



02 March 2007

KC/0437

Washington State Department of Ecology  
Toxic Cleanup Program  
P.O. Box 47600  
Lacey, WA 98504-7600

Attention: Mr. Joe Crossland

Subject: Submission of Cost Plus Fixed Fee Proposal for the Most Western  
Laundry  
Amendment 1

Reference: 1. Contract No. C0700034, Work Assignment No. SAIC001  
2. SAIC Proposal No. 01-02236-71-2007-148

Attachments: (A) Work Plan  
(B) Pricing Summaries

Dear Mr. Crossland:

Science Applications International Corporation (SAIC) is pleased to submit the enclosed Cost Plus Fixed Fee Amendment 1. The purpose of this amendment is to add funding in the amount of \$166,478 to complete Tasks 3-5 of the Most Western Laundry effort.

Any resultant Amendment shall be in accordance with the Term and Conditions specified in Contract No. C0700034.

If you have any technical inquiries, please contact Tom Dube at (425) 482-335 or Mark Dagel at (425) 482-3318. All other questions should be directed to me at (805) 564-6170 or via email at [churchillk@saic.com](mailto:churchillk@saic.com).

Sincerely,

**SCIENCE APPLICATIONS INTERNATIONAL CORPORATION**

A handwritten signature in blue ink that reads "Kerri Churchill". The signature is written in a cursive style.

Kerri Churchill  
Sr. Contracts Representative

**WORK PLAN AND COST ESTIMATE**

**AMENDMENT 1**

**MOST WESTERN LAUNDRY SITE**

**REMEDIAL INVESTIGATION/FEASIBILITY STUDY SAMPLING AND REPORTING**

**INTRODUCTION**

The Most Western Laundry Site is a former dry cleaning and laundry facility that operated from about 1907 until 1994 at the corner of 16<sup>th</sup> and B Streets, approximately 500 feet east of the Hoquiam River and 0.5 mile north of Grays Harbor, in Hoquiam, Washington. Most Western Laundry operated a dry cleaning machine from 1979 through 1984 using tetrachloroethene as the primary cleaning agent, and laundry operations continued until 1994.

Studies completed in the 1980s revealed solvent contamination at substantially elevated levels in soil and groundwater on the site. SAIC has completed a review of Ecology file documents and conducted a site visit on February 14, 2007. Based on the file review, the site visit, and a scoping meeting with Ecology (Task 1 of the Work Assignment), SAIC is submitting this work plan and cost estimate to conduct a remedial investigation and to prepare the RI/FS report.

This proposal covers Task 2, completion of a remedial investigation and feasibility study (RI/FS) and is a follow-on to the previously funded Task 1 which covered initial scoping activities and preparation of this workscope and cost estimate. Additional work that may be necessary at this site, such as additional phases of investigation, remedial action (including interim action and site fencing), and long-term monitoring, are not addressed in this proposal.

**TASK 2: CONDUCT REMEDIAL INVESTIGATION/FEASIBILITY STUDY**

This task includes conducting a RI/FS at the Most Western Laundry Site in Hoquiam, Washington. This task consists of the following four subtasks:

- Subtask 1: Project Management
- Subtask 2: Prepare Project Plans
- Subtask 3: Field Investigations
- Subtask 4: Prepare RI/FS Report

These four subtasks are described below in more detail, along with the anticipated schedule and level of effort for each.

***Subtask 2.1: Project Management***

*Scope*

This subtask includes ongoing project management, monthly tracking of project schedule and budget, and preparation of monthly progress reports during the period March 1, 2007 through June 30, 2007. This effort also includes routine communication and correspondence with Ecology at the project and program management level.

*Deliverables*

Monthly progress reports and invoices.

*Level of Effort*

The estimated level of effort for Subtask 2.1 is detailed in Attachment B and is summarized below:

Program Manager	16 Hrs
Work Assignment Manager	40 Hrs
Project Controller	36 Hrs

***Subtask 2.2: Prepare Project Plans***

*Scope*

This subtask involves preparation of project plans that will define site characterization activities to be performed at Most Western Laundry as part of this subtask. This will involve the following activities:

- Prepare sampling and analysis plan (SAP), which will consist of a field sampling plan (FSP) and a quality assurance project plan (QAPP). The SAP will be prepared in accordance with Washington Administrative Code (WAC) 173-340-820.
- Prepare a site-specific health and safety plan (HSP) in accordance with SAIC protocols.

*Deliverables*

The SAP will include information on: site background; proposed specific project activities and rationale explained in text, tables, and on GIS maps of the site; means of data collection and filling data gaps; concept of a phased RI approach; and quality assurance/quality control measures to be taken. A draft version of the SAP will be submitted electronically (MS Word and/or Adobe Acrobat format) to Ecology for their review. SAIC will address Ecology comments and finalize the document. The final document will be submitted electronically to Ecology. The HSP will not be submitted for Ecology review; however it will be provided electronically to Ecology for their records.

*Level of Effort*

The estimated level of effort for Subtask 2.2 is detailed in Attachment B and is summarized below:

Work Assignment Manager	18 Hrs
Sr. Geologist	60 Hrs
Sr. Environmental Engineer	8 Hrs
GIS/Environmental Scientist	20 Hrs
Staff Geologist	88 Hrs
Graphics/Production	8 Hrs

*Schedule*

The draft SAP will be submitted to Ecology for review within 3 weeks of execution of this task order. The final SAP and HSP will be submitted within approximately 1 week of receipt of all Ecology comments on the draft SAP.

***Subtask 2.3: Field Investigations***

*Scope*

This subtask involves conducting site characterization and related efforts as detailed in the final SAP that will be prepared as part of Subtask 2. The actual scope of Subtask 3 will depend on the contents of the final SAP, and will include at least two major phases of field work. For purposes of this document, we assume that this subtask will include the following activities:

- Prepare statements-of-work and procure subcontractors for geoprobing/drilling, soil sampling, and monitoring well installation; underground utility locating; surveying; waste transportation and disposal; and laboratory analysis.
- Field geologist will make an initial site visit to determine presence, location, and status of existing wells to be abandoned, and look in more detail at utilities and property boundaries.
- Acquire access and revocable use permit from the city of Hoquiam to drill or install wells in the alleyway and other right-of-ways surrounding the property.
- Perform site walk with drilling subcontractor to assess access, finalize boring locations, and determine areas where concrete needs to be cut or broken.
- Clear boring locations for underground utilities prior to drilling using private utility locating firm (conductible and non-conductible utilities) as well as the “one-call” system.
- *Phase IA Fieldwork.* Utilize a geoprobe rig to sample up to approximately 55 borings (what can be accomplished in five days of probing); this number depends on the rate of probing, hand-clearing, and the depths required to encounter noncontaminated soil. Maximum depths are expected to be in the range of 10 to 20 feet, and the water table is expected to be at 4 to 8 feet deep. Two deep exploratory borings will be advanced outside the heavily contaminated

area. Field screening of samples will take place (odor, PID readings, visual), and all borings will be geologically logged. The anticipated average number of analytical samples submitted per boring is 1.5. For the areas near known or likely subsurface utilities, probe locations will first be cleared using a hand auger. For areas away from known or likely utilities (the central area of the property), probing will proceed without hand clearing. For most of the property, a grid size of approximately 20x30-ft spacing will be used. In the areas of known past contamination, including in the city alleyway and the southern property, a denser spacing will be used.

- *Phase IB Fieldwork.* This phase of work (about one week) will follow very soon after Phase 1A. Drill four soil borings using a hollow-stem auger rig at locations and depths determined by field data in Phase IA. First several feet of borings will be advanced with hand auger and/or “air knife” to minimize damage to any undetected underground utility or other structures. Samples in this shallow interval will be collected with the hand auger. Field screening of samples will take place (odor, PID readings, visual), and all borings will be geologically logged. Collect soils samples at 2.5-ft depth intervals using split spoons; submit an anticipated average of 1.5 soil samples per boring for chemical analysis. Install 2-inch diameter PVC monitoring well in each boring. Develop the four wells prior to sampling. Survey well elevations to a known vertical datum. It is assumed that subsurface conditions will be consistent with Level D personnel protective equipment (PPE) and will not require respiratory protection.
- *Phase II Fieldwork.* The purpose of this phase is to delineate offsite contamination and to outline hot-spots for possible interim action soil removal. This work will take place approximately one month after Phase I fieldwork, following receipt of analytical results and initial data review. Utilize a geoprobe rig to sample up to 20 borings (approximately two days of probing). Field screening of samples will take place (odor, PID readings, visual). The anticipated average number of analytical samples submitted per boring is two. For the areas near known or likely subsurface utilities, probe locations will first be cleared using a hand auger. For areas away from known or likely utilities (the central area of the property), probing will proceed without hand clearing. Boring locations will be focused in order to better identify the outline of hot-spot contamination (both laterally and at depth) and to determine the extent of offsite soil contamination and approximate location of groundwater contamination. To aid in the latter, groundwater samples will be collected from the geoprobe at selected offsite locations.
- Measure water levels in monitoring wells periodically during one tidal cycle to estimate groundwater flow direction and to determine phase relationship between tidal levels in the adjacent Hoquiam River and the water table at the site. This information will be used to schedule the groundwater sampling events to coincide with the period of maximum groundwater outflow and minimum dilution.
- Collect two rounds of groundwater samples from four new monitoring wells using low-flow method to minimize turbidity and volume of purge water. Purge water generated will be drummed and labeled.

- All soil cuttings and waste water will be drummed and labeled. Arrange for transportation and disposal of drummed investigation-derived wastes (IDW). Actual disposal costs will depend on the characteristics of the IDW, which are not currently known. For the purpose of this cost estimate, it was assumed that all of the IDW would be categorized and handled as hazardous/dangerous waste, due to PCE contamination.
- Analyze soil environmental samples using an Ecology-accredited laboratory for the following parameters, which are selected based on known past chemical usage at or near the site:
  - Volatile organic compounds (Method SW5035/8260) on all analytical samples
  - Hydrocarbon identification (HCID) on selected samples
  - Tin (7000 series) on selected samples in most contaminated areas, with 10-day turn-around time; any sample result for tin that exceeds the Method B soil cleanup level for tributyltin-oxide (2.4 mg/kg) will be further analyzed for tributyltin.
- Analyze groundwater environmental samples using an Ecology-accredited laboratory for the following parameters, which are selected based on known past chemical usage at or near the site:
  - Volatile organic compounds (Method SW8260) on all analytical samples
  - Hydrocarbon identification (HCID) on selected samples
- In addition, it is assumed that it will be necessary to analyze one composite sample of IDW water and two composite samples of IDW soil for toxicity characteristic leaching procedure (TCLP) parameters to assist in the categorization and disposal of IDW.
- Field quality assurance samples will be submitted and analyzed at a rate of approximately 10 percent for field duplicates, and one per cooler for trip blanks.
- Laboratory data will be provided electronically and in hard copy to SAIC within approximately 10 business days of sample submission (faster turn-around time than default) and will consist of “Level II” deliverables including project narratives, chain-of-custody documentation, data reports including method blank results, and QA summary forms. The cost estimate does not include submission of instrument calibration forms or raw data and does not include third-party data validation.
- Submit sample results and other necessary information to Ecology’s Environmental Information Management System (EIM).

### *Deliverables*

The bulk of the presentation from this phase will be prepared in Subtask 4 (RI/FS report). However, SAIC will update the Ecology manager through periodic e-mails including attachments of key data and/or figures that give an overview of information gathered to date.

*Level of Effort*

The estimated level of effort for Subtask 2.3 is detailed in Attachment B and is summarized below:

Work Assignment Manager	24 Hrs
Sr. Geologist	80 Hrs
Sr. Environmental Engineer	8 Hrs
GIS/Environmental Scientist	8 Hrs
Project Geologist	160 Hrs
Staff Geologist	100 Hrs
Graphics/Production	12 Hrs
Project Administrator	5 Hrs

*Schedule*

The field investigation will begin within approximately 3 weeks of Ecology's acceptance of the final SAP.

***Subtask 2.4: Prepare RI/FS Report***

*Scope*

This task involves preparing a Remedial Investigation/Feasibility Study Report for the Most Western Laundry Site. This document will follow the guidance and directives of MTCA (WAC 173-340-350). SAIC will compile and analyze all the RI data from Subtask 3 and previous site information from Task 1 into the RI/FS report. A major component of input to this report involves a feasibility study to evaluate a selected number of remedial alternatives for the final remedy at this site.

*Deliverables*

The RI/FS Report will incorporate all available data and historical information collected during and prior to the Remedial Investigation. Using this information, the report will outline the site setting and history, investigation methods and results, nature and extent of contamination, likely source areas and contaminant pathways, any uncertainties or data gaps, quality assurance discussion, and a site conceptual model. A number of figures and tables will be utilized to present information, along with supporting information included as appendices.

In addition, a feasibility study will be conducted to evaluate each of the remedial alternatives according to a number of criteria (WAC 173-340-360). The stepwise process and results of the feasibility study will be presented in the FS portion of the report. Through discussions with Ecology, the range of evaluated alternatives and the preferred alternative will be selected and presented in the FS. The preferred alternative may be selected in addition to an interim action, if one is deemed necessary.

SAIC will prepare a draft version of the report electronically (MS Word and/or Adobe Acrobat format) to Ecology for their review. SAIC will then address Ecology comments, prepare response to these comments, and then finalize the document. The final document will be submitted electronically to Ecology. If Ecology requests to have hard copies provided for their files or for public review, this will be provided by SAIC.

*Level of Effort*

The estimated level of effort for Subtask 2.4 is detailed in Attachment B and is summarized below:

Work Assignment Manager	48 Hrs
Sr. Geologist	120 Hrs
Sr. Environmental Engineer	100 Hrs
GIS/Environmental Scientist	40 Hrs
Project Geologist	180 Hrs
Staff Geologist	80 Hrs
Graphics/Production	24 Hrs

*Schedule*

The draft RI/FS Report will be submitted within two months following receipt of all RI data, including laboratory analytical results and any background information needed for completion of the report. Response to comments on the draft RI/FS Report will be provided to Ecology within two weeks of receipt of comments. The final RI/FS Report will be submitted within three weeks of Ecology's approval of SAIC's responses.