August 6, 2009

Mr. Edward Quigley
Project Officer
U.S. Environmental Protection Agency (EPA)
77 West Jackson (SM-5J)
Chicago, Illinois 60604

Subject: **USS Lead Site**
Remedial Investigation/Feasibility Study Oversight
Remedial Action Contract (RAC) EP-S5-06-02
Work Assignment No. 054-RICO-053J

Dear Mr. Quigley:

SulTRAC is enclosing a copy of the above-referenced work plan for your review. We estimated a total cost of $302,999 to complete the activities described in the work plan. The cost estimate information provided is business confidential.

If you have any questions regarding this work plan, please call me at (312) 201-7722.

Sincerely,

Ronald Riesing
Program Manager

Enclosure

cc: Norvelle Merrill-Crawford, EPA Contracting Officer
Michael Berkoff, EPA Work Assignment Manager
Rik Lantz, SulTRAC Project Manager

WORK PLAN

REMEDIAL INVESTIGATION/FEASIBILITY STUDY
FOR
USS LEAD SUPERFUND SITE
EAST CHICAGO, LAKE COUNTY, INDIANA

Prepared for
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Work Assignment No.	:	054-RICO-053J
EPA Region	:	5
Date Prepared	:	August 6, 2009
Contract No.	:	EP-S5-0602
Prepared by	:	SulTRAC
SulTRAC Project Manager	:	Rik Lantz, R.G., LEED-AP
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EPA Work Assignment Manager	:	Mr. Michael Berkoff
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Appendix

1.0 INTRODUCTION

SulTRAC has prepared this work plan for the U.S. Environmental Protection Agency (EPA) Region 5 under Work Assignment No. 054-RICO-053J Remedial Action Contract No. EP-S5-0602 (RAC 2). This work plan was prepared in response to a Statement of Work (SOW) dated June 19, 2009. This work plan details SulTRAC understanding of the tasks described in the June 19, 2009 SOW and assumptions used to derive an estimated cost to perform the work. Estimated costs to complete the work are presented in the appendix to this work plan. The work discussed in this work plan spans a 24-month period of performance from June 2009 to June 2011.

1.1 PURPOSE

The purpose of this work assignment is to conduct a remedial investigation/feasibility study (RI/FS) at USS Lead Superfund Site to select a remedy that eliminates, reduces, or controls risks to human health and the environment. Specifically, the RI/FS involves the investigation and study of lead contamination in residential properties. The overall goal is to develop the minimum amount of data necessary to support the selection of an approach for site remediation and then to use this data to result in a well-supported Record of Decision (ROD).

Specific goals of the RI/FS, as determined during the July 7, 2009, site visit are as follows:

- Determine the lateral and vertical extent of lead-contaminated soils at residences, schools, parks, vacant lots, and other areas where children may come into contact with contaminated soil
- Determine if other contaminants are associated with lead-contaminated soils
- Determine if the lead-contaminated soil requires disposal as characteristic hazardous waste
- Provide a good basis for estimating the number of homes in the study area that will require remediation
- Evaluate contamination in a on-site wetland and determine if the contamination merits a remedial response

Preliminary review of historical documents and discussions with EPA WAM Michael Berkoff and OSC Fred Micke reveal a discordance between data in the *Draft Characterization of Lead and Other Metals in Soil in the Vicinity of the USS Lead site in, East Chicago Indiana* (TechLaw, 2004), which indicates a clear aerial dispersal pattern, and the Superfund Removal in 2008, which indicates that the lead contamination is not confined to the surface interval and is nearly constant throughout the fill material, suggesting that the contamination is associated with the fill material rather than aerial deposition. Resolving this discrepancy is a primary goal of this investigation.

SulTRAC proposes to conduct the remedial investigation in accordance with the guidance in *Superfund Lead-Contaminated Residential Sites Handbook* (U.S. EPA Office of Emergency and Remedial Response, OSWER 9285.7-50, August 2003). Key elements outlined in the guidance document but not specifically called out in the June 19, 2009, SOW include:

- Determine site-specific background;
- Removal criterion of 400 part per million (ppm);
- Sampling in a grid pattern, initially widely spaced, followed by a more dense sampling pattern;
- Investigation to a maximum depth of 2 feet below ground surface;

- Compare results of the following sample types to evaluate reduction or elimination of collecting both types of samples:
  - X-Ray Fluorescence and CLP laboratory results for metals of interest (U.S. EPA 2003, Section 4.3.4)
  - 0-1-inch samples and 0-6-inch samples (compared using statistical methods such as paired-sample t-test) (U.S. EPA 2000, Section 4.3.2)
  - Samples passed through a no. 600 sieve and unsieved sample results to evaluate partitioning of lead to finer particle sizes (U.S. EPA 2003, Section 4.3.3)

For the purposes of this investigation, the residential portion of the study area consists of the area bounded by the Indiana Harbor Canal to the west, Chicago Avenue to the north, Parrish Avenue to the east. The southern boundary of the residential portion of the study area is defined by East 151st Street from the canal to Huish Drive, the southernmost railroad tracks from Huish Drive to Grasselli Street, and East 149th Place from Grasselli Street to Parrish Avenue. The area defined by these boundaries contains 15 residential blocks (about 390 homes) east of the railroad tracks; 14 residential blocks (about 375 homes) west of the railroad tracks; one residential block and four half-blocks of residences (about 75 homes) on the west side of McCook Avenue; and a large public housing complex with 96 individual dwellings and 2 multistory apartment complexes west of McCook Avenue. In total, the residential study area contains about 940 homes. EPA's WAM provided a package of 132 residential access agreements from March and April, 2006.

1.2 GENERAL REQUIREMENTS

SulTRAC will execute the RI/FS in order to provide the information necessary for EPA to develop a well-supported ROD that when implemented through a remedial action will eliminate, reduce or control risks to human health and the environment. SulTRAC will furnish all necessary and appropriate personnel, materials, and services needed to complete the RI/FS in accordance with the requirements of this SOW.

SuTRAC will:

- Furnish all necessary and appropriate personnel, materials, and services needed for, or incidental to, performing the oversight of the RI/FS in accordance with this SOW;
- Propose the most appropriate procedures and methodologies using accepted engineering practices and controls at the lowest reasonable cost;
- Communicate at least weekly with the EPA contracting officer representative (COR), either in face-to-face meetings or through conference calls; and
- Maintain all technical and financial documents in accordance with the RAC 2 contract.

A summary of the potential major deliverables and proposed schedule for submittals is included in Table 1.

The EPA and SulTRAC contacts for this work assignment are listed below.

> **EPA Primary Contact**: Mr. Michael Berkoff, EPA Region 5 project manager. He can be reached at (312) 353-4367, via facsimile at (312) 886-4071, or via e-mail at Berkoff.Michael@epa.gov. His mailing address is US EPA Region 5, 77 West Jackson Blvd. Chicago, IL. 60604, mail code: SR-6J.

EPA Secondary Contact: Mr. Ed Quigley, EPA Region 5 project officer (PO), (312) 886-7726 or quigley.edward@epa.gov, via facsimile: (312) 886-0186; mailing address: U.S. EPA Region 5, Mail code: SA-7J, 77 West Jackson Boulevard, Chicago, IL 60604

SulTRAC Project Manager: Mr. Rik Lantz (312) 443-0550 ext. 16 or rlantz@onesullivan.com, mailing address: Sullivan International Group, Inc., 125 S. Wacker Drive, Suite 220, Chicago IL 60606

SulTRAC Program Manager: Mr. Ron Riesing, (312) 201-7722 or ronald.riesing@ttemi.com; mailing address: Tetra Tech EM, Inc., 1 South Wacker Drive, 37th Floor, Chicago, IL 60606

2.0 PROJECT APPROACH

The EPA SOW identifies the following 15 tasks under the RI/FS oversight work assignment:

Task 1 ─ Project Planning and Support

Task 2 ─ Community Involvement

Task 3 ─ Field Investigation/Data Acquisition

Task 4 ─ Sample Analysis

Task 5 ─ Analytical Support and Data Validation

Task 6 ─ Data Evaluation

Task 7 ─ Risk Assessment

Task 8 ─ Treatability Study/Pilot Testing N/A

Task 9 ─ Remedial Investigation Report

Task 10 ─ Remedial Alternatives Screening

Task 11 ─ Remedial Alternatives Evaluation

Task 12 ─ Feasibility Study Report

Task 13 ─ Post RI/FS Support

Task 14 ─ Administrative Record

Task 15 ─ Work Assignment Closeout

As discussed during the site kick-off meeting on July 7, 2009, SulTRAC will conduct a phased investigation, and this work plan presents a cost estimate for Tasks 1 through 6 only. Costs associated with Tasks 7 through 15 will be presented in a subsequent work plan/cost estimate, after results of the

first phase of the investigation are evaluated. Task 3 (field investigation / data acquisition) will be conducted in two phases; this work plan includes only costs associated with the first phase of the field investigation. Tasks and sub-tasks identified as not applicable to this work assignment are not discussed further in this work plan.

The following sections of this work plan discuss SulTRAC's understanding of and technical approach to completing each subtask; present SulTRAC's estimated costs to perform the activities included in each subtask; and present the assumptions used to derive those estimated costs.

TASK 1— PROJECT PLANNING AND SUPPORT

This work element involves planning the execution and overall management of this work assignment. The EPA SOW identifies four subtasks to be completed as part of the overall planning and support task as follows:

Subtask 1.1 ─ Work Plan

Subtask 1.2 ─ Site-Specific Plans

Subtask 1.4 ─ Project Management and Reporting

Subtask 1.5 ─ Subcontractor Procurement and Support Activities

Table A-1 in the appendix presents the total estimated costs for labor, travel, equipment, and other direct costs (ODC) associated with completing Task 1.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Total Cost
490	220	228	0	938	68	$0	$871	$103,728

The following sections discuss further details of the Task 1 subtask components.

Subtask 1.1 ─ Work Plan

This task includes the following efforts related to project initiation.

- **Attend Kickoff Meeting** —SulTRAC contacted the EPA WAM and PO within 5 calendar days after receiving the WA to schedule the kickoff meeting, which was held on July 2, 2009. SulTRAC personnel, Rik Lantz and Ron Riesing attended the kickoff meeting with EPA, which was conducted over a one hour period. Mr. Lantz and Mr. Riesing spent 2 hours each preparing for and attending the meeting.

P4	P3	P2	P1	Total LOE	CL
4	0	0	0	4	0

- **Review background documents** –SulTRAC reviewed existing Site background documents including *Draft Characterization of Lead and Other Metals in Soil in the Vicinity of the USS Lead site in, East Chicago Indiana* (TechLaw, 2004) and the site access agreements. Site background documents will also be reviewed by ecological risk assessors in order to obtain a solid understanding of the Site prior to evaluating the ecological conditions in a wetlands area at

the former smelter location. SulTRAC has assumed that the ecological risk assessors will take two days each and the PM five days to review all relevant background documents.

P4	P3	P2	P1	Total LOE	CL
40	16	16	0	72	0

- **Conduct Site Visit –**SulTRAC PM Rik Lantz visited the site on July 7, 2009, with the EPA WAM and EPA on-scene coordinator (OSC) Fred Micke. The July 7 site visit was conducted in one 8-hour day.

P4	P3	P2	P1	Total LOE	CL
8	0	0	0	8	0

- **Prepare Work Plan** — SulTRAC has prepared estimated costs to complete this work assignment for each element of this SOW and provided a cost breakdown by task and subtask levels, in accordance with the contract work breakdown structure (WBS). SulTRAC submitted the work plan electronically to the EPA Region 5 WAM, PO, and CO.

  This work plan includes a description of the technical approach for the RI, description of project tasks, project documentation, and a project schedule. SulTRAC will use existing quality assurance and quality control (QA/QC) systems and procedures to assure that the work plan and other deliverables are of professional quality, requiring only minor revisions. Specifically, the work plan includes the following:

  – Identification of RI/FS oversight project elements and the associated tasking.

  – SulTRAC's technical approach to each task to be performed, including a description of each task, the assumptions used to derive costs presented in the cost estimate, any information to be produced during and at the conclusion of each task, and a description of the work products that will be submitted to EPA. Information will be presented in a sequence consistent with the SOW.

  – A schedule (see Section 3.0) with specific dates for completing each required activity and submitting each deliverable required in the SOW.

P4	P3	P2	P1	Total LOE	CL
52	0	12	0	64	4

- **Revise Work Plan** — As needed, SulTRAC will attend a Work Plan fact finding/negotiation meeting via teleconference with USEPA. SulTRAC will prepare and submit a revised work plan incorporating the agreements made in the fact finding/negotiation meeting.

P4	P3	P2	P1	Total LOE	CL
8	0	4	0	12	4

- **Conflict of Interest** - SulTRAC prepared and submitted a conflict-of-interest disclosure to EPA on June 30, 2009.

Subtask 1.2 – Site-Specific Plans

SulTRAC will prepare the following plans before implementing the RI:

- Site Management Plan. The SMP provides EPA with a written understanding of how access, security, contingency procedures, management responsibilities, and waste disposal are to be handled.

P4	P3	P2	P1	Total LOE	CL
10	8	0	0	18	4

- Sampling and Analysis Plan (SAP) which is comprised of the following two parts:

  – Field Sampling Plan (FSP) in accordance with 40 CFR 300.415(b)(4)(ii). The FSP describes the number type, and locations of samples and the types of analyses.

P4	P3	P2	P1	Total LOE	CL
44	40	80	0	164	8

  – Quality Assurance Project Plan (QAPP) in accordance with Intergovernmental Data Quality Task Force Uniform Federal Policy (UFP) for Quality Assurance Project Plans, EPA-505-B-04-900A, March 2005. The UFP-QAPP meets all the requirements of EPA Requirements for Quality Assurance Project Plans (QA/R-5) EPA/24/B-01/003, March 2001 (reissued May 2006). The QAPP describes policy, organization, and functional activities and the data quality objectives and measures necessary to achieve adequate data for use in planning and documenting the sampling investigation.

P4	P3	P2	P1	Total LOE	CL
28	80	40	0	148	8

- Data Management Plan (DMP). The DMP outlines the procedures for storing, handling, accessing, and securing the data collected during the sampling event.

P4	P3	P2	P1	Total LOE	CL
6	0	12	0	18	2

- Site-specific Health and Safety Plan (HSP). The HSP specifies employee training, protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan in accordance with 29 CFR 1910.120(l)(1) and (l)(2). The HSP will be internally reviewed by a SulTRAC Certified Industrial Hygienist (CIH) before submittal to EPA.

P4	P3	P2	P1	Total LOE	CL
8	0	16	0	24	2

- Plan revisions: SulTRAC will submit all plans for EPA review and will revise plans as needed.

P4	P3	P2	P1	Total LOE	CL
14	32	24	0	70	12

SulTRAC estimates that completing the plans detailed above will require 442 LOE hours and 36 clerical hours.

P4	P3	P2	P1	Total LOE	CL
110	160	172	0	442	36

Subtask 1.4 ─ Project Management and Reporting

SulTRAC will perform general work assignment management activities including communications with the WAM, managing and tracking costs, preparing monthly progress reports, attending project meetings, attending EPA-held training and audits, and preparing and submitting invoices, accommodating any external audit and attending EPA-held training as required. The anticipated period of performance for this project is from July 2009 through June 2011 (24 months). SulTRAC will perform the following activities required to effectively manage the work assignment:

- **Prepare monthly reports, track cost and submit invoices ─** As part of this subtask, SulTRAC will provide general work assignment management and coordination to implement the work assignment SOW. SulTRAC will prepare monthly progress reports in accordance with contract requirements. The reports will be submitted to EPA Region 5 by the 20th calendar day of each month. SulTRAC will document the technical progress and status of each task in the WBS for the reporting period in accordance with the contract requirements. SulTRAC will manage, track, and report costs and LOE (by P level) for the reporting period, as well as cumulative amounts expended to date. SulTRAC will notify EPA when 75 percent of the approved work assignment budget has been expended. SulTRAC will track cost and monthly invoices will be prepared and submitted in accordance with the level of detail specified in the contract.

SulTRAC will accommodate any external audit or review mechanism and will attend EPA-held training as directed by EPA, but has not included hours for such activities in this cost estimate.

SulTRAC has estimated a total of 10 LOE and 1 clerical hour per month for this subtask for the 24 month duration of the project.

P4	P3	P2	P1	Total LOE	CL
240	0	0	0	240	24

- **Progress Meetings** – SulTRAC will participate in progress meetings as needed during the course of the work assignment. In accordance with the SOW, SulTRAC has assumed the two persons will attend 4 meetings for 2 hours per meeting. In addition, SulTRAC has assumed that each meeting will require 2 hours of preparation time.

P4	P3	P2	P1	Total LOE	CL
16	8	0	0	24	0

Subtask 1.5 – Subcontractor Procurement and Support Activities

SulTRAC will identify, procure and administer the necessary subcontracts and will manage and oversee subcontractors procured to accomplish the services included in this scope of work. Anticipated subcontractors may include Geoprobe, laboratory services, surveyors, utility clearance subcontractors, and the like. SulTRAC has assumed that 6 subcontractors will be required and that procuring, overseeing, and managing these subcontractors will require approximately 12 hours per subcontractor.

P4	P3	P2	P1	Total LOE	CL
12	36	24	0	72	0

TASK 2—COMMUNITY INVOLVEMENT

This task includes technical support during public/availability meeting(s). SulTRAC will provide community involvement support to U.S. EPA throughout the RI/FS oversight in accordance with the *National Oil and Hazardous Substances Pollution Contingency Plan* (NCP, 40 CFR Part 300) and the *Community Relations in Superfund - A Handbook*, (U.S. EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9230.0-3C, January 1992.

In accordance with the SOW, SulTRAC has assumed that there will be four community meetings during the remaining period of performance, as specified in the SOW, and that one SulTRAC personnel will participate in and travel to each meeting. For budgeting purposes SulTRAC assumed that technical support for each community meeting will include:

- 1 SulTRAC personnel will attend each meeting, including 4 hours of preparation time, 3 hours to set up and participate in meeting, and 4 hrs of travel time to and from the meeting, plus travel expenses.
- SulTRAC drafting personnel will prepare graphics for the participants of the meeting. SulTRAC has assumed that 4 hours of P2 graphics preparation time will be needed for each meeting.
- SulTRAC has not included any costs for preparation of fact sheets or translation services.

Actual personnel attendance needs will be as determined by the WAM at the time of the meeting.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Total Cost
44	0	16	0	60	0	$300	$92	$7,519

TASK 3 – FIELD INVESTIGATION / DATA ACQUISITION

Data acquisition entails collecting environmental samples and information required to support the RI/FS. The planning for this task is accomplished in Task 1 - Project Planning and Support, which results in the plans required to collect the field data. Data acquisition starts with EPA's approval of the FSP and QAPP developed in Task 1 and ends with the demobilization of field personnel and equipment from the site.

SulTRAC plans to conduct the field investigation portion of the RI in two phases. The first phase will address several primary objectives, including:

- Determine the lateral and vertical extent of lead-contaminated soils at residences, schools, parks, vacant lots, and other areas;
- Determine if other contaminants are associated with lead-contaminated soils;
- Determine if the lead-contaminated soil requires disposal as characteristic hazardous waste;
- Provide a good basis for estimating the number of homes in the study area that will require remediation. where children may come into contact with contaminated soil;
- Evaluate contamination in an on-site wetland and determine if the contamination merits a remedial response.

SulTRAC has used the city blocks as a basis to delineate the lateral extent of lead contamination. SulTRAC will collect samples from properties on each side of each block, for a total of approximately 3 sites per block. The field team will attempt to evenly distribute the samples to provide coverage of the study area; exact sampling locations will be determined based on site access. The residential area includes approximately 30 residential blocks, so a total of 90 properties will be sampled during the first phase of the investigation. An additional 20 samples will be collected in the area between McCook Avenue and the canal, and four additional samples will be collected in playgrounds and parks for a total of 114 properties evaluated during the initial phase of the investigation. The field team will attempt to achieve an even distribution of sampling locations, subject to property access.

- **Obtain access agreements** – As discussed during the July 2, 2009, kickoff meeting, SulTRAC has assumed that one two-person field team can obtain access to these properties during a two-week period.

P4	P3	P2	P1	Total LOE	CL
0	0	100	100	200	0

- **Utility clearance** – There are a total of 114 properties to be evaluated during the initial phase of the investigation. SulTRAC has assumed that each property will require one hour for utility clearance, and SulTRAC personnel will accompany the utility clearance subcontractor for a total of 120 hours. SulTRAC has assumed that utility clearance will cost approximately $400/day for 12 days for a total of $4,800 in utility clearance charges.

P4	P3	P2	P1	Total LOE	CL
0	0	0	120	120	0

- **Collect samples** – There are a total of 114 properties to be evaluated during the initial phase of the investigation. SulTRAC has assumed that one two-person field team can collect samples from 3 properties per day, for a total of approximately 30 field days. In addition, the PM will require one hour per team per day to manage the operation.

P4	P3	P2	P1	Total LOE	CL
30	0	300	300	630	0

- **Ecological investigation** – The ecological investigation during the first phase of sampling will consist of a one-day site visit to conduct a wetland and habitat delineation/function and value assessment and a benthic reconnaissance/community characterization, and a screen of databases for endangered species and others of special concern. The investigation will be limited to the

wetland areas surrounding the corrective action management unit (CAMU) at the U.S. Lead and Smelter Refinery Facility. The need for a possible geophysical survey of the wetlands will be assessed during the ecological site visit. SulTRAC has assumed that a senior and a junior ecological risk assessor will conduct a one-day site visit and prepare a brief, letter-style report summarizing their findings.

P4	P3	P2	P1	Total LOE	CL
24	0	32	0	56	8

- **Investigation-derived wastes** – The investigation is anticipated to produce two types of investigation-derived wastes: Soils from shallow soil borings, and rinse water from equipment decontamination. Soils and rinse water will be containerized in buckets and transported to a central area where the wastes will be containerized in 55-gallon drums. SulTRAC estimates that approximately 5 drums of soil and 10 drums of water will require characterization and disposal.

P4	P3	P2	P1	Total LOE	CL
2	0	12	8	22	0

- **Other** –
  - In accordance with discussions during the July 7 site visit, SulTRAC has assumed that a field laboratory and trailer will not be employed at the site during the initial phase of the investigation due to security concerns, and has not included any costs associated with setting up or maintaining a field trailer or temporary laboratory.
  - SulTRAC has not included any costs associated with conducting air investigations, hydrogeological investigations (Ground Water and Surface Water), waste investigations, geophysical investigations, or radiological investigations.
  - SulTRAC has not included any costs for property boundary or topographic surveys, well inventories, or utility right-of-way surveys.
  - The need for a possible geophysical survey of the wetlands will be assessed during the ecological site visit. SulTRAC has not included any costs for ecological surveys of the wetlands.

The total estimated LOE and associated costs for Task 3 are as follows:

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
56	0	444	528	1028	8	$3,360	$12,283	$17,584	$103,724

TASK 4 - SAMPLE ANALYSIS

As directed by the June 19, 2009 SOW, SulTRAC has assumed that sample analyses will be conducted by an EPA contract laboratory program (CLP) lab, and therefore has not included analytical costs in this cost estimate. However, several analyses recommended by *Superfund Lead-Contaminated Residential Sites Handbook* (EPA 2003) are not performed by CLP labs. These include passing samples through a No. 600 sieve and XRF analysis. SulTRAC will have a commercial geotechnical laboratory sieve approximately ten percent of the samples (12 samples) and has included costs of approximately $100 per sample for sample sieving, plus $500 for shipment of samples to the geotechnical laboratory and subsequently to a CLP laboratory. SulTRAC has included charges of $1,350.00 per week for rental of a Niton XRF 300 portable XRF unit under Task 3. SulTRAC has included 8 hours for a sample coordinator to coordinate geotechnical sample shipment and analysis.

The total estimated LOE and associated costs for Task 4 are as follows:

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Total Cost
0	8	0	0	8	0	$0	$2,201	$3,354

TASK 5 - ANALYTICAL SUPPORT AND DATA VALIDATION

This task describes analytical support and data validation when required of the samples collected under Task 3. SulTRAC will perform the following activities:

- Collect, prepare, and ship the environmental samples in accordance with the FSP and QAPP. Due to site security concerns, SulTRAC does not anticipate setting up a field trailer at the site. Instead, SulTRAC has assumed that sample packaging and associated paperwork will be conducted in a nearby hotel and has included hotel costs under this task. SulTRAC has assumed that one person will be required full-time during the field investigation to package, prepare, and ship samples and complete all sample paperwork using Forms-2-Lite software, and has included 300 hours of LOE (30 10-hour days) for a P2 conversant with CLP procedures and software to perform this task.

- Coordinate with the EPA Sample Management Office (SMO), the Regional Sample Control Coordinator (RSCC), regarding analytical support, data validation, and quality assurance issues. SulTRAC has included 1 hour per sampling day (30 hours) for SulTRAC's CLP coordinator.

- Implement the EPA-approved laboratory quality assurance program that provides oversight of in-house and subcontracted laboratories through periodic performance evaluation sample analyses and/or on-site audits of operations and has a system of corrective actions.

- Provide sample management including chain of custody procedures, information management, sample retention, and 10-year data storage. SulTRAC has included 40 hours for a database specialist to organize and archive resultant data in a database.

- Perform data validation, when necessary. SulTRAC has assumed that the CLP data will require limited data validation, in order to maintain defensibility, and has included 120 hours for a P3 chemist to perform analytical data validation and prepare a Data Validation Report. Validating data internally, rather than using CLP data validation will avoid schedule delays and expedite analysis of data.

The total estimated LOE and associated costs for Task 5 are as follows:

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Total Cost
30	120	340	0	490	0	$2,790	$569	$39,011

TASK 6 - DATA EVALUATION

SulTRAC anticipates reviewing data collected under the first phase of the investigation and presenting the results in a technical memorandum that presents and compiles all of the data collected, summarizes key findings, and proposes an approach for the more extensive second phase of the investigation, comparison and evaluation of the sampling techniques recommended in *Superfund Lead-Contaminated Residential Sites Handbook* (EPA 2003). The technical memorandum will compile the sampling data and determine usability of all data collected, and will replace the Data Evaluation Summary Report discussed in the SOW. SulTRAC does not anticipate that modeling will be necessary to evaluate the data, and has not included costs for modeling.

The total estimated LOE and associated costs for Task 6 are as follows:

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Total Cost
92	136	120	40	388	20	$0	$213	$35,417

TASKS 7 THROUGH 15

As discussed during the site kickoff meeting on July 2, 2009, SulTRAC will use a phased approach to conduct the RI at the USS Lead site. Results from the initial phase of the investigation will be used to guide subsequent phases of investigation and evaluate the need for new data and to help determine the density of data points. Accordingly, no costs have been included in this cost estimate for Tasks 7 through 15.

3.0 SCHEDULE

Major deliverables and a suggested schedule for submittals for this work assignment are presented in Table 1 below. Actual schedule will be determined in consultation with the EPA WAM.

TABLE 1: SUMMARY OF MAJOR SUBMITTALS FOR THE RI/FS AT USS LEAD SUPERFUND SITE

Deliverable	Due Date
Task 1.1 RI/FS Work Plan	30 days after site visit
Task 1.1 Revised Work Plan	15 days after receipt of comments or negotiation meting
Task 1.1 Conflict of Interest Disclosure	Within five days after acceptance of work assignment
Task 1.2 Site Management Plan	30 days after work plan approval
Task 1.2 Field Sampling Plan	30 days after work plan approval
Task 1.2 Quality Assurance Project Plan	30 days after work plan approval
Task 1.2 Data Management Plan	30 days after work plan approval
Task 1.2 Health & Safety Plan	30 days after work plan approval
Task 1.4 Monthly Progress Reports	As provided for in the Contract
Task 6 Technical Memorandum: Phase I Investigation	45 days after receipt of validated data.
Task 7 Draft SLHHRA Letter Report	To be determined
Task 7 Draft SLERA Letter Report	To be determined
Task 7 Draft HHRA Report	To be determined
Task 7 Draft ERA Report	To be determined
Task 7 Final SLHHRA Letter Report	10 days after receipt of comments
Task 7 Final SLERA Letter Report	10 days after receipt of comments
Task 7 Final HHRA Report	21 days after receipt of comments
Task 7 Final ERA Report	21 days after receipt of comments
Task 9 Draft RI Report	30 days after completion of HHRA or ERA
Task 9 Final RI Report	21 days after receipt of comments
Task 10 Remedial Alt Screening	To be determined
Task 11 Remedial Alt Evaluation	To be determined
Task 12 Draft FS Report	To be determined
Task 12 Final FS Report	21 days after receipt of comments
Task 15 Work Assignment Completion Report (WACR)	45 days after receipt of the Work Assignment Closeout Notification (WACN)
Task 15 Final Costs documented in WACR	90 days after receipt of WACN

4.0 QUALITY CONTROL

SulTRAC's internal QC process requires that all project deliverables be reviewed to promote technical adequacy and completeness. SulTRAC's QA manager or designee not associated with the work assignment will perform internal QC checks of work assignment activities. Internal QC checks will address adherence to this work plan and SulTRAC's QA program plan for RAC 2. The cost of QC reviews is included in the cost estimate for this work assignment.

5.0 COST ESTIMATE

The estimated LOE hours and dollars required for SulTRAC to complete the first phase of work under the USS Lead Superfund Site RI/FS Work Assignment are 2,912 LOE hours and $302,999, respectively. To develop the cost estimate, SulTRAC used estimated labor rates under RAC 2 and current rates for selected long-term staff. Appendix A summarizes the total project costs (Table A-1), staffing plan (Table A-2), travel costs (Table A-3), other direct costs (Table A-4), and equipment costs (Table A-5).

APPENDIX

PROPOSED COST ESTIMATE

(Five Pages)