SITE CHARACTERIZATION/REMEDIAL DESIGN

STUART OLVER HOLTZ SITE

PROJECT MANAGEMENT WORK PLAN/BUDGET ESTIMATE

WORK ASSIGNMENT D004440-3

Prepared for:
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 Broadway, Albany, New York

Denise M. Sheehan, Commissioner

DIVISION OF ENVIRONMENTAL REMEDIATION
REMEDIAL BUREAU B

URS Corporation
77 Goodell Street
Buffalo, New York 14203

Final
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PROJECT MANAGEMENT WORK PLAN/BUDGET ESTIMATE

FOR

SITE CHARACTERIZATION/ REMEDIAL DESIGN
STUART OLVER HOLTZ SITE
SITE #8-28-079
HENRIETTA, NEW YORK

Prepared for:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
WORK ASSIGNMENT D004440-3

Prepared by:

URS CORPORATION
77 GOODELL STREET
BUFFALO, NEW YORK 14203

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PROJECT MANAGEMENT WORK PLAN

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1.0 INTRODUCTION

This *Project Management Work Plan/Budget Estimate (PMWP)* has been prepared to identify the activities and costs for Site Characterization and Remedial Design for the Stuart Olver Holtz, Inc. (SOH) site. This is Work Assignment 3 under the URS Corporation – New York (URS) Engineering Services (Design/Construction) Standby Contract with the New York State Department of Environmental Conservation (NYSDEC or the Department).

1.1 General Site Information

1.1.1 Site Description

The 3.8-acre SOH site is located at 39 Commerce Drive, a mixed commercial/industrial area, in Henrietta, Monroe County (Figure 1). A manufacturing building which formerly occupied the eastern half of the site, was demolished in 2005, and only the building slab remains. The rest of the site consists of a paved parking lot, driveways and grass-covered areas. Immediately to the west of the property is a swale that receives drainage from the facility. Ruby Gordon's Furniture Store is located south of the site, and several commercial/retail buildings that front West Henrietta Road are located east of the site (See Figure 2).

1.1.2 Operational and Disposal History

Originally known as Electro Chemical Products, Inc., SOH operated a specialty metals finishing business at this site from 1962 until 1986, when it applied for Chapter 11 bankruptcy protection (Shaw, 2002). The facility was transferred to Metalade, Inc., which conducted operations similar to SOH.

An uncontrolled release of plating and coating solutions occurred in 1974 during a fire that destroyed a portion of the facility (Shaw, 2002). In 1980, SOH began accumulating drums of solvents

for processing in anticipation of receiving a permit to operate a solvent recovery unit at the site. The permit was never granted and in 1983, 200 of more than 300 solvent drums were removed from the site, some of which reportedly had leaked. The SOH site was later listed as a Class 2 inactive hazardous waste site.

Chlorinated solvents have been found in the groundwater at the site at concentrations that exceed New York State groundwater quality standards. The potential source area for this contamination has been identified as a former loading dock located outside the southwestern portion of the building (Figure 2). The source area is also thought to extend under the building slab (Shaw, 2002). Volatile organic compounds (VOCs), attributed to the SOH site, have also been detected in groundwater collected in basement sumps at the Ruby Gordon facility.

As an Interim Response Measure (IRM), the Department selected Bianchi Industrial Services, LLC to decommission the SOH building and ancillary equipment/utilities. The IRM began on November 4, 2005, and was substantially complete on January 25, 2006. The work included asbestos abatement prior to demolishing the building, as well as decommissioning drain lines and removing accumulated sediments/water from sumps, pits, catch basins, and related piping.

1.1.3 Site Geology/Hydrogeology

Site Geology. Subsurface conditions at the site, on average, consist of the following strata from the ground surface downwards (Shaw 2003):

- Fill - 5 feet thick – loose to medium dense, fine to coarse sand
- Lacustrine Deposits – 7 feet thick – stiff to soft clays and silts
- Upper Glacial Till – 14 feet thick
- Lower Glacial Till – 14 feet thick
- Shale Bedrock

The upper till is highly variable in terms of grain size distribution, but is generally medium dense to dense and widely graded from fine to coarse sand, with some silt/clay, and some fine to coarse gravel. Also present in the upper till are fine to medium sand strata from two to 10 feet thick, which provide zones of higher permeability for groundwater movement. The upper till, which is continuous across the site, appears to be the primary water bearing unit. The lower till is denser than the upper till, contains more silt and clay, and does not have the sand strata found in the upper till. The permeability of the lower till is one or two orders of magnitude lower than the upper till. Below the glacial till is severely weathered and fractured shale of the Vernon formation.

Hydrogeology. Overburden groundwater at the site generally flows to the north and northwest; however, there can be a localized southwesterly flow component when the Ruby Gordon basement sump pumps are operating. Groundwater flow in the upper till and the weathered bedrock appears to occur under semi-confined conditions. The upper till is bounded above and below by much lower permeability layers; i.e., the lacustrine deposits and the lower till, respectively. Likewise, the water-bearing weathered and fractured shale is bounded above by the lower till and below by more competent and less permeable shale.

1.1.4 Nature and Extent of Contamination

The primary overburden groundwater contaminants of concern (COCs) at the site are the following VOCs (Shaw, 2002):

- 1,1,1-Trichloroethane (TCA)
- 1,1,1-Dichloroethane (DCA)
- 1,1-Dichloroethene (DCE)
- 1,2-DCA
- 1,2-DCE (total)
- Methylene Chloride

- Trichloroethene (TCE)
- Tetrachloroethene (Perchloroethene or PCE)
- Vinyl Chloride

In December 2000, TCE concentrations in groundwater were as high as 640,000 µg/L; the groundwater quality standard for TCE is only 5 µg/L, per NYSDEC *TOGs 1.1.1* (NYSDEC, 1998).

The potential source area for groundwater contamination at the site has been identified as the former loading dock located outside of the southwestern portion of the building (Figure 2). The source area was also postulated to extend under the building slab (Shaw 2002). In 2000, elevated VOC concentrations in soil samples were found in this area at 16 to 24 feet, 30 feet, and 38 to 40 feet below ground surface. TCE was the most prevalent VOC detected with concentrations as high as 110,000 µg/kg; the NYSDEC cleanup objective to protect groundwater quality is only 700 µg/kg per *TAGM 4046* (NYSDEC, 1994).

1.1.5 Selected Remedy

The Department completed a Remedial Investigation/Feasibility Study (RI/FS) in 1996, and the Record of Decision (ROD) was signed in 1997. The selected remedy originally consisted of a short-term groundwater source extraction system, a down gradient contaminated overburden groundwater collection trench system, and passive pre-treatment of contaminated groundwater using zero-valent iron filings contained in subsurface vaults. The pre-treated groundwater would have discharged by gravity to a local publicly owned treatment works (POTW).

In 2002, the ROD remedy was re-evaluated and a *Pre-Design Investigation Summary/Focused Feasibility Study (FFS) Report* (Shaw, 2002) concluded that a two-step process of in situ chemical oxidation (ISCO) using permanganate, followed by enhanced natural bioremediation, would be more cost effective and achieve the remediation objectives faster. An *Explanation of Significant Differences* amended the ROD in October 2005 to incorporate this remedy (NYSDEC, 2005).

Based on a 65% Engineering Design Report prepared by Shaw Environmental, Inc. (Shaw, 2002), the major components of the new remedy are (See Figure 3):

- First injecting permanganate to destroy chlorinated ethenes in groundwater. The injection wells would be located on the northern and western site boundaries, along a portion of the southwestern site boundary, and in a closely spaced line upgradient of the Ruby Gordon sump pumps.

- Followed by injecting a carbon source such as molasses to enhance natural anaerobic biodegradation of chlorinated ethanes. Carbon injection would occur in the source area and within the groundwater plume.

- According to the current design, 80 injection wells will be installed to a depth of about 24 feet below ground surface, with the bottom 5-foot interval screened. At this depth, the injection well screens would be on average within the upper glacial till aquifer. The remedy also includes drainage improvements between Ruby Gordon and the SOH site, removing contaminated surface soils, long-term groundwater monitoring, and deed restrictions.

1.2 Scope of Project

In accordance with the *Work Assignment Scope,* included as Attachment 1, URS will further delineate the suspected source area at the former loading dock and under the slab. The investigation work will include: soil borings, new monitoring wells, sampling of soils and groundwater, indoor air/soil gas sampling, laboratory analyses, data validation, investigation derived waste (IDW) management, and a summary report of the findings. URS also proposes to perform a geophysical survey of the site to attempt to identify unknown underground features at the site.

Shaw Environmental, Inc. (SHAW) has submitted to NYSDEC draft (65%) plans, specifications, and a design report for ISCO with permanganate injection (SHAW, 2003). As stated in the *Work Assignment Scope*, URS will review and finalize the ISCO design to allow NYSDEC to competitively bid construction, operation, and maintenance of the ISCO system. Costs for finalizing the design of the second phase of the site remediation have not been included.

Design requirements for implementing the second phase of the remediation, namely enhanced anaerobic bioremediation of ethanes facilitated by molasses injection, can only be determined after the first phase, ISCO, has been completed. Permanganate injection results in a highly oxidized state in the aquifer, but for the second phase to be successful, there must be a highly reductive environment. As stated in Shaw's *65% Design Report*, the second phase design will require a sampling and analysis program to evaluate geochemical and microbiological conditions in the ground, and a lengthy bio-assessment bench scale study using the post-permanganate injection treated soils to assess the viability of the process and the molasses dosing schedule.

Because of the future unknowns associated with the post-ISCO geochemical conditions in the ground, URS has not included budgeted costs associated with the final design of enhanced bioremediation. We recommend developing these costs later once some data are available concerning the impact of the permanganate injection on subsurface conditions and groundwater quality.

The Work Assignment consists of the following major tasks:

- Task 1 – Work Plan Development
- Task 2 – Supplemental Investigation/Pre-Design Investigation
- Task 3 – Additional Tasks
- Task 4 – Plans and Specifications
- Task 5 - Pre-Award Services

Work under Task 3 is optional, depending on the results of Task 2 and could include individual source area investigations, IRMs, and design/installation of sub-slab air venting systems.

Section 2.0 of this *Project Management Work Plan* describes the scope of work for each of these tasks and their corresponding subtasks in detail.

2.0 SCOPE OF WORK

This section describes the four major tasks associated with the Site Characterization/ Remedial Design Work Assignment at the Stuart Olver Holtz Site. URS' understanding of the scope of this project is based upon the Department's *Work Assignment Letter and Scope* dated November 28, 2005 and included in Appendix A.

2.1 Task 1 - Develop Detailed Work Plan

URS has developed and submitted for the Department's review and approval, this *Project Management Work* Plan (PMWP) that includes a description of major tasks, a summary schedule, a staffing plan and budget, budget assumptions, deliverables, an M/WBE utilization plan, and a list of proposed subcontractors. URS will also submit separately the following:

- *Field Activities Plan (FAP)*
- *Health and Safety Plan (HASP)*
- *Quality Assurance Project Plan (QAPP)*
- Final Work Assignment Progress Schedule for the supplemental investigation and the remedial design

The plans are described in more detail in Section 2.2.

Budget Assumptions

- One trip to the site by the following URS personnel: Project Manager, Project Geologist, and Project Design Engineer. Duration of the trip is one day (8 hours).
- One trip to Albany by the following URS personnel: Project Manager, Project Geologist, and Project Design Engineer. Duration of the trip is two days (16 hours), including travel.

- Costs for this task include a brief review of previous project documents to gain an understanding of the site and the scope pf the project.
- One set of NYSDEC comments on the *Draft PMWP*.
- Costs for the *FAP, HASP*, and *QAPP* are included in Task 2.
- Costs for citizenship participation, as required by the Work Assignment, are included in Task 5.1.

Deliverables

- Five copies of the *Draft and Final PMWP*.

2.2 Task 2 – Supplemental Investigation/Pre Design Field Activities

This subsection describes work that will be done to investigate the extent of contamination that exists below the SOH building slab. Data generated during this portion of the work will be combined with existing site information from previous investigations and used as input in the design of the ISCO remedy for this site.

It is important to adequately define the source area and the plume in order to estimate the total oxidant demand from an estimate of the total mass of contaminant present, both sorbed and dissolved. Permanganate is not chemical-specific and ISCO will act on all potentially oxidizable contaminants present in the soil and groundwater within the aquifer. Consequently, it is important to collect soil samples below the groundwater table to identify the sorbed contaminant mass (ITRC, 2005). ISCO may also oxidize some metals, increasing their solubility (e.g.: iron, chromium, and selenium).

Naturally occurring organic and inorganic material in the soil and groundwater may also be acted on by ISCO, thereby increasing the demand for oxidant unrelated to the degradation of the contaminants. This natural oxidant demand (NOD) is measured in the laboratory on both soil and groundwater samples; however, we have assumed that the majority of the NOD will come from the soil.

The major tasks associated with this investigation are:

- Work Plans
- Surface Soil Sampling
- Soil Borings and Subsurface Soil Sampling
- Monitoring Well Installation
- Groundwater Sampling and Analysis
- Soil Gas and Indoor Air Sampling
- Geophysical Survey
- Supplemental Investigation Summary Report

Each of these tasks is described in detail in the following subsections. Budget assumptions and deliverables are listed in Sections 2.2.10 and 2.2.11, respectively.

2.2.1 Work Plans

The following Plans will be prepared to describe in detail the requirements for the supplemental investigation:

- *Field Activities Plan (FAP)*
- *Health and Safety Plan (HASP)*
- *Quality Assurance Project Plan (QAPP)*

Field Activities Plan. Also known as a *Field Sampling Plan (FSP)*, the *FAP* will provide guidance for the field work by defining in detail the sampling and data gathering procedures to be used. It will provide all pertinent information on the field work such as: drilling methods, monitoring

well construction, sample locations and sample methods, the approximate number of samples, analysis parameters and methods, and investigation derived waste (IDW) management.

Health and Safety Plan. The HASP will be developed to document the policies and procedures that will be implemented to protect the URS site worker and the public from potential hazards posed by work at this site. The HASP will address at a minimum the following elements per 29 CFR 1910.120 (USDOL, 2006):

- Key health and safety personnel
- Safety and health risk or hazard analysis for each task and site operation
- Employee training
- Personal protective equipment
- Medical surveillance requirements
- Frequency and types of air monitoring and environmental sampling techniques
- Site control measures
- Decontamination procedures
- Emergency procedures
- Confined space entry procedures, if needed
- Spill containment

Quality Assurance Project Plan. The QAPP will provide an overview of quality assurance/quality control (QA/QC) procedures that will be used during the supplemental investigation. The QAPP will describe at a minimum the data quality objectives; sample custody/holding times; analytical procedures; internal QC checks; calibration procedures; corrective actions; and data reduction, validation, and usability.

The New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) has certified the analytical laboratory selected for this project. The laboratory will report the results in accordance with the NYSDEC Analytical Services Protocol (ASP) Category B deliverable requirements. Data validation will be done by the URS project chemist, who will also prepare the *Data Usability Summary Report (DUSR)*.

2.2.2 Surface Soil Sampling

Surface soil samples will be collected from suspect source areas that are visually identified. The samples will be collected from zero to two inches below the surface, vegetative cover, or pavement. Before sampling, URS will first confirm potential sample locations with the Department.

We have assumed that no more than 10 samples will be collected. Per the *Work Assignment Scope* (Attachment 1), for budgeting purposes, 30 percent of the samples (3) will be analyzed for VOCs, semi-volatile organic compounds (SVOCs), pesticides, PCBs, and metals. The remaining samples (7) will be analyzed only for VOCs.

2.2.3 Soil Borings/Subsurface Soil Samples

Fifteen soil borings will be advanced below the building slab to further investigate the extent of contamination in the suspected source area. The boring locations will be selected in consultation with the Department and presented in the *FAP*.

The borings will be advanced using rotary drilling equipment and hollow stem augers having a minimum inside diameter of 4-1/4 inches (8-inch outside diameter). The slab will be saw cut first to facilitate inserting the augers. Each boring will extend to approximately 40 feet below ground surface (bgs), which is the average depth to the top of bedrock (See Section 1.1.3). Continuous soil samples will be collected using a 2-inch outside diameter split-barrel sampler in accordance with *ASTM D-1586, Standard Method for Penetration Test and Split Barrel Sampling of Soils*. The URS geologist on site will classify and describe each sample on a boring log using the Unified Soil Classification System per *ASTM D 2487-00, Standard Classification of Soils for Engineering Purposes*.

For budgeting purposes, it is assumed that two samples (30 total) will be selected from each boring for laboratory analysis. Samples will be collected from the vadose zone to delineate the source area and from below the groundwater table to estimate the oxidant demand for remediating the sorbed COCs within the aquifer. Full TCL analyses will be performed on 30 percent of the samples (9), and the remaining 21 samples will be analyzed for VOCs only. Five additional soil samples from the upper glacial till will be taken (~100 grams) for analysis of natural oxidant demand.

2.2.4 Monitoring Well Installation

A groundwater monitoring well will be installed in each of the 15 completed soil borings. The monitoring wells will be constructed of new, 2-inch inside diameter, Schedule 40 PVC pipe with threaded and flush joints. The slotted well screen will be 10 feet long and placed within the upper glacial till aquifer. Monitoring well installation details such as well screen slot size and sand filter pack material will be specified in the *FAP*. Following well development, groundwater levels will be measured in each new well and in the existing wells.

The *Work Assignment Scope* (Attachment 1) calls for each borehole to be pressure grouted with a cement/bentonite grout mixture to 24 feet bgs (approximately the bottom of the upper till) before constructing the monitoring wells. URS proposes instead to use bentonite chips to backfill the borehole because they are cheaper, they do not impact groundwater quality or the sand pack, and abandoning the wells later is much easier (a 24-foot long PVC monitoring well can easily be pulled from the ground). Bentonite chips will also be used to backfill the borehole above the sand pack.

The new monitoring wells and the existing monitoring wells will be surveyed for horizontal and vertical location under the direct supervision of a New York State licensed land surveyor. Horizontal control will be referenced to the New York State Plane, North American Datum 1983 (NAD 83), and vertical control will be referenced to New York State Plane, North American Vertical Datum (NAVD 88).

2.2.5 Groundwater Sampling and Analysis

Groundwater samples will be collected from the 15 new monitoring wells plus a selected number of the existing wells to measure contaminant concentrations within the plume and to verify its current boundaries. There are 26 existing wells and piezometers that were used during previous investigations, 21 on the SOH property and five on neighboring properties (Figure 4). Whether or not they still exist and are suitable for groundwater sampling is unknown. The first step in this sub-task will be to assess the condition of each of the existing wells and piezometers. The steps in this assessment are:

- Compile well completion diagrams for each well, if available (wells without documentation will not be sampled)
- Locate each well in the field for which the well completion diagrams are available
- Measure the depth to the bottom of the well screen and compare to the as-built depth
- Record groundwater levels
- Select wells suitable for sampling

Consistent with the *Work Assignment Scope* (Attachment 1), we have assumed that 23 of the existing wells will be suitable for sampling groundwater.

A total of 38 groundwater samples will be collected using low-flow sampling techniques, and analyzed for VOCs, SVOCs, pesticides, PCBs and metals (total and dissolved). Samples will also be analyzed for the following miscellaneous parameters: total organic carbon (TOC), chemical oxidant demand (COD), total dissolved solids (TDS), total petroleum hydrocarbons (TPH) and chloride.

The URS geologist in the field will do measurements of the following baseline water quality parameters: pH, oxidation-reduction potential, dissolved oxygen, dissolved carbon dioxide, temperature, and specific conductance.

2.2.6 Soil Gas and Indoor Air Sampling

Because VOCs have been detected in groundwater samples taken from the Ruby Gordon basement sumps, as part of this Work Assignment, indoor air and soil gas below the basement slab will be sampled and analyzed. The work will be done following the procedures in the *Field Sampling Plan for Vapor Intrusion Evaluations for New York State Remediation Sites* (URS, 2006). This plan has already been reviewed and approved by the Department for other URS work assignments, and it will be incorporated by reference into the *FAP* for this project.

URS has assumed that the Department will arrange for access to the Ruby Gordon facility for URS to conduct the work. Prior to sampling, the building will be inspected to identify conditions that could interfere with the proposed testing, identify sample locations, and complete the NYSDOH's *Indoor Air Quality Questionnaire and Building Inventory* (NYSDOH, 2005). Sample locations will be confirmed after discussion with the Department.

Twenty-four hour SUMMA canister samples will then be collected of the sub-slab soil gas, basement air, first floor air, and outside ambient air. A duplicate basement air sample will also be collected. All samples will be analyzed for TCL VOCs by USEPA Method TO-15 (USEPA, 1999). For the record, URS will take digital photographs of each sample location.

A letter report of the soil gas and indoor air sampling activities will be prepared that will include the following:

- A narrative summary of the sampling activities and results
- Data summary tables as well as complete analytical results
- Sample location plan
- SUMMA canister sampling field data sheets
- Field notes and/or daily activity logs

- Chain of custody forms
- The Indoor Air Quality Questionnaire and Building Inventory
- Photographs of sample locations
- DUSR

2.2.7 Geophysical Survey

URS recommends conducting a geophysical survey of the site, including below the former building slab. This work will be subcontracted to Radar Solutions International (RSI) of Waltham, MA, a women-owned business enterprise (WBE). This sub-task of the supplemental investigation was not originally part of the Department's *Work Assignment Scope* (Attachment 1).

The objective of the survey is to locate underground utilities and other below ground features, such as underground storage tanks (USTs). Current information on these features at the site is very limited. The underground utilities and USTs could be potential obstructions to installing ISCO injection wells, and the buried utility trenches could act as preferred migration pathways for the oxidant, limiting its effectiveness in the aquifer. Unknown USTs are also an additional potential source of contamination.

To do the survey, RSI will use metal detection equipment (Geonics EM61) and ground penetrating radar (Geophysical Survey Systems SIR-3000 Portable Digital Radar System. Survey grids will be established on site and the equipment will be GPS-navigated.

2.2.8 Supplemental Investigation Summary Report

The activities and findings of the supplemental investigation will be presented in a summary report that will include:

- A description of the field activities

- A description of deviations from this *Work Plan* and the *FAP*
- Data summary tables of detected compounds and a discussion of the data
- Comparison of analytical results to applicable NYSDEC cleanup criteria
- Boring logs, well completion diagrams, development logs, and purge logs with water quality measurements
- Geophysical survey report from RSI
- Existing site features map
- Sample location plan
- Other figure as required to describe the findings
- Site photographs
- Complete validated data tables and DUSR
- Summary/Conclusions/Recommendations

2.2.9 Investigation Derived Waste (IDW)

All IDW generated during equipment decontamination, drilling, well development, and well purging will be placed in drums and staged on site. At the completion of the investigation, a licensed transportation and disposal subcontractor will be required to characterize the IDW and dispose of it at an appropriate permitted facility. Personal protective equipment and sampling equipment will be double bagged and disposed of at a municipal waste landfill.

2.2.10 Budget Assumptions

Work Plans/Reports

- Deliverables listed in Section 2.2.11 will be submitted as draft and final
- Five hard copies of each submittal will be provided plus a compact disk containing a portable data format file copy of the final submittal
- Only one set of NYSDEC comments will be received on the draft submittal

Surface Soil Sampling

- No more than 10 surface soil samples will be collected by the URS geologist during the boring program.
- No additional time is included for this task for sample collection
- The samples will be analyzed for the parameters listed in Section 2.2.2

Soil Borings, Subsurface Soil Sampling, and Monitoring Well Installation

- For this investigation program the URS geologist and field technician will be from the URS Buffalo office and will be on site full time unless otherwise noted
- All work at the site can be conducted in level D personal protective equipment
- Allow one day site visit by project manager
- One 8-hour day on site for the geologist and field technician to locate the borings
- One 8-hour day for the geologist to arrange for and provide access to the site for utility clearance by Dig Safely-New York
- Fifteen soil borings will be drilled with continuous split-barrel sampling to 40 feet bgs

- Two soil samples from each boring will be analyzed for the TCL parameters listed in Section 2.2.3
- Five additional samples will be collected and analyzed for NOD
- A monitoring well will be installed in each boring as described in Section 2.2.3
- The soil borings, subsurface soil sampling, and monitoring well installations can be completed in twelve 10-hour work days, not including travel time
- No additional time is included for equipment breakdowns or weather delays
- Costs for abandoning monitoring wells are not included

Monitoring Well Development

- The fifteen new monitoring wells will be developed after all have been installed
- The URS geologist and field technician will develop two wells at a time and will complete well development in five 10-hour days, not including travel time
- The existing monitoring wells will not need to be re-developed

Groundwater Sampling

- The condition assessment of the existing wells can be completed in one 10-hour day by the geologist and field technician, not including travel time
- Purging of the wells by the geologist and field technician will begin a minimum of two weeks after developing the new wells
- One sample will be collected from each of the 15 new wells and 23 of the existing wells using low-flow sampling techniques
- The samples will be analyzed for the parameters listed in Section 2.2.5

- Well purging and sampling can be completed in five 10-hour days, not including travel time

Survey

- Survey of the sampling locations will be conducted by two Buffalo-based URS surveyors using GPS equipment
- The survey can be completed in one 10 hour day on site, not including travel time
- The field technician will be on site to provide site access and direct the survey crew

Geophysical Survey

- Because of potential interferences with the EM61, this work will be done after the drill rig has left the site
- The field technician will assist the geophysical subcontractor, RSI, for two 10-hour days to complete this work

Soil Gas/Indoor Air Sampling

- Allow a one-day trip for the field technician to inspect the Ruby Gordon facility to select sample locations and complete the *Indoor Air Quality Questionnaire and Building Inventory*
- The sample locations will be confirmed after discussion with the Department
- Allow a second one-day trip to set up the SUMMA canisters for sampling
- Return the following day to collect the SUMA canisters for shipment to the laboratory
- Standard (30 days) turn-around time for analysis results
- A letter report of the results will be prepared as described in Section 2.2.6

Investigation Derived Waste

- Soil cuttings, decontamination water, development water, and purge water will be placed in drums and staged at the site
- URS will subcontract with a licensed transportation and disposal (T&D) firm to characterize the waste for disposal at a suitably permitted facility
- Oversight of IDW disposal by the T&D firm will be done by the field technician over one 8-hour day

Supplemental Investigation Summary Report

- The report will be submitted as draft and final
- One set of minor comments will be received from the Department on the draft report
- One trip to Albany by the project manager and the geologist to discuss the results with the Department
- Trip duration is two 8-hour days, including travel

2.2.11 Deliverables

URS will submit five copies of draft and final versions of the following documents described herein for the supplemental investigation of the site:

- *Project Management Work Plan/Budget Estimate*
- *Field Activities Plan*
- *Health and Safety Plan*
- *Quality Assurance Plan*
- *Soil Gas/Indoor Air Sampling Report*

- *Supplemental Investigation Summary Report*

In addition to the hard copies, a PDF file of each final document will be submitted on a compact disk.

2.3 Task 3 – Additional Tasks

It is URS' understanding that the work associated with these additional tasks will only be undertaken if requested by the Department. At that time, URS will develop a budget amendment that will be negotiated with the Department prior to the start of work.

2.3.1 Task 3.1 – Individual Source Area Investigation

If field investigations described in Task 2 identify possible additional source areas, the Department may request further focused investigation in these localized areas, in the form of additional soil samples, soil gas samples, groundwater samples, etc.

2.3.2 Task 3.2 – Interim Remedial Measures

If local areas of contamination, identified as source areas, can be appropriately mitigated by IRMs, then the Department may request such measures.

2.3.3 Task 3.3 – Design and Installation of Air Venting Systems

If indoor air samples reveal contaminant levels in the Ruby Gordon facility that the NYSDOH finds unacceptable, the Department may request that URS install a sub-slab depressurization (SSD) system in the building basement.

2.3.4 Budget Assumptions

- URS will develop budget assumptions and costs for these additional tasks when requested by the Department

2.3.5 Deliverables

- None at this time.

2.4 Task 4 – Plans and Specifications

The remedial design for this site was started by Shaw Environmental who issued an *Excavation and Disposal, In-Situ Oxidation, and Enhanced Bioremediation Design Report (65% Engineering Design Report)* in June 2003 (Shaw, 2003). Since this document was issued site conditions have changed and almost three years have passed. Based on our initial review of Shaw's submittal, the design and the backup for it are largely conceptual in nature. These factors require that the design be substantially revisited prior to advancing it to the final design stage.

2.4.1 SubTask 4.1 Design Basis Report

URS will develop a *Design Basis Report (DBR)* that will be submitted separately from the *Supplemental Investigation Report* (Section 2.2.8). The *DBR* will incorporate the findings of the supplemental investigation, our review of Shaw's *65% Design Report,* and any modifications to the design basis as appropriate to allow the remedial design to be successfully implemented. The Shaw report will be a primary reference for the *DBR*; information in the Shaw document will generally not be repeated in the *DBR*. The *DBR* will be prepared as a draft for NYSDEC review prior to continuing with the remedial design.

2.4.2 SubTask 4.2 Plans and Specifications

URS will prepare plans and specifications to be used in competitively bidding the construction, operation, and maintenance of the selected remedy in conformance with New York State and applicable federal laws, rules, regulations, and guidelines. URS will utilize NYSDEC's standard construction contract clauses and format (latest version) to prepare the contract documents. The specifications will include minimum requirements for the site management plan, construction quality assurance plan, and health and safety plan to be prepared by the selected remedial contractor.

The Shaw 65% design documents include specifications and several half-size drawings. URS proposes to use most of the design approach utilized by Shaw; however, the information presented on the Shaw drawings was generally conceptual in nature. The design specifications are also somewhat generic in nature and missing important sections such as electrical and controls and instrumentation. Also, the need to use both potassium and sodium permanganate will be subjected to a cost and efficiency analysis.

As a result, URS recommends that the first set of deliverables for the remedial design consist of a Pre-Final (95%) design package. Following comments from NYSDEC and the Monroe County Health Department, the final design documents will be prepared.

Pre-Final (95%) Design. URS will prepare the pre-final submission of the plans and specifications, and our *DBR* summarizing the supporting data, documentation and design calculations. The design will address the removal of the soil hot spots identified by Shaw in the 65% design, utility lines identified as potential off-site conduits for contamination and permanganate migration, and in-situ treatment utilizing permanganate. A project meeting will be held in Albany to review this submission.

Assumptions

- URS will prepare intermediate design drawings and specifications
- URS will prepare the intermediate design phase DBR

- It is not anticipated that any special permits will be required to implement this design
- Ten drawings will be included in the design as identified in Table 4- 1
- The project manger and the project engineer will attend one meeting in Albany.

Deliverables

- Five copies of the Pre-Final (95%) Contract Documents (drawings and specifications), and the DBR.

Final (100%) Design. URS will prepare and submit the final version of the plans and specifications, the project cost estimate and the DBR. URS assumes that NYSDEC will require three draft copies of the final design documents for review. Any NYSDEC comments will be addressed and incorporated into the Final (100%) complete and stamped design documents.

Project Cost Estimate. URS will prepare the engineer's project cost estimate during the preparation of the final design documents. This estimate will include the costs of implementing the remedial design, as well as monitoring and maintenance costs for the ISCO treatment process. This pre-bid estimate will include quantity take-off sheets and the basis for unit and lump sum prices used in the cost estimate.

2.4.3 Budget Assumptions

- The costs for Task 4 include responding to one round of comments on the Pre-Final (95%) Design, and responding to one round of comments on the draft Final (100%) Design.
- A list of the drawings assumed to be required for this design is shown in Table 4-1.

2.4.4 Final Deliverables

- Five copies of the Final (100%) Contract Documents and the DBR

- Mylar originals of the design drawings stamped and signed by a New York State professional engineer
- 75 sets of the Contract Documents and drawings for bid purposes
- Compact disk(s) containing all final deliverable documents in PDF format, and drawings in AutoCAD.

2.5 Task 5 Pre-Award Services

During the pre-award phase, URS will provide support services to the Department for the purposes of competitively bidding the site remediation contract, as summarized below.

2.5.1 Task 5.1 Pre-bid and Public Meetings

URS will assist the Department at a pre-bid meeting that will be held at the Stuart Olver Holtz site. At the pre-bid meeting, URS will emphasize to the prospective bidders important items of the project, conduct a tour of the site, answer any questions, and prepare minutes of the meeting. URS will also prepare addenda to address clarifications to the bid documents, and URS will prepare written responses to all questions from prospective bidders.

URS will also assist the Department at a public meeting to describe the project. At the meeting, URS will answer questions concerning the design, construction, and scheduling of the project. URS will prepare graphic materials and fact sheets for the meeting. Minutes will be prepared following the meeting and distributed by URS.

2.5.2 Task 5.2 – Bid Review

URS will review plans required by the Contract Documents and submitted by the Contractor selected to do the work. The scope of URS' review will be to verify compliance with the requirements of the Contract Documents. Such submittals will include, but will not be limited to, a Contractor HASP.

2.5.3 Budget Assumptions

- The pre-bid and the public meetings will be attended by the URS Project Manager and the URS Design Engineer.
- Each meeting (including travel) is assumed to be of one-day duration (8 hours).
- Only one (1) set of comments will be received from the Department on the draft minutes of each meeting.
- The meetings will be held in Henrietta, NY at the site or in a public meeting facility near the site and secured by the Department.
- Two addenda, including one that contains the minutes from the pre-bid meeting, will be required. Costs assume that addenda are developed for clarification only and do not require re-design of any portion of, or the development of any new components of, the bid documents.
- The level of effort assumed for this task is as shown as shown in Appendix B.

2.5.4 Deliverables

- Draft and Final prebid meeting minutes will be prepared and submitted.
- Draft and Final public meeting minutes will be prepared and submitted.
- Up to two addenda to the bid documents as draft and final.
- Written review comments on Contractor's plans as final only.

3.0 SCHEDULE

A schedule for performing the work described in Section 2 will be provided as a separate deliverable and updated periodically as necessary.

4.0 IDENTIFICATION OF AREAS OF WORK REQUIRING SUBCONTRACTING

The areas of work requiring subcontracting are as follows:

- Drilling/Well Installation;
- Geophysical Survey;
- Laboratory/Analytical Services;
- IDW Management; and,
- Document Reproduction

The Minority/Women-owned business utilization plan form is included in Appendix C.

5.0 STAFFING PLAN/KEY PERSONNEL

The proposed management plan and key personnel for this project and the responsibilities of each project position are described below.

- Project Director (Donald Hunt, P.E.) is responsible for assuring the availability of resources, overall project performance, and representing URS in all contractual matters with the Department.

- Project Manager (Donald Hunt, P.E.) will be responsible for technical and financial management of the project, and for overall coordination and review of component work activities. The Project Manager will serve as the initial and primary contact with the Department throughout the project.

- Project Quality Assurance (James Lanzo, P.E.), will ensure that all project deliverables undergo a thorough QA review by senior staff members who are qualified and experienced in appropriate disciplines.

- Field Investigation Coordinator (Kevin McGovern, P.G., CPG); will oversee the execution of the supplemental investigations and pre-design field activities.

- Project Design Engineer (Craig Pawlewski, P.E.); will be responsible for the remedial design, including preparation of plans, specifications, and the design report. Other approved staff will be assigned as needed to complete the work.

- Project Health and Safety (Sheldon Nozik, CHMM), will coordinate developing the HASP and will provide guidance and input regarding its implementation.

6.0 PROJECT COST

An estimate of the project cost is presented in Appendix B.

REFERENCES

Interstate Technology and Regulatory Council (ITRC), 2005. *Technical regulatory Guidance for In Situ Chemical Oxidation of Contaminated Soil and Groundwater*; January.

New York State Department of Environmental Conservation (NYSDEC), 2005. *Explanation of Significant Differences, Stuart Olver Holtz, Town of Henrietta, Monroe County, Site Registry No. 8-28-079;* October.

New York State Department of Environmental Conservation (NYSDEC), 1998. Division of Water Technical and Operational Guidance Series, TOGs 1.1.1, Ambient Water Quality Standards and Guidance Values and groundwater Effluent Limitations.

New York State Department of Environmental Conservation (NYSDEC), 1994. Division of Technical and Administrative Guidance Memorandum, TAGM 4046, Determination of Soil Cleanup Objectives and Cleanup Levels.

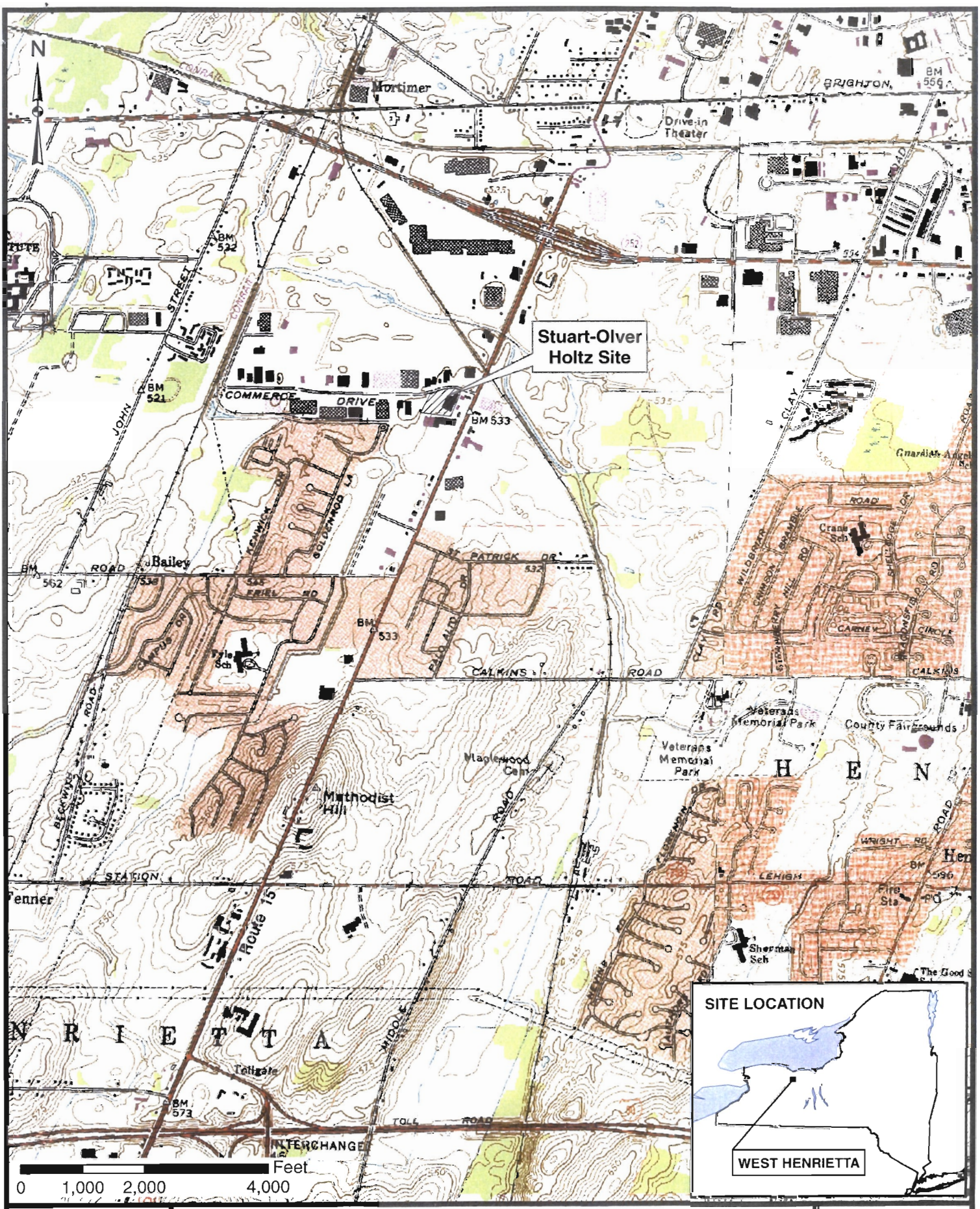
New York State Department of Health (NYSDOH), 2005. Indoor Air Sampling and Analysis Guidance; available at http://www.health.state.ny.us/nysdoh/indoor/guidance.htm; February.

New York State Department of Labor (NYSDOL), 2006. *Title 29 Code of Federal regulations (CFR), Part 1910.120, Hazardous Waste Operations and Emergency Response*; retrieved May 17, 2006 from http://www.osha.gov.

Shaw Environmental, Inc. (Shaw), 2002, *Pre-Design Investigation Summary Focused Feasibility Study, Stuart Olver Holtz Site, Henrietta, NY*; Prepared for New York State Department of Environmental Conservation; November 27.

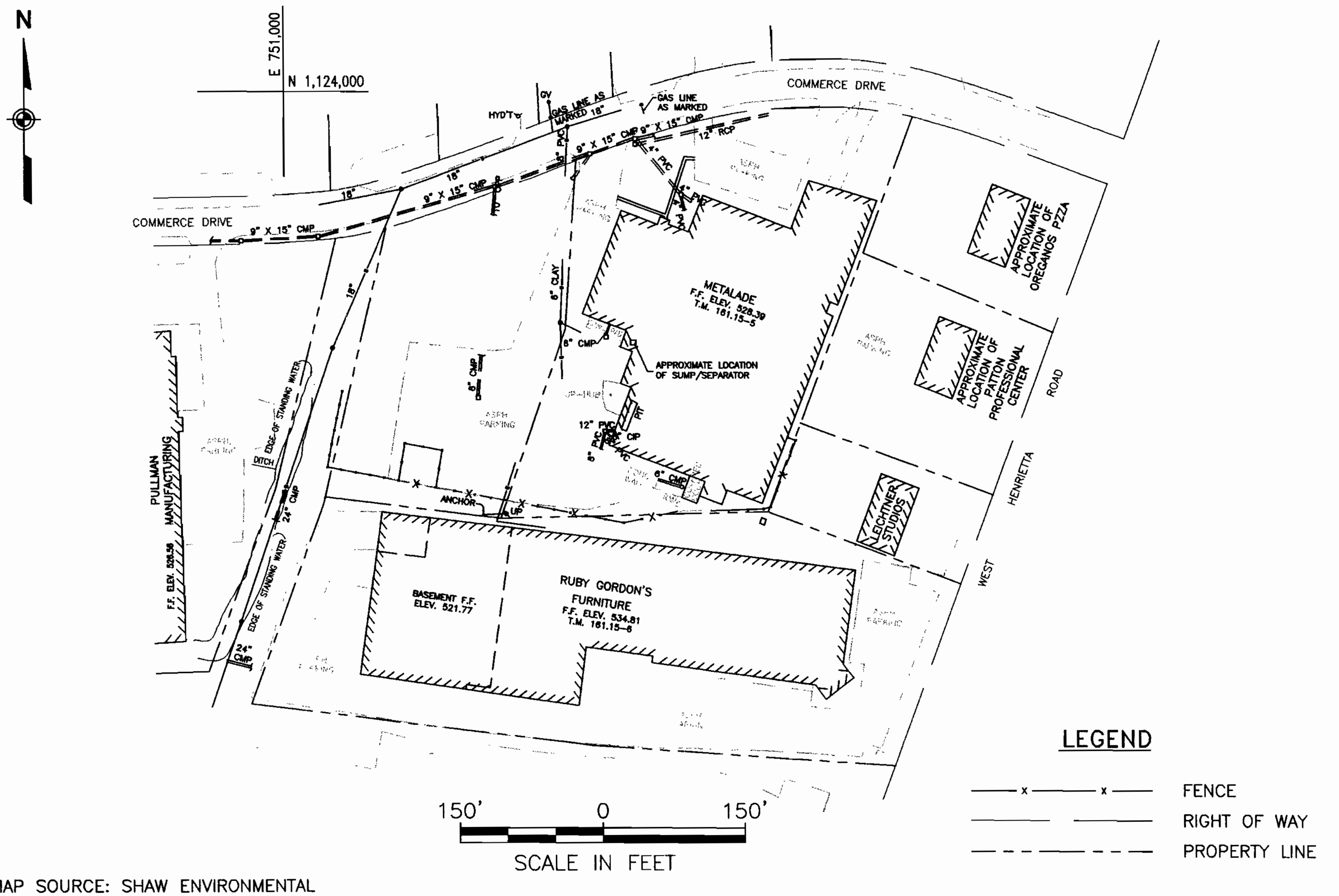
Shaw Environmental, Inc. (SHAW), 2003. *Excavation and Disposal, In-Situ Oxidation, and Enhanced Bioremediation Design Report (65% Engineering Design Report)*; Prepared for New York State Department of Environmental Conservation; June 19.

URS Corporation, Inc. (URS), 2006. *Field Sampling Plan for the Vapor Intrusion Evaluations for New York State Remediation Sites*; prepared for New York State Department of Environmental Conservation; March.



URS	SITE LOCATION STUART-OLVER-HOLTZ SITE	FIGURE 1

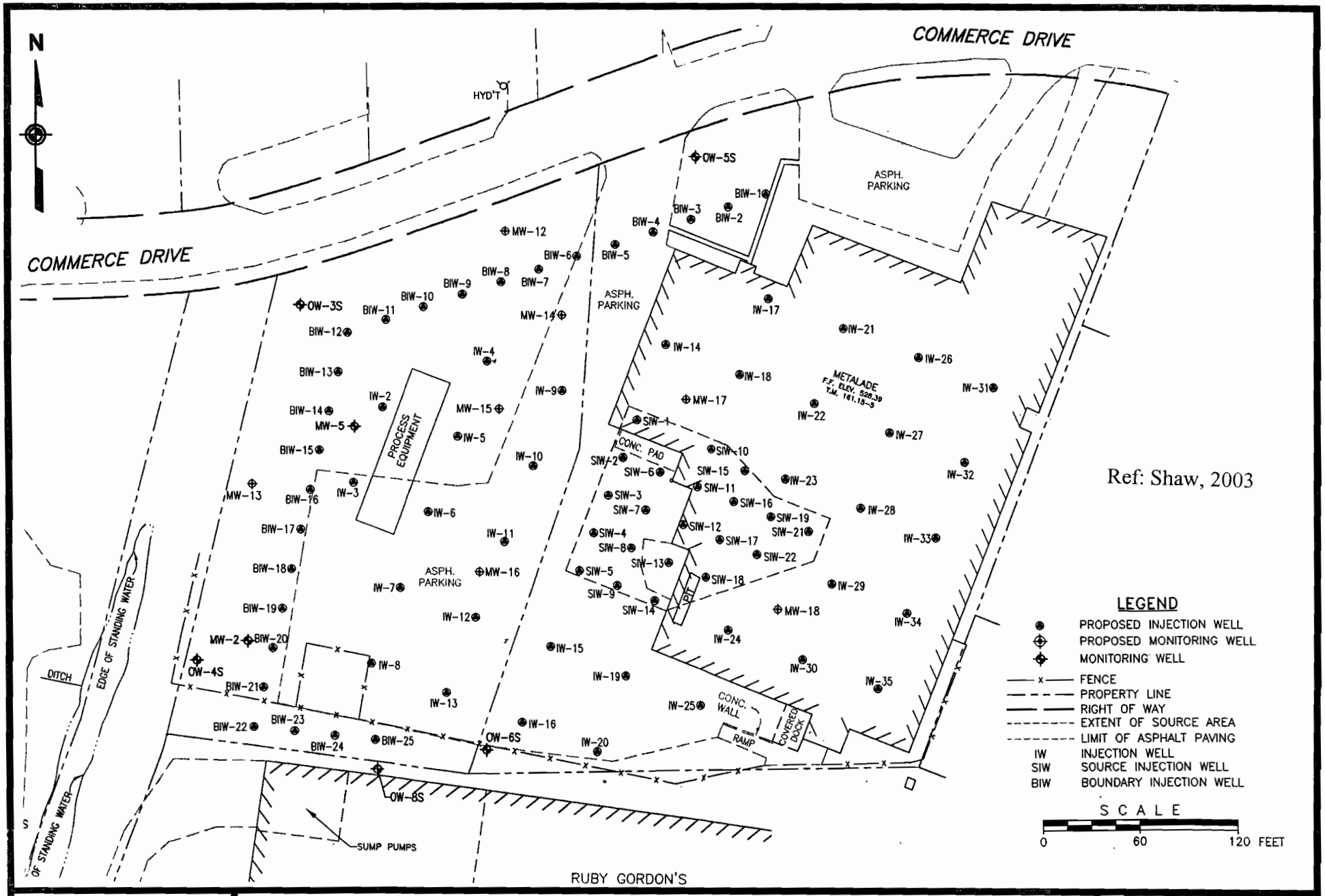
J:\11174465.00000\DB\GIS\SITE_LOCATION_TOPO.MXD
4/17/2006



URS

EXISTING SITE FEATURES
STUART OLVER HOLTZ SITE

FIGURE 2

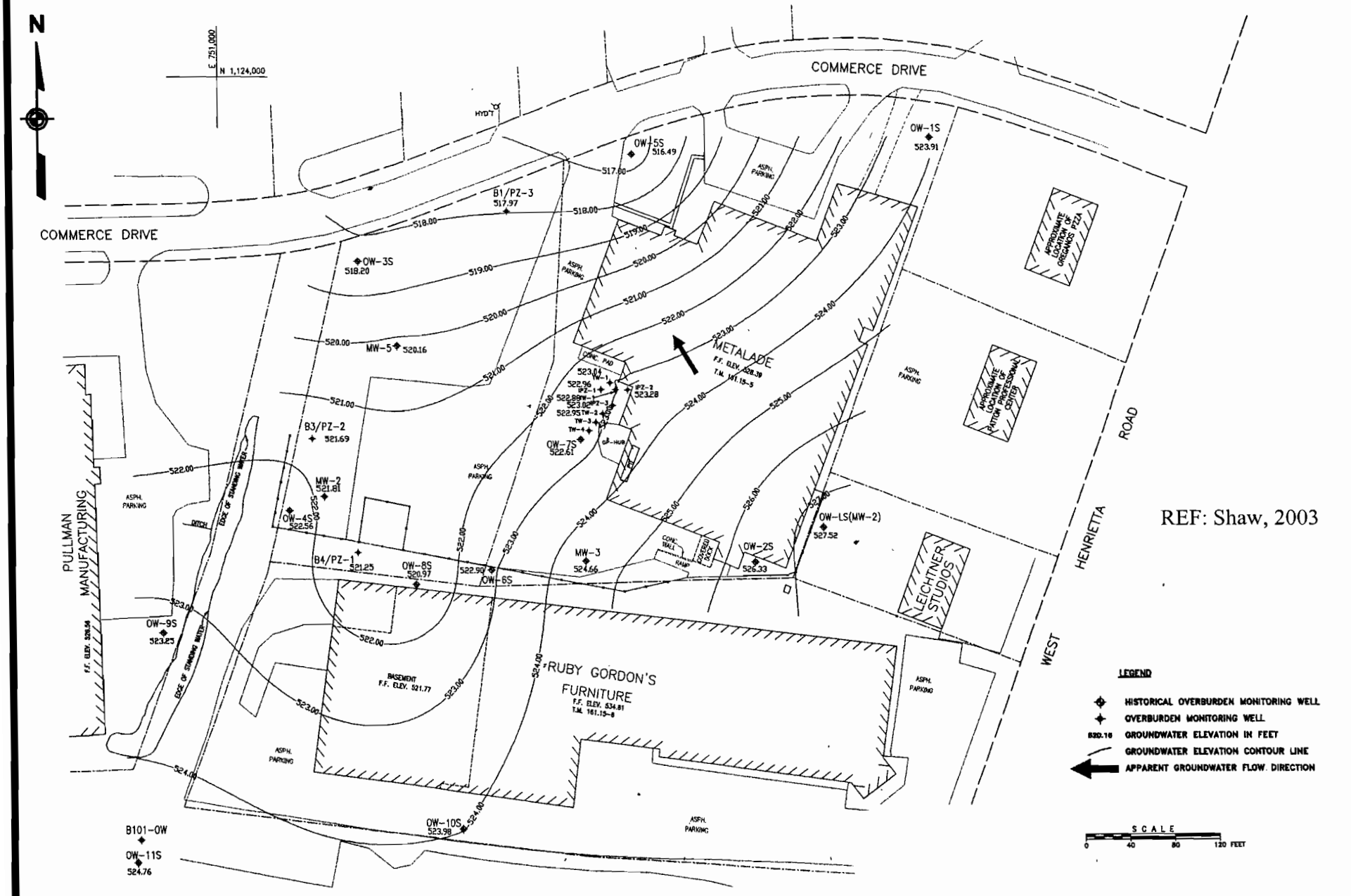


Ref: Shaw, 2003

URS

INJECTION WELL AND MONITORING WELL LOCATION PLAN STUART OLVER HOLTZ SITE

FIGURE 3



REF: Shaw, 2003

URS	EXISTING MONITORING WELLS AND PIEZOMETERS STUART OLVER HOLTZ SITE	FIGURE 4

TABLE 4-1

DRAWING LIST

Drawing	Title
1	Cover Sheet
2	Legend and General Notes
3	Existing Site Plan
4	Remediation Site Plan for Excavation and Disposal and In-Situ Chemical Oxidation
5	Injection Well Details
6	Piping and Instrumentation and Process Flow Diagram for In-Situ Chemical Oxidation
7	Mechanical Layout for In-Situ Chemical Oxidation
8	Mechanical Details for In-Situ Chemical Oxidation
9	Electrical Plan and Details for In-Situ Chemical Oxidation
10	Miscellaneous Details and Site Security

APPENDIX A

NYSDEC WORK ASSIGNMENT LETTER/SCOPE

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Program Management, Room 1224
625 Broadway, Albany, New York 12233-7012
Phone: (518) 402-9764 • **FAX:** (518) 402-9722
Website: www.dec.state.ny.us

Denise M. Sheehan
Acting
Commissioner

November 28, 2005

Mr. Donald Hunt, P.E.
URS Corporation
77 Goodell Street
Buffalo, NY 14203

Dear Mr. Hunt:

RE: State Superfund Standby Contract
Work Assignment #D004440-3
Stuart Olver Holtz, Site #8-28-079

Enclosed is a copy of a State Superfund Work Assignment (WA) for the above referenced project. Please acknowledge receipt by returning a signed copy of this letter to me within one week of receipt.

This WA has been identified by an alpha-numeric designation denoting the URS Corporation contract number and sequential number of this WA. Although this letter authorizes the expenditure of Work Plan Development Cost funds, these funds will not be available for payment until the Office of the State Comptroller (OSC) encumbers monies for this WA (generally this takes four weeks).

Project Name:	Stuart Olver Holtz
W.A. Number:	D004440-3
Site Number:	8-28-079
Operable Unit No.:	N/A
Program Element:	Site Characterization (SC)/Remedial Design (RD)
NYSDEC Project Manager:	Jeffrey McCullough
Phone Number:	(518) 402-9812

Work Plan Development Cost Authorization (Task 1):	$ 15,000
Estimated Work Assignment Budget (Tasks 2-3):	$ 165,700
Total Estimated Work Assignment Budget (All Tasks):	$ 180,700

Also enclosed is a copy of the work plan development schedule. All efforts should be made to adhere to it. Final work plans and budgets are to be developed so that a Notice to Proceed can be issued within a maximum of 90 days. Failure to do so may result in termination of this WA and will affect your firm's receipt of future work assignments.

A work plan submitted to the Department should include the following items:

1. **Description of major tasks and subtasks.**

2. **Detailed work assignment progress schedule with milestones.**

3. **Identification of areas of work requiring subcontracting.**

4. **A detailed work assignment budget** broken down by tasks and subtasks (using schedule 2.11 in the contract) in accordance with the contract's budget reporting requirements, utilizing cost rates and factors contained in the base contract (see Article 4 of contract), applied to the approved level-of-efforts. Schedule 2.11(b) must include all labor hours inclusive of administrative labor hours which should be presented separately in Schedule 2.11(b-1).

5. **A staffing plan** identifying management and technical staff and their responsibilities (submit resumes only for unapproved employees).

6. **A final M/WBE Utilization Plan** identifying subcontracts most likely to result in M/WBE utilization to be submitted to this office within two weeks.

If you have any questions concerning contractual procedures, please contact Mr. Ralph Burger at (518) 402-9752. If you have any questions concerning WA related technical issues, please contact the New York State Department of Conservation project manager identified in this letter. Please submit five (5) double-sided copies of the Work Plan and all responses on this WA to me.

Sincerely,

Dorothy Norvik
Chief
Contracts and Payments Section
Bureau of Program Management

Enclosures

Date Received and Accepted:_____

Signature of Consultant:_____

STATE SUPERFUND STANDBY CONTRACT WORK ASSIGNMENT

Site Name and Number: Stuart Olver Holtz (# 8-28-079)
Location: Town of Henrietta, Monroe County
Program Element: Remedial Design
NYSDEC Project Manager: Jeffrey McCullough

I. Narrative

General Site Information

The Stuart Olver Holtz (SOH) site is located at 39 Commerce Drive, a mixed commercial and industrial area, in Henrietta, Monroe County. The site encompasses 3.8 acres with a manufacturing building occupying the eastern half of the site. The remaining area consists of a paved parking lot, driveways and grass-covered areas. Immediately to the west of the property is a swale that receives drainage from the facility.

In 1996, the New York State Department of Environmental Conservation (Department) completed a Remedial Investigation/Feasibility Study (RI/FS). A Record of Decision (ROD) was signed in 1997. The selected remedy originally consisted of a short-term source extraction system, a down gradient contaminated overburden groundwater collection trench system and passive pre-treatment of contaminated groundwater by zero valence iron eventually discharging to the local POTW.

A Pre-Design Investigation Summary, Focused Feasibility Study was completed in November 2002 which included an analysis of the ROD alternative versus in-situ chemical oxidation (ISCO). The results of a pilot test clearly indicated that permanganate injection /augmented bio remediation system is a viable alternative to deal with the on-site overburden groundwater contamination. Based upon a comparative analysis of the passive groundwater treatment system and the ISCO system, the ISCO was selected as the preferred remedy for overburden groundwater contamination.

The components of the new remedy would include: a permanganate injection system to destroy chlorinated ethenes, an augmented bio remediation system utilizing a reductive agent as a carbon source to destroy chlorinated ethanes; a line of closely spaced injection wells along the southern property line and up gradient of the Ruby Gordon sumps (the injection wells would utilize reducing agents and/or carbon amendments to intercept and treat VOCs that migrate off-site toward the adjacent Ruby Gordon facility); drainage improvements between Ruby Gordon and the SOH site to minimize groundwater recharge to the Ruby Gordon basement; removal of on/off site surface and source area soils that are above SCGs, long-term overburden groundwater monitoring and institutional controls to reduce the potential for exposure to contaminated bedrock groundwater (disconnect the SOH bedrock supply wells, conduct bedrock groundwater monitoring and implement deed restrictions of future use(s) of groundwater).

In conducting the investigation, it was revealed that a significant source area of contamination exists beneath the southwest portion of the SOH building. The building is scheduled to be demolished in the Summer of 2005. The purpose of the demolition is to secure a safer working environment and to facilitate easier access to areas of contamination located under the structure, this in turn will lead to a more effective application of the remedial objectives. Asbestos abatement is required prior to demolishing the structure. The demolition work will include removal of accumulated sediments/water from site sumps, pits, catch basins and related piping, along with the decommissioning of drainage lines or connections. In order to complete the work, additional soil samples need to be taken from areas under the building foundation that are impacted by site contaminants. The Consultant will then use this information along with previous site information to complete the remedial design and implementation of the ISCO remedial alternative.

Scope of Work

This work assignment will consist of the remedial design of the ISCO alternative.

Under this work assignment, the Consultant will need to further delineate the source area under the building slab, and prepare a report. This field work will consist of installation, surveying, and sampling of soil borings, new monitoring wells; sampling of existing monitoring wells; laboratory analysis; data validation; and investigation derived waste (IDW) management. The Department does not have the staff to conduct the required activities and requires services from the standby consulting engineer to complete these tasks.

Upon receipt of the Work Assignment (WA), the Consultant's Project Manager will contact the NYSDEC Project Manager to discuss and verify the work to be completed.

Task 1. Develop Detailed Work Plan

The Consultant will develop and submit for the Department's review and approval, a proposed work plan that includes, a description of major tasks and sub tasks; a schedule with milestones and deliverables; a staffing plan, a budget; a M/WBE utilization plan; a Health and Safety Plan and a list of proposed subcontractors.

The Consultant will review the various reports available to gain a thorough understanding of the site conditions and components of the selected design. Copies of the reports will be furnished by the Department. This task will also include a site visit by the NYSDEC Project Manager and the Consultant. A scoping session, if necessary, will be held at NYSDEC's headquarters in Albany following the site visit and the record review, but within three weeks of the receipt of the WA. At least two days prior to the scoping session, the Consultant will submit four copies of the preliminary Project Work Plan (PWP) to the NYSDEC Contract Manager. The preliminary PWP will include the scope of work given in this work assignment and any modifications which are consistent with the project budget and schedule. A preliminary budget and a staffing plan should also be included in the PWP. The preliminary budget should include the summary of work assignment price, the direct labor hours budgeted and the monthly cost control report including subcontractor fees.

Based upon the existing records review, the Consultant will present a summary of information regarding the approach to be taken for the design of the selected remedy. The scope of work for the pre-design field investigations, including the number of environmental samples, sample locations, method of sampling, type of analysis, and QA/QC requirements should be included. As a rule, Analytical Services Protocol (ASP), latest version, must be followed unless otherwise directed by the NYSDEC. The project schedule will be agreed upon during this meeting. Any significant issues regarding the overall project will be resolved at this time.

Within three weeks after approval of the preliminary PWP by the Department, the Consultant will submit the Final PWP. The Final PWP and budget must be deemed acceptable so that a Notice to Proceed can be issued within 90 days of the issuance of the work assignment. The Final Work Plan will contain the following:

- Field Activities Plan
- Site Specific Health and Safety Plan (HASP)
- Site Specific Quality Assurance Project Plan (QAPP)
- Citizen Participation Activities
- MBE/WBE - EEO Utilization Plan
- Detailed Work Assignment Budget for the SI work and entire RD

- Final Work Assignment Progress Schedule for the SI and entire RD

Once the Work Plan is approved by the NYSDEC, a Notice to Proceed will be issued to the Consultant for the work to be performed.

The Field Activities Plan will provide all pertinent information on field work, construction details of monitoring wells, sampling locations and methods, the approximate number of samples to be collected and analyzed, parameters to be analyzed, analytical methods to be employed and a detailed project schedule. Any portions of the work to be decided in the field will be clearly identified. The approach the Department wants to take with this project is to have a flexible field activities' work plan. The plan should document the investigative objectives and approaches, discuss apparent data gaps, and clearly articulate the goals and decision logic for the field team. A preliminary approach to sampling should be outlined, but the Consultant in consultation with the Department will be selecting locations for sampling. The plan should allow for the modification of field techniques if necessary.

The Health and Safety Plan (HASP) will address the site specific hazards to on-site personnel and the community and strategies to handle these hazards. This should include but is not limited to:

(1.) A purpose (i.e., the HASP has been designed to protect the health and safety of on-site personnel and the surrounding community during remedial activities at the site or that adherence to the HASP will minimize the possibility that personnel at the site or the surrounding community will be injured or exposed to site-related contaminants during remedial activities.);

(2.) A discussion of the intent to make prior notifications, if applicable, to local police, fire, and potential emergency responders advising them of the remedial activities and schedule of events and an intent to notify adjacent property owners so that necessary precautions are taken such as closing windows and air-conditioning vents;

(3.) A section on community health and safety including methods by which the public will be contacted in the event of an emergency and a corresponding evacuation procedure, monitoring information, and contaminant action levels;

(4.) Site worker personal protection equipment;

(5.) A discussion of Community Air Monitoring with real-time air monitoring for volatile organic compounds (VOCs) and particulates at the perimeter of each designated work zone during ground-intrusive activities. The intent is to provide a measure of protection for site workers and the downwind community from potential exposure to airborne contaminant releases as a direct result of work activities. Action levels for particulates and VOCs should be discussed. The NYSDOH recommends that, because intrusive activities may potentially release airborne contaminants in the form of dust or vapors, continuous real-time monitoring be performed at the downwind perimeter of each exclusion/work zone when ground intrusive activities are in progress. Particulate monitoring will not be necessary when work is done in a nonsource area, unless dust is being generated. When invasive field work is creating dust or is being done in a source area, community air monitoring will be done in accordance with the NYSDOH Generic Community Air Monitoring Plan.

(6.) A discussion of methods to cordon-off work areas to preclude unauthorized access and minimize potential exposure/injuries.

All quality assurance protocols, both ASP and non-ASP, as outlined in the Standby Contract, must be provided in the Quality Assurance Project Plan (QAPP) and approved by the Department. Deviations from protocols specified in the QAPP may be approved in advance by the Department. Consequently, it is imperative that the Consultant's Quality Assurance Officer maintains close contact with both the Department and the analytical laboratory to correct any analytical problems that may arise during analyses. The Consultant is responsible for determining that the analytical laboratory has and maintains DOH ELAP certification in all categories of CLP and Solid and Hazardous Waste analytical testing for the duration of the project. Select data submittals will include "Category B" deliverables and DUSR on the selected data as identified in the approved work plan.

The Citizen Participation (CP) Activities will include a discussion of those tasks necessary to assist the Department with public meetings. This will include travel to public meetings, preparation of presentation materials for public meetings, mailing of fact sheets, etc.

The work plan will also identify work items to be subcontracted and include a Minority and Women Owned Business Enterprise (M/WBE) and Equal Opportunity (EEO) Utilization Plan.

The Task 1 Deliverable will be the Final PWP with those items discussed above. The proposed work plan must address each of the tasks outlined below.

Task 2: Supplemental Investigation/Pre Design Field Activities

After work plan approval and issuance of the NTP, the Consultant will be required to start field activities per the schedule provided in the approved work plan. Field investigations will be conducted to determine contamination at the site and to determine the extent to which these contaminants pose a threat to human health and the environment. The initial work will focus on the installation of soil boring and monitoring wells to determine the extent of contamination that exists under the SOH building. The data generated during this portion of the work will be combined with existing information and utilized in order to design the in-situ chemical oxidation remedy for the site. The Consultant will be responsible for providing on-site field oversight of subcontractors, preparing daily field logs, evaluating data and preparing a report which describes the findings, conclusions and recommendations.

The Consultant will conduct the following specific sub tasks to achieve those objectives:

Sampling and Analysis Plan Preparation – The Consultant will prepare a Sampling and Analysis Plan that will detail the scope and investigation methods to be employed to further delineate the previously identified source area at the SOH site.

Surface Soil Sampling - Suspected source areas, if detected, will be identified and sampled. Surface soil samples will be collected zero to 2 inches below the surface, vegetative cover, or pavement. (For budgeting purposes, the Consultant should assume that only 30% of the soil samples will require full TCL analysis, with the remainder requiring VOCs only.)

Soil Borings /Monitoring Well Installation - Under this subtask, the Consultant will advance 10-15 soil borings to approximately 40 feet using hollow stem augers and standard split spoons to collect continuous soil samples. Soil borings will be done to collect overburden samples at the source area located under the building to determine site geology and extent of contamination. Typically one or two overburden samples from each boring should be collected and analyzed (For budgeting purposes, the Consultant should assume that only 30% of the soil samples will require full TCL analysis, with the remainder requiring VOCs only.) At the completion of each soil boring, the bore hole will be pressure grouted with a cement/bentonite grout mixture to a depth of approximately 24 feet below ground surface and a monitoring well (2 inch diameter PVC well riser and 10 feet long screen) will be installed.

Well Development/Groundwater Sampling - Upon completion of the well installation, the wells will be properly developed and groundwater samples will be taken from each of the wells. The samples taken from the new monitoring wells will require full TCL analysis.

Groundwater sampling Laboratory Analysis - The Consultant will conduct confirmation sampling to verify the boundaries of the plume. Under this subtask, the Consultant will collect groundwater samples from the 23 existing and newly installed monitoring wells at the site. Monitoring wells will be purged of three to five well volumes prior to sampling and the samples will be delivered to an off-site laboratory for analysis, groundwater elevation will also be recorded. Sample analysis will include parameters necessary to design the groundwater treatment remedy. (VOCs, metals, SVOCs, pesticides, PCBs, TOC, COD, chloride ions, TPH, pH, flashpoint, and reactive cyanide and sulfide, etc.).

Soil Gas / Indoor Air Sampling - The Consultant will be tasked to conduct soil gas, indoor/ambient /subslab air sampling of relevant areas adjacent to the site. Samples will be analyzed for VOCs using method TO-15 selective ion monitoring.

Survey - Upon completion of field work, the location and elevation of each of the wells and other sampling points must be established by a New York State-licensed surveyor. Elevations of all well casings and the corresponding locations will be determined to within 0.01 feet, based on the North America Datum (NAD) 83, and added to the Base Map.

Data Validation/Usability Report - The Consultant will utilize a subcontractor to perform data validation on all soil and groundwater samples obtained during execution of the supplemental investigation. A Data Validation / Usability Report will be submitted to the NYSDEC.

IDW Management – The Consultant will manage all IDW generated during the execution of the supplemental investigation including soil cuttings, development and purge water, and personal protective equipment. All accumulated IDW will be disposed of off-site.

Remedial Design Field Activities Report Preparation - The Task 2 Deliverable will be the documenting the field activities completed and an analysis of those findings. Upon completion of the supplemental work, the Consultant will prepare a Remedial Design Field Activities Report for submission to the NYSDEC. The final report will consists of (1) the work plan and any deviations from the work plan, (2) the collected data, (3) interpretation of the data, (4) conclusions and recommendations' appropriate to the site, and (5) field notes.

Additional Tasks

Task 3.1: Individual Source Area Investigation - As field investigations suggest possible source areas, further investigation may be warranted in specific localized areas. The Consultant would be called upon to initiate further focused study, in the form of additional soil samples, soil gas, groundwater samples, etc. If the Department requests such work under this work assignment, an amendment to the budget would be negotiated with the Consultant.

Task 3.2: Interim Remedial Measures - If local areas of contamination are identified and source areas could be appropriately mitigated by initiating an interim remedial measure (IRM), the Consultant may be tasked to perform an IRM. If the Department requests such work under this work assignment, an amendment to the budget would be negotiated with the Consultant.

Task 3.3: Design and Installation of Air Venting Systems - If indoor air samples reveal contaminant levels in structures that the NYSDOH finds unacceptable, the Department will task the Consultant to install sub slab venting systems. If Department requests such work under this work assignment, an amendment to the budget would be negotiated with the Consultant.

Task 4: Plans and Specifications

The Consultant will prepare complete plans and specifications to be used in competitively bidding the construction, operation, and maintenance of the selected remedy in conformance with New York State and applicable federal laws, rules, regulations, and guidelines. This submittal will include a complete design for the in-situ chemical oxidation treatment system (well locations, pumping rates, etc.) and system O&M. The Consultant will utilize the Department's standard construction contract clauses and format (most recent) to prepare contract documents. Included in this task will be the development of minimum requirements for the construction quality assurance/health and safety plans (the plans themselves will be prepared by the construction contractor). The Consultant will be responsible for obtaining all necessary surveys to allow for the Department temporary and long-term easements.

Preliminary Design - The Consultant will submit to the Department six copies of preliminary construction plans and specifications when the design is 50% complete. The Consultant will have verified the existing field conditions. Supporting data, documentation, and design calculations will be provided with the design documents defining the functional aspects of the project and how it complies with any applicable regulations (air permit calculations, wastewater discharge requirements, etc.). County deed records (to the extent necessary and currently available) must be searched and reviewed to identify all potentially impacted property owners, and/or those parties with property rights, and an updated tax map must be provided to the Department. A preliminary listing of all temporary and permanent easements, right of ways and permits necessary in order to implement the proposed remedial design and associated operation and maintenance must be provided.

Additionally, all non property permits (e.g., US Army Corp. of Engineers Permit) that would be needed and regulations with which the design must be in substantive compliance (e.g., Article 15, Stream Protection, Air Pollution Permit, Part 360 requirements, etc.) must be identified. The preliminary design must also demonstrate substantive compliance when necessary, this may include completing permit application(s) (e.g., SPDES) with supporting data/information.

A schedule for meeting the critical access and permit requirements to allow bidding the project must be developed in cooperation with the Department Project Manager, and agreement reached as to whom (Department or the Consultant) will be responsible for obtaining required permits, completing applications and obtaining access agreements. This information must be updated, as appropriate, in subsequent design submissions. Coordination with the Department Project Manager is important to ensure Department has secured all necessary access agreements, right of ways and permits by the time of design completion and preparation of final bid documents.

Pre Final Design - At the option of the Department, the Consultant will submit to the Department three copies of intermediate construction plans and specifications when the design is 95% complete. .

Final Design - Upon completion of the design documents, the Consultant will submit to the Department for review up to seven copies of the final plans and specifications. Prior to this submittal, the Consultant will have thoroughly coordinated and cross-checked the bid form, specifications, and drawings to ensure consistency with the contract documents. Written documents will be provided by the Department describing the changes required to consider the plans and specifications acceptable for bidding. The Final Design must bear the seal and signature of a professional engineer registered to practice in New York State.

Along with the final design, the Consultant will submit a Limited Site Data Summary Report that will be issued along with the bid documents to bidders for their information. This report will include a summary of the site conditions and analytical data available to help bidders understand the requirements of the project.

After approval of the final design by the Department, the Consultant may be required to submit up to seventy-five (75) copies of the plans, specifications, and limited Site Data Report. A copy of all final plans, specifications and reports will also be submitted to the Department in Adobe PDF format.

Project Cost Estimate - At the final design stage the Consultant will prepare a pre bid construction, operation, and maintenance cost estimate for the project. The pre-bid estimate will be supported by quantity take off sheets and the basis for the development of unit and lump sum prices used in the estimate.

Design Report - As the design progresses, the Consultant will prepare a final Design Report that describes the major elements of the project, the basis of design, supporting data, documentation, design calculations, assumptions, and uncertainties. Corresponding portions of the Design Report will be submitted along with each major submittal of the plans and specifications.

Task 5: Pre Award Services

The Consultant will provide support services to the Department for the purposes of competitively bidding the site remediation contract.

Pre Bid Conference and Public Meetings - The Consultant will conduct a pre-bid conference with prospective bidders. At the pre-bid conference the Consultant will emphasize to the prospective bidders important items of the project, tour of the project site, answer any questions and prepare minutes to the meeting. The Consultant will prepare any necessary addenda to the plans and specifications for the timely transmittal to prospective bidders. The Consultant will respond to all questions from prospective bidders. At the public meetings, the Consultant will answer any questions raised concerning the design of the project, construction techniques and project scheduling, and prepare meeting minutes.

Bid Review - The Consultant will review all plans required by the contract documents and submitted by the contractor with the bid, including, but not limited to, the health and safety plan.

II. Level of Effort and Cost Estimates

Task No.	Major Task Description	Estimated Level of Effort	Estimated Cost
1.0	Work Plan Development	145	$ 15,000
2.0	Supplemental Investigation/Pre Design Field Activities	520	$ 125,000
3.1	Individual Source Area Investigation		TBD
3.2	Interim Remedial Measures		TBD
3.3	Design and Installation of Air Venting Systems		TBD
4.0	Plan and Specifications	225	$ 34,000
5.0	Pre Award Services	70	$ 6,700
Total		**960 Hours**	**$ 180,700**

III. Period of Performance

The Remedial Design work will be completed within 300 days of the receipt of the work assignment.

IV. Work Plan Development Cost Authorization

The estimated cost of developing the work plan and standby subcontracts is $15,000.

V. Project Budget

The estimated total budget is $180,700.

VI. M/WBE Utilization Plan

The Consultant will prepare M/WBE Utilization Plan in compliance with the conditions of the standby contract.

APPENDIX B

PROJECT BUDGET ESTIMATE

SCHEDULE 2.11(a)

Summary of Work Assignment Price
Stuart Olver Holtz Site
Work Assignment D004440-03

1) Direct Salary Costs (Schedules 2.10(a) and 2.11(b))	$101,166
2) Indirect Costs (Schedule 2.10(g))	$127,368
3) Direct Non-Salary Costs (Schedules 2.10(d)(e)(f) and 2.11(c)(d))	$22,186

Subcontract Costs

Cost-Plus-Fixed-Fee Subcontracts (Schedule 2.10(e) and 2.11(e))

Name of Subcontractor	Services to be Performed	Subcontract Price
4) Total Cost-Plus-Fixed-Fee Subcontracts		

Unit Cost Subcontracts (Schedule 2.10(f) and 2.11(f))

Name of Subcontractor	Services to be Performed	Subcontract Price
A) Queen City Graphics (WBE)	Copying/Printing	$10,000
B) Nothnagle Drilling, Inc.	Drilling Services	$31,412
C) IDW T&D Sub (TBD)	Investigation Derived Waste Disposal	$12,700
D) Mitkem Corporation (MBE)	Analytical Services	$44,729
E) Con-Test Analytical (WBE)	Vapor Intrusion Analysis	$1,666
F) Radar Solutions (WBE)	Geophysical Survey Services	$4,985
G) NOD Analysis (TBD)	Analytical Services	$150
H) Portable Toilet Rental (TBD)	Portable Toilet	$200
5) Total Unit Cost Subcontracts		$105,842
6) Subcontract Management Fee		$5,275
7) Total Subcontract Costs (lines 4 + 5 + 6)		$111,117

8) Fixed Fee (Schedule 2.10(h))	$27,424
9) Total Work Assignment Price (lines 1 + 2 + 3 + 7 + 8)	$389,260

Date Prepared: 05/31/06

URS Corporation
Stuart Olver Holtz Site
Work Assignment D004440-03

Date Prepared: 05/31/06

Schedule 2.11(b)

Direct Labor Hours Budgeted

Labor Classification	*IX*	*VIII*	*VII*	*VI*	*V*	*IV*	*III*	*II*	*I*	*Admin.*	*Total Direct Labor Hrs.*
*Avg. Salary Rate ($) (Year_2006___)	$58.65	$55.43	$44.88	$38.18	$32.18	$27.65	$22.95	$19.77	$16.00	$11.56	
Task 1 - Task 1 - Develop Detailed Work Plan		40	28	2	42	11	78	17		4	222
Task 2 - Task 2 - Supplemental Investigation/Predesign Activities		113	3	27	78	279	570	432		23	1525
Task 3 - Task 3 - Additional Tasks											
Task 4 - Task 4 - Plans and Specifications	16	124	100	280	400	100		276	150	50	1496
Task 5 - Task 5 - Pre-Award Services		36	44		84			20		10	194
Total Hours	16	313	175	309	604	390	648	745	150	87	3437
Total Direct Labor Cost ($)	$938	$17,350	$7,854	$11,798	$19,437	$10,784	$14,872	$14,729	$2,400	$1,006	$101,166

*For multiple years use one average salary rate row for each year and each years subtotal Labor Cost.

URS Corporation
Stuart Olver Holtz Site
Work Assignment D004440-03

Date Prepared: $ 38,868.00

SCHEDULE 2.11(backup)

DIRECT LABOR COSTS BUDGETED

Labor Classification	IX	VIII	VII	VI	V	IV	III	II	I	Admin	TOTALS
Average 2006 Rates	$58.65	$55.43	$44.88	$38.18	$32.18	$27.65	$22.95	$19.77	$16.00	$11.56	
Task 1 - Task 1 - Develop Detailed Work Plan		$2,217.20	$1,256.64	$76.36	$1,351.56	$304.15	$1,790.10	$336.09		$46.24	$ 7,378.34
Task 2 - Task 2 - Supplemental Investigation/Predesign Activities		$6,263.59	$134.64	$1,030.86	$2,510.04	$7,714.35	$13,081.50	$8,540.64		$265.88	$ 39,541.50
Task 3 - Task 3 - Additional Tasks											$ -
Task 4 - Task 4 - Plans and Specifications	$938.40	$6,873.32	$4,488.00	$10,690.40	$12,872.00	$2,765.00		$5,456.52	$2,400.00	$578.00	$ 47,061.64
Task 5 - Task 5 - Pre-Award Services		$1,995.48	$1,974.72		$2,703.12			$395.40		$115.60	$ 7,184.32
Direct Labor Cost ($)	$938.40	$17,349.59	$7,854.00	$11,797.62	$19,436.72	$10,783.50	$14,871.60	$14,728.65	$2,400.00	$1,005.72	$ 101,165.80

URS Corporation
Stuart Olver Holtz Site
Work Assignment D004440-03

Date Prepared: 05/31/06

Schedule 2.11(b-1)

Direct Administrative Labor Hours Budgeted

Labor Classification	*IX*	*VIII*	*VII*	*VI*	*V*	*IV*	*III*	*II*	*I*	*Admin*	*Total No. of Direct Labor Hrs.*
Task 1 - Develop Detailed Work Plan		8	8					4		4	24
Task 2 - Supplemental Investigation/Predesign Activities		8		2	8	8		16		8	50
Task 3 - Additional Tasks											
Task 4 - Plans and Specifications	2	8	8	16		12		8	12	12	78
Task 5 - Pre-Award Services		4	4		8			4		4	24
Total Hours	2	28	20	18	16	20		32	12	28	176

Contract/Project administrative hours would include but not necessarily be limited to the following activities

1) Work Plan Development
- Conflict of Interest Check
- Develop budget schedules and supporting documentation

2) Review Work Assignment (WA) Progress
- Conduct progress reviews
- Prepare monthly project report
- Update WA progress schedule
- Prepare monthly M/MBE Utilization Report

4) CAP Preparation
- Oversee and prepare monthly CAP
- Respond to payment issues/disallowances
- NSPE list updates
- Equipment Inventory

5) Manage subcontracts

6) Implement and manage program management and staffing plans

Contract/Project administrative hour would not include activities such as:

1) QA/QC reviews
2) Technical oversight by management
3) Develop subcontracts
4)Work Plan Development (other than COI and budget preparation)

URS Corporation
Stuart Olver Holtz Site
Work Assignment D004440-03

SCHEDULE 2.11(c)

Direct Non-Salary Costs
Work Assignment D004440-03

Item	Max Reimbursement Rate (Specify Unit)		Est. No. of Units	Total Estimated Cost $
A) SAMPLE ANALYSIS RATE				
NONE				
B) MISCELLANEOUS				
MILEAGE ($0.445 per mile)	$0.45	/Mile	0	$0.00
PER DIEM HOTEL (Rochester)	$81.00	/Day	35	$2,835.00
PER DIEM MEALS (Rochester)	$44.00	/Day	45	$1,980.00
PER DIEM HOTEL (Albany)	$94.00	/Month	8	$752.00
PER DIEM MEALS (Albany)	$49.00	/Week	10	$490.00
Vehicle Rental	$43.00	/Day	68	$2,924.00
Gas	$3.00	/Gallon	407	$1,221.00
Total Travel Costs				$10,202.00

Schedule 2.11 (d) 1

Equipment Purchased Under the Contract

Item	Est. Purchase Price ($)	O&M Rate* ($/month)	Term of Usage (Months)	Est. Usage Cost($) (Col 2 + [3 x 4])

TOTAL: $0.00

*The O&M rate is reimbursable only while the equipment is in the custody of the Engineer.

Schedule 2.11(d) 2

Maximum Reimbursement Rates For Consultant Owned Equipment

Item	Purchase Price x 85%	Usage Rate ($/Day)	Capital Recovery** Rate ($/Day)	O & M Rate ($/Unit of Time)	Est. Usage Days	Est. Usage Cost ($) (Col. 3 x 6)
D-2 ITEM (Consultant Owned)						
					TOTAL:	$0.00

* Usage Rate = Capital Recovery Rate + O&M Rate.
* The maximum usage rate for an item of equipment reverts to the O&M rate when the total capital recovery reimbursement rate exceed 85% of the purchase price.
** The Capital Recovery Rate is the equipment's depreciation for the useful life of the item.

Schedule 2.11(d) 3

Maximum Reimbursement Rate for Vendor Rented Equipment

Item	Max. Reimbursement Rate ($)*	Units	Est. Usage (Unit of Time)	Est. Rental Cost ($) (Col. 2 x 3)
Turbidimeter	$52.00	/Week	1.00	$52.00
Hammer Drill	$100.00	/Day	1.00	$100.00
PID	$130.00	/Week	2.00	$260.00
CGI (O2/LEL/H2S/CO)	$91.50	/Week	2.00	$183.00
Generator	$100.00	/Day	12.00	$1,200.00
Waterra pump	$146.25	/Week	1.00	$146.25
Water Level Meter	$32.50	Week	4.00	$130.00
Geopump (Peristaltic)	$48.75	/Week	1.00	$48.75
Grundfos Redi-Flow 2 Pump	$188.50	/Week	1.00	$188.50
Horiba U-22 w/flow-thru cell	$195.00	/Week	1.00	$195.00
Gillian Air Pump	$13.00	/Day	1.00	$13.00
ppb RAE	$81.25	/Day	1.00	$81.25
Trimble GPS - Pro XR, GPS-4000	$75.00	/Day	2.00	$150.00
Survey Equipment - Total Station 700	$18.00	/Day	2.00	$36.00
			TOTAL:	$2,783.75

Schedule 2.11(d) 4

Site-Dedicated Equipment

Item	Estimated Quantity	Units	Unit Cost ($)	Total Budgeted Cost (Col. 2 x 3) ($)

TOTAL: $0.00

Schedule 2.11(d) 5

Consumable Supplies

Item	Estimated Quantity	Units	Unit Costs ($)	Total Budgeted Cost (Col. 2 x 3) ($)
Level D PPE	50	/Man-day	$13.00	$650.00
Low Value Equipment	656	/Man-hour	$0.80	$524.80
Shipping (Reports, misc. by Fed-Ex)	40	/Each	$25.00	$1,000.00
Misc. Field Supplies	5	/Each	$100.00	$500.00
1/2 x 5/8 HDPE Tubing	1000	/Foot	$0.17	$170.00
Footvalve	38	Each	$20.00	$760.00
1/4 x 3/8 Silicone Tubing	50	/Foot	$2.50	$125.00
3/16 x 1/4 HDPE Tubing	3000	/Foot	$0.09	$270.00
Shipping (Cooler)	52	/Each	$100.00	$5,200.00
		TOTAL:		$9,199.80

Schedule 2.11 (e)

Cost-Plus-Fixed-Fee Subcontract
Work Assignment D004440-03

Name of Subcontractor	Service to be Performed	Subcontract Price

A) Direct Salary Costs

Professional Responsibility Level	Labor Classification	Ave. Reimbursement Rate ($/Hr.)	Est. No. of Hours	Total Est. Direct Salary Cost (Ave. Reimb. Rate x Est. # of Hrs.)

Total Direct Salary Costs _____

Footnotes:

1) These rates will be held firm until December 2006.

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

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

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

5) Reimbursement for technical time of principals, owners, and officers will be limited to the maximum reimbursement rate of that labor catagory, the actual hourly labor rate paid, or the State M-6 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 year 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 wil be subject to renegotiation for future years of the contract. There shall be no retroactive adjustments of payment as a result of renegotiated salary schedules.

::

B) Indirect Costs

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

Amount budgeted for indirect costs is: _____

C) Maximum Reimbursement Rates for Direct Non-Salary Costs

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. Of Units	Total Est. Cost

Total Direct Non-Salary Costs _____

D) Fixed Fee

The Fixed fee is: % _____

See Schedule 2.10(h) for how the fixed fee should be claimed.

Schedule 2.11(f) (1 of 4)

Unit Price Subcontracts
Work Assignment D004440-03

A. Name of Contractor	Services to be Performed	Subcontract Price	Management Fee
Queen City Graphics (WBE)	Copying/Printing	$10,000	$500

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. Of Units	Total Est. Cost
Reproduction	$100.00 /each	40	$4,000
Oversize Sheets	$3.00 /each	2000	$6,000
Subtotal Subcontract Price			$10,000
Subcontract Management Fee			$500
TOTAL			$10,500

B. Name of Contractor	Services to be Performed	Subcontract Price	Management Fee
Nothnagle Drilling, Inc.	Drilling Services	$31,412	$1,571

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. Of Units	Total Est. Cost
Mobe/Demobe	$11,210.00 /Lump Sum	1	$11,210
4.25-inch HSA	$10.00 /Foot	600	$6,000
2-inch Split Spoons	$10.00 /Each	300	$3,000
Well Riser 2-inch Sch 40 PVC	$8.00 /Foot	128	$1,024
Well Screen 2-inch #10 slot PVC	$14.00 /Foot	150	$2,100
Protective Casing - Above Ground	$130.00 /Each	15	$1,950
Grouting - 4.25 in HSA	$6.00 /Foot	173	$1,038
Decontamination Pad	$500.00 /Each	1	$500
Equipment Decontamination	$130.00 /Hour	15	$1,950
Steam Cleaner rental	$95.00 /Day	12	$1,140
DOT 55 gal Steel Drums	$30.00 /Each	40	$1,200
Moving/Staging/Development	$30.00 /Hour	10	$300
Subtotal Subcontract Price			$31,412
Subcontract Management Fee			$1,571
TOTAL			$32,983

Schedule 2.11(f) (2 of 4)

Unit Price Subcontracts
Work Assignment D004440-03

C. Name of Contractor	Services to be Performed	Subcontract Price	Management Fee
IDW T&D Sub (TBD)	Investigation Derived Waste Disposal	$12,700	635.00

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. Of Units	Total Est. Cost
Transportation			
Soil Disposal	$285.00 /Drum	30	8550.00
Water Disposal	$2.50 /Gallon	1500	3750.00
PPE Disposal	$80.00 /Drum	5	400.00
Subtotal Subcontract Price			12700.00
Subcontract Management Fee			635.00
TOTAL			13335.00

D. Name of Contractor	Services to be Performed	Subcontract Price	Management Fee
Mitkem Corporation (MBE)	Analytical Services	$44,729	$2,236

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. Of Units	Total Est. Cost
Soils/Solids			
TCL VOCs	$69.00 /Each	52	$3,588
TCL SVOCs	$149.00 /Each	20	$2,980
TCL Pesticides/PCBs	$129.00 /Each	20	$2,580
TAL Metals	$85.00 /Each	20	$1,700
Total Cyanide	$25.00 /Each	20	$500
Water			
TCL VOCs	$69.00 /Each	51	$3,519
TCL SVOCs	$149.00 /Each	46	$6,854
TCL Pesticides/PCBs	$129.00 /Each	46	$5,934
TAL Metals (total and Dissolved)	$85.00 /Each	92	$7,820
Total Cyanide	$25.00 /Each	46	$1,150
TOC	$35.00 /Each	46	$1,610
COD	$20.00 /Each	46	$920
Chloride	$20.00 /Each	46	$920
TPH	$55.00 /Each	46	$2,530
TDS	$15.00 /Each	42	$630
IDW			
Full TCLP	$583.00 /Each	2	$1,166
RCRA Characteristics	$105.00 /Each	2	$210
TCL PCBs	$59.00 /Each	2	$118
Subtotal Subcontract Price			$44,729
Subcontract Management Fee			$2,236
TOTAL			$46,965

Schedule 2.11(f) (3 of 4)

Unit Price Subcontracts
Work Assignment D004440-03

E. Name of Contractor	Services to be Performed	Subcontract Price	Management Fee
Con-Test Analytical (WBE)	Vapor Intrusion Analysis	$1,666	$83

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. Of Units	Total Est. Cost
VOCs by TO-15	$250.00 /Each	1	$250
Low Level VOCs by TO-15	$354.00 /Each	4	$1,416

Subtotal Subcontract Price	$1,666
Subcontract Management Fee	$83
TOTAL	$1,749

F. Name of Contractor	Services to be Performed	Subcontract Price	Management Fee
Radar Solutions (WBE) International	Geophysical Survey Services	$4,985	$249

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. Of Units	Total Est. Cost
Geophysical Survey	$4,985.00 /Lump Sum	1	$4,985

Subtotal Subcontract Price	$4,985
Subcontract Management Fee	$249
TOTAL	$5,234

Schedule 2.11(f) (4 of 4)

Unit Price Subcontracts
Work Assignment D004440-03

G. Name of Contractor	Services to be Performed	Subcontract Price	Management Fee
NOD Analysis (TBD)	Analytical Services	$150	

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. Of Units	Total Est. Cost
NOD Analysis	$150.00 /Each	1	$150

Subtotal Subcontract Price	$150
Subcontract Management Fee	
TOTAL	$150

H. Name of Contractor	Services to be Performed	Subcontract Price	Management Fee
Portable Toilet Rental (TBD)	Portable Toilet	$200	

Item	Max. Reimbursement Rate (Specify Unit)	Est. No. Of Units	Total Est. Cost
Toilet Rental	$100.00 /Month	2	$200

Subtotal Subcontract Price	$200
Subcontract Management Fee	
TOTAL	$200

Schedule 2.11(g)

Monthly Cost Control Report
Summary of Fiscal Information

URS Corporation
Contract D004440
Stuart Olver Holtz Site
Work Assignment D004440-03
All Tasks
Complete %

Date Prepared 05/31/06
Billing Period
Invoice No.

Expenditure Category Category	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*
	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)*	*Approval Budget*	*Estimated Over/Under (G-F)*
1. Direct Salary Costs							*$101,166*	*$101,166*
2. Indirect Costs (1.25.9%)							*$127,368*	*$127,368*
3. Subtotal Direct Salary Costs and Indirect Costs							*$228,534*	*$228,534*
4. Travel							*$10,202*	*$10,202*
5. Other Non-Salary Costs							*$11,984*	*$11,984*
6. Subtotal Direct Non-Salary Costs							*$22,186*	*$22,186*
7. Subcontractors							*$111,117*	*$111,117*
8. Total WA Cost							*$361,836*	*$361,836*
9. Fixed Fee							*$27,424*	*$27,424*
10. Total Work Price							*$389,260*	*$389,260*

Project Manager (Engineer) _____ *DATE:* _____

URS Corporation
Contract D004440
Stuart Olver Holtz Site
Work Assignment D004440-03
All Tasks
Complete %

Date Prepared 05/31/06
Billing Period
Invoice No.

Schedule 2.11(g) - Supplemental

Cost Control Report for Subcontract

Subcontract Name	A Subcontract Cost Claimed this Application Incl. Resubmittals	B Subcontract Costs Approved For Payment on Previous Applications	C Total Subcontract Costs to Date (A plus B)	D Subcontract Approved Budget	E Management Fee Budget	F Management Fee Paid	G Total Cost to Date (C plus F)
1 Queen City Graphics (WBE)				$10,000	$500		
2 Nothnagle Drilling, Inc.				$31,412	$1,571		
3 IDW T&D Sub (TBD)				$12,700	$635		
4 Mitkem Corporation (MBE)				$44,729	$2,236		
5 Con-Test Analytical (WBE)				$1,666	$83		
6 Radar Solutions (WBE)				$4,985	$249		
7 NOD Analysis (TBD)				$150			
8 Portable Toilet Rental (TBD)				$200			
TOTALS				$105,842	$5,275		

Project Manager (Engineer) _____ *DATE:* _____

Schedule 2.11(g)

Monthly Cost Control Report
Summary of Fiscal Information

URS Corporation
Contract D004440
Stuart Olver Holtz Site
Work Assignment D004440-03
Task 1 - Develop Detailed Work Plan
Complete %

Date Prepared 05/31/06
Billing Period
Invoice No.

Expenditure Category Category	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*
	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)*	*Approval Budget*	*Estimated Over/Under (G-F)*
1. Direct Salary Costs							*$7,378*	*$7,378*
2. Indirect Costs (125.9%)							*$9,289*	*$9,289*
3. Subtotal Direct Salary Costs and Indirect Costs							*$16,668*	*$16,668*
4. Travel							*$1,187*	*$1,187*
5. Other Non-Salary Costs								
6. Subtotal Direct Non-Salary Costs							*$1,187*	*$1,187*
7. Subcontractors							*$105*	*$105*
8. Total WA Cost							*$17,960*	*$17,960*
9. Fixed Fee							*$2,000*	*$2,000*
10. Total Work Price							*$19,960*	*$19,960*

Project Manager (Engineer) _____ *DATE:* _____

Schedule 2.11(g)

Monthly Cost Control Report
Summary of Fiscal Information

URS Corporation
Contract D004440
Stuart Olver Holtz Site
Work Assignment D004440-03
Task 2 - Supplemental Investigation/Predesign Activities
Complete %

Date Prepared 05/31/06
Billing Period
Invoice No.

Expenditure Category 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* *Approval Budget*	*H* *Estimated Over/Under (G-F)*
1. Direct Salary Costs							*$39,542*	*$39,542*
2. Indirect Costs (125.9%)							*$49,783*	*$49,783*
3. Subtotal Direct Salary Costs and Indirect Costs							*$89,324*	*$89,324*
4. Travel							*$8,382*	*$8,382*
5. Other Non-Salary Costs							*$10,984*	*$10,984*
6. Subtotal Direct Non-Salary Costs							*$19,366*	*$19,366*
7. Subcontractors							*$101,247*	*$101,247*
8. Total WA Cost							*$209,936*	*$209,936*
9. Fixed Fee							*$10,719*	*$10,719*
10. Total Work Price							*$220,655*	*$220,655*

Project Manager (Engineer) _____ *DATE:* _____

Schedule 2.11(g)

Monthly Cost Control Report
Summary of Fiscal Information

URS Corporation
Contract D004440
Stuart Olver Holtz Site
Work Assignment D004440-03
Task 3 - Additional Tasks
Complete %

Date Prepared 05/31/06
Billing Period
Invoice No.

Expenditure Category 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* *Approval Budget*	*H* *Estimated Over/Under (G-F)*
1. Direct Salary Costs								
2. Indirect Costs (125.9%)								
3. Subtotal Direct Salary Costs and Indirect Costs								
4. Travel								
5. Other Non-Salary Costs								
6. Subtotal Direct Non-Salary Costs								
7. Subcontractors								
8. Total WA Cost								
9. Fixed Fee								
10. Total Work Price								

Project Manager (Engineer) _____ *DATE:* _____

Schedule 2.11(g)

Monthly Cost Control Report
Summary of Fiscal Information

URS Corporation
Contract D004440
Stuart Olver Holtz Site
Work Assignment D004440-03
Task 4 - Plans and Specifications
Complete %

Date Prepared 05/31/06
Billing Period
Invoice No.

Expenditure Category 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* *Approval Budget*	*H* *Estimated Over/Under (G-F)*
1. Direct Salary Costs							*$47,062*	*$47,062*
2. Indirect Costs (1.259%)							*$59,251*	*$59,251*
3. Subtotal Direct Salary Costs and Indirect Costs							*$106,312*	*$106,312*
4. Travel							*$633*	*$633*
5. Other Non-Salary Costs							*$1,000*	*$1,000*
6. Subtotal Direct Non-Salary Costs							*$1,633*	*$1,633*
7. Subcontractors							*$9,450*	*$9,450*
8. Total WA Cost							*$117,395*	*$117,395*
9. Fixed Fee							*$12,757*	*$12,757*
10. Total Work Price							*$130,153*	*$130,153*

Project Manager (Engineer) _____ *DATE:* _____

Schedule 2.11(g)

Monthly Cost Control Report
Summary of Fiscal Information

URS Corporation
Contract D004440
Stuart Olver Holtz Site
Work Assignment D004440-03
Task 5 - Pre-Award Services
Complete %

Date Prepared 05/31/06
Billing Period
Invoice No.

Expenditure Category 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 Approval Budget	H Estimated Over/Under (G-F)
1. Direct Salary Costs							$7,184	$7,184
2. Indirect Costs (125.9%)							$9,045	$9,045
3. Subtotal Direct Salary Costs and Indirect Costs							$16,229	$16,229
4. Travel								
5. Other Non-Salary Costs								
6. Subtotal Direct Non-Salary Costs								
7. Subcontractors							$315	$315
8. Total WA Cost							$16,544	$16,544
9. Fixed Fee							$1,948	$1,948
10. Total Work Price							$18,492	$18,492

Project Manager (Engineer) _____ *DATE:* _____

Schedule 2.11 (h)
Monthly Cost Control Report
Summary of Labor Hours
Number of Direct Labor Hours Expended to Date/Estimated Number of Direct Labor Hours to Completion

URS Corporation
Stuart Olver Holtz Site
Work Assignment D004440-03

Date Prepared 05/31/06
Billing Period
Invoice No.

NSPE Labor Classification	IX EXP / EST*	VIII EXP / EST	VII EXP / EST	VI EXP / EST	V EXP / EST	IV EXP / EST	III EXP / EST	II EXP / EST	I EXP / EST	ADMIN EXP / EST	Total No. of Direct EXP / EST
Task 1 - Develop Detailed Work Plan	/	/ 40	/ 28	/ 2	/ 42	/ 11	/ 78	/ 17	/	/ 4	/ 222
Task 2 - Supplemental Investigation/Predesign Activities	/	/ 113	/ 3	/ 27	/ 78	/ 279	/ 570	/ 432	/	/ 23	/ 1525
Task 3 - Additional Tasks	/	/	/	/	/	/	/	/	/	/	/
Task 4 - Plans and Specifications	/ 16	/ 124	/ 100	/ 280	/ 400	/ 100	/	/ 276	/ 150	/ 50	/ 1496
Task 5 - Pre-Award Services	/	/ 36	/ 44	/	/ 84	/	/	/ 20	/	/ 10	/ 194
TOTAL HOURS:	/ 16	/ 313	/ 175	/ 309	/ 604	/ 390	/ 648	/ 745	/ 150	/ 87	/ 3437

*Expended/Estimated

Schedule 2.11(i)

Monthly Cost Control Report
Equipment Inventory Control Form *

Engineer **Contract No.** D004440

1) Equipment Description:
   Date of Purchase:
   Purchase Price:
   Dates and Location of Use Since Last Report:(Identify WA)
   Present Storage Location:
   Condition of Equipment:
   Responsible Person and Phone No.:

2) Equipment Description:
   Date of Purchase:
   Purchase Price:
   Dates and Location of Use Since Last Report:(Identify WA)
   Present Storage Location:
   Condition of Equipment:
   Responsible Person and Phone No.:

3) Equipment Description:
   Date of Purchase:
   Purchase Price:
   Dates and Location of Use Since Last Report:(Identify WA)
   Present Storage Location:
   Condition of Equipment:
   Responsible Person and Phone No.:

4) Equipment Description:
   Date of Purchase:
   Purchase Price:
   Dates and Location of Use Since Last Report:(Identify WA)
   Present Storage Location:
   Condition of Equipment:
   Responsible Person and Phone No.:

* This form is must be completed for all Department owned equipment in the custody of the Engi
submitted as part of the Monthly Cost Control Report.

APPENDIX C

M/WBE UTILIZATION PLAN

TABLE III
CONSULTANT/CONTRACTOR DETAILED MBE/WBE AND EEO UTILIZATION PLAN
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CONSULTANT/CONTRACTOR NAME:	URS Corporation - New York				
CONTRACT TYPE/NUMBER:	D004440 WA 3		CONTRACT AWARD DATE:	11/28/2005	
ADDRESS: 77 Goodell Street	CITY: Buffalo		STATE: NY	ZIP CODE:	14203
PROJECT OWNER NAME:	New York State Department of Enviornmental Conservation		PROJECT/GRANT No.:		
ADDRESS: 625 Broadway	CITY: Albany		STATE: NY	ZIP CODE:	12233
AUTHORIZED REPRESENTATIVE:	Don Hunt, PE		TITLE:	Senior Project Manager	
AUTHORIZED SIGNATURE:					
CONTRACT DESCRIPTION:	Stuart Olver Holtz Site				

EEO AND MBE/WBE CONTRACT SUMMARY

	%	AMOUNT		%	AMOUNT
1. TOTAL DOLLAR VALUE OF THE PRIME CONTRACT	100%	$389,260.00			
2. STATE SHARE AMOUNT	100%	$389,260.00			
3. MBE GOAL/AMOUNT	15%	$58,389.00	6. BUDGETED MBE	12.77%	$49,714.00
4. WBE GOAL/AMOUNT	5%	$19,463.00	7. BUDGETED WBE	3.00%	$11,666.00
5. MBE/WBE COMBINED TOTALS	20%	$77,852.00	8. MBE/WBE COMBINED TOTALS	15.77%	$61,380.00

BUREAU OF MINORITY & WOMEN'S BUSINESS PROGRAMS USE ONLY

PROPOSED GOALS		DATE APPROVED	DATE DISAPPROVED	INITIALS
MBE(%)	EEO-MINORITIES (%)			
WBE(%)	EEO-MINORITIES (%)			

SECTION I - MBE INFORMATION: IN ORDER TO ACIEVE THE MBE GOALS, NEW YORK STATE CERTIFIED MINORITY-OWNED FIRMS ARE EXPECTED TO PARTICIPATE IN THE FOLLOWING MANNER

MBE FIRM INFORMATION		DESCRIPTION OF WORK MBE	PROJECTED MBE CONTRACT AMOUNT AND AWARD DATE	CONTRACT SCHEDULE AND START DATE	CONTRACT PAYMENT SCHEDULE	PROJECT COMPLETION DATE
NAME:	Radar Solutions International					
ADDRESS:	51 Riverview Avenue	Geophysical Surveyor	$4,985.00			
CITY:	Waltham		DATE: June 2006	June 2006		
STATE/ZIP CODE:	MA 02453					
TELEPHONE No.:	781-891-4492					
NAME:	Mitkem Corporation					
ADDRESS:	175 Metro Center Blvd	Analytical services	$44,729.00			
CITY:	Warwick		DATE: June 2006	June 2006		
STATE/ZIP CODE:	RI 02886					
TELEPHONE No.:	401-732-3400					
NAME:						
ADDRESS:						
CITY:			DATE:			
STATE/ZIP CODE:						
TELEPHONE No.:						
NAME:						
ADDRESS:						
CITY:			DATE:			
STATE/ZIP CODE:						
TELEPHONE No.:						

SECTION II - WBE INFORMATION: IN ORDER TO ACHIEVE THE MBE GOALS, NEW YORK STATE CERTIFIED WOMAN-OWNED FIRMS ARE EXPECTED TO PARTICIPATE IN THE FOLLOWING MANNER.

WBE FIRM INFORMATION	DESCRIPTION OF WORK WBE	PROJECTED WBE CONTRACT AMOUNT AND AWARD DATE	CONTRACT SCHEDULE AND START DATE	CONTRACT PAYMENT SCHEDULE	PROJECT COMPLETION DATE
NAME: Queen City Imaging ADDRESS: 3100 Main Street CITY: Buffalo STATE/ZIP CODE: NY 14214 TELEPHONE No.: 716-832-8100	Copy/Reproduction	$10,000.00 DATE: June 2006	June 2006		
NAME: Con-Test Analytical ADDRESS: 39 Spruce Street CITY: East Longmeadow, STATE/ZIP CODE: MA 01028 TELEPHONE No.: 413-525-2332	Analytical Services	$1,666.00 DATE: June 2006	June 2006		
NAME: ADDRESS: CITY: STATE/ZIP CODE: TELEPHONE No.:		DATE:			
NAME: ADDRESS: CITY: STATE/ZIP CODE: TELEPHONE No.:		DATE:			