139,214
Task 4: Operations and Maintenance (O&M) - 12 months	0	0	8	106	0	0	227	8	0	349	10,481	19,390	29,871	2,240	32,111
Task 5 - O&M 2004-2005	0	0	8	132	0	128	180	122	0	570	16,491	30,508	46,999	3,525	50,524
Task 6: Soil Gas and IAQ Review	0	0	16	34	240	108	32	40	12	482	15,250	28,213	43,463	3,260	46,723
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Est. Direct Labor Hours	0	7	281	747	1,104	344	555	292	130	3,460					
Est. Direct Labor Cost	$0	$302	$10,613	$25,909	$30,868	$8,105	$12,557	$5,442	$1,849	TOTALS	$100,995	$186,841	$287,836	$21,588	$309,424

Engineer/Contract # **Ecology and Environment Engineering, P. C.**
Project Name: **Davis Howland Site**
Work Assignment No.: **D003493-23.5**

Date Prepared: **12/6/00**
Date Revised: **10/14/04**

Schedule 2.11 (b-1)
Direct Administrative Labor Hours Budgeted

NSPE Labor Classification	9	8	7	6	5	4	3	2	1	Total No. Of Direct Administrative Hrs. Budgeted
Task 1										
Task 2-**Pre-Award Services**					6	4	2	2		14
Task 3-**Construction Mngt.**					40	17	6	5		68
Task 4- **O&M Services '03**					2			12		14
Task 5- **O&M Services '04**					4	12	2	2	2	22
Task 6 - **Soil Gas / IAQ '04**					12	2	2	2	1	19
Task 7										
Task 8										
Task 9										
Task 10										
Task 11										
Task 12										
Total Hours					64	35	12	23	3	137

Contract/Project administrative hours would include (subject to contract allowability) but not necessarily be limited to the following activities:

1. Work Plan Development
- Conflict of Interest Check
- Develop budget schedule sand supporting documentation

2. Review work assignment progress
- Conduct progress reviews
- Prepare monthly project report
- Update WA progress schedule
- Prepare monthly M/WBE Utilization Report

3. Review work assignment costs
- Prepare monthly cost control report
- Cost control rev

4. CAP Preparation
Oversee and prepare monthly CAP
Respond to payment issues/ disallowables
NSPE list updates
Equipment Inventory

5. Manage subcontracts

6. Implement and manage program management and staffing plans

7. Conduct Health and Safety Reviews

8. Word processing and graphic artists

9. Report editing

Contract/Project administration hours would not Activities such as:

1. QA/QC reviews
2. Technical oversight by management
3. Develop subcontracts
4. Work Plan development
5. Review of Deliverables

Section 5
Schedule 2.11(c) Direct Non-Salary Costs

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

ITEM	Maximum Reimbursement Rate	Unit	Estimated No. of Units	Total Estimated Costs
A. IN-HOUSE COSTS*				
Communication Costs	$ 5.00	Call	563	2,815.00
Reproduction	$ 0.05	Page	34,630	1,731.50
Blueprinting	$ 1.75	Page	23	40.25
CAD Computer Usage	$ 10.00	Hour	577	2,396.00
Protective Clothing: Level D	$ 15.00	Day	22	330.00
Protective Clothing: Level C	$ 50.00	Day	-	-
Protective Clothing: Level B	$ 70.00	Day	-	-
Shipping: Lab Samples		lbs.	-	-
Shipping: Equipment		lbs.	-	-
Shipping: Other Fedex Priority	$ 22.00	5 lbs.	11	242.00
Postage (FED-EX PRIORITY)	$ 17.00	2 lbs.	42	714.00
Purchased Items - Incidentals		Lump Sum		3,129.00
Outside Equipment Rental		Lump Sum		1,650.00
Miscellaneous Field Supplies/ODCs		Lump Sum		2,248.00
E&E Analytical Services		Lump Sum		109,155.00
			Subtotal	124,450.75
B. MISCELLANEOUS				
1. TRAVEL				
Airfare: Buffalo/Albany	$ 504.00	RT	6.00	3,024.00
Per Diem: Albany	$ 34.00	Day	1.00	-
Per Diem: Rochester	$ 34.00	Day	-	-
Lodging: Albany	$ 70.00	Night	-	-
Auto Rental	$ 50.00	Day	3.00	150.00
Mini Van Rental	$ 70.00	Day	16.00	1,120.00
Local Mileage	$ 0.33	Mile	9,871.00	3,241.28
Parking	$ 9.20	Day	5.00	46.00
Gasoline/Tolls	$ 8.05	RT	60.00	757.50
			Subtotal	8,338.78
TOTAL DIRECT NON-SALARY COSTS				**$ 132,790**

NOTES: *PPE Costs are estimated. Actual costs will be billed.

Section 5
Schedule 2.11(d) Equipment Usage Schedule

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

ID No	ITEM	Maximum Reimbursement Rate	Time Period	Estimated No. of Periods	Estimated No. of Units	Total Estimated Cost

NO EQUIPMENT RENTAL CHARGES ARE ALLOWED PER STANDBY CONTRACT

TOTAL EQUIPMENT USAGE

Work Assignment No. D003493 -23.5
Assignment Modification: 10/14/04

Schedule 2.11(d) 1
Equipment Purchased Under the Contract
Davis Howland Oil Company Site

Item	Estimated Purchase Price	O&M Rate[1] ($ per month)	Terms of Usage (Months)	Estimated Usage Cost (Col. 2 +[3x4])
Digital Camera - Sony	$700.	---	18	$700.

Total $ 700.00

[1]The O&M rate is reimbursable only while the equipment is in the custody of the Engineer

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE
1. Joesph Lu Engineering	Mechanical, electrical, and process control reviews	$4,045.00
2. Joseph Lu Engineering	Construction Oversight services	$132,000.00
3. Joseph Lu Engineering	Additional Pre-award and Oversight Services	$4,842.15
4. Joseph Lu Engineering	Additional Oversight Services	$126,580.00
5. Joesph Lu Engineering	Operation & Maintenenace Oversight '03	$43,000.00
6.Joseph Lu Engineering	Operation & Maintenenacc Oversight '04	*$9,514.00*
7. Joseph Lu Engineering	Soil Gas / IAQ - '04	*$26,755.00*
	Total	***$346,736.15***

A.Direct Salary Costs

Professional Responsibility Level	Labor Classification	Avg. Reimbursement Rate ($/hr)	Max. Reimbursement Rate	Est. # Hours	Est. Direct Salary Cost (Ave. Reimb. Rate)
Item 1. Sr. Project Eng.	V	$ 33.33	$ 33.33	48	$ 1,599.84
Item 2. Project Eng.*	IV	$ 29.57	$ 29.57	1643	$ 48,583.51
Item 3. Project Eng.**	IV	$ 30.46	$ 30.46	176	$ 5,360.96
Item 4. Project Eng.**	IV	$ 25.75	$ 30.46	1950	$ 50,212.50
Item 5. Project Eng.***	IV/III	$ 30.46	$ 30.46	660	$ 20,103.60
Item 6. Project Eng.***	IV/III	$ 30.46	$ 30.46	176	$ 5,360.96
Item 7. Project Eng.***	IV	$ 30.46	$ 30.46	200	$ 6,092.00
				Total Direct Salary Costs	**$ 137,313.37**

* rate for year 2001
** rate for year 2002
*** rate for year 2003/2004

Footnotes

1) These rates will be held firm until April 1, 2002

2) Reimbursement will be limited to the lesser of either the 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 as noted will be entitled to overtime premium.

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 State M-6 job rate, whichever is lower.

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

7) This footnote applies to Schedules for years 4 thru 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.

8) Items italicized are costs that have been revied for the May 4, 2001 revisions.

B. Indirect Costs

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

Amount budgeted for indirect costs is:

C. Maximum Reimbursement Rates for Direct Non-Salary Costs

Item	Description	Max. Reimb. Rate	Unit	# Units	Total Est. Cost
1	Travel				
	Overnight Expenses				$ -
	Dinner Only				$ -
	Breakfast Only				$ -
	Mileage				$ -
	Total Travel				$ -
2	Supplies				
	Postage				$ -
	Level D Protection				$ -
	Level C Protection				$ -
	Total Station w/Tripod				$ -
	Miscellaneous Expenses				$ -
	Reproduction				$ -
	Total Supplies				$ -
	Total Travel and Supplies Cost				$ -

D. Fixed Fee

	The Fixed Fee is: see Schedule 2.10(h) for how the fixed fee should be claimed.	$

Schedule 2.11 (f)

Unit Price Subcontracts
Work Assignment Number D003493-23.5
Davis Howland Oil Company Site

Name of Subcontractor	Services to be Performed	Subcontract Price	Management Fee
ChemWorld Environmental	Analytical Data Usability	$6,246.00*	$ 0.00
Biel's Information Technology	Microfilming Services	$ 767.00	$ 0.00
Niagara Environmental Dynamics	O&M Services '03	$56,642.00**	$2,266.00
Rochester Gas & Electric	Electrical Services '03	$13,200.00	$ 528.00
Frontier Communications	Phone services '03	$ 600.00	$ 0.00
Rochester Gas & Electric	Gas Services '03	$ 7,200.00	$ 0.00
Niagara Environmental Dynamics	O&M Services '04	$65,000.00***	$2,600.00
Rochester Gas & Electric	Electrical Services '04	$12,000.00	$ 480.00
Frontier Communications	Phone services '04	$ 900.00	$ 0.00
Rochester Gas & Electric	Gas Services '04	$ 15,800.00	$ 632.00
County of Monroe	Pretreatment Charges '03	$ 5,600.00	$ 0.00
County of Monroe	Pretreatment Charges '04	$ 5,800.00	$ 0.00

* Low bidder determined based on one day turn-around costs.
Copies of Bids provided in the Work Plan.

** Based on low competitive bids - 5 bidders

*** Low bid based on evaluation of past bids and no startup cost required.

Item	Maximum Reimbursement Rate (Specify Unit)	Est. No Of Units	Total Estimated Costs
SUB-TOTAL SUBCONTRACT PRICE			**$ 189,755.00**
SUBCONTRACT MANAGEMENT FEE			**$ 6,506.00**
TOTAL			**$ 196,261.00**

Summary Schedule calculates from Other schedules listed beneath. BLACK TEXT represents calculations within THIS worksheet, BLUE TEXT represents calculations or cell references from OTHER worksh
Section 7

Schedule 2.11(g) Monthly Cost Control Report/Summary of Fiscal Information

Page _____ of _____
Date Prepared _____
Billing Period _____
Invoice No. _____

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

SUMMARY SCHEDULE

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							$100,995	
2. Indirect Costs (185%)							$186,841	
3. Subtotal Direct Salary & Indirect Costs							$287,836	
4. Travel							$8,339	
5. Other Non-Salary Costs							$124,451	
6. Subtotal Direct Non-Salary Costs							$132,790	
7a. Subcontractors							$542,991	
7b. Subcontract Management Fee							$6,506	
8. Total Work Assignment Cost							$970,122	
9. Fixed Fee							$21,588	
10. Total Work Assignment Price							$991,710	

Section 7

Schedule 2.11(g) Monthly Cost Control Report/Summary of Fiscal Information

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

Page _____ of _____
Date Prepared _____
Billing Period _____
Invoice No. _____

Task 1. Work Plan and Background Review

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							$4,361	
2. Indirect Costs (185%)							$8,068	
3. Subtotal Direct Salary & Indirect Costs							$12,429	
4. Travel							$49	
5. Other Non-Salary Costs							$134	
6. Subtotal Direct Non-Salary Costs							$183	
7a. Subcontractors							$4,430	
7b. Subcontract Management Fee							$0	
8. Total Work Assignment Cost							$17,042	
9. Fixed Fee							$932	
10. Total Work Assignment Price							$17,974	

Section 7
Schedule 2.11(g) Monthly Cost Control Report/Summary of Fiscal Information

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

Page _____ of _____
Date Prepared _____
Billing Period _____
Invoice No. _____

Task 2: Pre-Award Services

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							$8,973	
2. Indirect Costs (185%)							$16,600	
3. Subtotal Direct Salary & Indirect Costs							$25,573	
4. Travel							$93	
5. Other Non-Salary Costs							$1,093	
6. Subtotal Direct Non-Salary Costs							$1,186	
7a. Subcontractors							$3,593	
7b. Subcontract Management Fee							$0	
8. Total Work Assignment Cost							$30,352	
9. Fixed Fee							$1,918	
10. Total Work Assignment Price							$32,270	

Section 7

Schedule 2.11(g) Monthly Cost Control Report/Summary of Fiscal Information

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

Page _____ of _____
Date Prepared _____
Billing Period _____
Invoice No. _____

Task 3: Remedial Construction Management

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							$45,439	
2. Indirect Costs (185%)							$84,062	
3. Subtotal Direct Salary & Indirect Costs							$129,501	
4. Travel							$4,229	
5. Other Non-Salary Costs							$7,644	
6. Subtotal Direct Non-Salary Costs							$11,873	
7a. Subcontractors							$266,457	
7b. Subcontract Management Fee							$0	
8. Total Work Assignment Cost							$407,831	
9. Fixed Fee							$9,713	
10. Total Work Assignment Price							$417,544	

Section 7
Schedule 2.11(g) Monthly Cost Control Report/Summary of Fiscal Information

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ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

Task 4: Operations and Maintenance (O&M) - 12 months

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							$10,481	
2. Indirect Costs (185%)							$19,390	
3. Subtotal Direct Salary & Indirect Costs							$29,871	
4. Travel							$252	
5. Other Non-Salary Costs							$43,886	
6. Subtotal Direct Non-Salary Costs							$44,138	
7a. Subcontractors							$120,642	
7b. Subcontract Management Fee							$2,794	
8. Total Work Assignment Cost							$197,444	
9. Fixed Fee							$2,240	
10. Total Work Assignment Price							$199,685	

Section 7
Schedule 2.11(g) Monthly Cost Control Report/Summary of Fiscal Information

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

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Date Prepared _____
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Task 5 - O&M 2004-2005

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							$16,491	
2. Indirect Costs (185%)							$30,508	
3. Subtotal Direct Salary & Indirect Costs							$46,999	
4. Travel							$2,471	
5. Other Non-Salary Costs							$35,636	
6. Subtotal Direct Non-Salary Costs							$38,107	
7a. Subcontractors							$121,114	
7b. Subcontract Management Fee							$3,712	
8. Total Work Assignment Cost							$209,932	
9. Fixed Fee							$3,525	
10. Total Work Assignment Price							$213,457	

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Schedule 2.11(g) Monthly Cost Control Report/Summary of Fiscal Information

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ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

0	A	B	C	D	E	F	G	H
Expenditure Category	Costs Claimed This Period	Paid to Date	Total Disallowed to Date	Total Costs Incurred to Date (A+B+C)	Estimated Costs to Completion	Estimated Total Work Assignment Price (A+B+E)	Approved Budget	Estimated Under/Over (G-F)
1. Direct Salary Costs							$15,250	
2. Indirect Costs (185%)							$28,213	
3. Subtotal Direct Salary & Indirect Costs							$43,463	
4. Travel							$1,246	
5. Other Non-Salary Costs							$36,058	
6. Subtotal Direct Non-Salary Costs							$37,304	
7a. Subcontractors							$26,755	
7b. Subcontract Management Fee							$0	
8. Total Work Assignment Cost							$107,522	
9. Fixed Fee							$3,260	
10. Total Work Assignment Price							$110,782	

Schedule 2.11 (G) Supplemental

Cost Control Report
Subcontracts

ENGINEER : Ecology and Environment Engineering, P.C.
CONTRACT NO. : D003493
PROJECT NAME : Davis Howland Oil Complany Site
WORK ASSIGNMENT NO. D003493-23.5

Page 1 of 1
Date Prepared: levised: 10/14/04
Billing Period:
Invoice No.

SUBCONTRACTORS NAME	Task	A SUBCONTRACT COSTS CLAIMED THIS APPLICATION INCL. RESUBMITTALS	B SUBCONTRACT COST APPROVED FOR PAYMENT ON PREVIOUS APPLICATIONS	C TOTAL SUBCONTRACT COST TO DATE (A PLUS B)	D SUBCONTRACT APPROVED BUDGET	E MANAGEMENT FEE BUDGET	F MANAGEMENT FEE PAID	G TOTAL COSTS TO DATE (C PLUS F)
1. Lu Engineers - Contract Document review	1				$4,430			
2. Lu Engineers-Added Document review	2				$3,593			
3. Lu Engineers-Construction Oversight Services	3				$125,208			
4. Chemworld Env. -Analytical Data Useability	3				$6,246			
5. Biels- Microfilming	3				$767			
6. Lu Engineers-Additional Construction Electrical Mechanical/Shop Drawing Review Services	3				$7,656			
7. Lu Engineers-Additional Construction Oversight Services	3				$126,580			
8. Lu Engineers-Operations and Maintenance Oversight Services '03	4				$43,000			
9. Niagara Environmental Dynamics - Operations and Maintenance Services '03	4				$56,642	$2,266		
10. Rochester Gas and Electric - Electric Services - '03	4				$13,200	$528		
11. Frontier Communications Telephone Services - '03	4				$600			
12. Rochester Gas & Electric - Gas Services - '03	4				$7,200			
13. Lu Engineers-Operations and Maintenance Oversight Services '04	5				$9,514			
14. Niagara Environmental Dynamics - Operations and Maintenance Services '04	5				$65,000	$2,600		
15. Rochester Gas and Electric - Electric Services - '04	5				$12,000	$480		
16. Frontier Communications Telephone Services - '04	5				$900			
17. Rochester Gas & Electric - Gas Services - '04	5				$15,800	$632		
18. County of Monroe - Pretreatment Services - '03	5				$5,600			
19. County of Monroe -Pretreatment Services - '04	5				$5,800			
20. Anguil Environmental Services - Equipment O&M	5				$6,500			
21. Lu Engineers - Soil Gas and IAQ Sampling - '04	6				$26,755			
PAGE 1 TOTALS					**$542,991**	**$6,506**		

Project Manager: M. Steffan DATE:

Notes:
(1) Costs listed in Columns A, B, C & D do not include any management fees
(2) Management fee is applicalble to only properly procured, satisfactorilcompleted, unit price subcontracts over $10,00C
(3) Line 11, Column G should equal Line 7 (Subcontractors), Column D of the Summary Cost Control Report

Section 5

Schedule 2.11(h) Summary of Labor Hours

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
State Superfund Standby Contract #D003493
Work Assignment # : D003493-23.5
Project Name: Davis Howland Site 8-28-088

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Rates for Year Ending February 1, 2001

NSPE Grade	IX		VIII		VII		VI		V		IV		III		II		I		TOTAL	
Task 1-3 Rate/Hour	$67.65		$46.43		$37.50		$33.83		$27.96		$23.56		$20.90		$18.53		$14.22		HOURS	
Task 4 Rate/Hour	$73.88		$54.21		$46.87		$39.85		$34.15		$28.14		$25.12		$22.40		$17.49			
TASK	EXP./	EST.	EXP./	EST.	EXP./	EST.	EXP./	EST.	EXP./	EST.	EXP./	EST.	EXP./	EST.	EXP./	EST.	EXP./	EST.	EXP./	EST.
Task 1. Work Plan and Background Review	0	0	0	0	0	64	0	0	0	54	0	4	0	10	0	8	0	0	0	140
Task 2: Pre-Award Services	0	0	0	4	0	68	0	0	0	150	0	9	0	41	0	50	0	5	0	327
Task 3: Remedial Construction Management	0	0	0	3	0	117	0	475	0	660	0	95	0	65	0	64	0	113	0	1,592
Task 4: Operations and Maintenance (O&M) - 12 months	0	0	0	0	0	8	0	106	0	0	0	0	0	227	0	8	0	0	0	349
Task 5 - O&M 2004-2005	0	0	0	0	0	8	0	132	0	0	0	128	0	180	0	122	0	0	0	570
Task 6: Soil Gas and IAQ Review	0	0	0	0	0	16	0	34	0	240	0	108	0	32	0	40	0	12	0	482
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HOURS		0		7		281		747		1,104		344		555		292		130		3,460
TOTAL COST		$0		$302		$10,612		$25,909		$30,868		$8,105		$12,557		$5,442		$1,849		$95,644

6

Staffing Plan

EEEPC proposes the following primary staffing plan for the completion of this work assignment.

Program Manager: D. Albers, P.E. (EEEPC)
Project Director: D. Miller, P.E. (EEEPC)
Project Manager: M. Steffan (EEEPC)
Site Representative: R. Galasso (Lu Engineering, P.C.)

Task 1: Work Plan Development

S. Blair - Program Review
D. Miller, P. E. - Principal/Construction Management Review
M. Steffan - Preparation and subcontract development.

Task 2.1: Pre-Award Services

M. Steffan - Attends meetings and reviews minutes/addendum
R. Galasso - Attends meetings and prepares minutes/addendum

Task 3.1: Review of Contractor Submissions (5-day and 14-day submittals after bid opening)

D. Miller/Lu Engineers – Principal review of recommendations and review of air sparging/soil vapor extraction design and construction submittals.
M. Steffan – Reviews work plan, progress schedule, and sampling, blasting, transportation, and disposal plans.
T. Siener, CIH – Reviews HASP and spill response plan.
R. Galasso – Attends meetings and prepares minutes/addendum. Provides reviews of work plan, progress schedule, HASP, sampling, QA/QC, blasting, transportation, and disposal plans.

Task 3.2: Preconstruction Meeting

M. Steffan – Attends and reviews minutes
R. Galasso – Attends and prepares minutes

Task 3.3: Review of Contractor Submissions (following Contractor's NTP)

M. Steffan - Reviews technical submissions and comments on non-technical submissions.
Lu Engineers - Reviews air sparging/soil vapor extraction design.
M. Steffan - Reviews schedule updates and CAP submissions.
R. Galasso - Logs, tracks, and transmits all submissions and reviews comments.

Task 3.4: Project Inspection

D. Miller - Project management and construction issues.
M. Steffan - change orders, claims, clarifications, issues, management, and substantial and final inspections.
R. Galasso - Site Representative full time during construction and part-time during shakedown and O & M.

Task 3.5: Construction Records and Reports

M. Steffan - Assistance.
R. Galasso - Main documentation responsibility.

Task 3.6: Final Remediation Report/O & M Report

D. Miller - Principal review.
M. Steffan - Review and preparation.
R. Galasso - Review.

The project manager's resume and the site representative's qualifications are provided at the end of this section.

Task 4. O & M Services: 2003-2004

D. Miller, P. E. - Principal review.
M. Steffan – Project Manager.
Lu Engineering, P.C. - O & M oversight.

Task 5. O & M Services - 2004 - 2005

5.1 O & M Services

D. Miller - Principal review.
M. Steffan - Project Manager.
Lu Engineering, P.C. - O & M oversight.
EEEPC's Analytical Services Center - Analytical Services.

5.2 - Well Sampling, Analysis, and Report

D. Miller, P. E. - Principal review.
M. Steffan - Project Manager.
R. Meyers - Sampling work plan, well evaluation, sampling/analysis, and reporting.

Task 6. Soil Gas Survey and Indoor Air Quality Review.

6.1 – Soil Gas Survey

D. Miller, P. E. - Principal Review.
M. Steffan - Project Manager.
R. Watt – Contaminant contour mapping.
M. Mayer - Sampling work plan, field oversight, and sample transportation.

6.2 Indoor Air Monitoring Survey

D. Miller, P. E. - Principal review.
M. Steffan - Project Manager and report development and review.
R. Watt – Contaminant contour mapping.
R. Meyers/L. Cervi – Data and report preparation.
M. Mayer/J. Mays - Sampling work plan, field oversight, facility inventory review and mapping, and sample transportation.

MICHAEL G. STEFFAN, CDT — Civil Engineer

EDUCATION

B.S., Civil Engineering, Tri-State College

A.A.S., Civil Technology, Erie Community College

CERTIFICATIONS

Certified Construction Document Technologist, Construction Specifications Institute

With 26 years' experience, Mr. Steffan manages engineering design, construction, and operation and maintenance (O&M) programs for sites containing hazardous and toxic waste, USTs, transformers, pipeline facilities, asbestos, and lead. He develops contract documents, plans, cost estimates, and schedules for public and private bidding. A certified backflow prevention assembly tester (New York and Florida), he completes public water service connection studies and tests and certifies the operation/repair of backflow prevention devices. He is certified by the New York State Department of Labor to provide inspections, management plans, and design asbestos abatement projects. Mr. Steffan is also certified to perform inspections and risk assessments for lead-based paint by the United States Environmental Protection Agency. He is a member of the Board of Directors of the American Society of Civil Engineers (ASCE), Buffalo Chapter, and chairs its Continuing Education Committee on Professional Development.

Construction Management. For the City of Buffalo, Mr. Steffan developed engineering contract documents, provided construction cost estimates, supported the public bidding process, and provided construction oversight services for asbestos abatement, removal of petroleum USTs, environmental sensitive materials/wastes, and structural and substructural demolition. managed the construction. Mr. Steffan was the senior construction manager providing oversight of the contractor's submittals, payment requests, change orders, oversight of the day to day construction/demolition, and compliance of the contract document for the City of Buffalo. He provided daily and weekly status reporting to communicate compliance with the schedule and progress with the project, photo documentation, and progress minutes for all project meetings to the City and Canisius College. Completed closeout documentation of the project with the City and Regulatory agencies that allowed the property to be transferred for quick redevelopment by Canisius College into student housing.

Under E & E's Superfund remedial design (RD)/remedial action contract for the Texas Natural Resource Conservation Commission (TNRCC), he oversaw the removal of contaminated soil at the JCS Battery site and at the Precision Machine & Supply chromium plating site. He reviewed construction schedules, reviewed the results of compaction and material density testing, coordinated air and particulate dust monitoring and the analysis of clearance samples, processed fieldwork change orders, submitted daily and weekly progress reports, and coordinated soil removal videotaping and still photography.

For a client in Michigan, Mr. Steffan was E & E's senior construction manager for the installation of the first pilot treatment wetland to biochemically remediate TCE in groundwater. The work required his routine interaction with the E & E design team, wetland specialists, client representatives, representatives of the Michigan Department of Environmental Quality, and the client's prime contractor and other subcontractors. By reviewing the contractor's and subcontractor's daily progress and preparing daily and weekly status reports, he helped ensure project completion on time and within budget. In addition, he inspected and verified the quality of the selected construction materials, provided equipment field testing and problem resolution, negotiated and processed monthly contractor payments, developed punch lists for closeout reporting, and approved the project's substantial completion to enable closeout.

Legal Support. He was a key member of the E & E team that defended a natural gas distribution company against environmental claims that historical activities conducted at a former coal gasification site in Buffalo, New York, were responsible for contamination in Scajaquada Creek. Mr. Steffan demonstrated that PAHs were being released into the creek as a result of the new owner's construction activities, which were taking place without prudent environmental controls. Specifically, while constructing a new warehouse and transportation facility, the new owner did not maintain the environmental protection controls that had been established by the gas company during site closure. The new owner had allowed removal of the area's protective clay cap, so that when rainwater infiltrated the ground, PAHs could discharge into on-site monitoring wells. In addition, newly installed stormwater drains allowed further discharge of contaminants, via permeable fill, into Scajaquada Creek. Mr. Steffan managed the site reconnaissance and confirmation drilling and provided expert testimony to help demonstrate that the new owners had ignored important site-specific factors, causing the aggravation of environmental contamination in the surrounding areas and state waterways.

Underground Storage Tanks (UST).
Pennsylvania Department of Environmental Protection (PADEP)
Under E & E's multi-site UST contract with the Pennsylvania Department of Environmental Protection (PADEP), he managed E & E's investigations, evaluations of remedial alternatives, RD, and provision of community relations support for the Ron Matz Exxon site in Erie, Pennsylvania.

City of Buffalo, New York. For the Department of Community Development and Public Works, Mr. Steffan provided remedial services for the removal of underground storage tanks and site closure. For the Seneca Street

project, Mr. Steffan acted as the prime contractor for the removal and disposal of an underground storage tank to continue with the City's Neighborhood Revitalization program. Mr. Steffan coordinated the efforts of the subcontractor and regulatory agency to obtain official site closure within one month of the program startup. For the Delavan Armory project, Mr. Steffan provided oversight to the contractor and coordinated with the regulatory agency to obtain multiple tank closures to clear the property for future title transfer. As a result of this proper UST closure the consent order for cleanup by the EPA was completed.

New York State Department of Environmental Conservation (DEC) Operations and Maintenance (O&M) Program. Under E & E's multisite standby contract for NYSDEC, he managed the multiyear O&M program for the Dewey Loeffel site in Troy, New York. For this site, Mr. Steffan evaluated existing leachate collection systems, the containment cap, and infrastructure items associated with upgrading the facility to acceptable postclosure status in accordance with New York State regulatory guidelines. He also managed the feasibility review additional of on- and off-site treatment options for the stored leachate waste; semiannual groundwater monitoring and interpretation of the site subsurface environment to track groundwater conditions in the project area; development of the RD for overall site postclosure upgrading; public procurement of remedial construction subcontractors for leachate removal and demolition/installation of new on-site monitoring-well systems; and development of a site-specific O&M manual addressing the frequency of inspection, normal operational requirements, monitoring and analysis objectives, and routine maintenance procedures.

Engineering Design Work.

PCB Remedial Design. Mr. Steffan managed E & E's preparation of the RD and design plans and specifications for the Niagara Transformer Corporation site in Cheektowaga under the NYSDEC standby contract. As part of the initial design investigation, he led the gathering of borehole soil information and on-site soil testing for PCBs using field-screening immunoassay techniques to evaluate the overall depth and extent of contamination. He completed a cost/benefit evaluation concerning removal options for existing storm sewers and deep on-site excavations. He also performed a comprehensive area drainage evaluation, using USDA TR55 software for stormwater peak flow and Rout95 software to assess retention pond storage capacities as a result of drainage shed changes. Mr. Steffan redesigned new storm sewers and ancillary structures to provide positive drainage for multiple property owners in the project area. In addition, the design included the installation of a new aboveground storage tank (AST) farm with secondary containment and

foundations to meet current state regulatory standards. Mr. Steffan led the preparation of construction specifications, drawings, and construction cost estimates to support the NYSDEC public bidding process; used town tax ma to obtain temporary easement information needed for contractor right of access during construction; and prepared a discharge permit application f treated groundwater. The plans and specifications covered the excavation, removal, and disposal of PCB-contaminated soil within a 5-mile radius of the plant; installation of 2,000 feet of new storm sewers; and dredging of a ha mile-long retention pond. Mr. Steffan clarified technical contract issues during the public bidding phase; reviewed the selected contractor's work plan, health and safety plan, and QA project plan; and prepared the site-specif O&M manual.

Landfill Consolidation Design. In addition, under the NYSDEC standby contract, Mr. Steffan was a project engineer for the closure design for the 70-acre Wellsville-Andover municipal/industrial landfill. The proje involved the consolidation of 45 acres of previously closed and disposed hazardous waste into a secure 20-acre site on the same property. The desig addressed slope stability, leachate collection and control, compaction of excavated waste, and design of liner and cover systems. Design elements included a leachate collection system and a cover system consisting of geomembrane, geosynthetic clay liner, and geocomposite gas venting and drainage layers to eliminate water infiltration.

Remedial Response. Under the NYSDEC standby contract, he also was project manager for the interim remedial response at the Schatz Ball-Bearin manufacturing plant site in Poughkeepsie. He led the site survey and sam- pling; review of analytical results and comparison with NYSDEC and EPA remedial standards; development of cleanup recommendations, a remediatio construction schedule, and associated order-of-magnitude cost estimates. He oversaw the subcontractor's removal, transport, and disposal of 90 large capacitors containing PCBs.

General Subcontract Management. Mr. Steffan has served as program subcontract manager for E & E's standby contract for the New York State Department of Environmental Conservation (NYSDEC). He provided con- tract reporting to meet requirements for minority-owned and women-owned business enterprises (MBEs and WBEs) and had a key role in the planning and allocation of MBE/WBE subcontracts for each assigned site.

United States Environmental Protection Agency

START Team Support. In support of E & E's Region V EPA START Program – Cleveland Office, Mr. Steffan provided spill response services at a major fertilizer company tank failure in Morral, Ohio. Mr. Steffan provided construction oversight of the contractors providing remediation of the tank farm and off-site drainageways. He supported the EPA's On-Scene Coordinator by developing on-site and offsite drainage maps to review contaminant loading to downstream receptors. He evaluated the Contractors remedial program to assess and predict storage capacities of contaminated runoff. He inspected and provided engineering support by evaluated local storm sewers and stream hydraulics to assess safe contaminant dilution levels.

For E & Es Region V EPA Start Program out of the Detroit Office, Mr. Steffan provided indoor air quality assessment of homes after a major gasoline leak in Jackson, Michigan. The ruptured gasoline pipeline caused displacement of over 500 homeowners and shutdown of utilities for over a one week period. Mr. Steffan was part of the team that inspected homes for explosive atmospheres prior to return of the homeowners.

For the Standard Paint Site, Mr. Steffan provided construction oversight and compliance monitoring services of the remedial contractor characterizing and assessing drums and waste for transport and disposal. The work further consisted of daily reporting of progress to the E&E project manger and the EPA OSC.

For Global Metal Site Assessment, Mr. Steffan provided a Phase 1 site assessment services for the former Global Metal Manufacturing site. The site assessment included review of the environmental sensitive issues in accordance with ASTM standards.

Pennsylvania Interim Response Services Contract (IRSC)

Mr. Steffan also managed E & E activities for several sites being investigated under the earlier multisite, multitask-order, Interim Response Services contract with PADEP. The tasks included site inspection, interim response, characterization of drummed waste, soil-gas and headspace analysis, risk analysis, evaluation of land disposal and treatment alternatives, completion of fast-track feasibility studies and engineering/designs, development of specifications, procurement of subcontractors, construction oversight, replacement of activated carbon treatment units on domestic water supplies, and restoration of natural resources. Mr. Steffan managed or participated in activities at the Borzok Property, Voortman Farms, Crown Industries, Kayal

Service Station, Continental Refrigeration, William Taylor Estate, AutoLife, Keezel, and Quakertown sites.

Land Surveying. He conducted dioxin sampling and led the surveying of dioxin sampling locations at the Love Canal National Priorities List (NPL) site in Niagara Falls, New York; performed a topographic survey and coordinated the aerial survey for the Chatham Brothers NPL site in Escondido, California, Niagara Transformer Corporation Site ; and surveyed and established lagoon sampling points at the Bridgeport Rental and Oil Services NPL site in Bridgeport, New Jersey.

Asbestos General. Mr. Steffan is an Asbestos Hazard Emergency Response Act (AHERA) accredited asbestos abatement designer and New York State Department of Labor certified asbestos inspector, management planner, and project designer. He holds current EPA/New York State Department of Health (NYSDOH) certification as an asbestos inspector, manager planner and project designer. He has managed asbestos abatement programs involving on-site surveys; material quantification; hazard assessment; abatement engineering design and preparation of detailed construction cost estimates, regulatory reviews; preparation of public and private procurement specifications for site remediation/restoration; removal contractor evaluation, selection and supervision; and project closeout inspection. In many instances, the abatement programs have overlapped with renovation projects and required ceiling/roof replacement along with electrical and mechanical alterations, the specifications for which Mr. Steffan has incorporated into the overall contract documents.

Lead-based Paint General. Mr. Steffan is certified by the United States Environmental Protection Agency to conduct lead-based paint inspections and risk assessments on structures and houses (single and multi-unit) for remediation and demolition. Under the Air Force Reserve Command program, as project manager Mr. Steffan provided inspection and risk assessment services for updating lead-based paint management plans for five bases under the Command. The assignment included the review all buildings on the individual base, performance of an X-ray Fluorescence (XRF) spectrum analysis on surfaces within individual buildings, bulk sampling and assessment of those surface for the protection of staff according to current regulatory and Air Force standards. Update and revise each of the base's current operating and management plans into a useful internet document that can be viewed by the Command. These management plans included a database to allow the on-base program managers to update current environmental lead-based paint areas and reassess surfaces in the event of building improvement programs or observed

damage. The development of the database and placing the information on the internet has provide quick access of information for base-wide use.

Instructor/Presentations. For the American Society of Civil Engineers (ASCE), he was lead instructor and speaker for a seminar on construction project administration and claims avoidance. He also has delivered presentations on asbestos and other environmental issues to members of ASCE and the Western New York Safety Council, American Institute of Architects, and Metal Platers Association.

Additional Civil Engineering: Sewers/WaterLines/Highways. During six years as the principal engineer of the Town of Orchard Park, New York, Engineering Department, Mr. Steffan was responsible for the preparation of plans and construction documents for a variety of construction projects involving sanitary sewers, storm sewers, water lines, and highways. His work involved the development of effective infiltration/inflow reduction and sewer rehabilitation programs for the town, and the planning and development of town construction specification standards that were used to review the designs of subdivision developers for town water and sewer projects. For major storm and sanitary sewer, highway, low-hazard dam, lake dredging, and municipal building projects, he assisted in project planning, prepared designs with plans and specifications, developed construction cost estimates, conducted site surveys, performed infiltration/exfiltration tests on new sanitary sewer systems, directed construction inspection teams, held progress meetings, evaluated construction status for progress payments, and coordinated change orders and project closeout. Mr. Steffan also reviewed open mining gravel pit closure plans and conducted annual inspections to report closure status.

In addition, on behalf of the Town of Orchard Park, he prepared applications for public work grants and HUD funding. For awarded programs, he managed project funds, initiated the design, and monitored construction to ensure proper utilization of the funds.

For the Indiana State Highway Commission, Mr. Steffan prepared inspection and quantity reports for highway construction projects including cut and fill activities, subsurface soil testing, compaction and density testing, surveying, and property restoration.

Michael G. Steffan, CDT (Cont.)

EMPLOYMENT:

Ecology and Environment, Inc., Buffalo, New York, 1985-present
Recra Research, Inc., Amherst, New York, Senior Project Engineer, 1985
Union Carbide Corporation, Carbon Products Division, Niagara Falls, New York, Environmental Plant Engineer/Coordinator, 1980-1985
Town of Orchard Park, New York, Engineering Department, HUD Funds Coordinator/Community Development Coordinator, 1977-1980; Principal Engineer, 1974-1977
Indiana State Highway Commission, Fort Wayne, Indiana, Highway Engineering Assistant II, summer 1973

ROBERT A. GALASSO

Resident Project Representative

-EDUCATION-

AAS, Applied Sciences, Auburn Community College, Auburn, New York

-REGISTRATIONS-

-Certified Engineering Technician, Level IV, NICET Certificate #071854

-EXPERIENCE-

1999, Resident Project Representative
Joseph C. Lu Engineering & Land Surveying, P.C.
Penfield, New York

1968-1999, Resident Project Representative
Galson/Lozier Engineers
Rochester, New York

-PROJECT EXPERIENCE-

Mr. Galasso's professional history includes over 30 years of construction administration, project management and design. He has provided these services on wastewater treatment facilities, correctional facilities, wastewater pump stations, sanitary and storm sewers, watermains, lined reservoirs and landfills. As a Resident Project Representative, Mr. Galasso is responsible for maintaining full control of construction engineering and inspection, including supervision and assignments of inspectors, surveyors, and soil and materials technicians on the project.

Northwest Quadrant Pump Station Improvements, Monroe County, New York
Mr. Galasso was the Resident Project Representative for the $6 million upgrade of three sewage pump stations in the Town of Greece, New York. The project included ten dry pit submersible pumps (300-500 hp) with adjustable frequency drives, odor control facilities, sewage grinders, screens, electrical services, lightning protection, new roofs, brick repair, pump discharge piping and related work.

Torrey Landfill Final Remediation Project, Yates County, New York
Mr. Galasso was the Resident Project Representative for the removal and stock pile of existing soil cover and installation of approximately 33 acres of 40 mil geomembrane, geotextiles, geocomposite, protective soil cover, top soil and ground cover, gas venting trenches and vent pipes. This $4 million project included demolition of a 23' x 50' single story wood frame building, slab and foundation, leachate and groundwater collection piping, wells and pump stations, leachate storage tanks and transfer pump station, entrance and access roads.

Keuka Park Water District Extension No. 1, Town of Jerusalem, New York
Mr. Galasso provided Resident Project Representative services for the Town on this $1.6 million project. The work included installation of 7 miles of 8" and 12" ductile iron watermain, two pressure reducing valves and vaults, one master meter and vault, hydrants, services and related appurtenances.

Wastewater Treatment Plant Upgrade, Victor, New York
Mr. Galasso provided Resident Project Representative services for the Village on this $1.4 million project. The work included upgrade of existing treatment facilities including influent structure, primary clarifier, plastic media trickling filters, pumps, aeration equipment, control building, digester and other appurtenances.

Xerox Square Podium Rehabilitation Project, Xerox Corporation, Rochester, New York
Mr. Galasso provided Resident Project Representative services for a $10 million three phase, structural concrete/waterproofing rehabilitation project involving the removal of existing wearing course and waterproofing from the structural concrete substrate over an 80,000 square foot area. This project included identifying, removing and replacement of unsound concrete followed by the application of liquid waterproofing membrane and new wearing course. Asbestos abatement of plumbing, flooring and HVAC was performed. Ninety percent of the work took place over occupied space which necessitated building-out and moving occupants to temporary relocation sites, completing the rehabilitation work and then returning the occupants to their original location.

Mendon Reservoir and 16-inch Watermain, Monroe County Water Authority, Mendon, New York
Resident Project Representative on $1.2 million construction of a 5 million gallon hypolon lined water reservoir and two miles of watermain.

Frank E. Van Lare Wastewater Treatment Facility, Monroe County Pure Waters, Rochester, New York
Resident Project Representative for extensive rehabilitation to two existing 22'-3" OD, 11 hearth sewage sludge incinerators including refractory replacement, control room renovations, asbestos abatement and chimney rehabilitation.

7

MBE/WBE Utilization Plan

Introduction and Objective

EEEPC fully subscribes to the New York State policy that MBE/WBE firms be afforded the maximum opportunity to participate in contracts offered by New York State agencies. As a contractor of NYSDEC, EEEPC is committed to full compliance with Executive Law Article 15-A and pertinent federal regulations to further MBE/WBE goals and to achieve significant participation by MBE/WBE firms to a level commensurate with their capabilities and responsibilities.

In this section, EEEPC's MBE/WBE Utilization Plan is described, including goals for this work assignment, details regarding the services, firms, current utilization, and work scheduled to be performed by MBE/WBE firms.

Contract Goals

EEEPC fully expects to commit to the following established percentage goals. Actual dollar amounts will be contingent upon the total dollar value of the awarded contract.

■ Total project amount:	$991,711
Total percent of MBE/WBE work goal:	20% - $198,343
- Total percent of MBE work goal:	15% - $148,757
- Total percent of WBE work goal:	5% - $ 49,586

EEEPC maintains an up-to-date affirmative action plan and MBE/WBE hiring plan to ensure equal opportunity for all job applicants, employees, and subcontractors. For the New York State Superfund standby contract, EEEPC will use the following procedures and resources to meet established MBE/WBE goals:

- The EEEPC project manager will consult with the EEEPC MBE/WBE subcontracting coordinator to identify and evaluate work that requires subcontractor services. The subcontracting

opportunities will be divided into discrete tasks that may be completed by MBE or WBE firms.

- Following the identification of discrete tasks, the MBE/WBE subcontracting coordinator will review the New York State Directory of Certified Minority and Women-owned Business Enterprises and EEEPC's MBE/WBE database.

EEEPC has developed a database to facilitate the acquisition of qualified MBE and WBE firms for work on various state and federal government contracts. This database consists of the following:

- MBE and WBE firms listed in the current New York State Department of Commerce Directory of Minority and Women-Owned Businesses, entered and cross-referenced by nine categories of services frequently used by EEEPC.

The categories are:

- Environmental consulting
- Engineering
- Drilling/geophysics
- Laboratory
- Community relations
- Construction management
- Supplier/equipment
- Miscellaneous services
- General contractors

This listing and cross-referencing facilitates EEEPC's rapid identification of potentially-qualified MBE/WBE firms for use in various projects.

- Firms identified in the database as environmental consulting, engineering/geophysical, or drilling services were sent questionnaires requesting more detailed information regarding the backgrounds of each firm. Any firm responding to the first-tier questionnaire was then asked to submit additional information in a supplemental questionnaire that gave EEEPC more information in a standard format, which enables the comparison and selection of potential firms using methodical and consistent evaluation criteria.

- Following the identification of qualified potential MBE/WBE contractors, the project manager will solicit bids as delineated in the paragraph below, Criteria for Selection.

Subcontracted Services

EEEPC has found that opportunities exist for MBE/WBEs in the following work categories:

- Site security fencing;
- Protective services;
- Drilling and monitoring well installation;
- Soil borings;
- Physical soil tests;
- Site and topographical surveys;
- Title searches;
- Engineering services;
- Structural engineering;
- Geophysical engineering;
- Geophysical surveys;
- Photographic services;
- Heavy equipment;
- Laboratory data validation; and
- Photocopying report reproduction services.

Criteria for Selection

The criteria for selection are used to obtain and evaluate bids for other nonprofessional services. Following the identification of discrete tasks and potential MBE/WBE firms by the project manager and EEEPC's MBE/WBE subcontracting coordinator, bids will be requested from qualified firms, and, to the extent possible, one or more MBE/WBE firms will be asked to bid on each task. If bids exceed $10,000, at least five bids will be obtained. If bids range between $5,000 and $10,000, three bids will be obtained. In either case, based on the bids submitted, an award will be made to the most responsible MBE/WBE bidder. If bids are less than $5,000,

EEEPC plans to solicit three verbal quotes from MBE/WBE firms. Professional services will be subcontracted to MBE/WBE firms pursuant to applicable New York State regulations.

MBE services proposed for this Work Assignment will be performed by Lu Engineers (an MBE). The work to be performed will be the conceptual and final review of electrical/control and mechanical submittals of the air sparging/soil vapor extraction system. The value of the work was quoted to be $ 4,045 (see Appendix F).

Full construction, operation, and maintenance oversight will be subcontracted to Lu Engineering (an MBE). The value of the work was quoted per the schedule of the contract to be $267,788 (see Appendix F-1, F-2, and F-3).

O & M oversight for 2003-2004 will be subcontracted to Lu Engineering (an MBE). The value of the work was quoted per the exhibit of work and contingency costs for a total of $43,000 (see Appendix G).

O & M oversight for 2004-2005 will be subcontracted to Lu Engineering (an MBE). The value of the work was quoted per the exhibit of work and contingency costs for a total of $9,514 (see Appendix H).

The data usability review of the contractor's analytical information will be subcontracted to Chemworld Environmental, Inc., (a WBE) for the project. The value of the work quoted per the selection criteria of NYSDEC is $6,246. Copies of the competitive bids and proposal are provided (see Appendix I).

M/WBE Program Status for Work Assignment 23.4

The budget modification approved in March 2003 was for $667,473. As reported in EEEPC's quarterly M/WBE report of March 31, 2004, MBE utilization was $298,310 and WBE utilization was $3,529. Based on the total of M/WBE utilization performed for the assignment of $301,839, this totals 45.2%, or 25.2% above the contract goal. With this budget modification, another $9,514 in MBE services is anticipated out of the new task costs of $211,349. Assuming full utilization of this sub-consultant, the total assignment M/WBE services should be $311,353, or 35.6% based on the new budget total of $878,821. This assignment exceeds the established contract goals.

M/WBE Program Status for Work Assignment 23.5

The budget modification approved in June 2004 was for $878,821. As reported in EEEPC's quarterly M/WBE report of June 30, 2004, MBE utilization was $298,601 and WBE utilization was $3,529. Based on the total M/WBE utilization performed for the assignment of $302,130, this total is 45.2%, or 25.2% above the contract goal for the work assignment. With this budget modification, another $26,755 in MBE services is anticipated out of the new task costs of $110,782. Assuming full utilization of this sub-consultant, the total assignment of M/WBE services should be $338,108, or 34.1% based on the new budget total of $991,711. This assignment exceeds the established contract goals.

A

Niagara Environmental Dynamics, Inc. (NEDI) O & M Services, 2003-2004

A.1 Scope of Work

Exhibit #1
Scope of Work
Remedial Site and Treatment System Operations and Maintenance Program
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

1.1 General Scope of Work.

The subcontractor shall provide all necessary labor, equipment, materials, and health and safety protection to successfully operate and maintain the overall treatment system at the Davis Howland Oil Company site. It is the intent of this subcontract to maximized the up-time performance of the operating treatment system. The length operational and maintenance services under this contract is expected for 12 months.

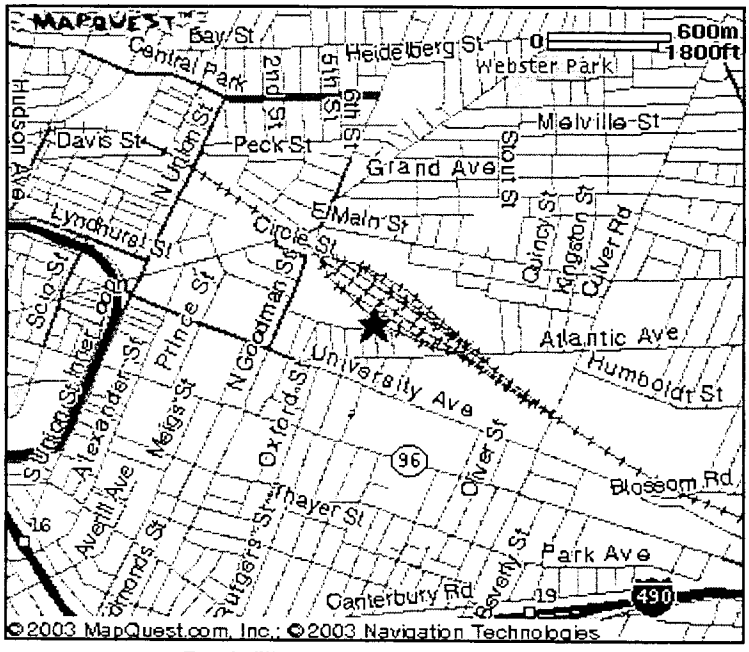
The normal operation and maintenance work shall consist of weekly site visits during the first month to review general system operations, record discharge readings, and perform general system balancing and maintenance requirements. Samples will be taken to a third party laboratory for analysis of the influent and effluent of the groundwater and air weekly for the first month and every other week for months 2 - 12. System maintenance, balancing, and monitoring review is expected on a weekly basis.

In addition, the subcontractor shall respond and repair to treatment system shutdowns as on as needed basis as further outlined in unscheduled system maintenance below.

1.2 General Site Location & Background.

Location:

The Davis Howland Site is located at 200 Anderson Avenue in the City of Rochester, New York (see map below).



Davis Howland Oil Company site
200 Anderson Avenue, Rochester, County of Monroe, NY

Supporting Project Background Information:
After investigating the site and consulting with the public, the New York State Department of Environmental Conservation (NYSDEC) selected a cleanup remedy in 1997, specifically for the on-site soil contamination, including the shallow and bedrock groundwater. The design of the groundwater pump and treatment system was completed in September 2000. Remedial construction began in May 2001 and completed September 2002. As a part of the remediation, NYSDEC completed the following major construction activities:

- Installation of 47 air injection points (to inject clean air back into the subsurface zone);
- 7 interior building soil vapor extraction points (to collect /remove contaminated air from the subsurface zone below the buildings on-site);
- 3 groundwater extraction wells (to collect and remove contaminated groundwater);
- 2 bedrock recovery wells (to collect and remove contaminated groundwater);
- 1500 lineal feet of exterior soil vapor extraction laterals (to collect /remove contaminated air from the subsurface zone below the exterior capped area);
- Construction of a trailer mounted treatment system to treat the shallow and bedrock groundwater beneath the site;
- Installation of a catalytic thermal oxidizing unit (for incineration of volatile organic compounds released after air stripping); and
- Installation of a 50,000 square foot asphalt cap over the entire area of contamination.

A copy of the general project location plan and site layout information is provided as **Figures 1-1, 1-2 and 1-3.**

1.3. Health and Safety Requirements.
The subcontractor will be required to have successfully completed the 40 hour basic Health and Safety Training Course and refresher training for Hazardous Waste Operations. The training courses need to meet the requirements of OSHA 29CFR1910.120 and be approved by the United States Environmental Protection Agency. In addition, the subcontractor will be in regulatory compliance with 29CFR1926.50 regarding personnel trained in first aid and cardio-pulmonary resuscitation (CPR). The subcontractor to submit certifications and refreshers of all staff to be employed at the site.

The subcontractor will be required to provide a site specific Health and Safety Plan (HASP) for the work to be performed for review and compliance acceptance by Ecology and Environment Engineering, P. C. (E&E). Where modifications to the scope of work are encountered, modifications or addendums to the HASP will be required to be incorporated into the original approved plan.

1.4 Site Access and Security.
The subcontractor will only access the site and treatment system from the alley on the west of the site. Keys to all external gates will be made available to the subcontractor. For interior building operating system items, keys and security codes will be made available for each leased area. The subcontractor shall ensure security of each area during all times of O&M work and while on-site. All security and system access issues will be reported immediately to E&E.

The subcontractor shall coordinate work activities with the current owner of the building and tenants and avoid interfering with their daily work as much as possible.

1.5 Initial and Normal System Operations and Maintenance.

The subcontractor shall initially become familiar with the operations and maintenance of the overall remediation treatment system. At a minimum, make weekly visits to the treatment system and on-site operating equipment. The site visits are expected to provide a general operating inspection the system, monitor overall system performance, AS/SVE system balancing to maximize remedial cleanup, to make adjustments to the normal operating system and preventative maintenance repairs, and as required collect operational data and samples as required by E&E and the regulatory requirements in accordance with the operation and maintenance manuals. Copies of the system and support equipment O&M manuals will be available and will provided to the successful bidding subcontractor.

Normal system operation and maintenance shall include refilling and replacing seal oil, replacing equipment filters, checking indoor and below grade valve and gage operations, checking flow meters, changing CatOX operating charts, changing pens for CatOx charts, checking groundwater pumps, etc. For exterior O&M , where on-site debris impacts the accessability to chambers this shall be noted in the weekly reports.

Issues regarding inclement weather and snow at the site including manhole accessability will need to be handled by the subcontractor on as needed basis.

The subcontractor shall be responsible for cleaning treatment equipment in accordance to the manufacturers required frequencies or more frequently based on the actual site conditions that may be encountered during O&M.

The system progress monitoring form to be utilized in the review of initial and normal system operations and maintenance is included as Figure 1-5.

Figure 1-5

General System Performance Requirements include:

System Parameter	Performance Required
General Soil vapor extraction, air sparge, air stripper, catalytic oxidizing unit, and groundwater extraction and pumping wells	• System operation up-time at least 90% during the twelve month O&M reporting period.[1] • Maximization of all treatment operating systems to achieve the regulatory discharge requirements and site cleanup goals.
Soil Vapor Extraction	• Maintain a vacuum of at least 30-40 inches of water at the blower. • Maintain a flow rate between 115-220 SCFM.
Air Sparge	• Maintain a minimum of 12 psi at each sparge point. • Maintain a flow of 0.5 to 1.5 CFM at each sparge point.

Groundwater Extraction/Recovery System	• Maintain the approx. minimum flow rates at each extraction and recovery location:
	  • P-1 - 13.2 GPM
	  • P-2 - 9.3 GPM
	  • P-3 - 3.7 GPM
	  • PW-1 - 3.0 GPM
	  • PW-2 - 3.0 GPM
	Maintain a minimum depth to groundwater interface of 48 inches at each piezometer.

Groundwater Treatment System.	Meet the Monroe County Pure Water - Rochester District permit limits for treated groundwater discharged to the sanitary sewer. See Table B for limits.
Vapor Phase	Operate the Catalytic Oxidizer to treat extracted soil gas and off-gas from the Air Stripper to meet the regulatory discharge limits for the approved emission discharge source Air Guide I permit. See Table C for limits.

Notes:

1. System up-time percentage shall be measured by dividing the total number of optimum hours achieved in the month by the total number of hours in that month.

1.6 Preventative Maintenance Review and Evaluation

The subcontractor shall review unspecified treatment system preventative measures as a means to improve system performance and effluent cleanup. System performance improvements shall be reported and discussed with E&E for review, evaluation, and costs with possible future inclusion into the current O&M program.

1.7 System Performance Sampling and Analysis

The subcontractor shall utilize the existing sampling ports located on the treatment system to obtain performance samples. Performance samples will be delivered or shipped to a third party laboratory for analysis. All samples will be preserved to ensure minimum holding times are not reached prior to delivery and analysis. All samples will be shipped under standard chain of custody for sign-off release for all parties during handling of all environmental samples.

Cleaned and prepared bottles will be available to the subcontractor from the laboratory prior to each sampling event. Subcontractor to call a minimum of 48 hours in advance to allow the lab to prepare, provide sample preservation, and labels for all sample containers.

The subcontractor shall prepare a sampling plan which includes standard operating procedures in proper sample methodology, bottle requirements, labeling and chain of custody. The plan shall be submitted in 5 days after award as a performance requirement to the successful bidder.

A. Influent and Treated Effluent Water Samples

The subcontractor shall collect one (1) influent groundwater sample to the air stripper, after the equalization tank, and one (1) effluent sample after the stripping tower. These samples shall be collected at the frequency and analyzed according to the protocol provided in **Attachment A**. The required sampling and analysis requirements are also provided in these tables.

All treated water discharged to the sanitary sewer shall meet the Monroe County Pure Waters - Rochester District acceptance criteria. The acceptable discharge criteria are presented in **Attachment B.**

B. Influent and Effluent Air Samples.

The subcontractor shall collect one air sample prior to air treatment and one sample following air treatment. The air treatment device is a catalytic oxidizing unit (CatOx) manufactured by Global Technologies, Milwaukee, Wisconsin. These samples shall be collected at the frequency and analyzed according to the protocol provided in **Attachment A.** The required sampling and analysis requirements are also provided in these tables.

The subcontractor shall be require to meet all substantive requirements of NYSDEC Division of Air Resources, Air Guide I (latest version) for discharging treated air to the atmosphere. The criteria for discharge has been provided as **Attachment C**.

1.8 System O&M Performance Reporting.
The subcontractor shall provide weekly updates and a monthly system operating report summary to E&E. The weekly reports shall be provided to E&E by the next Tuesday for the previous weeks activities. The monthly summary report shall be provided to E&E by the 10th calendar day of the month for the previous months activities during the entire contracted O&M period.

The report format shall be as previously provided by the former contract. Copy of the system progress monitoring report format is provided at **Attachment D**.

1.9 Unscheduled System Maintenance
The treatment system operation is currently hooked into an auto-dialing alarm system which alerts designated O&M personnel of system problems. Copy of the Davis Howland OC auto-dialer channel designations have been provided as **Attachment E**. The subcontractor shall provide all necessary labor, tools, equipment, and materials required to handle and maintain unscheduled system operational shutdowns. The subcontractor shall be required to respond to an unscheduled system shutdowns within 24 hours of the specific alarm. If the system shutdown occurs during a non-business day, the subcontractor shall respond on the next business day.

1.10 Prevailing Wage Requirements.
New York State Department of Labor prevailing wage requirements are not in effect for this work.

1.11 Schedule
The subcontractor shall anticipate startup of the operations and maintenance program as March 1, 2003 and continue for 12 months to March 1, 2004

Attachment A

Operation and Maintenance Program
Davis Howland Oil Company Site, NYSDEC Site #8-28-088
Sampling and Analytical Requirements

Purpose	Parameter	Sample Analysis	Sample Location	Sample Type	Sample Frequency	QA/QC Frequency	Required Turn around Time	Units	Level of Reporting [1]	Concentrations	Data Validation Required
Confirmatory air samples - Vapor Phase Treatment System (Catalytic Oxidizing Unit)	Volatile Organic Compounds (VOCs)	USEPA Method TO-14	Influent and Effluent Vapor Phase Treatment System	Grab	• Initial month - weekly • Months 2-12 - every other week	None	5 days from sample receipt	ug/l	Standard		None
Confirmatory water samples - Groundwater Treatment System (Air Stripper)	Volatile Organic Compounds (VOCs)	USEPA Method 8260	Influent and Effluent of the Air Stripper	Grab	• Initial month - weekly • Months 2-12 - every other week	None	5 days from sample receipt	ug/l (ppb)	Standard	2.13 TTO [(2)]	None
	Total Petroleum Hydrocarbons (TPHs)	NYSDOH Method 310-13									
	Semi - Volatiles & Base Neutral Extractables	USEPA Method 8270B									
	Pesticides	USEPA Method 8081B									
	PCBs	USEPA Method 608									
	PH							Standard units			

Notes:

1. Standard level of reporting shall consist of a summary of laboratory results, laboratory QA/QC results, and Chain of Custody.

2. TTO - Total Toxic Organics. TTO is defined as the sum of the detected concentration of volatiles, total petroleum hydrocarbons, semi-volatiles and base nuetral extractables, pesticides, and PCBs.

ATTACHMENT "B"

COUNTY OF MONROE
SEWER USE PERMIT ENCLOSURE

The Tyree Organization
4 Northway Lane
Latham, New York 12110

PERMIT NUMBER: 854
DISTRICT NUMBER: 8520

TYPE OF BUSINESS: Groundwater Remediation
SIC CODE: N/A
SAMPLE POINT: Sample Port - air stripper

REQUIRED MONITORING

SELF MONITORING FREQUENCY: Weekly

SAMPLING PROTOCOL: Sampling and analysis shall be performed in accordance with the techniques prescribed in 40CFR part 136 and amendments thereto. In the absence of 40 CFR Part 136 testing methodology, a New York State Department of Health, approved method is acceptable. A grab sample, collected from the above noted sample point shall be analyzed for the following:

parameter	limit
pH	5.0-12.0
polychlorinated biphenols (PCB)	below detection limit (0.3 ppb)
acetone	action level
Total Petroleum Hydrocarbons	100 ppm
purgeable halocarbons purgeable aromatics acid extractables base neutrals pesticides	The analytical summation of this group shall not exceed 2.13 ppm.

SPECIAL CONDITIONS:

1. All groundwater must be treated regardless of the influent concentrations.
2. Monthly flow summaries shall be submitted for billing purposes. It is imperative these summaries are submitted in a timely manner.

8/20/02

ATTACHMENT "C"

RECEIVED
BY DATE

New York State Department of Environmental Conservation

Division of Environmental Remediation
Bureau of Construction Services
625 Broadway, 12th Floor
Albany, New York 12233-7013

Phone No.: (518) 402-9812
Fax No.: (518) 402-9819

FACSIMILE TRANSMISSION

Date:May 28, 2002	**No. of Pages (Including Cover):** 13
To: Mike Steffan	
Company: E&E	
Fax Number: 716-684-0844	
From: David Chiusano	

Message: The Department's Davis Howland Air Emissions review is attached. Please approve the submittal. You can paraphrase Jim Harrington's memo, but please do not transmit the memo itself.

Thanks

MEMORANDUM

TO: Dave Chiusano, Construction Services

FROM: Jim Harrington, Technology Section

SUBJECT: Air Emissions from Davis Howland Oil Company site remediation

DATE: May 28, 2002

I have completed review of the revised calculations (May 24, 2002) presented by Uriel Oko for the Davis Howland site remediation. These calculations relate to the potential hydrogen chloride emissions from the catalytic oxidizer that will be installed on the exhaust from the air stripper and soil vapor extraction systems. The revised calculations have addressed my previous comments and generally demonstrate that based on the design loadings, the system will comply with the applicable air regulations. The calculations do predict a minor exceedance (119% of the AGC) of the level for HCl using a the very conservative screen one approach. It appears that this exceedance is onsite and I am confident that refined modeling would show that the predicted value is a significant overestimate. Therefore I am recommending that you approve this submission and allow the project to move forward. However, the levels of contaminants extracted from the remediation systems should be monitored closely at the beginning of operation to ensure that the design levels are not greatly exceeded. If those levels are greatly exceeded, the air impacts should be reevaluated. If there are any questions, please do not hesitate to contact me.

The Tyree Organization

AirGuide 1 Study

Davis-Howland Oil Corporation Site

Site Number 8-28-088

City of Rochester

Monroe County, New York

Presented to

Mr. J. Harrington, NYSDEC

by

Mr. P. Holloway, The Tyree Organization

and

Uriel Oko, P.E., Ph.D.

May 24, 2002

Davis Howland Oil Corporation Site
New York State Department of Conservation Site Number 8-28-088

Uriel M. Oko, Ph.D., P.E.
April 25, 2002

Stack Gas Calculations

Vacuum Blower Output, Maximum Hydrocarbon Concentration

Constants Used for Calculations:

Gas Flowrate - cfm	220			Mol wt HCl	36.5
Pressure - inches of water	35	System Pressu	15.964641	psia g/lb	453.59
Temperature - Fahrenheit	68	System Temp.	592	Degrees R	

Compound (Ref. 1)	Formula Weight	Gas Concentration ug/m^3	Gas Concentration lb moles/ft^3	Into Catalytic Oxidizer g/min of Contaminant Vol*Conc	Out of Catalytic Oxidizer g/min Contaminant Exhaust	Stack lb/hr emissions Exhaust	Stack lb/yr emissions Exhaust	Hydrochloric Acid lbs/hr	Hydrochloric Acid lbs/yr
								0	0
1,1,1 Trichloroethane	133	220	9.99113E-11	0.001196844	1.19684E-05	1.5832E-06	0.0138685	0.000130343	1.141805364
1,2,4 Trimethyl Benzene	120	600	3.02005E-10	0.003264121	3.26412E-05	4.3177E-06	0.03782319	0.000393992	3.451366213
1,3,5 Trimethyl Benzene	120	240	1.20802E-10	0.001305649	1.30565E-05	1.7271E-06	0.01512928	0.000157597	1.380546485
4 Isopropyl Toluene	135	31	1.38698E-11	0.000168646	1.68646E-06	2.2308E-07	0.0019542		
Benzene	78.11	76	5.87693E-11	0.000413455	4.13455E-06	5.4691E-07	0.00479094		
c-1,2 Dichloroethene	98	130	8.01237E-11	0.000707226	7.07226E-06	9.3551E-07	0.00819502	6.96856E-05	0.610445725
Etyl Benzene	106	340	1.93739E-10	0.001849669	1.84967E-05	2.4467E-06	0.02143314		
Iso Propyl Benzene	121	65	3.24468E-11	0.000353613	3.53613E-06	4.6775E-07	0.00409751		
Methylene Chloride	50.5	10	1.19606E-11	5.4402E-05	5.4402E-07	7.1962E-08	0.00063039	5.20121E-06	0.04556259
Naphthalene	128	19	8.96576E-12	0.000103364	1.03364E-06	1.3673E-07	0.00119773		
n-Butyl Benzene	136	19	8.43837E-12	0.000103364	1.03364E-06	1.3673E-07	0.00119773		
n-Propyl Benzene	121	100	4.99181E-11	0.00054402	5.4402E-06	7.1962E-07	0.00630387		
Sec Butyl Benzene	136	42	1.86532E-11	0.000228488	2.28488E-06	3.0224E-07	0.00264762		
Tetrachloroethenen	168	970	3.48743E-10	0.005276998	5.277E-05	6.9803E-06	0.06114749	0.000606622	5.314008296
Toluene	92.13	1200	7.86727E-10	0.006528243	6.52824E-05	8.6354E-06	0.07564638		
Trichloroethene	131	30	1.38323E-11	0.000163206	1.63206E-06	2.1589E-07	0.00189116	1.80454E-05	0.158077842
Xylene	106	1300	7.40766E-10	0.007072263	7.07226E-05	9.3551E-06	0.08195025		
		5392		0.02933357	0.000293336	3.8802E-05	0.33990441	0.001381485	12.10181251
Total									

(1) Ref: ENSR Engineering Report on Contract No. D004181, September 2000, Table 7

Davis Howland Oil Corporation Site
New York State Department of Conservation Site Number 8-28-088

Average Concentration Water to Stipper then to Stack

Volume Flowrate - gpm 30
Temperature - Fahrenheit 68

Compound (Ref. 2)	Cas Number	Formula Weight	Water Concentration ug/l	Into Catalytic Oxidizer g/min of Contaminant Vol*Conc	Out of Catalytic Oxidizer - into Stack lbs/hr of Contaminant	Stack Hydrogen Chloride emissions Exhaust lbs/hr	Stack Hydrogen Chloride emissions Exhaust lbs/yr
Hydrogen Chloride	07647-01-0	36.5	0	0			
1,1,1 Trichloroethane	00079-00-5	133	1,591	0.18065805	0.000238755	0.019477929	170.63
1-1 Dichloroethane	00075-00-3	100	910	0.1033305	0.00013656	0.009878122	86.53
1-1 Dichloroethene		99	212	0.0240726	3.1814E-05	0.002324522	20.36
Acetone	00067-64-1	58	391	0.04439805	5.86758E-05		
Benzene	00071-43-2	78	27	0.00306585	4.05178E-06		
Chloroform	00067-66-3	119	4	0.0004542	6.00264E-07	5.47315E-05	0.48
cis 1,2 Dichloroethane		98	13,000	1.47615	0.001950859	0.143995941	1,261.40
1,2 Dichloroethene (Total)		99	5,998	0.6810729	0.000900096	0.065766426	576.11
cis 1,2 Dichloroethene		98	7,643	0.86786265	0.001146955	0.084658536	741.61
Ethylbenzene	00100-41-4	106	791	0.08981605	0.000118702		
Methylene Chloride	00071-55-6	51	2,000	0.2271	0.000300132	0.021284468	186.45
Tetrachloroethene	00127-18-4	168	436	0.0495078	6.54288E-05	0.005634303	49.36
Toluene	00108-88-3	92	241	0.02736555	3.61659E-05		
trans 1,2 Dichloroethene		99	3	0.00034065	4.50198E-07		
Trichloroethane		132	1,513	0.17180115	0.00022705	0.018663334	163.49
Trichloroethene		131	271	0.03077205	4.06679E-05	0.003368389	29.51
Vinyl Chloride	00075-01-4	62	1,089	0.12365595	0.000163422	0.00953321	83.51
Xylenes (total)	01330-20-7	106	1,024	0.1162752	0.000153668		
Total			37,144	4.2177012	0.005574054	0.38463991	3,369.45
Isopropyl Alcohol			280	0.031794	4.20185E-05		

(2) Ref. ENSR Engineering Report on Contract No. D004181, September 2000, Table 5

Davis Howland Oil Corporation Site
New York State Department of Conservation Site Number 8-28-088

Maximum Concentration Water to Stipper then to Stack

Volume Flowrate - gpm 30
Temperature - Fahrenheit 68

Compound (Ref. 2)	Cas Number	Formula Weight	Water Concentration ug/l	Into Catalytic Oxidizer g/min of Contaminant Vol*Conc	Out of Catalytic Oxidizer - into Stack lbs/hr of Contaminant	Stack Hydrogen Chloride emissions Exhaust lbs/hr	Stack Hydrogen Chloride emissions Exhaust lbs/yr
Hydrogen Chloride	07647-01-0	36.5	0	0			
1,1,1 Trichloroethane	00079-00-5	133	9,400	1.06737	0.001410821	0.115080157	1,008.10
1-1 Dichloroethane	00075-00-3	100	5,900	0.669945	0.00088539	0.064044964	561.03
1-1 Dichloroethene		99	1,100	0.124905	0.000165073	0.012061198	105.66
Acetone	00067-64-1	58	2,200	0.24981	0.000330145		
Benzene	00071-43-2	78	42	0.0047691	6.30278E-06		
Chlorofom	00067-66-3	119	4	0.0004542	6.00264E-07	5.47315E-05	0.48
cis 1,2 Dichloroethane		98	23,000	2.61165	0.00345152	0.254762049	2,231.72
1,2 Dichloroethene (Total)		99	54,000	6.1317	0.008103568	0.592095196	5,186.75
cis 1,2 Dichloroethene		98	51,000	5.79105	0.00765337	0.564907151	4,948.59
Ethylbenzene	00100-41-4	106	1,900	0.215745	0.000285126		
Methylene Chloride	00071-55-6	51	3,500	0.397425	0.000525231	0.037247819	326.29
Tetrachloroethene	00127-18-4	168	870	0.0987885	0.000130557	0.01124276	98.49
Toluene	00108-88-3	92	640	0.072672	9.60423E-05		
trans 1,2 Dichloroethene		99	3	0.00034065	4.50198E-07		
Trichloroethane		132	2,600	0.29523	0.000390172	0.032071823	280.95
Trichloroethene		131	2,900	0.329295	0.000435192	0.03604549	315.76
Vinyl Chloride	00075-01-4	62	3,400	0.38607	0.000510225	0.029763925	260.73
Xylenes (total)	01330-20-7	106	3,700	0.420135	0.000555244		
Total			166,159	18.86735445	0.02493483	1.749377263	15,324.54
Isopropyl Alcohol			1,500	0.170325	0.000225099		

(2) Ref: ENSR Engineering Report on Contract No. D004181, September 2000, Table 5

LOC FAC EP	DATE	HA/hA feet	hs feet	D in.	T degF	V fps	Q acfm	Dpl/D feet	BW/S feet	BL feet	#
CAS NUMBER	EMISSIONS (lb/hr)					EMISSIONS (lb/year)			Rat	%Ctrl	

TYREE 201 ANDERSON AVE.
SIC: 0 SC: 0100 APP: PC UTME: 10000. UTMN: 10000. BL DIR: 180.0

0100	TYRE0100	523	2	0.	20.	8.	400.	11.34	234.00	25. 250.	130. 12
07647-01-0				0.385000000000000					3370.000000000000000		0.000(
00079-00-5				0.000510000000000					4.400000000000000		0.000(
00075-00-3				0.004200000000000					36.450000000000000		0.000(
00067-64-1				0.000058670000000					0.510000000000000		0.000(
00071-43-2				0.000004050000000					0.035000000000000		0.000(
00067-66-3				0.000054700000000					0.480000000000000		0.000(
00100-41-4				0.000118700000000					1.040000000000000		0.000(
00071-55-6				0.000300000000000					2.620000000000000		0.000(
00127-18-4				0.000065400000000					0.600000000000000		0.000(
00108-88-3				0.000036200000000					0.320000000000000		0.000(
00075-01-4				0.000163000000000					1.420000000000000		0.000(
01330-20-7				0.000154000000000					1.350000000000000		0.000(
TOTAL:				0.390664720000000					3419.224999999999900		(12

END OF FILE: Type "X" and Press Enter to EXIT :

CONTAMINANT ASSESSMENT SUMMARY OF AIRGUIDE 1 ANALYSIS 5/23/ 2
Page 1

CAS NUMBER	AGC ug/m3	SHORT-TERM MAXIMUM (Cav,Pt,Area) % OF SGC	CAVITY ACTUAL ANNUAL % OF AGC	POINT or AREA SOURCE POTENTIAL ANNUAL % OF AGC	ACTUAL ANNUAL % OF AGC
00067-64-1	28000.00000000	0.0001	0.0000	0.0000	0.00
00067-66-3	0.04300000	0.1054	0.0000	7.8952	7.9178
00071-43-2	0.13000000	0.0009	0.0000	0.1934	0.191
00071-55-6	1000.00000000	0.0013	0.0000	0.0019	0.00
00075-00-3	10000.00000000	0.0000	0.0000	0.0026	0.0026
00075-01-4	0.02000000	0.0003	0.0000	50.5824	50.360
00079-00-5	0.06300000	0.0000	0.0000	50.2425	49.53
00100-41-4	1000.00000000	0.0006	0.0000	0.0007	0.0007
00108-88-3	400.00000000	0.0003	0.0000	0.0006	0.000
00127-18-4	1.00000000	0.0189	0.0000	0.4059	0.4
01330-20-7	700.00000000	0.0104	0.0000	0.0014	0.0014
07647-01-0	20.00000000	742.0503	0.0000	119.4738	119.51
SUMMARY TOTALS		742.1884	0.0000	228.8002	227.9592

END OF FILE: Type "X" and Press Enter to EXIT :

CONTAMINANT ASSESSMENT SUMMARY OF AIRGUIDE 1 ANALYSIS 5/23/ 2
Page 1

CAS NUMBER	AGC ug/m3	SHORT-TERM MAXIMUM (Cav,Pt,Area) % OF SGC	CAVITY ACTUAL ANNUAL % OF AGC	POINT or AREA SOURCE POTENTIAL ANNUAL % OF AGC	ACTUAL ANNUAL % OF AG
00067-64-1	28000.00000000	0.0001	0.0000	0.0000	0.0000
00067-66-3	0.04300000	0.1054	0.0000	7.8952	7.9
00071-43-2	0.13000000	0.0009	0.0000	0.1934	0.191
00071-55-6	1000.00000000	0.0013	0.0000	0.0019	0.00
00075-00-3	10000.00000000	0.0000	0.0000	0.0026	0.0
00075-01-4	0.02000000	0.0003	0.0000	50.5824	50.360
00079-00-5	0.06300000	0.0000	0.0000	50.2425	49.5
00100-41-4	1000.00000000	0.0006	0.0000	0.0007	0.0
00108-88-3	400.00000000	0.0003	0.0000	0.0006	0.000
00127-18-4	1.00000000	0.0189	0.0000	0.4059	0.4
01330-20-7	700.00000000	0.0104	0.0000	0.0014	0.0
07647-01-0	20.00000000	742.0503	0.0000	119.4738	119.518
SUMMARY TOTALS		742.1884	0.0000	228.8002	227.

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CONTAMINANT IMPACT SUMMARY OF AIRGUIDE 1 ANALYSIS 5/23/ 2
Page 1

CAS NUMBER	AGC ug/m3	SHORT-TERM MAXIMUM (Cav,Pt,Area) ug/m3	CAVITY ACTUAL ANNUAL ug/m3	POINT or AREA SOURCE POTENTIAL ANNUAL ug/m3	POINT or AREA SOURCE ACTUAL ANNUAL ug/m3
00067-64-1	28000.00000000	0.16962	0.00000	0.00364	0.00362
00067-66-3	0.04300000	0.15814	0.00000	0.00339	0.00340
00071-43-2	0.13000000	0.01171	0.00000	0.00025	0.00025
00071-55-6	1000.00000000	0.86733	0.00000	0.01862	0.01858
00075-00-3	10000.00000000	12.14264	0.00000	0.26067	0.25854
00075-01-4	0.02000000	0.47125	0.00000	0.01012	0.01007
00079-00-5	0.06300000	1.47446	0.00000	0.03165	0.03121
00100-41-4	1000.00000000	0.34317	0.00000	0.00737	0.00738
00108-88-3	400.00000000	0.10466	0.00000	0.00225	0.00227
00127-18-4	1.00000000	0.18908	0.00000	0.00406	0.00426
01330-20-7	700.00000000	0.44523	0.00000	0.00956	0.00958
07647-01-0	20.00000000	1113.07544	0.00000	23.89475	23.90362
SUMMARY TOTALS		1129.45276	0.00000	24.24633	24.25278

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CONTAMINANT IMPACT SUMMARY OF AIRGUIDE 1 ANALYSIS 5/23/
Page

CAS NUMBER	AGC ug/m3	SHORT-TERM MAXIMUM (Cav,Pt,Area) ug/m3	CAVITY ACTUAL ANNUAL ug/m3	POINT or AREA SOURCE POTENTIAL ANNUAL ug/m3	POINT or AREA SOURCE ACTUAL ANNUAL ug/m3
00067-64-1	28000.00000000	0.16962	0.00000	0.00364	0.0036
00067-66-3	0.04300000	0.15814	0.00000	0.00339	0.0034
00071-43-2	0.13000000	0.01171	0.00000	0.00025	0.0002
00071-55-6	1000.00000000	0.86733	0.00000	0.01862	0.0185
00075-00-3	10000.00000000	12.14264	0.00000	0.26067	0.2585
00075-01-4	0.02000000	0.47125	0.00000	0.01012	0.0100
00079-00-5	0.06300000	1.47446	0.00000	0.03165	0.0312
00100-41-4	1000.00000000	0.34317	0.00000	0.00737	0.0073
00108-88-3	400.00000000	0.10466	0.00000	0.00225	0.0022
00127-18-4	1.00000000	0.18908	0.00000	0.00406	0.0042
01330-20-7	700.00000000	0.44523	0.00000	0.00956	0.0095
07647-01-0	20.00000000	1113.07544	0.00000	23.89475	23.9036
SUMMARY TOTALS		1129.45276	0.00000	24.24633	24.2527

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CONTAMINANT IMPACT SUMMARY OF AIRGUIDE 1 ANALYSIS 5/23/
Page

CAS NUMBER	AGC ug/m3	SHORT-TERM MAXIMUM (Cav,Pt,Area) ug/m3	CAVITY ACTUAL ANNUAL ug/m3	POINT or AREA SOURCE POTENTIAL ANNUAL ug/m3	POINT or AREA SOURCE ACTUAL ANNUAL ug/m3
00067-64-1	28000.00000000	0.16962	0.00000	0.00364	0.0036

EMISSION POINT AND CONTAMINANT ASSESSMENT OF AIRGUIDE 1 ANALYSIS 5/23/ 2

		SHORT-TERM	CAVITY	POINT or AREA SOURCE	
EMISSION POINT	CAS NUMBER	MAXIMUM (Cav,Pt,Area) % OF SGC	ACTUAL ANNUAL % OF AGC	POTENTIAL ANNUAL % OF AGC	ACTUAL ANNUAL % OF AGC
0100 TYRE0100	07647-01-0	742.0503	0.0000	119.4738	119.5181
SUMMARY TOTALS		742.0503	0.0000	119.4738	119.5181

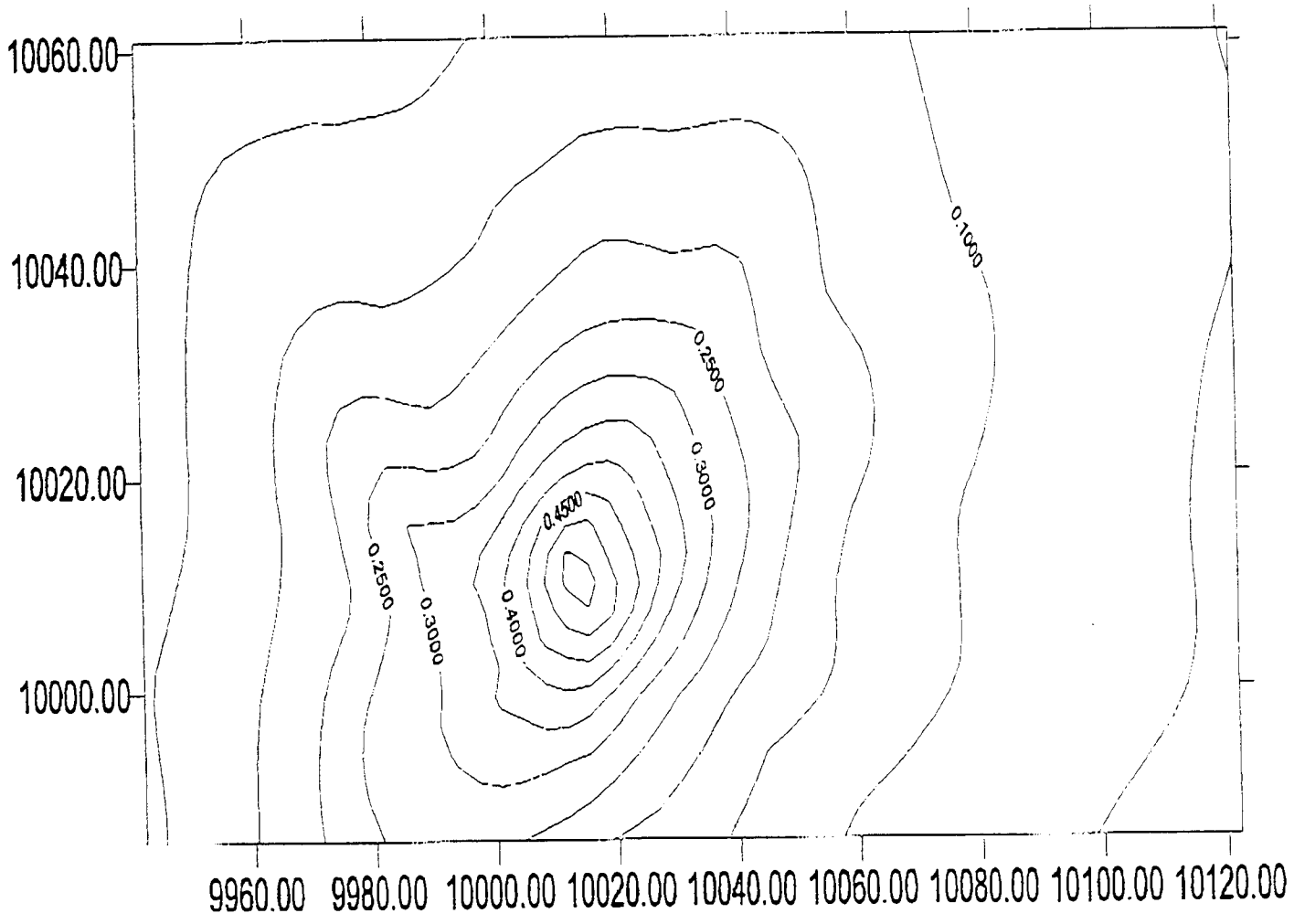
Screen 6: Display Sources that fail AIR GUIDE -1

END OF FILE: Type "X" and Press Enter to EXIT :

Inhalation Hazard

at Vicinity of Thermal Oxidizer

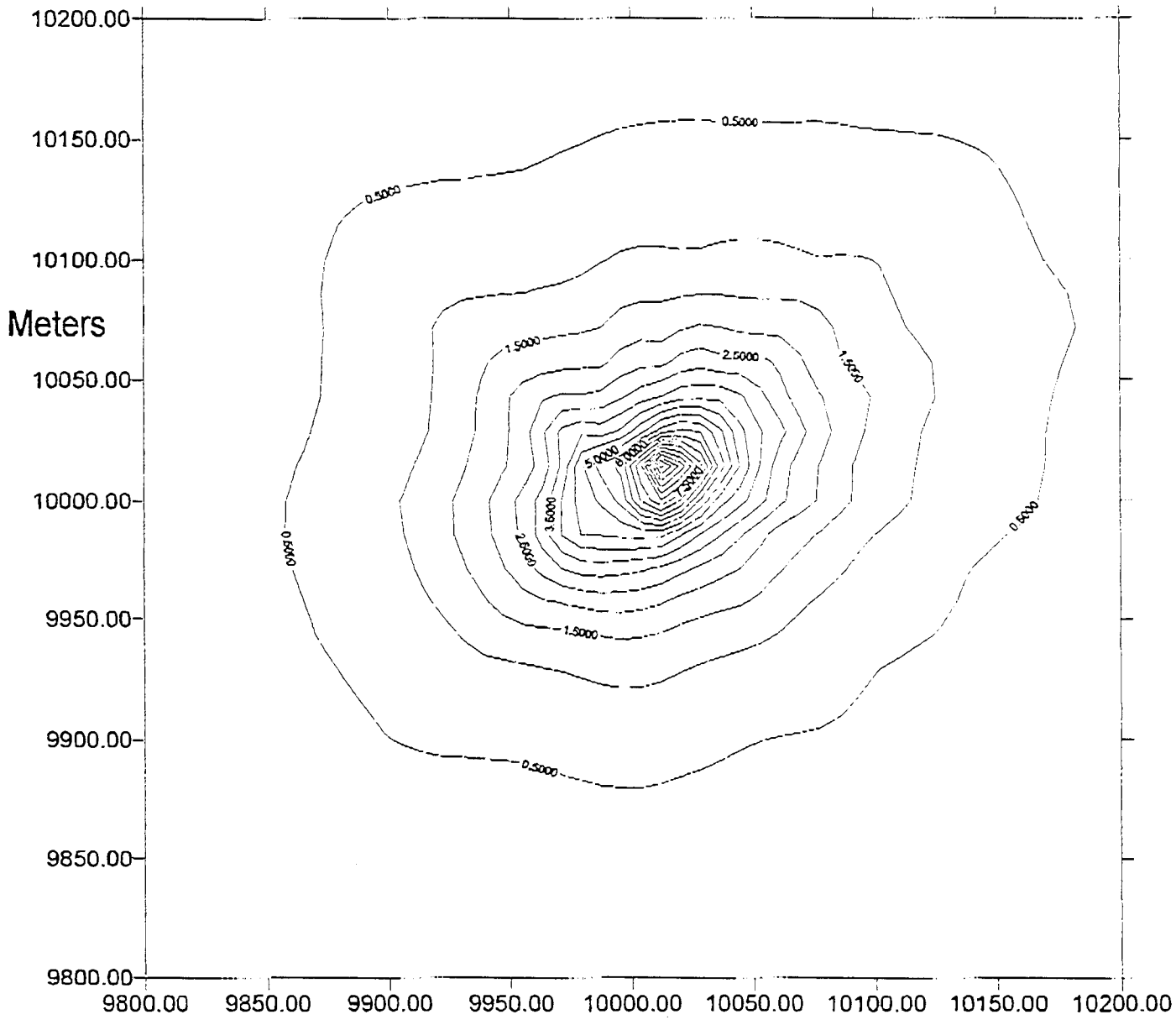
HCl at 3,300 lbs/yr



HCl Concentration - ug/m3

At Vicinity of Thermal Oxidizer

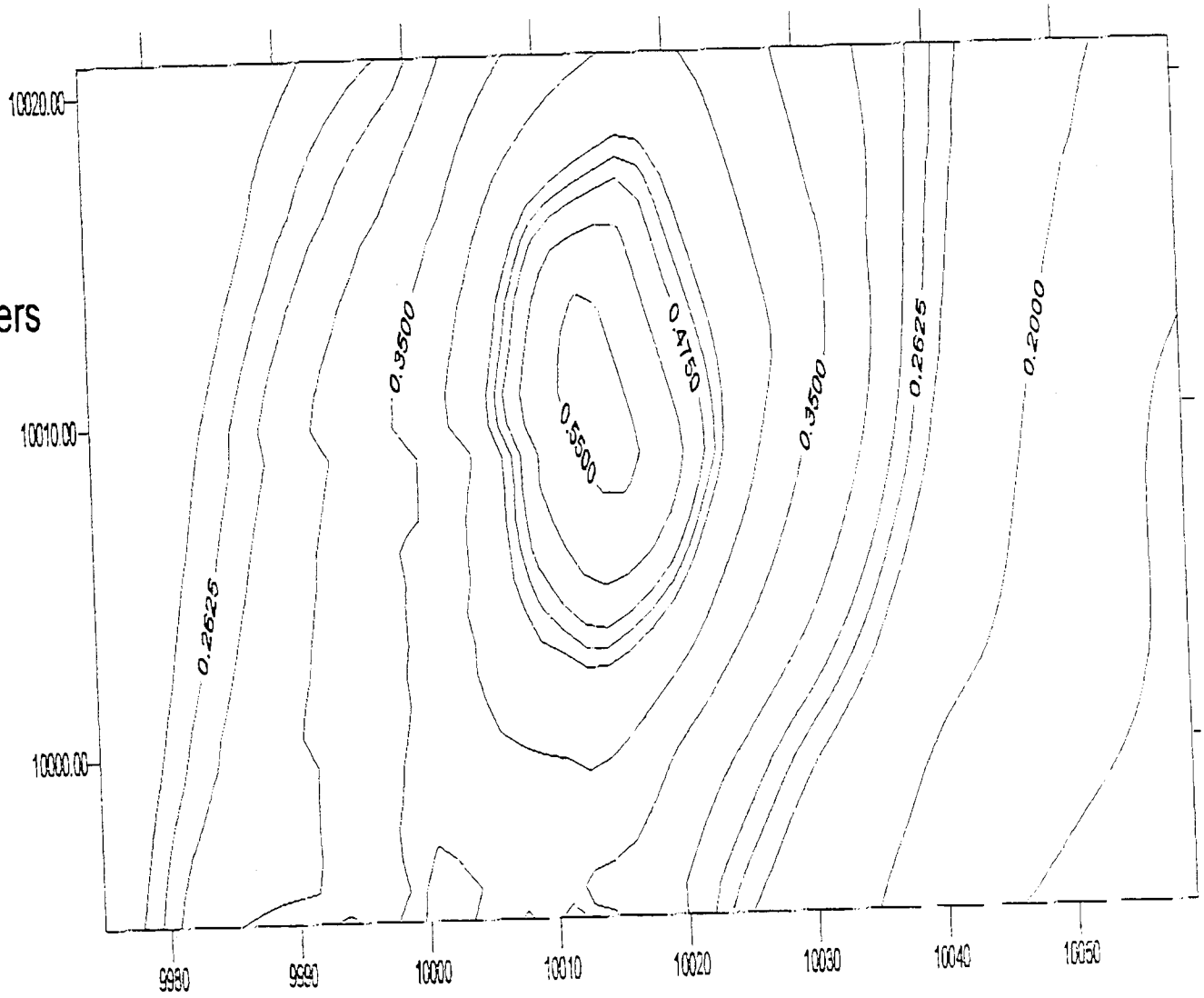
HCl at 3,300 lbs/yr



Actual Annual Concentration/AGC

at Vicinity of Thermal Oxidizer

HCl at 3,300 lbs/yr



Meters

Attachment D
Operation and Maintenance Program

Davis Howland Oil Company Site, NYSDEC Site # 8-28-88
System Progress Monitoring

Monitoring Location	Temperature	Pressure	Flow Rate	Concentration [2]	Total Removed [2]
Air Sparge System					
Blower Inlet		*	*		
Blower Outlet	*	*			
Heat Exchanger Outlet	*	*			
AS Wells		*	*		
Soil Vapor Extraction System					
SVE Points		*	*		
SVE Lines		*	*		
SVE Headers		*			
Condensate Filter Separator Inlet	*	*	*		
Condensate Filter Separator Outlet		*			
SVE Blower Inlet Filter		* (1)			
SVE Blower Inlet	*				
SVE Blower Outlet	*	*		*	
Vapor Phase Treatment System					
Catalytic Oxidizer Inlet	*	*	*	*	
Catalytic Oxidizer Outlet	*	*	*	*	*
Groundwater Treatment System					
Pump Well Discharge	*	*			
Recovery Well Discharge	*	*			
Equalization Tank Discharge			*	*	
Air Stripper Inlet (Air)		*			
Air Stripper Outlet (Air)		*	*	*	*
Air Stripper Outlet (Water)			*	*	*

Notes:

1. Pressure Differential
2. See QA/QC Plan for sampled contaminants

ATTACHMENT "E"

System Progress Monitoring

Technician:_____ Date:_____ Time:_____

Weather:_____ Day/Week No.:_____

Job Name/No.: Davis Howland / 8-28-088 Location: Rochester, NY

Monitoring Location	Temperature (F)	Pressure	Flow Rate	Totalizer Reading
Air Sparge System				
Blower Inlet		PSI		
Blower Outlet	F	PSI		
Heat Exchanger Outlet	F	PSI		
Soil Vapor Extraction System				
SVE Lines		inHg		
SVE Header Inlet		inWC		
Moisture Separator Inlet	F	inWC	inWC	
Moisture Separator Outlet		inWC		
SVE Blower Inlet Filter (Top)		inWC		
SVE Blower Inlet Filter (Bottom)		inWC		
SVE Blower Outlet	F	inWC		
Vapor Phase Treatment System				
Catalytic Oxidizer Inlet	F		scfm	
Catalytic Oxidizer Outlet	F			
Groundwater Treatment System				
Pumping Well PW-1			gpm	g
Pumping Well PW-2			gpm	g
Recovery Well P-1			gpm	g
Recovery Well P-2			gpm	g
Recovery Well P-3			gpm	g
Remote Air Stripper Effluent Totalizer				g
Air Stripper Inlet (Air)		inWC		
Air Stripper Outlet (Air)		inWC	inWC	
Air Stripper Outlet (Water)		PSI	gpm	g
Equalization Tank Transfer pump		PSI		

Did you perform system sampling? (circle) YES NO ; if yes, Effluent pH=_____

Notes:

System Progress Monitoring

Technician:_____ Date:_____

Weather:_____ Time:_____

Job Name/No.:Davis Howland / 8-28-088 Location: Rochester, NY

I.D.	Pressure	Flow	Adjustments	Notes	Depth of Water
AS1	PSI	scfm			
AS2	PSI	scfm			
AS3	PSI	scfm			
AS4	PSI	scfm			
AS5	PSI	scfm			
AS6	PSI	scfm			
AS7	PSI	scfm			
AS8	PSI	scfm			
AS9	PSI	scfm			
AS10	PSI	scfm			
AS11	PSI	scfm			
AS12	PSI	scfm			
AS13	PSI	scfm			
AS14	PSI	scfm			
AS15	PSI	scfm			
AS16	PSI	scfm			
AS17	PSI	scfm			
AS18	PSI	scfm			
AS19	PSI	scfm			
AS20	PSI	scfm			
AS21	PSI	scfm			
AS22	PSI	scfm			
AS23	PSI	scfm			
AS24	PSI	scfm			
AS24A	PSI	scfm			
AS25	PSI	scfm			
AS26	PSI	scfm			
AS27	PSI	scfm			
AS28	PSI	scfm			
AS29	PSI	scfm			

System Progress Monitoring

Technician:_____ Date:_____

Weather:_____ Time:_____

Job Name/No.:Davis Howland / 8-28-088 Location: Rochester, NY

I.D.	Pressure	Flow	Adjustments	Notes	Depth of Water
AS30	PSI	scfm			
AS31	PSI	scfm			
AS32	PSI	scfm			
AS33	PSI	scfm			
AS34	PSI	scfm			
AS35	PSI	scfm			
AS36	PSI	scfm			
AS37	PSI	scfm			
AS38	PSI	scfm			
AS39	PSI	scfm			
AS40	PSI	scfm			
AS41	PSI	scfm			
AS42	PSI	scfm			
AS43	PSI	scfm			
AS44	PSI	scfm			
AS45	PSI	scfm			
AS46	PSI	scfm			
SVE P1	inHg	inWC			
SVE P2	inHg	inWC			
SVE P3	inHg	inWC			
SVE P4	inHg	inWC			
SVE P5	inHg	inWC			
SVE P6	inHg	inWC			
SVE L10 (P7)	inHg	inWC			
SVE L13 (P8)	inHg	inWC			

Notes:

Monitoring Well / Peizometer Data Sheet

Technician:_____ Date:_____

Weather:_____ Day/Week No.:_____

Job Name/No.:Davis Howland / 8-28-088 Location: Rochester, NY

Well I.D.	DTW (Top Riser)	DTW (Finish Grade)	Time	Visible Product	Odor	Sample Taken
PZ-1						
PZ-2						
PZ-3						
PZ-4						
PZ-5						
PZ-6						

Notes:

Davis Howland Site
200 Anderson Ave., Rochester, NY
Site No.: 8-28-088

ATTACHMENT "F"

Auto-Dialer Channel Designations

Channel	Alarm
01	**Air Sparge Unit Alarm** (1) – Low SVE Vacuum; (2) – Blower Outlet High T° Alarm; (3) – Heat X-changer High T° Alarm; (4) – High Pressure Alarm.
02	**SVE Unit Alarm** (1) – High T° Alarm; (2) – Blower Motor High T° Alarm; (3) – Filter High Pressure Alarm; (4) – Moisture Separator High Level; (5) – High Pressure Alarm.
03	**Equalization Tank Alarm** (1) – Low Low Level Alarm; (2) – High Level Alarm.
04	**Air Stripper Alarm** (1) – Low Pressure Alarm; (2) High Sump Level; (3) – Blower Motor High T° Alarm.
05	**Cat-Ox Unit Failure.**
06	**External Overflow Tank High Water Level Alarm.**
07	**Spare Channel.**
08	**Trailer Intrusion Detected.** Note: 30 second delay before alarm is Activated.

>Dial 585-242-9875 to reach the auto-dialer and hear an update.
>Press (9) to acknowledge alarm.

Call Sequence:

1. Phil Holloway Pager – 518-446-4153
2. Stephen Phelps Pager – 800-366-2337 pin#25097
3. Jennifer Kotch Cell – 203-948-5051
4. E & E – 716-684-8060
5. Bob Galasso Pager – 585-306-0243

A.2 Copy of NEDI Bid

Exhibit #2
Operations and Maintenance Program
Subcontractor Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

4) Unscheduled System Maintenance and Reporting.

This includes mobilization and demobilization to handle and maintain unscheduled treatment system shutdowns. As required and necessary, communication and coordination with the Engineer. This includes the evaluation of the system problems and the ability to restart the system and to continue treatment of the environmental waste streams. For purposes of estimating, a maximum of 8 unscheduled system maintenance site visits shall be included.

5) Contingency Services in case of Major System Repairs.

Contingency services are to utilized only at the direction of the Engineer. These services are for system modifications or major equipment repairs that could be encountered during the 12 months of operation of the system or utilized in providing increased performance of the equipment above the current system operations. These services do not include normal required system maintenance as required under the scope of services in items 1-4 above.

Pricing Schedule

A. Scope of Work Base Pricing:

Item Description	Team	Quantity	Units	Cost/Unit	Total
1) Initial System Review and Operations	2	1	LS	$3,142.00	$ 3,142.00
2) Weekly Operation and Maintenance and Reporting Visits	1	24	Each	$ 562.50	$ 13,500.00
3) Weekly Operation and Maintenance, Sampling and Reporting Visits.	1	28	Each	$ 625.00	$ 17,500.00
4) Unscheduled System Maintenance and Reporting.	1	8	Each	$ 562.50	$ 4,500.00
5) Contingency Services.		1	LS	$	$ 18,000.00
				Grand Total	$ 56,642.00

Exhibit #2
Operations and Maintenance Program
Subcontractor Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

B. Hourly Rate Pricing:

$ Provide fully loaded hourly rates including overhead costs and profit:

1. Technician 1 - (Senior staff) $ 62.50 /hour
2. Technician 2 - (Associate or Junior staff) $ 58.00 /hour
3. Electrical/Controls Specialist $ 75.00 /hour

C. Optional Equipment Rates:

$ Provide additional information on equipment rates (including mob/demob costs) that could be used beyond the initial scope of services.

Equipment - Description	Rate/Hour	Rate/Day
Welder / Generator	$ 15.00	$ 75.00 +fuel
Oxy-Acetylene torch set	$ 7.50	$ 50.00 + gases
Air compressor	$ 8.50	$ 60.00
Pressure Washer	$ 8.50	$ 60.00
Wet/dry Vacuum	$ 2.50	$ 15.00
Scaffold	$ 12.00	$ 85.00
Hand Power tools	$ N/A	$ 30.00
Sound Meter	$ N/A	$ 15.00
Velometer	$ 5.00	$ 35.00
Pitot Tube	$ 5.00	$ 35.00
3 gas detector	$ 5.00	$ 35.00
	$	$
	$	$
	$	$

Firm: Niagara Environmental Dynamics Inc.
Dated: February 21, 2003
By: 3/5/03

A.3 Copy of all Bids

O&M Enterprises Inc.
7134 Marigold Drive
North Tonawanda, NY 14120

February 13, 2003

Ecology and Environment Engineering Inc.
368 Pleasant View Drive
Lancaster, New York 14086

Attn: Mike Steffan

Dear Mr. Steffan,
O&M Enterprises, Inc. is pleased to submit the following proposal for the Operations and Maintenance of the remediation system at the former Davis Howland Oil Company in Rochester, NY. As stated on the pricing schedule this proposal includes pricing for the following:
1. Initial System Review and Operations
2. Weekly Operation and Maintenance and Reporting visits with one technician.
3. Weekly Operation and Maintenance, Sampling and Reporting with two technicians.
4. Unscheduled System Maintenance and Reporting with two technicians.

It is the opinion of O&M Enterprises, Inc. that the best way to support this project is to have two technicians familiar with the operation of the remedial system.

Assumptions

1. O&M Enterprises assumes that the building tenants will allow access at any time necessary.

2. O&M Enterprises takes no responsibility for missing and or stolen property from the building owner or the tenants.

3. O&M Enterprises has not included any pricing for replacement equipment, parts, or expendable materials in this quote, but could purchase and invoice on a cost plus 12% basis.

4. O&M Enterprises assumes analytical costs for air, water, and soil samples will be the responsibility of E&E the samples can be delivered to the E&E laboratory on Walden Ave. in Lancaster, NY thereby eliminating the cost and need to ship samples.

5. O&M Enterprises assumes that weekend and holiday hours are not included in the downtime percentage calculations.

6. O&M Enterprises reserves the right to decrease manpower thereby passing the savings on to E&E.

If I can be of further assistance feel free to call me at 694-4977 or 435-8500. Thank You

Sincerely,

Richard C. Becken

Telephone (716) 694-4977, (716) 731-5322 e-mail address Richbome@aol.com

Exhibit #2
Operations and Maintenance Program
Subcontractor Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

4) Unscheduled System Maintenance and Reporting.

This includes mobilization and demobilization to handle and maintain unscheduled treatment system shutdowns. As required and necessary, communication and coordination with the Engineer. This includes the evaluation of the system problems and the ability to restart the system and to continue treatment of the environmental waste streams. For purposes of estimating, a maximum of 8 unscheduled system maintenance site visits shall be included.

Pricing Schedule

A. Scope of Work Base Pricing:

Item Description	Team	Quantity	Units	Cost/Unit	Total
1) Initial System Review and Operations	2	1 - 2	LS	$300.00	$ 300.00
2) Weekly Operation and Maintenance and Reporting Visits	1	24	Each	$ 445.00	$ 10680.00
3) Weekly Operation and Maintenance, Sampling and Reporting Visits.	2	28	Each	$790.00	$ 22120.00
4) Unscheduled System Maintenance and Reporting.	2	8	Each	$ 765.00	$ 6120.00
				Grand Total	$ 39220.00

CONTINGENCY $18,000.00

TOTOL $57,220.00 MGS

B. Hourly Rate Pricing:

- Provide fully loaded hourly rates including overhead costs and profit:

1. Technician 1 - (Senior staff) $ 50.00 /hour
2. Technician 2 - (Associate or Junior staff) $ 40.00 /hour
3. Electrical/Controls Specialist $ 65.00 /hour

Exhibit #2
Operations and Maintenance Program
Subcontractor Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

C. Optional Equipment Rates:

- Provide additional information on equipment rates (including mob/demob costs) that could be used beyond the initial scope of services.

Equipment - Description	Rate/Hour	Rate/Day
Pressure Washer	$	$ 50.00
Hand Tools / Multi Meter	$	$ included
Hydac meter (pH, Temp, Conductivity)	$	$ included
Rental Equipment	$	$ ~~cost + 12%~~
	$	$
	$	$
	$	$
	$	$
	$	$
	$	$
	$	$
	$	$
	$	$
	$	$
	$	$

Firm: O&M Enterprises Inc.

Dated: February 13, 2003

By: Richard C. Becken Richard C Becken

TOTAL P.04

GALLOWAY TECHNICAL SERVICES
5726 Tonawanda Creek Road
Lockport, New York 14094
(716) 625-6895
FAX (716) 625- 4304

facsimile transmittal

To: MIKE STEFFAN Fax: (716) 684-0844

Company: E & E

From: **William A. Galloway, Jr.** Date: 2/18/03

Re: DAVIS HOWLAND BID

CC: Pages: 3

Notes:

MIKE,

HERE IS YOUR QUOTE FOR DAVIS HOWLAND. THANKS FOR THE OPERTUNITY TO BID IT. IF YOU NEED ANYTHING ELSE, PLEASE CALL

THANK YOU

BILL

Exhibit #2
Operations and Maintenance Program
Subcontractor Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

4) Unscheduled System Maintenance and Reporting.

This includes mobilization and demobilization to handle and maintain unscheduled treatment system shutdowns. As required and necessary, communication and coordination with the Engineer. This includes the evaluation of the system problems and the ability to restart the system and to continue treatment of the environmental waste streams. For purposes of estimating, a maximum of 8 unscheduled system maintenance site visits shall be included.

Pricing Schedule

A. Scope of Work Base Pricing:

Item Description	Team	Quantity	Units	Cost/Unit	Total
1) Initial System Review and Operations		1	LS	$ 4,980.00	$ 4,980.00
2) Weekly Operation and Maintenance and Reporting Visits		24	Each	$ 735.00	$ 17,640.00
3) Weekly Operation and Maintenance, Sampling and Reporting Visits.		28	Each	$ 735.00	$ 20,580.00
4) Unscheduled System Maintenance and Reporting.		8	Each	$ 850.00	$ 6,800.00
				Grand Total	$ 50,000.00

** Fifty Thousand and----------00/100

CONTINGENCY $ 18,000.00

TOTAL 68,000.00

B. Hourly Rate Pricing:

- Provide fully loaded hourly rates including overhead costs and profit:

1. Technician 1 - (Senior staff) $ 55.00 /hour
2. Technician 2 - (Associate or Junior staff) $ 40.00 /hour
3. Electrical/Controls Specialist $ 55.00 /hour

Exhibit #2
Operations and Maintenance Program
Subcontractor Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

C. Optional Equipment Rates:

- Provide additional information on equipment rates (including mob/demob costs) that could be used beyond the initial scope of services.

Equipment - Description	Rate/Hour	Rate/Day
Pick-up Truck	$ 35.00	$ 140.00
Hand Tools (Hammers, wrenches, etc.)	$ 25.00	$ 100.00
Small Transfer Pump	$ 20.00	$ 100.00
Pressure Washer (3500PSI)	$ 35.00	$ 150.00
Backhoe	$ 60.00	$ 420.00
Dump Truck (5-6 Yards)	$ 40.00	$ 275.00
Trailer (10 Ton)	$ 35.00	$ 245.00
	$	$
	$	$
	$	$
	$	$
	$	$
	$	$
	$	$
	$	$

** Additional materials @ Cost + 20%

Firm: Galloway Technical Services, Inc.
5726 Tonawanda Creek Road
Lockport, New York 14094
Phone: (716) 625-6895
Fax: (716) 625-4304

Dated: February 18, 2003

By: William A. Galloway, Jr. - President

2/18/03

LU ENGINEERS
Civil and Environmental
2230 Penfield Road
Penfield, NY 14526-1922

Office (585) 377-1450
Fax (585) 377-1266
e-mail: luengrs@luengineers.com

FAX

COVER SHEET

DATE: 2/17/03 ***PROJECT NO.:*** 10618-09/P03-21

THIS FACSIMILE MESSAGE FOR THE ATTENTION OF:

NAME: Mike Stefan

FIRM: E x E

FAX NO.: (716) 684-0844

FROM: Greg Andrus

SUBJECT: DHOC Site O+M Proposal

REGULAR COPY WILL ☒ ***OR WILL NOT*** ☐ ***BE SENT.***

TOTAL NUMBER OF PAGES (INCLUDING THIS COVER SHEET): 6

Please call or email with any questions you may have.

Thanks,

Greg

NOTE: ***IF YOU DO NOT RECEIVE ALL THE PAGES, OR IF THE QUALITY IS NOT SUITABLE, PLEASE CALL (585) 377-1450 AS SOON AS POSSIBLE.***

LU ENGINEERS
Civil and Environmental

February 17, 2003

Ecology and Environment Engineering, P.C.
368 Pleasant View Drive
Lancaster, New York 14086

Attn: Mr. Michael Steffan

RE: Davis-Howland Oil Company Site **P03-21**
Remedial Operations and Maintenance

Dear Mr. Steffan:

As requested, Lu Engineers proposes to provide operations and maintenance (O&M) services for the soil and groundwater remediation systems currently installed at the referenced site. The anticipated duration of this project is one year.

Scope of Services

Lu Engineers proposes to fulfill the requirements outlined in the "Exhibit 1" and "Exhibit 2" portions of Ecology and Environment's Request for Proposal package for this project. Based on our review of these requirements, it is our understanding that Lu Engineers' responsibilities will be divided into four tasks including:

1. Initial Treatment System Review and Operations
2. Weekly Operation and Maintenance and Reporting
3. Weekly Operation and Maintenance, Sampling and Reporting
4. Unscheduled System Maintenance and Reporting

Costs

Costs for the proposed services are presented in the Attached "Exhibit 2" form. It is our understanding that Lu Engineers' status as a licensed professional engineering firm will allow for the elimination of the need for independent engineering O&M oversight. Therefore, no such oversight costs are provided or anticipated for this project.

Proposed costs are divided into three categories as specified including:

JOSEPH C. LU ENGINEERING AND LAND SURVEYING, P.C.
2230 PENFIELD ROAD PENFIELD, NEW YORK 14526
TELEPHONE: (585) 377 1450 FAX: (585) 377 1266
www.luengineers.com

A. Scope of Work Base Pricing (as above)
   1 Initial Treatment System Review and Operations
   2 Weekly Operation and Maintenance and Reporting
   3 Weekly Operation and Maintenance, Sampling and Reporting
   4 Unscheduled System Maintenance and Reporting
B. Hourly Rate Pricing
C. Optional Equipment Rates

Costs presented for items A1 through 4 include equipment, materials, mileage and a team of two (2) personnel including individuals specified under Item B as "Technician 1" and Technician 2". The majority of site work will be conducted by Technician 2-level personnel. Technician 1-level personnel will be responsible for incidental site technical assistance, data review, QA/QC and all correspondence with Ecology and Environment and regulatory entities. Other personnel will be utilized on an as-needed basis as the project progresses.

As specified by Ecology and Environment, the total cost presented for Item A1 includes development of a project-specific health and safety plan and sampling plan.

Any additional costs for unspecified subcontracted labor, equipment and/or materials will be billed on a cost plus 10% basis.

Assumptions
Lu Engineers' assumptions with respect to costs and the manner of completion of the specified tasks include, but are not limited to, the following:

1. Payment for Lu Engineers' services, related equipment and/or materials costs is in no way tied to performance of the subject remediation system or any of its components.

2. All sample bottle sets and coolers will be delivered directly to Lu Engineers' office. Upon completion of sampling, Lu Engineers will deliver sample coolers to Federal Express' downtown Rochester office for shipping to the contract laboratory under the laboratory's Federal Express account.

3. Lu Engineers will not be liable for any impacts to human health or the environment or permit violations relating to operation or failure of the remediation system or any of its components.

4. Free access to all areas of the site, both interior and exterior will be provided to Lu Engineers at all times.

5. Background information including any design or system engineering reports will be provided to Lu Engineers.

Limitation of Liability

To the fullest extent permitted by law, and not withstanding any other provision of this Agreement, the total liability, in the aggregate, of the Consultant and the Consultant's officers, directors, partners, employees and subconsultants, and any of them, to the Client and anyone claiming by or through the Client, for any and all claims, losses, costs or damages, including attorneys' fees and costs and expert-witness fees and costs of any nature whatsoever or claims expenses resulting from or in any way related to the Project or the Agreement from any cause or causes shall not exceed the total compensation received by the Consultant under this Agreement, or the total amount of $50,000, whichever is greater. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

Lu Engineers personnel have conducted remedial design, construction and O&M on numerous contaminated sites. We are very exited about the opportunity to provide remedial O&M services for this project.

Please call or e-mail with any questions you may have. Thank you for considering Lu Engineers for this project.

Respectfully submitted,

Robert J. Elliott, P.E.
Vice President

Enc. Exhibit #2 Form

Exhibit #2
Operations and Maintenance Program
Subcontractor Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

Pricing Schedule

A. Scope of Work Base Pricing:

Item Description	Team	Quantity	Units	Cost/Unit	Total
1) Initial System Review and Operations	See Above	1	LS	$4,800.00	$4,800.00
2) Weekly Operation and Maintenance and Reporting Visits	See Above	24	Each	$759.00	$18,216.00
3) Weekly Operation and Maintenance, Sampling and Reporting Visits	See Above	28	Each	$1101.00	$30,828.00
4) Unscheduled System Maintenance and Reporting	See Above	8	Each	$784.00	$6,272.00
				Grand Total	$60,116.00

CONTINGENCY $18,000

TOTAL $ ~~78~~ 78,116.00

B. Hourly Rate Pricing:

- Provide fully loaded hourly rates including overhead costs and profit:

1. Technician 1 - (Senior staff)	$63 /hour
2. Technician 2 - (Associate or Junior staff)	$54 /hour
3. Electrical/Controls Specialist	$60 /hour
4. Mechanical/Electrical Engineer	$78 /hour

C. Optional Equipment Rates:

Equipment – Description	Rate/Hour	Rate/Day
Solinst Water Level Indicator	N/A	$20
Dawson Vacuum Pump	N/A	$25
Clear View Disposable Bailers	N/A	$8 each
Dissolved Oxygen Meter	N/A	$45
PH/Conductivity Meter	N/A	$20
Dwyer Manometer	N/A	$20
Magnehelics (various)	N/A	$20
MiniRAE 2000 PID	N/A	$75
Bacharach Confined Space Air Monitoring Meter	N/A	$50
Lamotte Turbidity Meter	N/A	$20
Bosch Hammer Drill	N/A	$35
Foxboro 108 OVA	N/A	$90

Firm: Lu Engineers

Dated: February 17, 2003

By: Robert J. Elliott, P.E.

B

Niagara Environmental Dynamics, Inc. (NEDI) O & M Services, 2004-2005

B.1 Scope of Work 2004-2005

Niagara Environmental Dynamics Inc.

June 3, 2004

Ecology & Environment Engineering P.C.
368 Pleasant View Drive
Lancaster NY
14086

Attention: Michael Steffan

Dear Mr. Steffan,

Thank you for the opportunity to present this proposal and submissions for continuing sub-contract work for the Davis Howland Oil Company site NYSDEC # 8-28-88 at 200 Anderson Avenue Rochester New York for fiscal 2004-2005.

We will endeavour to continue to provide timely cost effective on site services to insure the safe, effective, and efficient operation of the remedial systems.

Niagara Environmental Dynamics Inc. will provide qualified supervision, trained competent technicians, tools, materials, sub-contractors as required, scientific equipment as described, insurance and documentation for a comprehensive O & M program as described for the following prices:

Labor rates
Service technician supervisor $62.50 per hour
Overtime, weekends, & holidays $77.50 per hour

Technician and/or laborer $ 58.00 per hour
Overtime, weekends, & holidays $ 73.00 per hour

These rates would be applied as follows:

Weekly O & M for 40 times per contract year @$600.00 day

Monthly sampling collection and O & M for 12 times per contract year @$650.00 day.

Unscheduled maintenance would consist of a contingency of 24 days per year. @$650.00 day

5693 Old Lake Shore Road • Lakeview, New York 14085 • Telephone: (716) 692-6851 • FAX: (716) 627-9066
E-mail: ned@niagara-environmental.com • Web Site: www.niagara-environmental.com/enviro

Materials and rental tool costs

Mileage rate for ½ ton Pick up truck for deliveries etc to site $0.54 per mile
Welder generator $ 75.00 per day + fuel
Oxy Acetylene torch $50.00 per day + gas consumed
Air compressor $60.00 per day
Pressure washer $ 60.00 per day
Wet dry vacuum $ 15.00 per day
Scaffold $ 85.00 per day
Hand tools complete set wrenches, socket sets, small electrical hand tools, levels, electric cords etc $30 per day

Scientific Equipment
pH meter N/C, pressure gauges , manometers, magnehelic gauges, decibel sound meter, velometer, 4 gas detector, pitot tube kit @$35.00 day inclusive.

PPE, hardware, fittings, fasteners, electronic devices, rentals, sub-contractor trades, repair materials, and sub- contractor snow removal
All 10% above cost or invoice.

Once again we appreciate the time and hospitality that you extended to me during our O & M project this past year.

Best regards

Michael J. Mugas
Niagara Environmental Dynamics Inc.

Exhibit #1A
Scope of Work
Remedial Site and Treatment System Operations and Maintenance Program - 2004-2005
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

1.1 General Scope of Work.

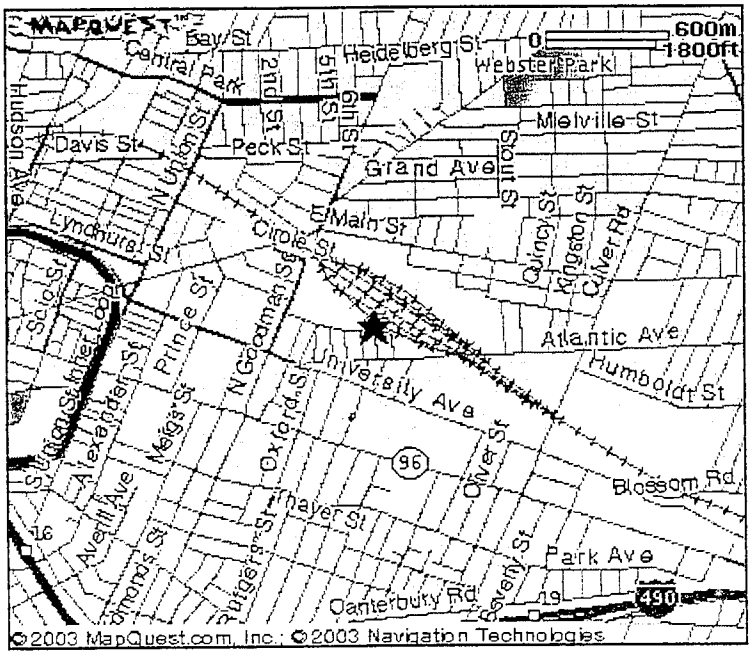
The subcontractor shall provide all necessary labor, equipment, materials, and health and safety protection to successfully operate and maintain the overall treatment system at the Davis Howland Oil Company site. It is the intent of this subcontract to maximized the up-time performance of the operating treatment system. The length operational and maintenance services under this contract is 12 months.

The normal operation and maintenance work shall consist of weekly site visits during the next 12 months to review general system operations, record discharge readings, and perform general system balancing and maintenance requirements. Samples will be taken monthly during the 12 months of O&M services and taken to a third party laboratory for analysis of the influent and effluent of the groundwater and air. System maintenance, balancing, and monitoring review is expected on a weekly basis.

In addition, the subcontractor shall respond and repair to all or portions treatment system shutdowns as on as needed basis as further outlined in unscheduled system maintenance and contingency services below.

1.2 General Site Location & Background.

Location:
The Davis Howland Site is located at 200 Anderson Avenue in the City of Rochester, New York (see map below).



Davis Howland Oil Company site
200 Anderson Avenue, Rochester, County of Monroe, NY

Supporting Project Background Information:
After investigating the site and consulting with the public, the New York State Department of Environmental Conservation (NYSDEC) selected a cleanup remedy in 1997, specifically for the on-site soil contamination, including the shallow and bedrock groundwater. The design of the groundwater pump and treatment system was completed in September 2000. Remedial construction began in May 2001 and completed September 2002. As a part of the remediation, NYSDEC completed the following major construction activities:

- Installation of 47 air injection points (to inject clean air back into the subsurface zone);
- 7 interior building soil vapor extraction points (to collect /remove contaminated air from the subsurface zone below the buildings on-site);
- 3 groundwater extraction wells (to collect and remove contaminated groundwater);
- 2 bedrock recovery wells (to collect and remove contaminated groundwater);
- 1500 lineal feet of exterior soil vapor extraction laterals (to collect /remove contaminated air from the subsurface zone below the exterior capped area);
- Construction of a trailer mounted treatment system to treat the shallow and bedrock groundwater beneath the site;
- Installation of a catalytic thermal oxidizing unit (for incineration of volatile organic compounds released after air stripping); and
- Installation of a 50,000 square foot asphalt cap over the entire area of contamination.

A copy of the general project location plan and site layout information is provided as **Figures 1-1, 1-2 and 1-3.**

1.3. Health and Safety Requirements.
The subcontractor will be required to have successfully completed the 40 hour basic Health and Safety Training Course and refresher training for Hazardous Waste Operations. The training courses need to meet the requirements of OSHA 29CFR1910.120 and be approved by the United States Environmental Protection Agency. In addition, the subcontractor will be in regulatory compliance with 29CFR1926.50 regarding personnel trained in first aid and cardio-pulmonary resuscitation (CPR). The subcontractor to submit certifications and refreshers of all staff to be employed at the site.

The subcontractor will be required to provide a updated site specific Health and Safety Plan (HASP) for the work to be performed for review and compliance acceptance by Ecology and Environment Engineering, P. C. (E&E). Where modifications to the scope of work are encountered, modifications or addendums to the HASP will be required to be incorporated into the original approved plan.

1.4 Site Access and Security.
The subcontractor will only access the site and treatment system from the alley on the west of the site. Keys to all external gates will be made available to the subcontractor. For interior building operating system items, keys and security codes will be made available for each leased area. The subcontractor shall ensure security of each area during all times of O&M work and while on-site. All security and system access issues will be reported immediately to E&E.

The subcontractor shall coordinate work activities with the current owner of the building and tenants and avoid interfering with their daily work as much as possible.

1.5 Normal System Operations and Maintenance.

The subcontractor shall initially become familiar with the operations and maintenance of the overall remediation treatment system. At a minimum, make weekly visits to the treatment system and on-site operating equipment. The site visits are expected to provide a general operating inspection the system, monitor overall system performance, AS/SVE system balancing to maximize remedial cleanup, to make adjustments to the normal operating system and preventative maintenance repairs, and as required collect operational data and samples as required by E&E and the regulatory requirements in accordance with the operation and maintenance manuals. Copies of the system and support equipment O&M manuals will be available and provided to the subcontractor.

Normal system operation and maintenance shall include refilling and replacing seal oil, replacing equipment filters, checking indoor and below grade valve and gage operations, checking flow meters, changing CatOX operating charts, changing pens for CatOx charts, checking groundwater pumps, etc. For exterior O&M, where on-site debris impacts the accessability to chambers this shall be noted in the weekly reports.

Issues regarding inclement weather and snow at the site including manhole accessability will need to be handled by the subcontractor on as needed basis.

The subcontractor shall be responsible for cleaning treatment equipment in accordance to the manufacturers required frequencies or more frequently based on the actual site conditions that may be encountered during O&M. One set of Operations and Maintenance manuals will be available to the subcontractor at the site of work

The system progress monitoring form to be utilized in the review of initial and normal system operations and maintenance is included as Figure 1-5.

Figure 1-5

General System Performance Requirements include:

System Parameter	Performance Required
General Soil vapor extraction, air sparge, air stripper, catalytic oxidizing unit, and groundwater extraction and pumping wells	• System operation up-time at least 90% during the twelve month O&M reporting period.[1] • Maximization of all treatment operating systems to achieve the regulatory discharge requirements and site cleanup goals.
Soil Vapor Extraction	• Maintain a vacuum of at least 30-40 inches of water at the blower. • Maintain a flow rate between 115-220 SCFM.
Air Sparge	• Maintain a minimum of 12 psi at each sparge point. • Maintain a flow of 0.5 to 1.5 CFM at each sparge point.

Groundwater Extraction/Recovery System	• Maintain the approx. minimum flow rates at each extraction and recovery location:
	  • P-1 - 13.2 GPM
	  • P-2 - 9.3 GPM
	  • P-3 - 3.7 GPM
	  • PW-1 - 3.0 GPM
	  • PW-2 - 3.0 GPM
	Maintain a minimum depth to groundwater interface of 48 inches at each piezometer.

Groundwater Treatment System.	Meet the Monroe County Pure Water - Rochester District permit limits for treated groundwater discharged to the sanitary sewer. See Table B for limits.
Vapor Phase	Operate the Catalytic Oxidizer to treat extracted soil gas and off-gas from the Air Stripper to meet the regulatory discharge limits for the approved emission discharge source Air Guide I permit. See Table C for limits.

Notes:

1. System up-time percentage shall be measured by dividing the total number of optimum hours achieved in the month by the total number of hours in that month.

1.6 Preventative Maintenance Review and Evaluation

The subcontractor shall review unspecified treatment system preventative measures as a means to improve system performance and effluent cleanup. System performance improvements shall be reported and discussed with E&E for review, evaluation, and costs with possible future inclusion into the current O&M program.

1.7 System Performance Sampling and Analysis

The subcontractor shall utilize the existing sampling ports located on the treatment system to obtain performance samples. Performance samples will be delivered or shipped to a third party laboratory for analysis. All samples will be preserved to ensure minimum holding times are not reached prior to delivery and analysis. All samples will be shipped under standard chain of custody for sign-off release for all parties during handling of all environmental samples.

Cleaned and prepared bottles will be available to the subcontractor from the laboratory prior to each sampling event. Subcontractor to call a minimum of 48 hours in advance to allow the lab to prepare, provide sample preservation, and labels for all sample containers.

The subcontractor shall use the existing sampling plan which includes standard operating procedures in proper sample methodology, bottle requirements, labeling and chain of custody. The plan shall be submitted in 5 days after award as a performance requirement to the successful bidder.

A. Influent and Treated Effluent Water Samples

The subcontractor shall collect one (1) influent groundwater sample to the air stripper, after the equalization tank, and one (1) effluent sample after the stripping tower. These samples shall be collected at the frequency and analyzed according to the protocol provided in **Attachment A**. The required sampling and analysis requirements are also provided in these tables.

All treated water discharged to the sanitary sewer shall meet the Monroe County Pure Waters - Rochester District acceptance criteria. The acceptable discharge criteria are presented in **Attachment B.**

B. Influent and Effluent Air Samples.

The subcontractor shall collect one air sample prior to air treatment and one sample following air treatment. The air treatment device is a catalytic oxidizing unit (CatOx) manufactured by Global Technologies, Milwaukee, Wisconsin. These samples shall be collected at the frequency and analyzed according to the protocol provided in **Attachment A.** The required sampling and analysis requirements are also provided in these tables.

The subcontractor shall be require to meet all substantive requirements of NYSDEC Division of Air Resources, Air Guide I (latest version) for discharging treated air to the atmosphere. The criteria for discharge has been provided as **Attachment C**.

Attachment A

Operation and Maintenance Program 2004-2005
Davis Howland Oil Company Site, NYSDEC Site #8-28-088
Sampling and Analytical Requirements

Purpose	Parameter	Sample Analysis	Sample Location	Sample Type	Sample Frequency	QA/QC Frequency	Required Turn around Time	Units	Level of Reporting [1]	Data Validation Required
Confirmatory air samples - Vapor Phase Treatment System (Catalytic Oxidizing Unit)	Volatile Organic Compounds (VOCs)	USEPA Method TO-14A	Influent and Effluent Vapor Phase Treatment System	Grab	• Months 1-12	None	5 days from sample receipt	ug/l	Standard	None
Confirmatory water samples - Groundwater Treatment System (Air Stripper)	Purgable Halocarbons	USEPA 40 CFR 136 - Method 601	Influent and Effluent of the Air Stripper	Grab	• Months 1-12	None	5 days from sample receipt	ug/l (ppb)	Standard	None
	Total Petroleum Hydrocarbons (TPHs)	NYSDOH Method 310-13								
	Acid Extractables & Base Neutral	USEPA Method 40 CFR 136 Method 625								
	Pesticides / PCBs	USEPA 40 CFR 136 Method 608								
	Purgable Aromatics	USEPA 40 CFR 136 Method 602								
	PH	Method 150.1						Standard units		

Notes:

1. Standard level of reporting shall consist of a summary of laboratory results, laboratory QA/QC results, and Chain of Custody.

ATTACHMENT "B"

COUNTY OF MONROE
SEWER USE PERMIT ENCLOSURE

The Tyree Organization
4 Northway Lane
Latham, New York 12110

PERMIT NUMBER: 854
DISTRICT NUMBER: 8520

TYPE OF BUSINESS: Groundwater Remediation
SIC CODE: N/A
SAMPLE POINT: Sample Port - air stripper

REQUIRED MONITORING

SELF MONITORING FREQUENCY: Weekly

SAMPLING PROTOCOL: Sampling and analysis shall be performed in accordance with the techniques prescribed in 40CFR part 136 and amendments thereto. In the absence of 40 CFR Part 136 testing methodology, a New York State Department of Health, approved method is acceptable. A grab sample, collected from the above noted sample point shall be analyzed for the following:

parameter	limit
pH	5.0-12.0
polychlorinated biphenols (PCB)	below detection limit (0.3 ppb)
acetone	action level
Total Petroleum Hydrocarbons	100 ppm
purgeable halocarbons purgeable aromatics acid extractables base neutrals pesticides	The analytical summation of this group shall not exceed 2.13 ppm.

SPECIAL CONDITIONS:

1. All groundwater must be treated regardless of the influent concentrations.
2. Monthly flow summaries shall be submitted for billing purposes. It is imperative these summaries are submitted in a timely manner.

8/20/02

ATTACHMENT C

RECEIVED
BY DATE

New York State Department of Environmental Conservation

Division of Environmental Remediation
Bureau of Construction Services
625 Broadway, 12th Floor
Albany, New York 12233-7013

Phone No.: (518) 402-9812
Fax No.: (518) 402-9819

FACSIMILE TRANSMISSION

Date: May 28, 2002	**No. of Pages (Including Cover):** 13
To: Mike Steffan	
Company: E&E	
Fax Number: 716-684-0844	
From: David Chiusano	

Message: The Department's Davis Howland Air Emissions review is attached. Please approve the submittal. You can paraphrase Jim Harrington's memo, but please do not transmit the memo itself.

Thanks

MEMORANDUM

TO: Dave Chiusano, Construction Services

FROM: Jim Harrington, Technology Section

SUBJECT: Air Emissions from Davis Howland Oil Company site remediation

DATE: May 28, 2002

I have completed review of the revised calculations (May 24, 2002) presented by Uriel Oko for the Davis Howland site remediation. These calculations relate to the potential hydrogen chloride emissions from the catalytic oxidizer that will be installed on the exhaust from the air stripper and soil vapor extraction systems. The revised calculations have addressed my previous comments and generally demonstrate that based on the design loadings, the system will comply with the applicable air regulations. The calculations do predict a minor exceedance (119% of the AGC) of the level for HCl using a the very conservative screen one approach. It appears that this exceedance is onsite and I am confident that refined modeling would show that the predicted value is a significant overestimate. Therefore I am recommending that you approve this submission and allow the project to move forward. However, the levels of contaminants extracted from the remediation systems should be monitored closely at the beginning of operation to ensure that the design levels are not greatly exceeded. If those levels are greatly exceeded, the air impacts should be reevaluated. If there are any questions, please do not hesitate to contact me.

The Tyree Organization

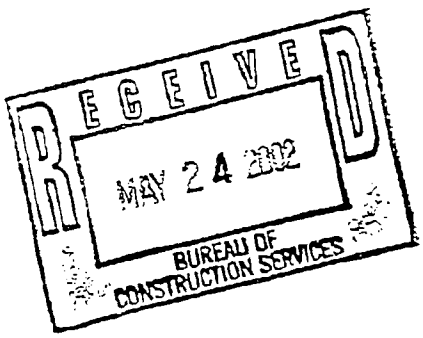
AirGuide 1 Study

Davis-Howland Oil Corporation Site

Site Number 8-28-088

City of Rochester

Monroe County, New York



Presented to

Mr. J. Harrington, NYSDEC

by

Mr. P. Holloway, The Tyree Organization

and

Uriel Oko, P.E., Ph.D.

May 24, 2002

Davis Howland Oil Corporation Site
New York State Department of Conservation Site Number 8-28-088

Uriel M. Oko, Ph.D., P.E.
April 25, 2002

Stack Gas Calculations

Vacuum Blower Output, Maximum Hydrocarbon Concentration

Constants Used for Calculations:

Gas Flowrate - cfm	220			Mol wt HCl	36.5
Pressure - inches of water	35	System Pressu	15.964641	psia	g/lb 453.59
Temperature - Fahrenheit	68	System Temp.	592	Degrees R	

Compound (Ref. 1)	Formula Weight	Gas Concentration ug/m^3	Gas Concentration lb moles/ft^3	Into Catalytic Oxidizer g/min of Contaminant Vol*Conc	Out of Catalytic Oxidizer g/min Contaminant Exhaust	Stack lb/hr emissions Exhaust	Stack lb/yr emissions Exhaust	Hydrochloric Acid lbs/hr	Hydrochloric Acid lbs/yr
								0	0
1,1,1 Trichloroethane	133	220	9.99113E-11	0.001196844	1.19684E-05	1.5832E-06	0.0138685	0.000130343	1.141805364
1,2,4 Trimethyl Benzene	120	600	3.02005E-10	0.003264121	3.26412E-05	4.3177E-06	0.03782319	0.000393992	3.451366213
1,3,5 Trimethyl Benzene	120	240	1.20802E-10	0.001305649	1.30565E-05	1.7271E-06	0.01512928	0.000157597	1.380546485
4 Isopropyl Toluene	135	31	1.38698E-11	0.000168646	1.68646E-06	2.2308E-07	0.0019542		
Benzene	78.11	76	5.87693E-11	0.000413455	4.13455E-06	5.4691E-07	0.00479094		
c-1,2 Dichloroethene	98	130	8.01237E-11	0.000707226	7.07226E-06	9.3551E-07	0.00819502	8.96856E-05	0.610445725
Etyl Benzene	106	340	1.93739E-10	0.001849689	1.84967E-05	2.4467E-06	0.02143314		
Iso Propyl Benzene	121	65	3.24468E-11	0.000353613	3.53613E-06	4.6775E-07	0.00409751		
Methylene Chloride	50.5	10	1.19600E-11	5.4402E-05	5.4402E-07	7.1962E-08	0.00063039	5.20121E-06	0.04556259
Naphthalene	128	16	8.96576E-12	0.000103364	1.03364E-06	1.3673E-07	0.00119773		
n-Butyl Benzene	136	19	8.43837E-12	0.000103364	1.03364E-06	1.3673E-07	0.00119773		
n-Propyl Benzene	121	100	4.99181E-11	0.00054402	5.4402E-06	7.1962E-07	0.00630387		
Sec Butyl Benzene	136	42	1.86532E-11	0.000228488	2.28488E-06	3.0224E-07	0.00264762		
Tetrachloroethenen	168	970	3.48743E-10	0.005276998	5.277E-05	6.9803E-06	0.06114749	0.000806622	5.314008290
Toluene	92.13	1200	7.86727E-10	0.006528243	6.52824E-05	8.6354E-06	0.07564638		
Trichloroethene	131	30	1.38323E-11	0.000163206	1.63206E-06	2.1589E-07	0.00189116	1.80454E-05	0.150077842
Xylene	106	1300	7.40766E-10	0.007072263	7.07226E-05	9.3551E-06	0.08195025		
		5392		0.02933357	0.000293336	3.8802E-05	0.33990441	0.001381486	12.10181251
Total									

(1) Ref: ENSR Engineering Report on Contract No. D004181, September 2000, Table 7

Davis Howland Oil Corporation Site
New York State Department of Conservation Site Number 8-28-088

Average Concentration Water to Stipper then to Stack

Volume Flowrate - gpm 30
Temperature - Fahrenheit 68

Compound (Ref. 2)	Cas Number	Formula Weight	Water Concentration ug/l	Into Catalytic Oxidizer g/min of Contaminant Vol*Conc	Out of Catalytic Oxidizer - Into Stack lbs/hr of Contaminant	Stack Hydrogen Chloride emissions Exhaust lbs/hr	Stack Hydrogen Chloride emissions Exhaust lbs/yr
Hydrogen Chloride	07647-01-0	36.5	0	0			
1,1,1 Trichloroethane	00079-00-5	133	1,591	0.10065805	0.000238755	0.019477929	170.63
1-1 Dichloroethane	00075-00-3	100	910	0.1033305	0.00013656	0.009878122	86.53
1-1 Dichloroethene		99	212	0.0240726	3.1814E-05	0.002324522	20.36
Acetone	00067-64-1	58	391	0.04439805	5.86758E-05		
Benzene	00071-43-2	78	27	0.00306585	4.05178E-06		
Chloroform	00067-66-3	119	4	0.0004542	6.00264E-07	5.47315E-05	0.48
cis 1,2 Dichloroethane		98	13,000	1.47615	0.001950059	0.143995941	1,261.40
1,2 Dichloroethene (Total)		99	5,998	0.6810729	0.000900096	0.065788426	576.11
cis 1,2 Dichloroethene		98	7,043	0.80786265	0.001146955	0.084668536	741.61
Ethylbenzene	00100-41-4	106	791	0.08981605	0.000118702		
Methylene Chloride	00071-55-6	51	2,000	0.2271	0.000300132	0.021284468	186.45
Tetrachloroethene	00127-18-4	168	436	0.0495078	6.54288E-05	0.005634303	49.36
Toluene	00108-88-3	92	241	0.02736555	3.61659E-05		
trans 1,2 Dichloroethene		99	3	0.00034065	4.50198E-07		
Trichloroethane		132	1,513	0.17180115	0.00022705	0.018663334	163.49
Trichloroethene		131	271	0.03077205	4.06679E-05	0.003368389	29.51
Vinyl Chloride	00075-01-4	62	1,089	0.12365595	0.000163422	0.00953321	83.51
Xylenes (total)	01330-20-7	106	1,024	0.1162752	0.000153668		
Total			37,144	4.2177012	0.005574054	0.38463991	3,369.45
Isopropyl Alcohol			280	0.031794	4.20185E-05		

(2) Ref: ENSR Engineering Report on Contract No. D004181, September 2000, Table 5

Davis Howland Oil Corporation Site
New York State Department of Conservation Site Number 8-28-088

Maximum Concentration Water to Stipper then to Stack

Volume Flowrate - gpm: 30
Temperature - Fahrenheit: 68

Compound (Ref. 2)	Cas Number	Formula Weight	Water Concentration ug/l	Into Catalytic Oxidizer g/min of Contaminant Vol*Conc	Out of Catalytic Oxidizer - Into Stack lbs/hr of Contaminant	Stack Hydrogen Chloride emissions Exhaust lbs/hr	Stack Hydrogen Chloride emissions Exhaust lbs/yr
Hydrogen Chloride	07647-01-0	36.5	0	0			
1,1,1 Trichloroethane	00079-00-5	133	9,400	1.06737	0.001410821	0.115080167	1,008.10
1-1 Dichloroethane	00075-00-3	100	5,900	0.669945	0.00088539	0.064044984	561.03
1-1 Dichloroethene		99	1,100	0.124905	0.000165073	0.012061198	105.66
Acetone	00067-64-1	58	2,200	0.24981	0.000330146		
Benzene	00071-43-2	78	42	0.0047691	6.30278E-06		
Chloroform	00067-66-3	119	4	0.0004542	6.00264E-07	5.47315E-05	0.48
cis 1,2 Dichloroethane		98	23,000	2.61165	0.00345152	0.254762049	2,231.72
1,2 Dichloroethene (Total)		99	54,000	6.1317	0.008103568	0.592095196	5,186.75
cis 1,2 Dichloroethene		98	51,000	5.79105	0.00765337	0.564807151	4,948.59
Ethylbenzene	00100-41-4	106	1,900	0.215745	0.000285126		
Methylene Chloride	00071-55-6	51	3,500	0.397425	0.000525231	0.037247819	326.29
Tetrachloroethene	00127-18-4	168	870	0.0987885	0.000130557	0.01124276	98.49
Toluene	00108-88-3	92	840	0.072672	9.60423E-05		
trans 1,2 Dichloroethene		99	3	0.00034065	4.50198E-07		
Trichloroethane		132	2,600	0.29523	0.000390172	0.032071823	280.95
Trichloroethene		131	2,800	0.320295	0.000435192	0.03604549	315.76
Vinyl Chloride	00075-01-4	62	3,400	0.38607	0.000510225	0.029783925	260.73
Xylenes (total)	01330-20-7	106	3,700	0.420135	0.000555244		
Total			166,159	18.86735445	0.02493483	1.749377263	15,324.54
Isopropyl Alcohol			1,500	0.170325	0.000225099		

(2) Ref: ENSR Engineering Report on Contract No. D004181, September 2000, Table 5

CAS NUMBER	feet feet in. degr fps acfm feet feet EMISSIONS (lb/hr)	EMISSIONS (lb/year)	Rat %Ctr
	201 ANDERSON AVE.		
TYREE			
SIC: 0 SC: 0100	APP: PC UTME: 10000.	UTMN: 10000.	BL Dir: 180.0
0100 TYRE0100	523 2 0. 20. 8. 400. 11.34	234.00 25. 250. 130.	
07647-01-0	0.385000000000000	3370.000000000000000	0.00
00079-00-5	0.000510000000000	4.400000000000000	0.00
00075-00-3	0.004200000000000	36.450000000000000	0.00
00067-64-1	0.000058670000000	0.510000000000000	0.00
00071-43-2	0.000004050000000	0.035000000000000	0.00
00067-66-3	0.000054700000000	0.480000000000000	0.00
00100-41-4	0.000118700000000	1.040000000000000	0.00
00071-55-6	0.000300000000000	2.620000000000000	0.00
00127-18-4	0.000065400000000	0.600000000000000	0.00
00108-88-3	0.000036200000000	0.320000000000000	0.00
00075-01-4	0.000163000000000	1.420000000000000	0.00
01330-20-7	0.000154000000000	1.350000000000000	0.00
TOTAL:	0.390664720000000	3419.224999999999900	(1

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CONTAMINANT ASSESSMENT SUMMARY OF AIRGUIDE 1 ANALYSIS

CAS NUMBER	AGC ug/m3	SHORT-TERM MAXIMUM (Cav,Pt,Area) % OF SGC	CAVITY ACTUAL ANNUAL % OF AGC	POINT or AREA SOURCE POTENTIAL ANNUAL % OF AGC	ACTUAL ANNUAL % OF AGC
00067-64-1	28000.00000000	0.0001	0.0000	0.0000	0.00
00067-66-3	0.04300000	0.1054	0.0000	7.8952	7.91
00071-43-2	0.13000000	0.0009	0.0000	0.1934	0.19
00071-55-6	1000.00000000	0.0013	0.0000	0.0019	0.00
00075-00-3	10000.00000000	0.0000	0.0000	0.0026	0.00
00075-01-4	0.02000000	0.0003	0.0000	50.5824	50.36
00079-00-5	0.06300000	0.0000	0.0000	50.2425	49.51
00100-41-4	1000.00000000	0.0006	0.0000	0.0007	0.00
00108-88-3	400.00000000	0.0003	0.0000	0.0006	0.00
00127-18-4	1.00000000	0.0189	0.0000	0.4059	0.4
01330-20-7	700.00000000	0.0104	0.0000	0.0014	0.00
07647-01-0	20.00000000	742.0503	0.0000	119.4738	119.51
SUMMARY TOTALS		742.1884	0.0000	228.8002	227.959

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CONTAMINANT ASSESSMENT SUMMARY OF AIRGUIDE 1 ANALYSIS

CAS NUMBER	AGC ug/m3	SHORT-TERM MAXIMUM (Cav,Pt,Area) % OF SGC	CAVITY ACTUAL ANNUAL % OF AGC	POINT or AREA SOURCE POTENTIAL ANNUAL % OF AGC	ACTUAL ANNUAL % OF AGC
00067-64-1	28000.00000000	0.0001	0.0000	0.0000	0.0
00067-66-3	0.04300000	0.1054	0.0000	7.8952	7.91
00071-43-2	0.13000000	0.0009	0.0000	0.1934	0.19
00071-55-6	1000.00000000	0.0013	0.0000	0.0019	0.0
00075-00-3	10000.00000000	0.0000	0.0000	0.0026	0.00
00075-01-4	0.02000000	0.0003	0.0000	50.5824	50.36
00079-00-5	0.06300000	0.0000	0.0000	50.2425	49.
00100-41-4	1000.00000000	0.0006	0.0000	0.0007	0.00
00108-88-3	400.00000000	0.0003	0.0000	0.0006	0.00
00127-18-4	1.00000000	0.0189	0.0000	0.4059	0.
01330-20-7	700.00000000	0.0104	0.0000	0.0014	0.00
07647-01-0	20.00000000	742.0503	0.0000	119.4738	119.51
SUMMARY TOTALS		742.1884	0.0000	228.8002	227.95

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CONTAMINANT IMPACT SUMMARY OF AIRGUIDE 1 ANALYSIS 5/2

Page

CAS NUMBER	AGC ug/m3	SHORT-TERM MAXIMUM (Cav,Pt,Area) ug/m3	CAVITY ACTUAL ANNUAL ug/m3	POINT or AREA SOUR POTENTIAL ANNUAL ug/m3	ACTUA ANNUA ug/m
00067-64-1	28000.00000000	0.16962	0.00000	0.00364	0.0
00067-66-3	0.04300000	0.15814	0.00000	0.00339	0.0
00071-43-2	0.13000000	0.01171	0.00000	0.00025	0.0
00071-55-6	1000.00000000	0.86733	0.00000	0.01862	0.0
00075-00-3	10000.00000000	12.14264	0.00000	0.26067	0.2
00075-01-4	0.02000000	0.47125	0.00000	0.01012	0.0
00079-00-5	0.06300000	1.47446	0.00000	0.03165	0.0
00100-41-4	1000.00000000	0.34317	0.00000	0.00737	0.0
00108-88-3	400.00000000	0.10466	0.00000	0.00225	0.0
00127-18-4	1.00000000	0.18908	0.00000	0.00406	0.0
01330-20-7	700.00000000	0.44523	0.00000	0.00956	0.0
07647-01-0	20.00000000	1113.07544	0.00000	23.89475	23.9
SUMMARY TOTALS		1129.45276	0.00000	24.24633	24.2

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CONTAMINANT IMPACT SUMMARY OF AIRGUIDE 1 ANALYSIS 5/2

Page

CAS NUMBER	AGC ug/m3	SHORT-TERM MAXIMUM (Cav,Pt,Area) ug/m3	CAVITY ACTUAL ANNUAL ug/m3	POINT or AREA SOUR POTENTIAL ANNUAL ug/m3	ACTUA ANNUA ug/m
00067-64-1	28000.00000000	0.16962	0.00000	0.00364	0.0
00067-66-3	0.04300000	0.15814	0.00000	0.00339	0.0
00071-43-2	0.13000000	0.01171	0.00000	0.00025	0.0
00071-55-6	1000.00000000	0.86733	0.00000	0.01862	0.0
00075-00-3	10000.00000000	12.14264	0.00000	0.26067	0.2
00075-01-4	0.02000000	0.47125	0.00000	0.01012	0.0
00079-00-5	0.06300000	1.47446	0.00000	0.03165	0.0
00100-41-4	1000.00000000	0.34317	0.00000	0.00737	0.0
00108-88-3	400.00000000	0.10466	0.00000	0.00225	0.0
00127-18-4	1.00000000	0.18908	0.00000	0.00406	0.0
01330-20-7	700.00000000	0.44523	0.00000	0.00956	0.0
07647-01-0	20.00000000	1113.07544	0.00000	23.89475	23.9
SUMMARY TOTALS		1129.45276	0.00000	24.24633	24.2

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CONTAMINANT IMPACT SUMMARY OF AIRGUIDE 1 ANALYSIS 5/2

Page

CAS NUMBER	AGC ug/m3	SHORT-TERM MAXIMUM (Cav,Pt,Area) ug/m3	CAVITY ACTUAL ANNUAL ug/m3	POINT or AREA SOUR POTENTIAL ANNUAL ug/m3	ACTUA ANNUA ug/m

EMISSION POINT AND CONTAMINANT ASSESSMENT OF AIRGUIDE 1 [illegible]

EMISSION POINT	CAS NUMBER	SHORT-TERM MAXIMUM (Cav,Pt,Area) % OF SGC	CAVITY ACTUAL ANNUAL % OF AGC	POINT or AREA SOURCE POTENTIAL ANNUAL % OF AGC	ACTUAL ANNUAL % OF AGC
0100 TYRE0100	07647-01-0	742.0503	0.0000	119.4738	119.51
SUMMARY TOTALS		742.0503	0.0000	119.4738	119.51

Screen 6: Display Sources that fail
AIR GUIDE -1

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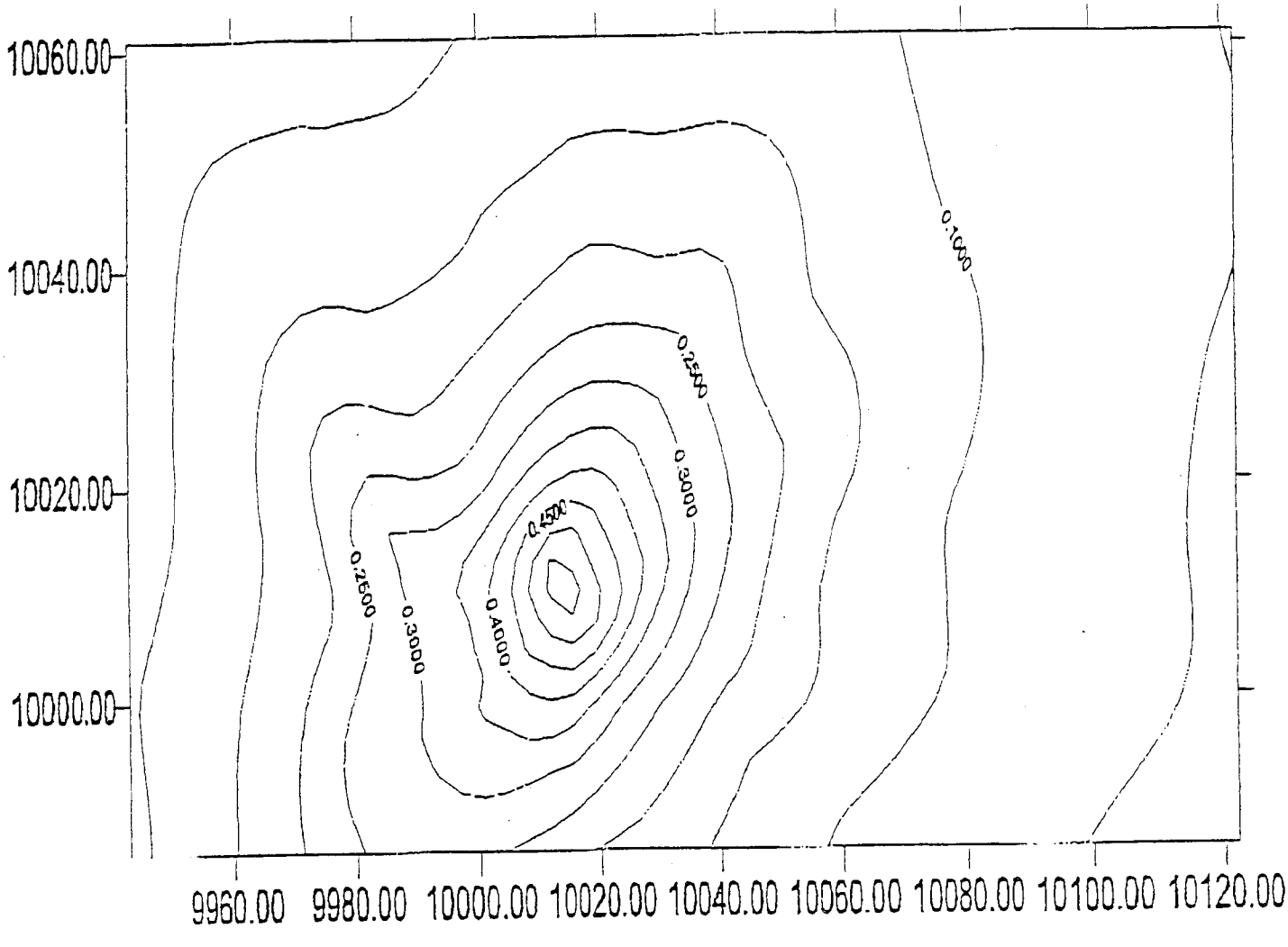
Inhalation Hazard

at Vicinity of Thermal Oxidizer

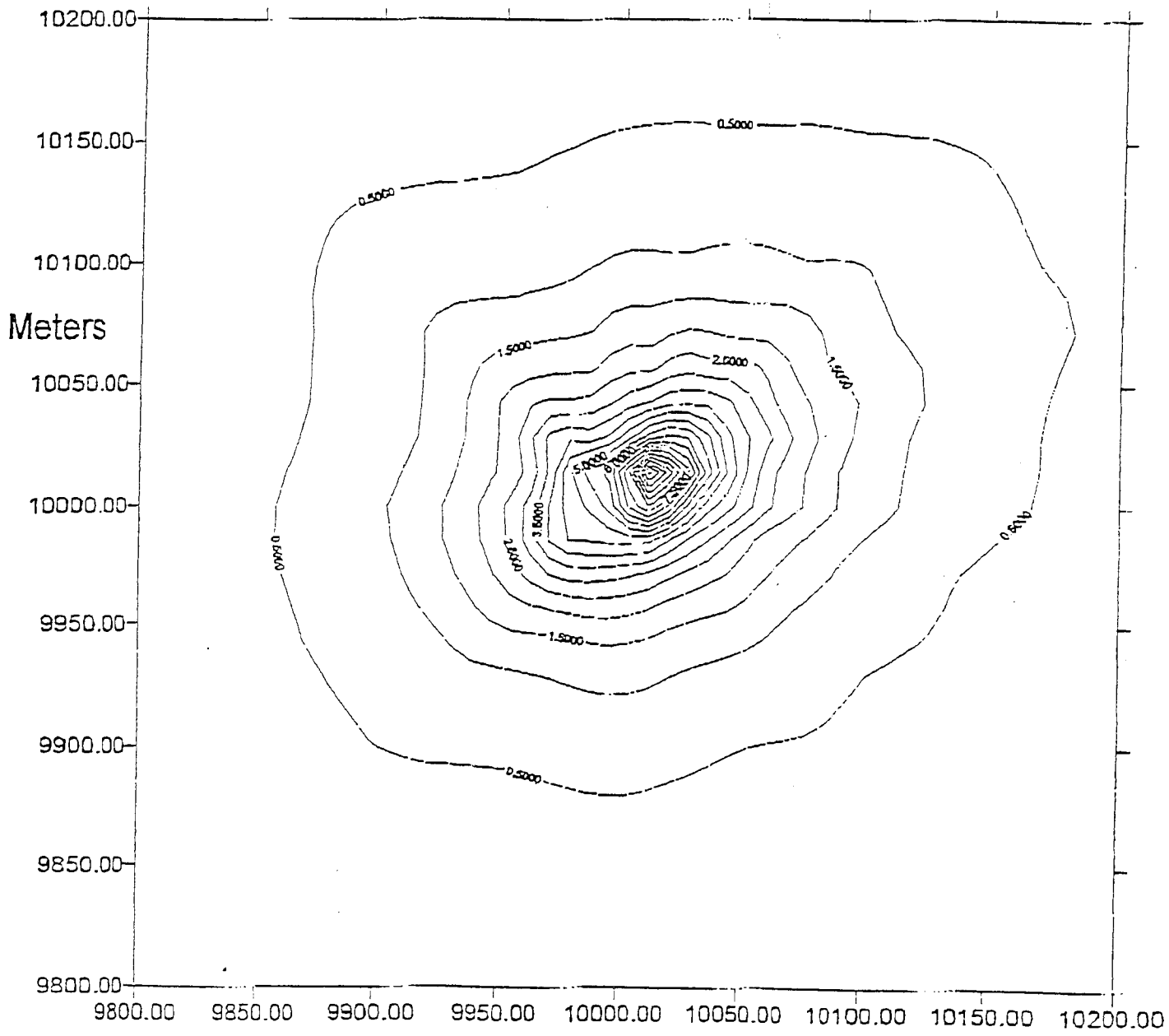
HCl at 3,300 lbs/yr



HCl Concentration - ug/m3

At Vicinity of Thermal Oxidizer

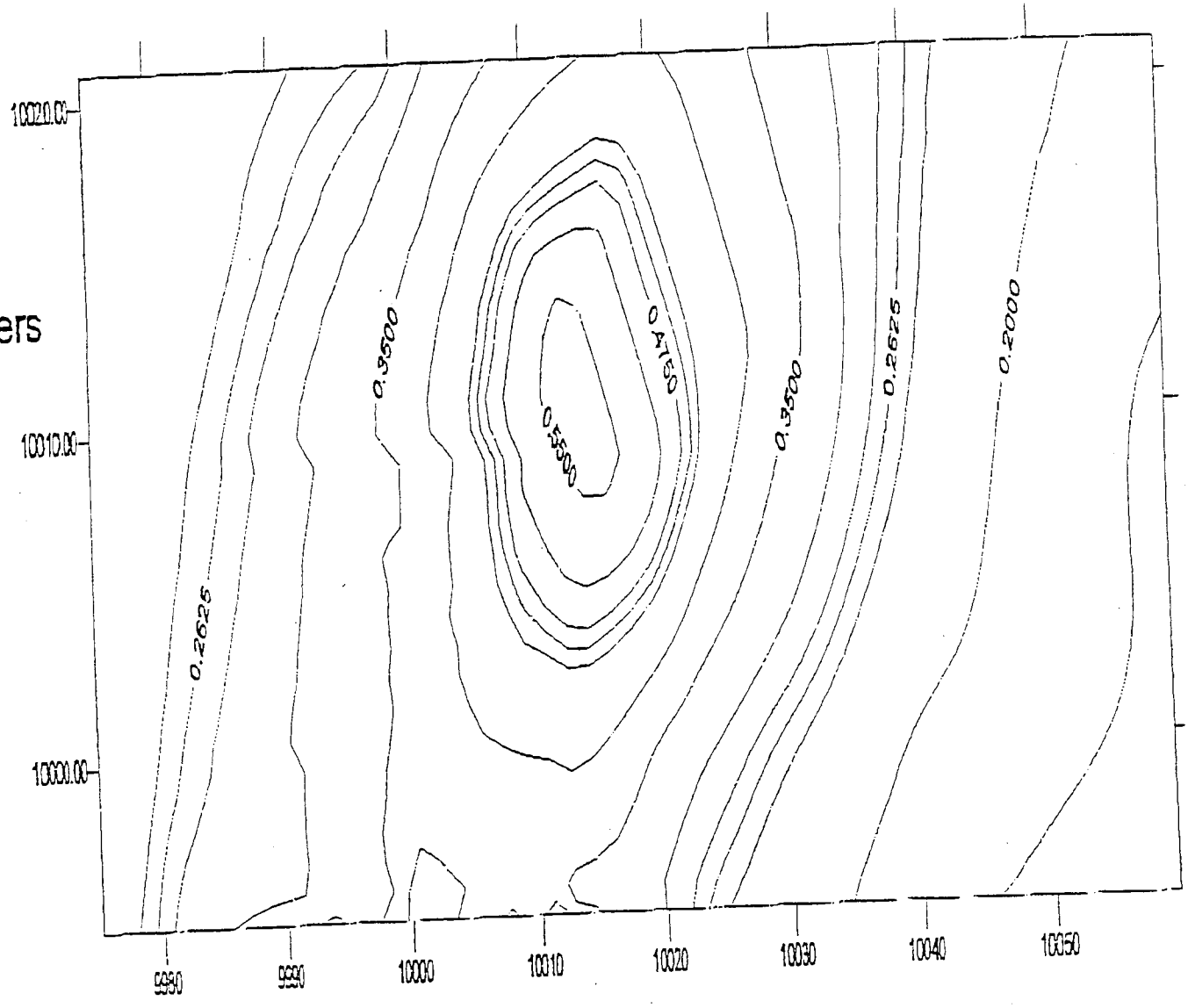
HCl at 3,300 lbs/yr



Actual Annual Concentration/AGC

at Vicinity of Thermal Oxidizer

HCl at 3,300 lbs/yr



Meters

Attachment D
Operation and Maintenance Program

Davis Howland Oil Company Site, NYSDEC Site # 8-28-88
System Progress Monitoring

Monitoring Location	Temperature	Pressure	Flow Rate	Concentration [2]	Total Removed [2]
Air Sparge System					
Blower Inlet		*	*		
Blower Outlet	*	*			
Heat Exchanger Outlet	*	*			
AS Wells		*	*		
Soil Vapor Extraction System					
SVE Points		*	*		
SVE Lines		*	*		
SVE Headers		*			
Condensate Filter Separator Inlet	*	*	*		
Condensate Filter Separator Outlet		*			
SVE Blower Inlet Filter		* (1)			
SVE Blower Inlet	*				
SVE Blower Outlet	*	*		*	
Vapor Phase Treatment System					
Catalytic Oxidizer Inlet	*	*	*	*	
Catalytic Oxidizer Outlet	*	*	*	*	*
Groundwater Treatment System					
Pump Well Discharge	*	*			
Recovery Well Discharge	*	*			
Equalization Tank Discharge			*	*	
Air Stripper Inlet (Air)		*			
Air Stripper Outlet (Air)		*	*	*	*
Air Stripper Outlet (Water)			*	*	*

Notes:

1. Pressure Differential
2. See QA/QC Plan for sampled contaminants

ATTACHMENT 2

System Progress Monitoring

Technician:_____ Date:_____ Time:_____

Weather:_____ Day/Week No.:_____

Job Name/No.: Davis Howland / 8-28-088 Location: Rochester, NY

Monitoring Location	Temperature (F)	Pressure	Flow Rate	Totalizer Reading
Air Sparge System				
Blower Inlet		PSI		
Blower Outlet	F	PSI		
Heat Exchanger Outlet	F	PSI		
Soil Vapor Extraction System				
SVE Lines		inHg		
SVE Header Inlet		inWC		
Moisture Separator Inlet	F	inWC	inWC	
Moisture Separator Outlet		inWC		
SVE Blower Inlet Filter (Top)		inWC		
SVE Blower Inlet Filter (Bottom)		inWC		
SVE Blower Outlet	F	inWC		
Vapor Phase Treatment System				
Catalytic Oxidizer Inlet	F		scfm	
Catalytic Oxidizer Outlet	F			
Groundwater Treatment System				
Pumping Well PW-1			gpm	g
Pumping Well PW-2			gpm	g
Recovery Well P-1			gpm	g
Recovery Well P-2			gpm	g
Recovery Well P-3			gpm	g
Remote Air Stripper Effluent Totalizer				g
Air Stripper Inlet (Air)		inWC		
Air Stripper Outlet (Air)		inWC	inWC	
Air Stripper Outlet (Water)		PSI	gpm	g
Equalization Tank Transfer pump		PSI		

Did you perform system sampling? (circle) YES NO ; if yes, Effluent pH=_____

Notes:

System Progress Monitoring

Technician:_____ Date:_____

Weather:_____ Time:_____

Job Name/No.:Davis Howland / 8-28-088 Location: Rochester, NY

I.D.	Pressure	Flow	Adjustments	Notes	Depth of Water
AS1	PSI	scfm			
AS2	PSI	scfm			
AS3	PSI	scfm			
AS4	PSI	scfm			
AS5	PSI	scfm			
AS6	PSI	scfm			
AS7	PSI	scfm			
AS8	PSI	scfm			
AS9	PSI	scfm			
AS10	PSI	scfm			
AS11	PSI	scfm			
AS12	PSI	scfm			
AS13	PSI	scfm			
AS14	PSI	scfm			
AS15	PSI	scfm			
AS16	PSI	scfm			
AS17	PSI	scfm			
AS18	PSI	scfm			
AS19	PSI	scfm			
AS20	PSI	scfm			
AS21	PSI	scfm			
AS22	PSI	scfm			
AS23	PSI	scfm			
AS24	PSI	scfm			
AS24A	PSI	scfm			
AS25	PSI	scfm			
AS26	PSI	scfm			
AS27	PSI	scfm			
AS28	PSI	scfm			
AS29	PSI	scfm			

System Progress Monitoring

Technician:_____ Date:_____

Weather:_____ Time:_____

Job Name/No.:Davis Howland / 8-28-088 Location: Rochester, NY

I.D.	Pressure	Flow	Adjustments	Notes	Depth of Water
AS30	PSI	scfm			
AS31	PSI	scfm			
AS32	PSI	scfm			
AS33	PSI	scfm			
AS34	PSI	scfm			
AS35	PSI	scfm			
AS36	PSI	scfm			
AS37	PSI	scfm			
AS38	PSI	scfm			
AS39	PSI	scfm			
AS40	PSI	scfm			
AS41	PSI	scfm			
AS42	PSI	scfm			
AS43	PSI	scfm			
AS44	PSI	scfm			
AS45	PSI	scfm			
AS46	PSI	scfm			
SVE P1	inHg	inWC			
SVE P2	inHg	inWC			
SVE P3	inHg	inWC			
SVE P4	inHg	inWC			
SVE P5	inHg	inWC			
SVE P6	inHg	inWC			
SVE L10 (P7)	inHg	inWC			
SVE L13 (P8)	inHg	inWC			

Notes:

Monitoring Well / Peizometer Data Sheet

Technician:_____ Date:_____

Weather:_____ Day/Week No.:_____

Job Name/No.:Davis Howland / 8-28-088 Location: Rochester, NY

Well I.D.	DTW (Top Riser)	DTW (Finish Grade)	Time	Visible Product	Odor	Sample Taken
PZ-1						
PZ-2						
PZ-3						
PZ-4						
PZ-5						
PZ-6						

Notes:

Davis Howland Site
200 Anderson Ave., Rochester, NY
Site No.: 8-28-088

ATTACHMENT "F"

Auto-Dialer Channel Designations

Channel	Alarm
01	**Air Sparge Unit Alarm** (1) – Low SVE Vacuum; (2) – Blower Outlet High T° Alarm; (3) – Heat X-changer High T° Alarm; (4) – High Pressure Alarm.
02	**SVE Unit Alarm** (1) – High T° Alarm; (2) – Blower Motor High T° Alarm; (3) – Filter High Pressure Alarm; (4) – Moisture Separator High Level; (5) – High Pressure Alarm.
03	**Equalization Tank Alarm** (1) – Low Low Level Alarm; (2) – High Level Alarm.
04	**Air Stripper Alarm** (1) – Low Pressure Alarm; (2) High Sump Level; (3) – Blower Motor High T° Alarm.
05	**Cat-Ox Unit Failure.**
06	**External Overflow Tank High Water Level Alarm.**
07	**Spare Channel.**
08	**Trailer Intrusion Detected.** Note: 30 second delay before alarm is Activated.

>Dial 585-242-9875 to reach the auto-dialer and hear an update.
>Press (9) to acknowledge alarm.

Call Sequence:

1. Phil Holloway Pager – 518-446-4153
2. Stephen Phelps Pager – 800-366-2337 pin#25097
3. Jennifer Kotch Cell – 203-948-5051
4. E & E – 716-684-8060
5. Bob Galasso Pager – 585-306-0243

B.2 Copy of NEDI Bid 2004-2005

Exhibit #2A
Operations and Maintenance Program 2004-2005
Subcontractor Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

4) Contingency Services

These services include mobilization and demobilization services to handle additional site services caused by significant equipment modification or replacement or items to handle out of compliance issues with the regulatory authority.

Pricing Schedule

A. Scope of Work Base Pricing:

Item Description	Team	Quantity	Units	Cost/Unit	Total
1) Weekly Operation and Maintenance and Reporting Visits		40	Each	$ 600	$ 24000
2) Monthly Operation and Maintenance, Sampling and Reporting Visits.		12	Each	$ 750	$ 9000
3) Unscheduled System Maintenance and Reporting.		24	Each	$ 800	$ 19200
4) Contingency Services		1	LS	$ 12,800	$ 12800
				Grand Total	$ 65,000

Exhibit #2A
Operations and Maintenance Program 2004-2005
Subcontractor Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

B. Hourly Rate Pricing:

- Provide fully loaded hourly rates including overhead costs and profit:

1. Technician 1 - (Senior staff)	$ 62.50	/hour
2. Technician 2 - (Associate or Junior staff)	$ 58.00	/hour
3. Electrical/Controls Specialist	$ 62.50	/hour

C. Optional Equipment Rates:

- Provide additional information on specific equipment rates (including mob/demob. costs) that could be used beyond the initial scope of services.

Equipment - Description	Rate/Hour	Rate/Day
1/2 Ton Truck Mileage Allowance	$ .54 mile	$
Welder Generator	$	$ 75.00
Oxy Acetylene Torch	$	$ 50.00
Air Compressor	$	$ 60.00
Pressure Washer	$	$ 60.00
Wet/Dry Vacuum	$	$ 15.00
Scaffold	$	$ 85.00
Hand Tools Portable Power Tools	$	$ 30.00
Scientific Equipment Lot	$	$ 35.00
	$	$
	$	$
	$	$
	$	$
	$	$
	$	$

Firm: _____

Dated: _____

By: _____

C

Biels Information Technology Systems Microfilming

Request For Proposal
CONTRACTOR PARTICIPATION BID FORM

TO: ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
368 Pleasantview Drive
Lancaster, New York

RE: CONTRACT # D003493
Work Assignment # 23
Site # 8-28-088

Biel's Information Technology Systems proposes to perform the work as follows:
(Name of Firm)

Microfilming final project files on 16-mm roll film, type M cartridges. A second copy shall be provided on roll film only, not cartridge type. A certification from the firm must accompany the film. The certification shall certify the copy is accurate, complete, and has been inspected and shall be signed by an authorized representative of the firm.

Conditions of the bid are:

- E & E will assume all delivery costs for the files to be firm.
- The firm shall assume all delivery costs for the files and film to E & E at the address above.
- Documents shall be filmed on 16-mm film at a reduction ratio of 24:1 and retained in a roll format.
- Processing shall be in accordance with applicable ANSI and AIIM specifications in order to meet or exceed archival standards.
- The background density of each filmed image will be maintained between 0.95 and 1.2 .
- All film will be inspected by the firm to insure complete record integrity.

Costs for microfilming services are:

1a.	16-mm film type M cartridges Microfilming services for approximately 10,000 pages of 8.5" by 11" or smaller records		$ .035 /ea	$ 350.00 total
1b.	Approximately 10 pages of 'E' size or smaller drawings		$ .70/ea *	$ 125.00 *total *
2.	Second copy on roll film only	5 rolls **	$ 15.75/ea	$ 78.75 total
3.	Document preparation	10 hours	$ 19.95/hr	$ 199.50 total
4.	M type cartridges for dupes		$ 2.75/ea	$ 13.75 total
	Total Costs			$ 767.00

Firm: Biel's Information Technology Systems

Date 10/27/00

Signed: Dale J Keegan Dale Keegan, Marketing Rep.

* MINIMUM CHARGE APPLIES - FILMING & CREATION OF APERTURE CARDS

** 4 MIL (130') SILVER DUPE - HIGHEST QUALITY - DIRECT DUPE

D

EEEPC Analytical Pricing for O & M Services, 2003-2004

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086-
TEL: *(716) 685-8080*
FAX: *(716) 685-0852*

ACCREDITED IN ACCORDANCE WITH nelac

NYSELAP ID: ***10486***

28-Feb-03

QUOTATION for ANALYTICAL SERVICES

Quote : 20030008

Company: E and E Buffalo Office
Contact: Mr. Mike Steffan
Address: 368 Pleasant View Dr.
Lancaster, NY 14086
Phone: (716) 684-8060 Fax: (716) 684-0844

Submitted By: *Alan Laffin*
DateExpected:

Quote ID: 20030008 Expires: 22-Apr-03 B and P No
Project: NYSDEC Davis Howland
TAT: 10 Calendar Days
QC Level: DEC CLP
Bill MS/MSD at Unit Rates: ☐ EDDType: Corporate EDD InvType: Custom/ClientSpecific(See PM)

Matrix	Test Name	Remarks	# Samp	Test Price	Test Total
Water	Petroleum Products by Method 310-13		52	$75.00	$3,900.00
Water	pH by method 150.1		52	$10.00	$520.00
Air	VOCs in Air by GCMS Method TO-14A		52	$225.00	$11,700.00
Water	Pesticides by Method 8081A		52	$100.00	$5,200.00
Water	PCBs by Method 8082		52	$100.00	$5,200.00
Water	VOCs, TCL List by GCMS Method 8260B		52	$100.00	$5,200.00
Water	Semivolatile Organics by Method 8270C		52	$210.00	$10,920.00

Sub total:	$42,640.00
Misc:	$0.00
Discount:	0.00%
Surcharge:	0.00%
TOTAL:	**$42,640.00**

Cost Comments TO-14 analysis will not include acetone, 2-butanone, 4-methyl-2-pentanone and 2-hexanone. TO-14 samples will be collected in bags.

Quote Comments: Project consist of influent and effluent samples collected weekly. Results from sampling due to E & E by the first week of the next month. Pricing inlcudes NYS ASP Category B Deliverable package.

Approved by:_____ Accepted by:_____

Standard Terms and Conditions:

Please return signed copy to the above address or fax to (716) 685-0852.
Client MUST contact your E & E representative prior to sample receipt to schedule analyses.
Ecology and Environment's acceptance of samples is subject to available capacity and is contingent upon the creation of a mutually agreeable sample delivery schedule.
The unit prices contained in the quotation are contingent upon receipt of the sample quantity, test method, sample matrix, and schedule as indicated the RFP.
Significant deveiations may require adjustments to the unit prices and may impact EEs ability to accept the work.
Samples must be shipped to the lab on the day they are taken.
EE reserves the right to subcontract analyses if necessary, with the approval of the client.
The unit prices quoted include (unless otherwise stated):
-Standard laboratory compound lists and limits
-A Standard laboratory report
-Sampling containers and their shipment to the site. 5 business days notice must be provided for delivery. Any expedited shipping charges will be billed to the client

E

EEEPC Analytical Pricing for O & M Services, 2004-2005

Analytical Services Center
International Specialists in Environmental Analysis

18-Jun-04

4493 Walden Avenue
Lancaster, New York 14086-
TEL: *(716) 685-8080*
FAX: *(716) 685-0852*

QUOTATION for

ANALYTICAL SERVICES

Quote : 20040201

Company: E and E Buffalo Office
Contact: Mr. Mike Steffan
Address: 368 Pleasant View Dr.
Lancaster, NY 14086
Phone: (716) 684-8060 Fax: (716) 684-0844

Submitted By:

DateExpected:

Quote ID: 20040201 Expires: B and P No:
Project: Davis Howland
TAT: 21 Calendar Days
QC Level:
Bill MS/MSD at Unit Rates: EDDType: DataPack: InvType:

Matrix	Test Name	Remarks	# Samp	Test Price	Test Total
Water	Volatile Organic Halocarbons by GC Method 601		50	$50.00	$2,500.00
Water	Volatile Organic Aromatics by GC Method 602		50	$50.00	$2,500.00
Water	Semivolatile Organics by Method 625		48	$210.00	$10,080.00
Water	Pesticide and PCB Analysis by Method 608		48	$200.00	$9,600.00
Water	Petroleum Products by Method 310-13		48	$75.00	$3,600.00
Water	pH by method 150.1		24	$10.00	$240.00
Air	VOCs in Air by GCMS Method TO-14A		24	$225.00	$5,400.00

Cost

Sub total:	$33,920.00
Misc:	$0.00
Discount:	0.00%
Surcharge:	0.00%
TOTAL:	**$33,920.00**

Quote Comments:

Approved by:_____ Accepted by:_____

Standard Terms and Conditions:

Please return signed copy to the above address or fax to (716) 685-0852.
Client MUST contact your E&&E representative prior to sample receipt to schedule analyses.
Ecology and Environment's acceptance of samples is subject to available capacity and is contingent upon the creation of a mutually agreeable sample delivery schedule.
The unit prices contained in the quotation are contingent upon receipt of the sample quantity, test method, sample matrix, and schedule as indicated the RFP. Significant deviations may require adjustments to the unit prices and may impact E&Es ability to accept the work.
Samples must be shipped to the lab on the day they are taken.
E&E reserves the right to subcontract analyses if necessary, with the approval of the client.
The unit prices quoted include (unless otherwise stated):
Standard laboratory compound lists and limits
A Standard laboratory report
-Sampling containers and their shipment to the site. 5 business days notice must be provided for delivery. Any expedited shipping charges will be billed to the client

F

Lu Engineers - Conceptual Review and Construction Oversight

F.1 Conceptual Review

LU ENGINEERS
Civil and Environmental

Celebrating 20 Yea
1980 - 20

October 25, 2000

Ecology and Environment Engineering, P.C.
368 Pleasant View Drive
Lancaster, New York 14086

Attn: Mr. Michael Steffan

RE: Davis-Howland Oil Company Site
Remedial Design Review **P00-171**

Dear Mr. Steffan:

As requested, based on a quick review of the available conceptual design documents that you provided to us, we have prepared an estimated cost for providing review of the remedial design. It is our understanding that you require Lu Engineers to review and comment on the contractor's design in three phases, including conceptual design, initial design and final design. Our estimated cost for this work including labor and expenses is $4,044.80. Proposed costs are presented in the attached "Exhibit 2" form.

Please call or e-mail with any questions you may have. Thank you for considering Lu Engineers for this project.

Respectfully submitted,

Robert J. Elliott, P.E.
Vice President

Enclosure: Exhibit #2

JOSEPH C. LU ENGINEERING AND LAND SURVEYING, P.C.
2230 PENFIELD ROAD PENFIELD, NEW YORK 14526
TELEPHONE: (716) 377 1450 FAX: (716) 377 1266
e-mail: luengrs@luengineers.com
web: www.luengineers.com

Exhibit #2
Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

This work will be performed under the existing approved rates for the year 2001. The breakdown below is by task and includes minimal Other Direct Costs (ODCs) for postage and mailing of comment letters to E&E's Project Manager.

No work beyond the approved budget can proceed without written authorization from E&E's Project Manager. Such authorization will only be granted if detailed justification can be provided and E&E can obtain authorization from NYSDEC.

Task Charge #	Task Description	Hours	Rate/Hour	Cost
NY02.03.01.96	Conceptual Design Review	16	$33.33	$533.28
NY02.03.03.96	Final Design Review (initial and final)	32	$33.33	$1,066.56
	Subtotal Labor			$1,599.84
	Overhead @ 127%			$2,031.80
	Subtotal Labor & Overhead			$3,631.64
	Fee @ 10%			$363.16
	Total - Fully Loaded Labor			$3,994.80
	ODCs - Postage			$50.00
	Grand Total			$4,044.80

Firm: _____

Dated: _____

By: _____

F.2 Treatment Equipment Inspection

LU ENGINEERS
Civil and Environmental

April 18, 2001

Ecology and Environment Engineering, P.C.
368 Pleasant View Drive
Lancaster, New York 14086

Attn: Mr. Michael Steffan

Re: Davis-Howland Oil Company Site
Remedial Design Review
Project 10618-09

Dear Mr. Steffan:

As requested, we have prepared an estimated cost for providing the services requested in your Exhibit #1, Supplemental Scope of Work for the referenced site dated 4/13/01.

Our estimated cost for this work, including labor and expenses, is $4,842.15. Proposed costs are presented in the attached "Exhibit 2" form. The costs were prepared based on estimates provided by E&E and various assumptions including:

- Ground transportation in Rhode Island will be provided by E&E.
- The Subtask 3.3 "report" will consist of a brief memorandum detailing findings from the Providence, RI inspection.

Please call or e-mail Greg Andrus or me with any questions you may have. Thank you for considering Lu Engineers for this project.

Respectfully submitted,

Robert J. Elliott, P.E.
Vice President

Enc. Exhibit #2 Form

JOSEPH C. LU ENGINEERING AND LAND SURVEYING, P.C.
2230 PENFIELD ROAD PENFIELD, NEW YORK 14526
TELEPHONE: (716) 377 1450 FAX: (716) 377 1266
www.luengineers.com

Exhibit #2
Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

This work will be performed under the existing approved rates for the year 2001* and 2002**. The breakdown below is for labor by subtask as noted by year. Other Direct Costs (ODCs) to include round trip travel to Providence, RI, per diems, postage, and other miscellaneous expenses. Receipts will be needed with all ODCs.

Please note, no work beyond the approved budget can proceed without written authorization from E&E's Project Manager. Such authorization will only be granted if detailed justification can be provided and E&E can obtain authorization from NYSDEC.

Task/Subtask	Task Description	Hours		Labor Grade	Rate/Hour	Cost
Subtask 2.2	Addenda Preparation	16	*	NSPE IV	$29.57	$473.12
Subtask 3.1	Review of 5/14 day Contractor Submissions	11	*	NSPE IV	$29.57	$325.27
Subtask 3.3	Review of Contractor Submission following NTP	24	*	NSPE IV	$29.57	$709.68
	Subtotal Hours and Labor	**51**				**$1,508.07**
	Overhead @ 127%					$1,915.25
	Subtotal Labor & Overhead					$3,423.32
	Fee @ 10%					$342.33
	Total - Fully Loaded Labor					$3,765.65
	ODCs - R/T Airfare Albany, NY					$276.50
	ODCs - R/T Airfare Providence, RI					$600.00
	ODCs - Per diems & postage					$100.00
	ODCs - Miscellaneous					$100.00
	Grand Total					**$4,842.15**

Firm: _____

Dated: _____

By: _____

F.3 Construction Oversight

LU ENGINEERS
Civil and Environmental

December 5, 2000

Ecology and Environment Engineering, P.C.
368 Pleasant View Drive
Lancaster, New York 14086

Attn: Mr. Michael Steffan

Re: Davis-Howland Oil Company Site
Remedial Design Review

P00-189

Dear Mr. Steffan:

As requested, we have prepared an estimated cost for providing the services requested in your Exhibit #1, Scope of Work for the referenced site dated 11/28/00.

Our estimated cost for this work including labor and expenses is $132,000.00. Proposed costs are presented in the attached "Exhibit 2" form. The costs were prepared based on estimates provided by E&E and various assumptions including:

- First Aid and CPR training will not be required for Lu Engineers personnel working on this project.
- All computer equipment and supplies will be provided by E&E.
- E&E will provide all telecommunications.
- Ground transportation in Albany will be provided by E&E.

Please call or e-mail Greg Andrus or me with any questions you may have. Thank you for considering Lu Engineers for this project.

Respectfully submitted,

Robert J. Elliott, P.E.
Vice President

Enc. Exhibit #2 Form
Professional Resume for Robert Galasso

JOSEPH C. LU ENGINEERING AND LAND SURVEYING, P.C.
2230 PENFIELD ROAD PENFIELD, NEW YORK 14526
TELEPHONE: (716) 377 1450 FAX: (716) 377 1266
e-mail: luengrs@luengineers.com
web: www.luengineers.com

Exhibit #2
Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

This work will be performed under the existing approved rates for the year 2001* and 2002**. The breakdown below is for labor by subtask as noted by year. Other Direct Costs (ODCs) to include round trip travel to Albany, NY, per diems, postage, and other miscellaneous expenses. Receipts will be needed with all ODCs.

Please note, no work beyond the approved budget can proceed without written authorization from E&E's Project Manager. Such authorization will only be granted if detailed justification can be provided and E&E can obtain authorization from NYSDEC.

Task/Subtask	Task Description	Hours		Labor Grade	Rate/Hour	Cost
Subtask 1.2	Site Visit/Background Review	60	*	NSPE IV	$29.57	$1,774.20
Subtask 2.1	Pre-Bid Conference	16	*	NSPE IV	$29.57	$473.12
Subtask 2.2	Addenda Preparation	16	*	NSPE IV	$29.57	$473.12
Subtask 3.1	Review of 5/14 day Contractor Submissions	56	*	NSPE IV	$29.57	$1,655.92
Subtask 3.2	Pre-Construction Meeting	16	*	NSPE IV	$29.57	$473.12
Subtask 3.3	Review of Contractor Submission following NTP	200	*	NSPE IV	$29.57	$5,914.00
Subtask 3.4A	Project Inspection - Full Oversight (22 weeks)	888	*	NSPE IV	$29.57	$26,258.16
Subtask 3.4B	Project Inspection - Intermittent Oversight (16 wks) A	256	*	NSPE IV	$29.57	$7,569.92
Subtask 3.4B	Project Inspection - Intermittent Oversight (10 wks) A	160		NSPE IV	$30.46	$4,873.60
Subtask 3.5	Construction Records and Reports	68	*	NSPE IV	$29.57	$2,010.76
Subtask 3.6A	Review of Final Construction Report	16	*	NSPE IV	$29.57	$473.12
Subtask 3.6B	Review of Final Operations and Maintenance Report	16		NSPE IV	$30.46	$487.36
	Subtotal Hours and Labor	1768		[redacted]	[redacted]	**$52,436.40**
	Overhead @ 127%					$66,594.23
	Subtotal Labor & Overhead					$119,030.63
	Fee @ 10%					$11,903.06
	Total - Fully Loaded Labor					$130,933.69
	ODCs - R/T Airfare Albany, NY					$462.00
	ODCs - Per diems & postage					$250.00
	ODCs - Miscellaneous					$354.31
	Grand Total					**$132,000.00**

A - based on estimated schedule in section B

Firm: _____

Dated: _____

By: _____

F.4 Construction Oversight (Additional)

LU ENGINEERS
Civil and Environmental

October 24, 2002

Ecology and Environment Engineering, P.C.
368 Pleasant View Drive
Lancaster, New York 14086

Attn: Mr. Michael Steffan

Re: Davis-Howland Oil Company Site
Lu Project No. 10618-09

Dear Mr. Steffan:

As requested, we have prepared an estimate of costs incurred for work in addition to the base scope of services for this project. Our estimated cost for this additional work, including labor and expenses is $126,580.61. Proposed costs are presented in the attached "Exhibit 2" form.

Please call or e-mail with any questions you may have.

Respectfully submitted,

(For)

Robert J. Elliott, P.E.
Vice President

Enclosure: Exhibit 2

JOSEPH C. LU ENGINEERING AND LAND SURVEYING, P.C.
2230 PENFIELD ROAD PENFIELD, NEW YORK 14526
TELEPHONE: (585) 377 1450 FAX: (585) 377 1266
www.luengineers.com

Exhibit #2B
Supplemental Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

This **supplemental** work will be performed under the existing approved rates for the years 2001 and 2002. The breakdown below is for labor by subtask as noted by year. Other Direct Costs (ODCs) to include, postage, and other miscellaneous expenses.

Task / Subtask	Task Description - Supplemental Work	Estimated Hours	Labor Grade	Rate/ Hour	Cost
Subtask 3.4A	Continuation of Full oversight services as a result of Contractor delays	1950	NSPE IV	25.75	50,212.50
	Subtotal Hours and Labor				50,212.50
	Overhead @127%				63,769.88
	Subtotal Labor & Overhead				113,982.38
	Fee @10%				11,398.24
	Total- Fully Loaded Labor				125,380.61
	ODCs - Per diems & postage				300.00
	ODCs - Miscellaneous				900.00
	Grand Total				$126,580.61

Firm: Lu Engineers

Dated: October 24, 2002

By: (For Robert J. Elliott, P.E.)

G

Lu Engineers – O & M Oversight, 2003-2004

LU ENGINEERS
Civil and Environmental

February 28, 2003

Ecology and Environment Engineering, P.C.
368 Pleasant View Drive
Lancaster, New York 14086

Attn: Mr. Michael Steffan

RE: Davis-Howland Oil Company Site **P03-28**
Remedial Operations and Maintenance Oversight

Dear Mr. Steffan:

As requested, Lu Engineers proposes to provide operations and maintenance (O&M) oversight services for the soil and groundwater remediation systems currently installed at the referenced site. The anticipated duration of this project is one year.

Scope of Services

Lu Engineers will provide part time operation and maintenance oversight for the routine operations and maintenance (O&M) of the Air Sparging (AS) and Soil Vapor Extraction (SVE), Groundwater pumping and treatment system and catalytic oxidation treatment (CatOX) unit at the Davis Howland Oil Company site, Rochester, New York. The O&M oversight period is expected to be performed over 12 months starting at acceptance of the program by NYSDEC.

Lu Engineers' staff will be required to have successfully completed the 40 hour basic Health and Safety Training Course, annual refresher training for Hazardous Waste Operations, and medical approval in performance of the work. All training and refresher courses need to meet the requirements of OSHA 29CFR1910.120 and be approved by the United States Environmental Protection Agency.

Lu Engineers will be required to provide an updated site-specific Health and Safety Plan for the adjusted scope of work. The revised HASP will be submitted for review and compliance acceptance by Ecology and Environment Engineering, P.C. (E&E).

The scope of services includes coordination with E&E's subcontractor in the performance of the weekly operations and maintenance services at the site as accepted in the current Operations and Maintenance Manual submitted by The Tyree Organization Limited and approved for use with the project. Lu Engineers will work in conjunction with the subcontractor in the understanding of the system and support in the key aspects and location of O&M work at the job site.

Lu Engineers shall provide independent reporting of equipment functionality for purposes of quality assurance review of the subcontracted services and to document the need in the modification of operating and maintenance procedures or the need for equipment modifications or changes. Lu Engineers reporting shall be provided on the standard daily reporting forms utilized during O&M operations with the original contractor.

Supplemental Services by Task and Subtask:

Task 4 - Operations and Maintenance Program

Subtask 4.1 - Initial System Review and Operation
Provide oversight services to support the subcontractor in becoming familiar with the on-site remedial operations and questions related to on-site treatment equipment.

Subtask 4.2 - Weekly Operations and Maintenance Oversight and Reporting
Provide independent reporting and review of the O&M services performed by the subcontractor.

Subtask 4.3 - Weekly Operations, Maintenance, Sampling Oversight, and Reporting
Provide independent reporting and review of the O&M services, and sampling performed by the subcontractor.

Subtask 4.4 - Unscheduled System Maintenance Oversight and Reporting
As necessary, travel to the site to oversee unscheduled maintenance repair of treatment system shutdowns. This includes necessary communications and coordination with E&E. Support the evaluation of the shutdown and possible solutions to restart and operate the system.

Costs
Costs for the proposed services are presented in the Attached "Exhibit 2" form.

As specified by Ecology and Environment, the total cost presented for Item A1 includes development of a project-specific health and safety plan and sampling plan.

Any additional costs for unspecified subcontracted labor, equipment and/or materials will be billed on a cost plus 10% basis.

Assumptions
Lu Engineers' assumptions with respect to costs and the manner of completion of the specified tasks include, but are not limited to, the following:

1. Payment for Lu Engineers services, related equipment and/or materials costs is in no way tied to performance of the subject remediation system or any of its components.

2. Lu Engineers will not be liable for any impacts to human health or the environment or permit violations relating to operation or failure of the remediation system or any of its components.

3. Free access to all areas of the site, both interior and exterior will be provided to Lu Engineers at all times.

4. Background information including any design or system engineering reports will be provided to Lu Engineers.

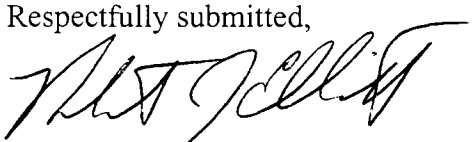
Limitation of Liability

To the fullest extent permitted by law, and not withstanding any other provision of this Agreement, the total liability, in the aggregate, of the Consultant and the Consultant's officers, directors, partners, employees and subconsultants, and any of them, to the Client and anyone claiming by or through the Client, for any and all claims, losses, costs or damages, including attorneys' fees and costs and expert-witness fees and costs of any nature whatsoever or claims expenses resulting from or in any way related to the Project or the Agreement from any cause or causes shall not exceed the total compensation received by the Consultant under this Agreement, or the total amount of $50,000, whichever is greater. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

Lu Engineers personnel have conducted remedial design, construction and O&M on numerous contaminated sites. We are very exited about the opportunity to provide remedial O&M services for this project.

Please call or e-mail with any questions you may have.. Thank you for considering Lu Engineers for this project.

Respectfully submitted,



Robert J. Elliott, P.E.
Vice President

Enc. Exhibit #2 Form

Exhibit #2
Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88
P03-28

This work will be performed under the existing approved rates for the year 2003 -2004. The breakdown below is for labor by subtask as noted by year. Other Direct Costs (ODCs) to include postage, and other miscellaneous expenses. Receipts will be needed with all ODCs.

Please note, no work beyond the approved budget can proceed without written authorization from E&E's Project Manager. Such authorization will only be granted if detailed justification can be provided and E&E can obtain authorization from NYSDEC.

O&M Subcontractor Oversight

Task/Subtask	Task Description	Hours	Labor Grade	Rate/Hour	Cost
4.1	Initial systems review and operation w/ subcontractor	40	NSPE IV	$26.25	$1,050.00
4.2a	Weekly O&M oversight and reporting	20	NSPE IV	$26.25	$525.00
4.2b	Weekly O&M oversight and reporting	220	NSPE III	$20.00	$4,400.00
4.3a	Weekly O&M, sampling, oversight and reporting	16	NSPE IV	$26.25	$420.00
4.3a	Weekly O&M, sampling, oversight and reporting	4	NSPE III	$20.00	$80.00
4.3b	Weekly O&M, sampling, oversight and reporting	260	NSPE III	$20.00	$5,200.00
4.4	Unscheduled system maintenance oversight and reporting	100	NSPE III	$20.00	$2,000.00
	[illegible]	[illegible]			[illegible]
	Overhead @ 127%				$17,367.25
	Subtotal Labor & Overhead				$31,042.25
	Fee @ 10%				$3,104.23
	Total - Fully Loaded Labor				$34,146.48
	Mileage (60 trips x $10.80/trip)				$648.00
	Contingency Oversight Services				$8,000.00
	ODCs - Miscellaneous				$205.52
	Grand Total				**$43,000.00**

Firm: Lu Engineers

Dated: 3/6/03

By: [signature]

k:\marketin\prop2000\P03-28 DHO O&M Oversight Exhibit 2 fees.xls

Exhibit #1C
Supplemental Scope of Work
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

General Scope of Work:

The subconsultant to provide part time operation and maintenance oversight for the routine operations and maintenance (O&M) of the Air Sparging (AS) and Soil Vapor Extraction (SVE), Groundwater pumping and treatment system and catalytic oxidation treatment (CatOX) unit at the Davis Howland Oil Company site, Rochester, New York. The O&M oversight period is expected to be performed over 12 months starting at acceptance of the program by NYSDEC.

The oversight O&M subconsultant staff will be required to have successfully completed the 40 hour basic Health and Safety Training Course, annual refresher training for Hazardous Waste Operations, and medical approval in performance of the work.. All training and refresher courses need to meet the requirements of OSHA 29CFR1910.120 and be approved by the United States Environmental Protection Agency. In addition, the SR will be in regulatory compliance with 29CFR1926.50 regarding personnel trained in first aid and cardio-pulmonary resuscitation (CPR).

The subconsultant will be required to provide an updated site specific Health and Safety Plan for the adjusted scope of work to be performed by the SR. The revised HASP will be submitted for review and compliance acceptance by Ecology and Environment Engineering, P. C. (E&E).

The scope of services includes coordination with E&E's subcontractor in the performance of the weekly operations and maintenance services at the site as accepted in the current Operations and Maintenance Manual submitted by The Tyree Organization Limited and approved for use with the project. The subconsultant having knowledge of the construction and O&M of the system will work in conjunction with the subcontractor in the understanding of the system and support in the key aspects and location of O&M work at the job site.

The subconsultant shall provide independent reporting of equipment functionality for purposes of quality assurance review of the subcontracted services and to document the need in the modification of operating and maintenance procedures or the need for equipment modifications or changes. The subconsultant reporting shall be provided on the standard daily reporting forms utilized during O&M operations with the original contractor (Tyree).

The subconsultant shall review the scope of O&M services of the subcontractor in **Attachment A** to be familiar with the requirements for service.

A. Supplemental Services by Task and Subtask:

Task 4 - Operations and Maintenance Program

Subtask 4.1 - Initial System Review and Operations

Provide oversight services to support the subcontractor in becoming familiar with the on-site remedial operations and questions related to on-site treatment equipment.

Subtask 4.2 - Weekly Operations and Maintenance Oversight and Reporting.

Provide independent reporting and review of the O&M services performed by the subcontractor.

Subtask 4.3 - Weekly Operations, Maintenance, Sampling Oversight, and Reporting.

Provide independent reporting and review of the O&M services, and sampling performed by the subcontractor.

Subtask 4.4 - Unscheduled System Maintenance Oversight and Reporting

As necessary, travel to the site to oversee unscheduled maintenance repair of treatment system shutdowns. This includes necessary communications and coordination with E&E. Support the evaluation of the shutdown and possible solutions to restart and operate the system.

Contingency Oversight Services

Contingency oversight services are provided in case of major equipment repairs are required and oversight is necessary. Contingency services will be utilized only at the direction of Ecology and Environment Engineering, P. C.

B. Estimated Revised Project Schedule

Estimated Work Assignment Elements	Schedule Period
• Initial Treatment System Review and Operations	March 2003 - March 2004
• Weekly O&M Oversight Support	Every second week after initial system review.
• Weekly O&M Oversight and Sampling Support	Every other week after startup of O&M program
• Unscheduled System Maintenance & Reporting	As needed basis.

H

Lu Engineers – O & M Oversight, 2004-2005

LU ENGINEERS
Civil and Environmental

June 8, 2004

Ecology and Environment Engineering, P.C.
368 Pleasant View Drive
Lancaster, New York 14086

Attn: Mr. Michael Steffan

RE: Davis-Howland Oil Company Site **P04-111**
Remedial Operations and Maintenance Oversight

Dear Mr. Steffan:

As requested, Lu Engineers proposes to provide operations and maintenance (O&M) oversight services for the soil and groundwater remediation systems currently installed at the referenced site. The anticipated duration of this project is one year.

Scope of Services

Lu Engineers will provide part time operation and maintenance oversight for the routine operations and maintenance (O&M) of the Air Sparging (AS) and Soil Vapor Extraction (SVE), Groundwater pumping and treatment system and catalytic oxidation treatment (CatOX) unit at the Davis Howland Oil Company site, Rochester, New York. The O&M oversight period is expected to be performed over 12 months starting at acceptance of the program by NYSDEC.

Lu Engineers' staff will be required to have successfully completed the 40 hour basic Health and Safety Training Course, annual refresher training for Hazardous Waste Operations, and medical approval in performance of the work. All training and refresher courses need to meet the requirements of OSHA 29CFR1910.120 and be approved by the United States Environmental Protection Agency.

Lu Engineers will be required to provide an updated site-specific Health and Safety Plan for the adjusted scope of work. The revised HASP will be submitted for review and compliance acceptance by Ecology and Environment Engineering, P.C. (E&E).

The scope of services includes coordination with E&E's subcontractor in the performance of the weekly operations and maintenance services at the site as accepted in the current Operations and Maintenance Manual submitted by The Tyree Organization Limited and approved for use with the project. Lu Engineers will work in conjunction with the subcontractor in the understanding of the system and support in the key aspects and location of O&M work at the job site.

JOSEPH C. LU ENGINEERING AND LAND SURVEYING, P.C.
2230 PENFIELD ROAD PENFIELD, NEW YORK 14526
TELEPHONE: (585) 377 1450 FAX: (585) 377 1266
www.luengineers.com

Lu Engineers shall provide independent reporting of equipment functionality for purposes of quality assurance review of the subcontracted services and to document the need in the modification of operating and maintenance procedures or the need for equipment modifications or changes. Lu Engineers reporting shall be provided on the standard daily reporting forms utilized during O&M operations with the original contractor.

Supplemental Services by Task and Subtask:

Task 4 - Operations and Maintenance Program

Subtask 4.1 - Monthly Operations, Maintenance, Sampling Oversight, and Reporting
Provide independent reporting and review of O&M services and sampling performed by the subcontractor.

Subtask 4.2 - Unscheduled System Maintenance Oversight and Reporting
As necessary, travel to the site to oversee unscheduled maintenance repair of treatment system shutdowns. This includes necessary communications and coordination with E&E. Support the evaluation of the shutdown and possible solutions to restart and operate the system.

Subtask 4.3 - Contingency Oversight Services
Contingency oversight services to be provided in case major equipment repairs are required and oversight is necessary. Contingency services will be utilized only at the direction of Ecology and Environment Engineering, P.C.

Costs

Costs for the proposed services are presented in the Attached "Exhibit #2D" form.

Any additional costs for unspecified subcontracted labor, equipment and/or materials will be billed on a cost plus 10% basis.

Assumptions

Lu Engineers' assumptions with respect to costs and the manner of completion of the specified tasks include, but are not limited to, the following:

1. Payment for Lu Engineers services, related equipment and/or materials costs is in no way tied to performance of the subject remediation system or any of its components.

2. Lu Engineers will not be liable for any impacts to human health or the environment or permit violations relating to operation or failure of the remediation system or any of its components.

3. Free access to all areas of the site, both interior and exterior will be provided to Lu Engineers at all times.

4. Background information including any design or system engineering reports will be provided to Lu Engineers.

Limitation of Liability

To the fullest extent permitted by law, and not withstanding any other provision of this Agreement, the total liability, in the aggregate, of the Consultant and the Consultant's officers, directors, partners, employees and subconsultants, and any of them, to the Client and anyone claiming by or through the Client, for any and all claims, losses, costs or damages, including attorneys' fees and costs and expert-witness fees and costs of any nature whatsoever or claims expenses resulting from or in any way related to the Project or the Agreement from any cause or causes shall not exceed the total compensation received by the Consultant under this Agreement, or the total amount of $50,000, whichever is greater. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

Lu Engineers personnel have conducted remedial design, construction and O&M on numerous contaminated sites. We are very excited about the opportunity to provide remedial O&M services for this project.

Please call or e-mail with any questions you may have. Thank you for considering Lu Engineers for this project.

Respectfully submitted,

Gregory L. Andrus, CHMM
Project Manager

Enc. Exhibit #2D Form

Exhibit #1D
Supplemental Scope of Work
Operations and Maintenance Oversight 2004 - 2005
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

General Scope of Work:

The subconsultant to provide limited or part time operation and maintenance oversight for the routine operations and maintenance (O&M) of the Air Sparging (AS) and Soil Vapor Extraction (SVE), Groundwater pumping and treatment system and catalytic oxidation treatment (CatOX) unit at the Davis Howland Oil Company site, Rochester, New York. The O&M oversight period is expected to be performed over 12 months starting at acceptance of the program by NYSDEC.

The oversight O&M subconsultant staff will be required to have successfully completed the 40 hour basic Health and Safety Training Course, annual refresher training for Hazardous Waste Operations, and medical approval in performance of the work.. All training and refresher courses need to meet the requirements of OSHA 29CFR1910.120 and be approved by the United States Environmental Protection Agency. In addition, the oversight staff will be in regulatory compliance with 29CFR1926.50 regarding personnel trained in first aid and cardio-pulmonary resuscitation (CPR).

The subconsultant will be required to provide an updated site specific Health and Safety Plan for the adjusted scope of work to be performed by the oversight staff. The revised HASP will be submitted for review and compliance acceptance by Ecology and Environment Engineering, P. C. (E&E).

The scope of services includes coordination with E&E's subcontractor in the performance of the incidental or contingency operations and maintenance services at the site as accepted in the current Operations and Maintenance Manual approved for use with the project. The subconsultant having knowledge of the construction and training in the O&M of the system will work in conjunction with the subcontractor in the understanding of the system and support in the key aspects of O&M work at the job site.

The subconsultant shall provide independent reporting of equipment functionality for purposes of quality assurance review of the subcontracted services and to document the need in the modification of operating and maintenance procedures or the need for equipment modifications or changes. The subconsultant reporting shall be provided on the standard daily reporting forms utilized during times of O&M oversight operations (supplied by E & E).

The subconsultant shall review the scope of O&M services of the subcontractor in **Attachment A** to be familiar with the requirements for service.

A. Supplemental Services by Task and Subtask:

Task 4 - Operations and Maintenance Program

Subtask 4.1 - Monthly Operations and Maintenance Sampling Oversight and Reporting.

Provide independent reporting and review of the O&M services, and sampling performed by the subcontractor.

Subtask 4.2 - Unscheduled System Maintenance Oversight and Reporting

As necessary, travel to the site to oversee unscheduled maintenance repair of treatment system shutdowns. This includes necessary communications and coordination with E&E. Support the evaluation of the shutdown and possible solutions to restart and operate the system.

Subtask 4.3 Contingency Oversight Services

Contingency oversight services are provided in case of major equipment repairs are required and oversight is necessary. Contingency services will be utilized only at the direction of the project manager of Ecology and Environment Engineering, P. C.

B. Estimated Revised Project Schedule

Estimated Work Assignment Elements	Schedule Period
• Monthly O&M Oversight and Sampling Support	Beginning June 2004 to June 2005, once per month.
• Unscheduled System Maintenance Oversight & Reporting	As needed basis.
• Contingency Oversight Services	As needed basis

Exhibit #2D
Operations and Maintenance Oversight 2004-2005
Supplemental Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88
P04-111

This work will be performed under the existing approved rates for the year 2004 -2005. The breakdown below is for labor by subtask as noted by year. Other Direct Costs (ODCs) to include postage, and other miscellaneous expenses. Receipts will be needed with all ODCs.

Please note, no work beyond the approved budget can proceed without written authorization from E&E's Project Manager. Such authorization will only be granted if detailed justification can be provided and E&E can obtain authorization from NYSDEC.

Task/Subtask	Task Description	Hours	Labor Grade	Rate/Hour	Cost
4.1	Monthly O&M Oversight and Reporting	96	NSPE III	$20.75	$1,992.00
4.2 and 4.3	Unscheduled and Contingency System Maintenance Oversight and Reporting	80	NSPE III	$20.75	$1,660.00
	Subtotal Hours and Labor	**176**			**$3,652.00**
	Overhead @ 127%				$4,638.04
	Subtotal Labor & Overhead				$8,290.04
	Fee @ 10%				$829.00
	Total - Fully Loaded Labor				$9,119.04
	Mileage (18 trips x $10.80/trip)				$194.40
	ODCs - Miscellaneous				$200.00
	Grand Total				**$9,513.44**

Firm: Lu Engineers

Dated: 6/9/04

By: [signature]

ChemWorld Environmental–Data Validation

I.1 ChemWorld Pricing

CW CHEMWORLD ENVIRONMENTAL, INC.
Environmental Consultants

October 31, 2000

Mr. Michael G. Steffan
Ecology and Environmental, Inc.
368 Pleasant View Drive
Lancaster, New York 14086

RE: Letter Proposal to Provide Data Usability Summary Report (DUSR) Services
Davis Howland Oil Company Project

Dear Mr. Steffan:

ChemWorld Environmental, Inc. (ChemWorld), a woman-owned, small business enterprise based out of the Washington, D.C. area, is pleased to submit the following letter proposal to Ecology and Environment, Inc. (E&E). A New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) will be prepared in support of site investigation activities for the project. ChemWorld specializes in providing professional, independent, cost-effective services in the areas of analytical data validation, as well as review and interpretation of analytical data related to environmental investigation activities. The firm also offers expertise in the development and review of site-specific work plans, sampling and Quality Assurance Plans (QAPPs).

Data validation is the systematic process by which data quality is defined and documented with respect to data quality criteria. These criteria are established and detailed in project and laboratory quality control programs and referenced in analytical methods. The data validation and DUSR technical review processes result in an assessment of data acceptability and usability with respect to stated project goals and requirements. ChemWorld provides data validation and data usability services to our clients in accordance with project-specific requirements, including United States Environmental Protection Agency (USEPA), State- and Federal Agency- specific analytical and data validation guidelines.

ChemWorld will provide DUSR services to E&E in accordance with your facsimile requests of October 27, 2000. DUSR activities will be performed in accordance with NYSDEC and USEPA Region II protocols, as appropriate. The DUSR will be prepared in a letter report format and will detail the acceptability of the data, including quality control deviations noted. Copies of the corresponding sample Form I's or the appropriate sample summary forms that require qualification based upon the DUSR will be attached to the letter report. These Form I's will include any additional data qualifiers as noted in the DUSR.

ChemWorld has significant experience in the provision of analytical data validation and data usability services. Selected project experience includes the following:

- Data Validation services for a Latham, New York environmental consulting and engineering firm. Validation of organics, inorganics, and general chemistry parameters was performed in accordance with New York State Department of Environmental Conservation (NYSDEC) and USEPA protocols. ChemWorld has provided data validation and chemistry support services to the firm since October 1992, and continues to support the firm on multiple projects. In addition, ChemWorld supports the firm's Norwood, MA and Windsor, CT offices on an as needed basis.

- Data validation for a Woodbury, New York consulting and engineering firm. The data validation activities supported the NYSDEC Superfund Standby Program as well as private clients. ChemWorld has provided data validation and data usability services since August 1992 and continues to provide ongoing data validation services for the firm. In addition, ChemWorld supports the firm's Edison, NJ and New York, NY offices.

14 Orchard Way North, Rockville, Maryland 20854, Tel. (301) 294-6144, Fax (301) 309-6640

- Multiple data validation projects for a Buffalo, New York consulting and engineering firm in support of the NYSDEC Superfund Standby Program. ChemWorld provided on-going validation services from September 1991 through March 1995. The firm continues to support intermittent projects.

- Data validation of organics and inorganics for long term monitoring of a New Jersey landfill. ChemWorld has supported this project since October 1995 continues to provide on-going quarterly data validation services.

- Data validation services for a Charlottesville, Virginia environmental consulting and engineering firm since May 1991. Data validation was performed utilizing USEPA Contract Laboratory Program (CLP) guidelines for full CLP data packages. ChemWorld also provides data validation for the firm utilizing USEPA and Air Force Center for Environmental Excellence (AFCEE) protocols.

- Two major data validation projects for New York City and New Jersey environmental consulting firms, consisting of approximately 600 samples. Validation of organics, inorganics, and general chemistry parameters was performed in accordance with NYSDEC and USEPA Region II protocols. The project was funded by the New York City Department of Environmental Protection.

- Data validation services for a Norcross, Georgia environmental consulting and remediation firm. Data validation was performed utilizing Naval Energy and Environmental Support Activity (NEESA) Level C data packages for organics, inorganics, and TCLP.

- Data validation services for a Memphis, Tennessee environmental consulting firm contracted for the Comprehensive Long-Term Environmental Action Navy (C.L.E.A.N.) District II Program. Validation was performed for Level C data packages for organics, inorganics, and selected explosive compounds.

- Multiple organic, inorganic, and radiological data validation reports for an Oak Ridge, Tennessee environmental consulting and engineering firm. Data Validation was performed in accordance with Hazardous Waste Remedial Actions Program (HAZWRAP) Level C and D guidelines.

- Data usability services for a New York City environmental consulting firm. ChemWorld supported the project for one year, encompassing review of 15 New York State Phase II Sites. The project consisted of an independent review of the Validation Report, review of the laboratory responses, screening of the analytical data package and qualifying of the data. A Data Usability Summary in letter form was provided for each site. The summary consisted of deviations which rendered data unusable and any necessary recommendations for interpretation of the data including resampling, as necessary.

Information provided as part of this letter proposal includes the following four attachments:

Attachment A: Cost quotation, based upon request of October 27, 2000.

Attachment B: Biography of Andrea P. Schuessler, who will be dedicated to the project.

Attachment C: Copy of U.S. SBA "*Administrator's Award for Excellence*".

Attachment D: NYS Woman-Owned Business Enterprise Certification Letter.

ChemWorld's standard turn around time for a DUSR is 30 days from receipt of the analytical data. However, ChemWorld will complete the technical work within the project-specific turn around time, as required. If the data package is incomplete or if significant analytical problems are detected during the review, additional time may be required. However, the firm makes every effort to work with the laboratory and our client to meet project deadlines. Attachment A also includes additional cost

information regarding significant analytical problems, incorrect qualitation and/or quantitation of parameters, significant amounts of re-submittals by the laboratory, and missing or incorrect information.

ChemWorld Environmental, Inc. is a certified Woman-Owned Business Enterprise (WBE) in the State of New York. This status was granted by the Governor's Office of Minority and Women's Business Development of June 3, 1992. In addition, the firm has been awarded the U.S. Small Business Administration's "*Administrator's Award for Excellence*".

Thank you for the opportunity to provide E&E with this letter proposal. ChemWorld looks forward to working with you and your firm, again, in the near future. Should you require additional information or clarification regarding this proposal, please contact me by telephone at 301-294-6144 or by FAX at 301-309-6640. Thank you for your time and consideration.

Respectfully Submitted,

Andrea P. Schuessler

Andrea P. Schuessler, CHMM
ChemWorld Environmental, Inc.

Attachments

c: MP-2000 file

ATTACHMENT A

Exhibit #2
Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

Note: No work beyond the approved budget can proceed without written authorization from E & E's Project Manager. Such authorization will only be granted if detailed justification can be provided and E & E can obtain authorization from NYSDEC.

Item A: One Day DUSR Turnaround

Task Item	Analytical Description	Estimated Quantity	Units	Unit Cost 1 day turn around	Total Amount
UC-26 A	EPA Method 8021B-TCLP STARS Listed Compounds Only	5	each	$28	$140
UC-26B	EPA Method 8270 -TCLP Base Neutrals Only	5	each	$30	$150
UC-26C	EPA Method 8260	2	each	$30	$60
UC-26D	EPA Method 8270	40	each	$33	$1,320
UC-26E	EPA Method 1311	46	each	–	–
UC-26F	EPA Method 1010	22	each	$6	$132
UC-26G	EPA Method 846 6010B/7000	46	each	$30	$1,380
UC -26H	EPA Method SW846, 7.3	26	each	$8	$208
UC-26I	EPA Method 9095	26	each	$6	$156
UC-26J	EPA Method 9045	26	each	$4	$104
UC-26K	EPA Method 8170 8270 ??	5	each	$33	$165
UC-26L	EPA Method 6010B	5	each	$30	$150
UC-26M	EPA Method 8240	24	each	$30	$720
UC-26N	NYSDOH Method 310-13 (2 day turnaround)	8	each	$8	$64

DAVIS Howland Oil Co.

For DUSR One DAY TAT

				Unit Cost	Extended Cost
UC-26O	NYSDOH Method 310-13 (24 hour turnaround)	5	each	$8	$40
UC-26P	EPA Method 8260 (2 day turnaround)	16	each	Not Required	Not Required
UC-26Q	EPA Method 8260 (24 hour turnaround)	10	each	$30	$300
UC-26R	EPA Method 8270B (24 hour turnaround)	5	each	$33	$165
UC-26S	EPA Method 8270B (2 day turnaround)	8	each	$33	$264
UC-26T	EPA Method 8081B (2 day turnaround)	8	each	$28	$224
UC-26U	EPA Method 8081B (24 hour turnaround)	5	each	$28	$140
UC-26V	EPA Method 608 (2 day turnaround)	8	each	$28	$224
UC-26W	EPA Method 608 (24 hour turnaround)	5	each	$28	$140
UC-26X	EPA Method TO-2	104	each	Not Required	Not Required
				Grand Total	

TOTAL $6,246.00

Firm: ChemWorld Environmental, Inc.

Dated: 10/31/2000

By: ANDREA P. Schuessler Andrea P. Schuessler

NYSDEC-Davis Howland
Subcontract Scope

DAVIS Howland Oil Co.

Item 2: 5 Day DUSR Turnaround

Task Item	Analytical Parameter			Unit Cost	Extended cost
UC-26 A	EPA Method 8021B-TCLP STARS Listed Compounds Only	5	each	$25	$125
UC-26B	EPA Method 8270 -TCLP Base Neutrals Only	5	each	$27	$135
UC-26C	EPA Method 8260	2	each	$27	$54
UC-26D	EPA Method 8270	40	each	$30	$1,200
UC-26E	EPA Method 1311	46	each	-	-
UC-26F	EPA Method 1010	22	each	$5	$110
UC-26G	EPA Method 846 6010B/7000	46	each	$27	$1,242
UC -26H	EPA Method SW846, 7.3	26	each	$7	$182
UC-26I	EPA Method 9095	26	each	$5	$130
UC-26J	EPA Method 9045	26	each	$3.50	$91
UC-26K	EPA Method 8170 8270??	5	each	$30	$150
UC-26L	EPA Method 6010B	5	each	$27	$135
UC-26M	EPA Method 8240	24	each	$27	$648
UC-26N	NYSDOH Method 310-13 (2 day turnaround)	8	each	$8	$64
UC-26O	NYSDOH Method 310-13 (24 hour turnaround)	5	each	$8	$40
UC-26P	EPA Method 8260 (2 day turnaround)	16	each		
UC-26Q	EPA Method 8260 (24 hour turnaround)	10	each	$30	$300

5 DAY DUSR TAT Davis Howland Oil Co.

				Unit Cost	Extended Cost
UC-26R	EPA Method 8270B (24 hour turnaround)	5	each	$33	$165
UC-26S	EPA Method 8270B (2 day turnaround)	8	each	$33	$264
UC-26T	EPA Method 8081B (2 day turnaround)	8	each	$28	$224
UC-26U	EPA Method 8081B (24 hour turnaround)	5	each	$28	$140
UC-26V	EPA Method 608 (2 day turnaround)	8	each	$28	$224
UC-26W	EPA Method 608 (24 hour turnaround)	5	each	$28	$140
UC-26X	EPA Method TO-2	104	each		
				Grand Total	

Firm: ChemWorld Environmental, Inc. $5,763.00

Dated: 10/31/2000

By: ANDREA P. Schuessler ; Andrea P. Schuessler

Item 3: 10 day DUSR Turnaround

Davis Howland Oil Co.

Task Item	Analytical Description			Unit Cost	Extended Cost
UC-26 A	EPA Method 8021B-TCLP STARS Listed Compounds Only	5	each	$21	$105
UC-26B	EPA Method 8270 -TCLP Base Neutrals Only	5	each	$23	$115
UC-26C	EPA Method 8260	2	each	$23	$46
UC-26D	EPA Method 8270	40	each	$25	$1,000
UC-26E	EPA Method 1311	46	each	–	–
UC-26F	EPA Method 1010	22	each	$5	$110
UC-26G	EPA Method 846 6010B/7000	46	each	$23	$1,058
UC -26H	EPA Method SW846, 7.3	26	each	$6	$156
UC-26I	EPA Method 9095	26	each	$5	$130
UC-26J	EPA Method 9045	26	each	$3	$78
UC-26K	EPA Method 8170 8270 ??	5	each	$25	$125
UC-26L	EPA Method 6010B	5	each	$23	$115
UC-26M	EPA Method 8240	24	each	$23	$552
UC-26N	NYSDOH Method 310-13 (2 day turnaround)	8	each	$8	$64
UC-26O	NYSDOH Method 310-13 (24 hour turnaround)	5	each	$8	$40
UC-26P	EPA Method 8260 (2 day turnaround)	16	each		
UC-26Q	EPA Method 8260 (24 hour turnaround)	10	each	$30	$300

10 DAY DUSR TAT DAVIS Howland Oil Co.

				Unit Cost	Extended Cost
UC-26R	EPA Method 8270B (24 hour turnaround)	5	each	$33	$165
UC-26S	EPA Method 8270B (2 day turnaround)	8	each	$33	$264
UC-26T	EPA Method 8081B (2 day turnaround)	8	each	$28	$224
UC-26U	EPA Method 8081B (24 hour turnaround)	5	each	$28	$140
UC-26V	EPA Method 608 (2 day turnaround)	8	each	$28	$224
UC-26W	EPA Method 608 (24 hour turnaround)	5	each	$28	$140
UC-26X	EPA Method TO-2	104	each		
				Grand Total	

$5,151.00

Firm: ChemWorld Environmental, Inc.

Dated: 10/31/2000

By: ANDREA P. Schuessler ; Andrea P Schuessler

ATTACHMENT B

ANDREA P. SCHUESSLER, CHMM

EDUCATION

M.E., Science Education, State University of New York at Buffalo

B.S., Chemistry, State University of New York at Buffalo

PROFESSIONAL EXPERIENCE

Ms. Schuessler, a Certified Hazardous Materials Manager (CHMM) with 18 years' experience, is responsible for ChemWorld Environmental, Inc.'s technical operations. Project-specific work includes analytical data validation; Quality Assurance (QA) consulting services; review and interpretation of chemical data; and assistance in development / review of site-specific work plans, sampling and QA plans. All technical work is performed utilizing United States Environmental Protection Agency (USEPA), State, and client-specific protocols, as required.

Ms. Schuessler held the position of 'Chair', of the Board of Examiners, for the Institute of Hazardous Materials Management from 1995 to 1998. She is currently serving a 4-year term on the Board of Directors for the Institute. Ms. Schuessler is also the author of the Chapter *Analytical Data Validation & Quality Assurance*, which is included in the Handbook on Hazardous Materials Management, published for the Institute of Hazardous Materials Management (1995). This book is currently being updated.

Ms. Schuessler has been both performing and managing data validation activities for 14 years. She originally was trained in USEPA Region IX and has been involved in data validation activities in USEPA Regions I, II, III, V, IX, and X. Her data validation experience has included a diversified client base. Data validation has been performed utilizing project-specific protocols detailed within the associated project and QA plans. She has extensive technical and managerial experience in working with government agencies and commercial clients in the development and implementation of site-specific work plans, sampling and QA Project Plans for hazardous waste field investigations and Remedial Investigations/Feasibility Studies (RI/FS).

Ms. Schuessler has reviewed and updated state-of-the-art field analytical/mobile laboratory screening procedures for organic analyses of soil, water and air. These procedures were submitted to USEPA and implemented nationwide.

While employed for a major environmental consulting and engineering firm in Buffalo, NY, Ms. Schuessler assisted in managing a QA/Chemistry Group of 4 chemists responsible for implementation of Corporate QA activities. The group was responsible for the following functions: development and review of hazardous waste site QA project and program plans; review, interpretation and reporting of analytical data; performance of field and laboratory monthly QA Audits; and performance and management of all corporate data validation activities.

In addition, Ms. Schuessler was project manager for several major RI/FS projects in New York State and Pennsylvania totaling $2.5 million. She was responsible for comprehensive management including the following activities: proposal development; costing; development of project plans; implementation of field activities; management of sub-contractors; and report preparation.

ATTACHMENT C

U.S. Small Business Administration

Administrator's Award for Excellence

Presented to

ChemWorld Environmental, Inc.

In recognition of outstanding contribution and service to the nation by a small business in satisfying the needs of the Federal procurement system.

April 29, 1997

Date

Administrator

ATTACHMENT D

Empire State Development

Minority & Women's Business Development

February 6, 1998

ANDREA SCHUESSLER
CHEMWORLD ENVIRONMENTAL INC
14 ORCHARD WAY NORTH
ROCKVILLE, MD 20854

Dear ANDREA SCHUESSLER:

This letter is sent to confirm your continued certification as a ~~WBE-Owned Business Enterprise~~.

Be advised that your certification remains in effect until such time as you are contacted by this Office for recertification.

According to Chapter XIV of Minority and Women's Business Development 5NYCRR Section 144.8, any changes which affect ownership, managerial, and/or operational control, (i.e. company name, business address, telephone numbers, principal products/services and bonding capacity, etc) must be reported to this Office within 30 days of the occurrence of such changes. Failure to submit any changes could result in your firm's certification status being revoked and the name of your firm removed from the Directory.

If your certification status is questioned by any public or private entity, you may direct the inquiry to this Office for further clarification. Should you have any questions regarding this matter, you may contact me at (518) 473-0582.

We wish you continued success in your future endeavors.

Sincerely,

Michelle Marquez-Melecio

Michelle Marquez-Melecio
Vice President – Affirmative Action
Compliance and Certification

File # 6233

New York State Department of Economic Development
One Commerce Plaza Albany New York 12245
Tel 518 473 0582 Fax 518 473 0665

I.2 Additional Bids

Data Validation Services

Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone (518) 251-4429
Facsimile (518) 251-4428

October 27, 2000

Mike Steffan
Ecology & Environment
368 Pleaseant View Dr.
Lancaster, NY 14086

RE: Cost estimate for review of Davis Howland Oil Co. site data packages

Dear Mr. Steffan:

Thank you for contacting me regarding a cost estimate for Data Usability Summary Review (DUSR) review of the data packages pertaining to the Davis Howland Oil site. Data Validation Services has been performing independent review of environmental laboratory data since 1989, and is certified by New York state as a WBE. The following outlines the proposed review and the cost estimate.

The data packages provided will be reviewed as noted in the scope of work submitted with the request for proposal. Full validation to verify summary page values and QC reported results from the raw data will not be performed at this time. The USEPA national and regional validation guidelines/ procedures will be used to determine the applicable qualifications the data. Those qualifications that impact significantly on the usability of the sample results are cited within the report and on the E&E DUSR summary form. The report will then be generated as a brief narrative discussion, incorporating the findings for a given set of submitted data.

The unit costs provided on the attached tables include review of data packages (as noted above), generation of the report, return shipment of data (by standard mail), and associated communications. The unit costs apply to field samples and field duplicates. Associated blanks and QC are reviewed at no additional charge.

The unit costs pertain to review of data which have been generated in compliance with required laboratory analysis protocols, and which are submitted in the equivalent of NYSDEC ASP Category B or CLP data packages. If numerous noncompliant processing issues are observed, if summary forms are not present, or if review of the data shows many instances of summary form entry errors, additional costs will be applied and longer turnaround times will be required.

The ability to generated DUSRs within the required fast turnaround times will be dependent upon both ongoing communcations which provide this firm with specifics of scheduling, and upon good quality laboratory data.

Please contact me at the numbers above if you desire additional information, or have questions regarding this proposal. Payment terms are net 30 unless otherwise arranged. As always, I look forward to possibly working with your firm.

Very truly yours,

Judy Harry

Exhibit #2
Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

Note: No work beyond the approved budget can proceed without written authorization from E & E's Project Manager. Such authorization will only be granted if detailed justification can be provided and E & E can obtain authorization from NYSDEC.

Item A: One Day DUSR Turnaround

UC-26 A	EPA Method 8021B-TCLP STARS Listed Compounds Only	5	each	40	5 200
UC-26B	EPA Method 8270 -TCLP Base Neutrals Only	5	each	40	200
UC-26C	EPA Method 8260	2	each	50	100
UC-26D	EPA Method 8270	40	each	50	2000
UC-26E	EPA Method 1311	46	each	0	0
UC-26F	EPA Method 1010	22	each	0	0
UC-26G	EPA Method 846 6010B/7000	46	each	50	2300
UC -26H	EPA Method SW846, 7.3	26	each	6	156
UC-26I	EPA Method 9095	26	each	6	156
UC-26J	EPA Method 9045	26	each	0	0
UC-26K	EPA Method 8170	5	each	30	150
UC-26L	EPA Method 6010B	5	each	50	150
UC-26M	EPA Method 8240	24	each	50	1200
UC-26N	NYSDOH Method 310-13 (2 day turnaround)	8	each	20	160

UC-26O	NYSDOH Method 310-13 (24 hour turnaround)	5	each	20	$ 100
UC-26P	EPA Method 8260 (2 day turnaround)	16	each		
UC-26Q	EPA Method 8260 (24 hour turnaround)	10	each	50	500
UC-26R	EPA Method 8270B (24 hour turnaround)	5	each	50	250
UC-26S	EPA Method 8270B (2 day turnaround)	8	each	50	400
UC-26T	EPA Method 8081B (2 day turnaround)	8	each	60	480
UC-26U	EPA Method 8081B (24 hour turnaround)	5	each	60	300
UC-26V	EPA Method 608 (2 day turnaround)	8	each	60	480
UC-26W	EPA Method 608 (24 hour turnaround)	5	each	60	300
UC-26X	EPA Method TO-2	104	each		
				Grand Total	

$9582

Firm: Data Validation Services

Dated: 10-27-00

By:

NYSDEC Data Deliverables Subcontract Scope

Item 2: 5 Day DUSR Turnaround

Unit Item	Analytical Description	[illegible]	Units	[illegible]	[illegible]
UC-26 A	EPA Method 8021B-TCLP STARS Listed Compounds Only	5	each	$ 30	$ 150
UC-26B	EPA Method 8270 -TCLP Base Neutrals Only	5	each	30	150
UC-26C	EPA Method 8260	2	each	42	84
UC-26D	EPA Method 8270	40	each	42	1680
UC-26E	EPA Method 1311	46	each	0	0
UC-26F	EPA Method 1010	22	each	0	0
UC-26G	EPA Method 846 6010B/7000	46	each	42	1932
UC-26H	EPA Method SW846, 7 3	26	each	5	130
UC-26I	EPA Method 9095	26	each	5	130
UC-26J	EPA Method 9045	26	each	0	0
UC-26K	EPA Method 8170	5	each	42	210
UC-26L	EPA Method 6010B	5	each	42	210
UC-26M	EPA Method 8240	24	each	42	1008
UC-26N	NYSDOH Method 310-13 (2 day turnaround)	8	each	15	~~120~~ ✓
UC-26O	NYSDOH Method 310-13 (24 hour turnaround)	5	each	15	75 120
UC-26P	EPA Method 8260 (2 day turnaround)	16	each	[illegible]	[illegible]
UC-26Q	EPA Method 8260 (24 hour turnaround)	10	each	42	420

UC-26R	EPA Method 8270B (24 hour turnaround)	5	each	42	$ 210
UC-26S	EPA Method 8270B (2 day turnaround)	8	each	42	336
UC-26T	EPA Method 8081B (2 day turnaround)	8	each	45	360
UC-26U	EPA Method 8081B (24 hour turnaround)	5	each	45	225
UC-26V	EPA Method 608 (2 day turnaround)	8	each	45	360
UC-26W	EPA Method 608 (24 hour turnaround)	5	each	45	~~225~~ 10-27-00 225
UC-26X	EPA Method TO-2	104	each		
				Grand Total	

Firm: Data Validation Services

$ 8015

Dated: 10-27-00

By:

Item 3: 10 day DUSR Turnaround

[illegible]	Analytical [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UC-26 A	EPA Method 8021B-TCLP STARS Listed Compounds Only	5	each	B 20	6 100
UC-26B	EPA Method 8270 -TCLP Base Neutrals Only	5	each	20	100
UC-26C	EPA Method 8260	2	each	25	50
UC-26D	EPA Method 8270	40	each	25	1000
UC-26E	EPA Method 1311	46	each	0	0
UC-26F	EPA Method 1010	22	each	0	0
UC-26G	EPA Method 846 6010B/7000	46	each	25	1150
UC -26H	EPA Method SW846, 7.3	26	each	3	78
UC-26I	EPA Method 9095	26	each	3	78
UC-26J	EPA Method 9045	26	each	0	0
UC-26K	EPA Method 8170	5	each	25	125
UC-26L	EPA Method 6010B	5	each	25	125
UC-26M	EPA Method 8240	24	each	25	600
UC-26N	NYSDOH Method 310-13 (2 day turnaround)	8	each	10	80
UC-26O	NYSDOH Method 310-13 (24 hour turnaround)	5	each	10 ~~50~~ 10-23-00	50
UC-26P	EPA Method 8260 (2 day turnaround)	16	each	[illegible]	[illegible]
UC-26Q	EPA Method 8260 (24 hour turnaround)	10	each	25 ~~50~~ 10-23-00	250

NYSDEC: David Rowland
Subconsultant Scope

UC-26R	EPA Method 8270B (24 hour turnaround)	5	each	$ 25	$ 125
UC-26S	EPA Method 8270B (2 day turnaround)	8	each	25	200
UC-26T	EPA Method 8081B (2 day turnaround)	8	each	30	240
UC-26U	EPA Method 8081B (24 hour turnaround)	5	each	30	150
UC-26V	EPA Method 608 (2 day turnaround)	8	each	30	240
UC-26W	EPA Method 608 (24 hour turnaround)	5	each	30	150
UC-26X	EPA Method TO-2	104	each		
				Grand Total	

$ 4891

Firm: Data Validation Services

Dated: 10-27-00

By: [signature]

EDV, INC.

Environmental Data Validation, Inc.
1326 Orangewood Avenue
Pittsburgh, PA. 15216
Phone (412) 341-5281
Fax (412) 571-1932
Homepage: http://www.EDV-inc.com

Certified DBE, MBE, WBE

e-mail: mwalters@EDV-INC.com

FAX COVER SHEET

FROM MAXINE

TO MIKE STEFAN

716-684-0844

NO. OF PAGES 7
(INCLUDING COVER SHEET)

MESSAGE:

10 day

Item 3: 10 day DUSR Turnaround

[illegible]	Analytical Description	Estimated Quantity	Unit	[illegible]	[illegible]
UC-26 A	EPA Method 8021B-TCLP STARS Listed Compounds Only	5	each	19.10	95.5
UC-26B	EPA Method 8270 -TCLP Base Neutrals Only	5	each	[illegible]	85.5
UC-26C	EPA Method 8260	2	each	19.50	39.0
UC-26D	EPA Method 8270	40	each	21.50	860
UC-26E	EPA Method 1311	46	each		
UC-26F	EPA Method 1010	22	each	0.26	5.72
UC-26G	EPA Method 846 6010B/7000	46	each	[illegible]	989.00
UC-26H	EPA Method SW846, 7.3	26	each	.26	6.76
UC-26I	EPA Method 9095	26	each	0.26	6.76
UC-26J	EPA Method 9045	26	each	1.10	27.10
UC-26K	EPA Method 8170	5	each	21.50	107.50
UC-26L	EPA Method 6010B	5	each	18.15	90.75
UC-26M	EPA Method 8240	24	each	[illegible]	468.00
UC-26N	NYSDOH Method 310-13 (2 day turnaround)	8	each	10.15	81.20
UC-26O	NYSDOH Method 310-13 (24 hour turnaround)	5	each	10.15	50.75
UC-26P	EPA Method 8260 (2 day turnaround)	16	each		
UC-26Q	EPA Method 8260 (24 hour turnaround)	10	each	19.50	195.00

3108.54

10 day

UC-26R	EPA Method 8270B (24 hour turnaround)	5	each	21.50	107.50
UC-26S	EPA Method 8270B (2 day turnaround)	8	each	21.50	172.00
UC-26T	EPA Method 8081B (2 day turnaround)	8	each	16.15	129.20
UC-26U	EPA Method 8081B (24 hour turnaround)	5	each	16.15	80.75
UC-26V	EPA Method 608 (2 day turnaround)	8	each	20.81	166.48
UC-26W	EPA Method 608 (24 hour turnaround)	5	each	20.81	104.05
UC-26X	EPA Method TO-2	104	each	[redacted]	[redacted]
				Grand Total	[redacted]

959.98

3868.50

Firm:____________________________________

Dated:____________________________________

By:____________________________________

Exhibit #2
Cost Data
Davis Howland Oil Company Site
NYSDEC Site Number # 8-28-88

Note: No work beyond the approved budget can proceed without written authorization from E & E's Project Manager. Such authorization will only be granted if detailed justification can be provided and E & E can obtain authorization from NYSDEC.

Item A: One Day DUSR Turnaround

UC-26 A	EPA Method 8021B-TCLP STARS Listed Compounds Only	5	each	38.20	191.00
UC-26B	EPA Method 8270 -TCLP Base Neutrals Only	5	each	34.20	171.00
UC-26C	EPA Method 8260	2	each	35.00	70.00
UC-26D	EPA Method 8270	40	each	42.50	1700.00
UC-26E	EPA Method 1311	46	each	0	0
UC-26F	EPA Method 1010	22	each	0.50	11.00
UC-26G	EPA Method 846 6010B/7000	46	each	42.25	1943.50
UC -26H	EPA Method SW846, 7.3	26	each	0.50	13.00
UC-26I	EPA Method 9095	26	each	0.50	13.00
UC-26J	EPA Method 9045	26	each	2.50	65.00
UC-26K	EPA Method 8170	5	each	42.25	212.50
UC-26L	EPA Method 6010B	5	each	36.10	180.50
UC-26M	EPA Method 8240	24	each	30.05	721.20
UC-26N	NYSDOH Method 310-13 (2 day turnaround)	8	each	18.05	144.40

5296.1

1 of 2

UC-26O	NYSDOH Method 310-13 (24 hour turnaround)	5	each	18.05	90.25
UC-26P	EPA Method 8260 (2 day turnaround)	16	each	Not Required	Not Required
UC-26Q	EPA Method 8260 (24 hour turnaround)	10	each	36.10	361.00
UC-26R	EPA Method 8270B (24 hour turnaround)	5	each	42.20	211.00
UC-26S	EPA Method 8270B (2 day turnaround)	8	each	42.20	337.6
UC-26T	EPA Method 8081B (2 day turnaround)	8	each	32.00	256.00
UC-26U	EPA Method 8081B (24 hour turnaround)	5	each	32.00	160.00
UC-26V	EPA Method 608 (2 day turnaround)	8	each	39.99	319.92
UC-26W	EPA Method 608 (24 hour turnaround)	5	each	39.99	199.95
UC-26X	EPA Method TO-2	104	each	Not Required	Not Required
				Grand Total	

9252

7231.82

Firm: _____

Dated: _____

By: _____

NYSDEC-Division Howland
Subcontract Scope

Item 2: 5 Day DUSR Turnaround

Task Item	Analytical Description	Estimated Quantity	Units	Unit Price	Total Amount
UC-26 A	EPA Method 8021B TCLP STARS Listed Compounds Only	5	each	25.65	128.25
UC-26B	EPA Method 8270 -TCLP Base Neutrals Only	5	each	23.65	118.25
UC-26C	EPA Method 8260	2	each	26.25	52.50
UC-26D	EPA Method 8270	40	each	29.25	1170.00
UC-26E	EPA Method 1311	46	each	———	———
UC-26F	EPA Method 1010	22	each	0.39	8.58
UC-26G	EPA Method 846 6010B/7000	46	each	29.25	1345.50
UC -26H	EPA Method SW846, 7.3	26	each	0.39	10.14
UC-26I	EPA Method 9095	26	each	0.39	10.14
UC-26J	EPA Method 9045	26	each	2.63	68.38
UC-26K	EPA Method 8170	5	each	29.65	148.25
UC-26L	EPA Method 6010B	5	each	26.25	131.25
UC-26M	EPA Method 8240	24	each	25.65	615.60
UC-26N	NYSDOH Method 310-13 (2 day turnaround)	8	each	13.50	108.00
UC-26O	NYSDOH Method 310-13 (24 hour turnaround)	5	each	13.50	67.50
UC-26P	EPA Method 8260 (2 day turnaround)	16	each	[redacted]	[redacted]
UC-26Q	EPA Method 8260 (24 hour turnaround)	10	each	25.65	256.50

4238 84

NYSDEC-Davis Hawland
Subcontract Scope

5 day

UC-26R	EPA Method 8270B (24 hour turnaround)	5	each	25.65	128.25
UC-26S	EPA Method 8270B (2 day turnaround)	8	each	25.65	205.20
UC-26T	EPA Method 8081B (2 day turnaround)	8	each	20.30	162.40
UC-26U	EPA Method 8081B (24 hour turnaround)	5	each	20.30	101.50
UC-26V	EPA Method 608 (2 day turnaround)	8	each	26.85	214.80
UC-26W	EPA Method 608 (24 hour turnaround)	5	each	26.85	134.25
UC-26X	EPA Method TO-2	104	each		
				Grand Total	

5185.24

Firm: _____

Dated: _____

By: _____

NYSDEC Davis Rowland
Subcontract Scope

J

Lu Engineers – Soil Gas and Indoor Air Quality Work

Lu Engineers – Scope of Services

REQUEST FOR PROPOSAL
ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
NYSDEC Site # 9-15-157
EEEPC Contract No. - 000699.NY02 - Task No. 07
October 1, 2004

Active Geoprobe Soil Gas Survey and Ambient Indoor and Subslab Ambient Air Monitoring Vicinity of 200 Anderson Avenue Rochester, New York

Exhibit 1

Project Description

To be proactive and follow-up with New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) requirements to perform these services, Ecology and Environment Engineering, P.C. (EEEPC) will be conducting an active soil gas survey across selected properties in the vicinity of 200 Anderson Avenue, former Davis Howland Oil Company (DHOC) site in Rochester, New York.

Scope of Work (SOW)

The soil gas sampling will be conducted for volatile organic compound (VOC) analysis at 40 to 60 locations along the right of ways and accessible properties on Anderson Avenue, Fairmont Street, and Norwood Avenue near the DHOC site (see Figure 1). Two duplicate samples will also be collected. All soil gas samples will be collected from between ten and twelve feet below ground surface (BGS).

Soil gas samples will be collected using the equipment (to be provided by the Geoprobe® subcontractor unless noted) and procedures described below.

Geoprobe Soil Gas Survey Equipment

- Direct-Push Geoprobe® unit with vacuum pump;
- 1.25-inch diameter steel probe rods (decontaminated between sample points);
- Post Run Tubing (PRT) System sampling tools including point holders, adapters, and Teflon-lined polyethylene tubing;
- SUMMA® canisters (provided by EEEPC) & vacuum control gauge;

- PID/FID (provided by EEEPC) for Health and Safety screening during all field activities

Geoprobe Soil Gas Survey Procedures

A vehicle-mounted Geoprobe® unit will be used to collect the subsurface soil gas samples using the following procedures:

- A clean drive point adaptor and new expendable point will be driven to approximately 8 to 10 feet (BGS).

- After the drive point has reached the desired depth, the probe rod will be retracted approximately 3-4" to create a void which will allow the migration of soil vapor sample into the bottom of the drive point adaptor.

- A clean, unused piece of ¼" Teflon-lined polyethylene tubing will then be attached to the stainless steel adaptor. The tubing is inserted into the probe rod and extended to the bottom of the probe rod. Using a counter-clockwise circular motion, the tubing is threaded to the drive point adaptor and tightened to compress the "O" ring seal.

- To ensure the integrity of the PRT and tubing connections, a vacuum check will performed on the system prior to purging and collecting the sample.

- After connecting the tubing to the "down-hole" drive point adaptor, the line is purged by drawing a measured volume (one tubing volume) of soil gas/vapor through the tubing using the vacuum/volume system mounted in Geoprobe® unit. A tubing pinch valve will be utilized to seal the end of the tube while the connection to the canister is made and to re-seal the tubing after sampling is completed

- The tubing connected to the drive point adaptor is then disconnected from the vacuum system and attached to a SUMMA® canister. Sample collection will take approximately one hour.

The following general stipulations apply for all the tasks of this SOW:

- Assembly and disassembly of a decontamination pad. This pad must be small enough to be moved along with the Geoprobe to each sampling location;

- Containerization and transportation of decontamination water (across Anderson Avenue. to the DHOC groundwater treatment system);

- Removing all non-contaminated solid waste generated during site activities.

- All work is to be performed during 10-hour workdays on a 6-day work schedule. The work is expected to commence in September 2004.

- The subcontractor must provide the appropriate personnel (two man crew and oversight staff) and equipment to conduct the Geoprobe sampling.

- Decontamination will take place at each separate location. A water source will not be available at each location. However, a water source is available directly across Anderson Avenue inside the 200 Anderson Avenue facility.

- It is the drilling subcontractor's responsibility to assess the accessibility of the site and to provide the appropriate Geoprobe rig and vehicles for this SOW. Therefore, a site visit is recommended.

- The subcontractor shall try to minimize the impacts on the site during Geoprobe activities. Work is intended to take place between the curb and sidewalk or one foot inside the sidewalk within the state or village right of way in front of each property. All ruts, holes, and other disturbances in maintained areas caused by Geoprobe activities and vehicles will be filled with topsoil, leveled with the surrounding grade, and seeded and mulched by the subcontractor. Remember these are front lawns of individual property owners. Anything that can be done to reduce damage to the lawns should be included in your bid (i.e. plywood to drive on etc.).

- The subcontractor is expected to provide the information requested in Exhibit 2 and add appropriate line items in the spaces provided for additional equipment or supplies to complete the task. If the subcontractor has any suggestions or changes to the requested methods the subcontractor may make the changes accordingly.

- The subcontractor will be held to this estimate, especially the number of days to complete the project, unless there is a change in the project SOW. Any changes in the SOW (such as increased number of sampling locations and upgrading personal protection levels) will not be performed until approved by EEEPC and EEEPC's client.

- Line items not on this agreement will not be paid without prior approval by EEEPC. The subcontractor shall only invoice EEEPC for items in this subcontract that are actually used to complete the tasks described in Exhibits 1 and 2 of this request for bid (RFB).

- The subcontractor is subject to liquidated damages in the amount of $1200/day for each work day over the proposed total number of days indicated in Exhibit 2 by the subcontractor, assuming no changes in the SOW.

Utility Clearance

- EEEPC will provide locations for all geoprobe work under this phase of the work.
- EEEPC and/or the client will provide utility clearance for all subsurface activities.

Equipment Decontamination

The Geoprobe and all appurtenances must be decontaminated with high-pressure steam prior to arrival to the site. All equipment will be decontaminated again upon arrival to the site to remove road dirt only. Moreover, it is the subcontractor's responsibility to decontaminate all equipment prior to leaving the site.

Decontamination of all down hole equipment will be performed prior to and after each sampling location. The subcontractor will construct a decontamination pad, which will consist of a wooden frame and plastic sheeting. Drilling decontamination will consist of:

- Scrubbing with brushes using TSP and clean water; and
- Rinsing with clean water.

Once clean, no equipment may touch the ground prior to use. The equipment must be stored on the Geoprobe rig, or on plastic sheeting.

Investigation-Derived Waste (IDW)

The subcontractor will remove all non-contaminated investigation-derived solid waste generated during site activities. All decontamination water will be temporarily containerized for transport across Main St. to the Mr. C's groundwater treatment system. A small sump pump and garden hose or equivalent will be needed to pump the water up into the groundwater treatment system.

Health and Safety Requirements

The subcontractor must comply with the following health and safety stipulations:

- The subcontractor will submit to EEEPC a completed, signed Health and Safety Plan (HASP) for review no later than 5 days prior to commencement of on-site activities. If modifications or clarifications of the plan are requested by EEEPC, these will be preformed before the start of in-field activities.

- The subcontractor will designate a responsible person for compliance of their HASP.

- The subcontractor will provide all personal protective equipment (PPE) and upgrades of PPE as specified in the HASP including costs, and the proper disposal of all spent PPE.

- The subcontractor should assume that all work will be performed using a minimum of Level D personal protection (including at a minimum hard hat, safety glasses, neoprene gloves, and steel-toed boots and may also include tyvek and saranex if conditions warrant). Upgrades may be necessary therefore; level C personal protective equipment must be available on site. If upgrades are required, costs will be implemented as indicated under contingent costs in Exhibit 2.

Information pertinent to the subcontractor's Health and Safety Plan may be acquired from EEEPC at the winning subcontractor's request.

Project Schedule

EEEPC is planning on commencing the investigation in late September 2004.

CONTINGENT COSTS

Upgrade to Level C respiratory protection	$_____/crew hr.

TOTAL NOT-TO-EXCEED PRICE	$_____
TOTAL NUMBER OF WORK DAYS	_____

LU ENGINEERS
Civil and Environmental

September 22, 2004

Ecology and Environment Engineering, P.C.
368 Pleasant View Drive
Lancaster, New York 14086

Attention: Michael Steffan

Re: NYSDEC Site # 8-28-088, Active Geoprobe Soil Gas Survey and Ambient Indoor and Subslab Ambient Air Monitoring
Lu Engineers' Proposal Number P04-165R

Dear Mr. Steffan:

Lu Engineers is please to provide the following proposal for the referenced work based on the draft scope of work provided via e-mail on September 16, 2004. Based on our understanding of the project requirements we have made the following assumptions with respect to project costs:

1. A total of 9 PRT points will be tested per day and a total of 60 will be completed for this project.
2. The average depth of each PRT point will be 9 feet below grade.
3. Field work will require a full 8-hour work day for both the interior and exterior testing.
4. Access to all areas (indoor and outdoor) will be arranged by E&E.
5. Electricity required for drilling in Subtask 3 will be provided by residents/home owners.
6. Transportation and analysis for summa canisters will be conducted by E&E.
7. Prevailing wage rates do not apply to the subcontracted drilling.

The following sections specify our estimated costs for completion of the requested tasks.

SUBTASK 1: MOBILIZATION / DEMOBILIZATION

The mobilization/demobilization task shall include the following:

A. Mobilization/demobilization of all equipment (including all equipment, utility clearances, etc. as required for active soil gas sampling and ambient indoor and sub-slab ambient air monitoring as described in Exhibit 1), and personnel for all tasks described in Exhibit 1.
Lump sum cost $1,500.00

B. Site restoration of maintained areas (i.e. leveling tire ruts, concrete and asphalt patching, spreading topsoil, re-seeding grassy areas, etc.).
Lump sum cost $1,000.00

C. Preparation, submittal written and approved of a site-specific Health and Safety Plan for personnel present on site 5-days prior to the start of work. E & E will provide site-specific contaminant information to the best of its knowledge.

Lump sum cost $ 750.00

Total for Task 1 $3,250.00

SUBTASK 2: GEOPROBE SOIL GAS SURVEY

An active soil Gas survey will consist of up to 50 Geoprobe® "Post Run Tubing" (PRT) soil gas sampling points as described in Exhibit 1.

A. Up to 50 shallow (10 to 12 feet BGS) Geoprobe® sampling points (including equipment listed in Exhibit 1A, decontamination time, etc.).

Lu Engineers Labor/Equipment/Supplies for 5 days ($700.00/day) $3,500.00

B. Other costs (please specify type and unit costs):

- Twenty-five 50 lb bags bentonite @ $18.00/bag $ 450.00
- PRT system per hole 50 points total @ 137.5 per point $6,875.00
- Geoprobe® with operator @ 968.00 per day (5 days total) $4,840.00

Total for Task 2 $15,665.00

Total Number of Work Days: 5

SUBTASK 3: INTERIOR SAMPLING AND INVENTORY WORK

Indoor air sampling and VOC source inventories are planned for up to fourteen (14) residences in the area of the subject site. Sampling and related work will be conducted as described in Exhibit 1.

A. Up to 14 residential sampling inventory locations (including one sub-slab and two interior summa canister samples and one ambient sample per day to a maximum of 10 total samples per day, drilling /repair time, etc.).

($540.00/day) $3,240.00

B. Other costs (please specify type and unit costs)

- Equipment and materials as specified in Exhibit 1 ($275.00/day) $1,650.00

Total for Task 3 $4,890.00

Total Number of Work Days: 6

Additional Days Required Billed at $815.00/day

SUBTASK 4: REPORT ASSISTANCE

Lu Engineers will provide assistance to E&E with preparation of the project report and related work on an as-needed basis. It is estimated that a maximum of 20 hour will be required for this subtask.

20 Hours at $67.50/hr: $1,350.00

CONTINGENT COSTS

Upgrade to Level C respiratory protection: $30.00/person/hr.

TOTAL NOT-TO-EXCEED PRICE: $25,155.00

TOTAL NUMBER OF FIELD WORK DAYS (Subtasks 2 and 3): 11

Thank you for considering Lu Engineers for this project. Please call or e-mail with any questions you may have.

Respectfully submitted,

Gregory L. Andrus, CHMM
Project Manager

Project: Soil Gas Survey, Davis Howland Oil Company IHWS

Accepted by: _____

Title: _____

Date: _____

Lu Engineers _____

Title: Joseph C. Lu, P.E., President

Date: 9/22/04

K

EEEPC – Air and Water Analyses – Soil Gas and Indoor Air Quality Program

EEEPC Quote for Air and Water Analyses

Analytical Services Center

International Specialists in Environmental Analysis

Lancaster New York 14086-
Phone: (716) 685-8080 Fax: (716) 685-0852

13-Oct-04

QUOTATION for ANALYTICAL SERVICES

Quote : 20050075

Company: E and E Buffalo Office
Contact: Mr. Mike Steffan
Address: 368 Pleasant View Dr.
Lancaster, NY 14086
Phone: (716) 684-8060 Fax: (716) 684-0844

Submitted By:

DateExpected:

Quote ID: 20050075 Expires: 10-Jan-05 B and P No:
Project: Davis Howland
TAT: 7 Calendar Days
QC Level: DEC NONCLP
Bill MS/MSD at Unit Rates: EDDType: Corporate EDD DataPack: NONE InvType: Standard Invoice

Matrix	Test Name	Remarks	# Samp	Test Price	Test Total
Air	VOCs in Air by GCMS Method TO-14A	3 day TAT/Level A	90	$337.50	$30,375.00
Water	Volatile Organic Halocarbons by GC Method 601	7 day TAT/Level A	10	$90.00	$900.00
Water	Volatile Organic Aromatics by GC Method 602	7 day TAT/Level A	10	$90.00	$900.00

Cost

Sub total:	
Misc:	$0.00
Discount:	0.00%
Surcharge:	0.00%
TOTAL:	**$32,175.00**

Quote Comments:

Approved by:_____ Accepted by:_____

Standard Terms and Conditions:

Please return signed copy to the above address or fax to (716) 685-0852.
Client MUST contact your ASC representative prior to sample receipt to schedule analyses.
ASC's acceptance of samples is subject to available capacity and is contingent upon the creation of a mutually agreeable sample delivery schedule.
The unit prices contained in the quotation are contingent upon receipt of the sample quantity, test method, sample matrix, and schedule as indicated the RFP. Significant deviations may require adjustments to the unit prices and may impact the ASC's ability to accept the work.
Samples must be shipped to the lab on the day they are taken.
The ASC reserves the right to subcontract analyses if necessary, with the approval of the client.
The unit prices quoted include (unless otherwise stated):
-Standard laboratory compound lists and limits
-A Standard laboratory report
-Sampling containers and their shipment to the site. 5 business days notice must be provided for delivery. Any expedited shipping charges will be billed to the client