# **ARCS V**

**Remedial Activities at Uncontrolled Hazardous** Waste Sites in **Region V** 



SEPA United States Environmental Protection Agency

Work Plan for the Long Term Response Action

> **Onalaska Municipal Landfill** Onalaska, Wisconsin

WA 79-5HL5 Contract No. 68-W8-0040







## Work Plan for the Long Term Response Action

Onalaska Municipal Landfill Onalaska, Wisconsin

WA 79-5HL5 Contract No. 68-W8-0040

Prepared by



March 4, 1994

MKE100139EB.WP5

## Contents

		Page
1.0	Introduction	1-1
1.1	General	1-1
	Project Background	
2.0	Scope of Work and Task Descriptions	2-1
2.1	Task PP—Project Planning	2-1
2.2	Task RA—Remedial Action Implementation	2-2
2.3	Task CV—Cleanup Validation	2-5
	Task EP—Subcontractor Procurement	2-8
	Task PC—Project Closeout	2-11
3.0	Staff Organization	3-1
3.1	Site Manager	3-1
3.2	Review Team	3-1
4.0	Schedule	4-1
5.0	Budget	5-1

### Tables

Numb	er	lows Page
2-1	Summary of the Estimated Number of Groundwater Samples and Analytical Costs	 2-6
5-1	Estimated Costs	 5-1

## Figures

Numl	ber Follows Page	
1	Site Location Map	
2	Site Map	
3	Project Organization	
4	Project Schedule	

i

### Section 1 **1.0 Introduction**

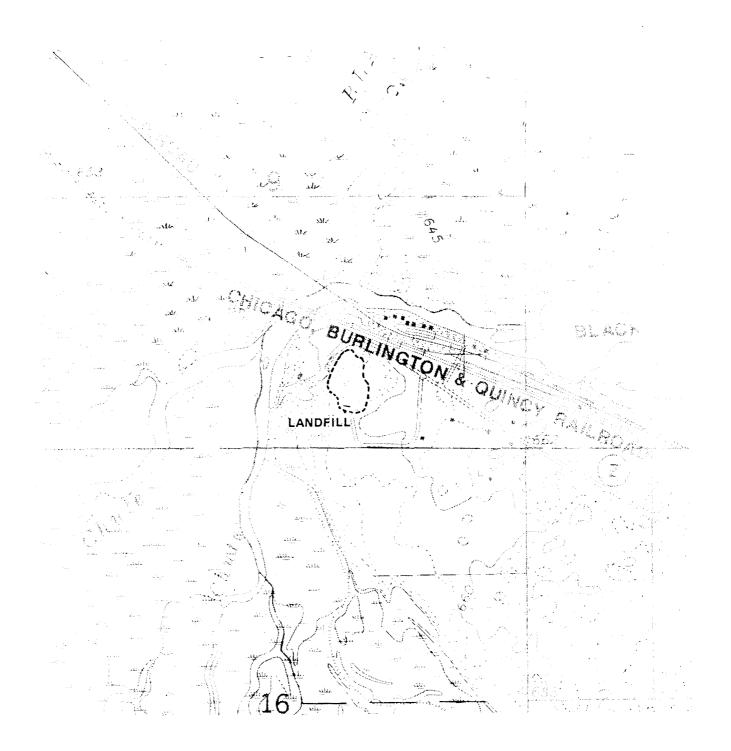
### 1.1 General

This work plan defines the scope of activities, schedule, and budget to accomplish Work Assignment (WA) 79-5HL5, Long-Term Response Action (LTRA) for the Onalaska Municipal Landfill site. The scope of the WA consists of operating and maintaining the groundwater treatment plant, in situ biotreatment system, and landfill cap in accordance with the groundwater treatment system and cap operation and maintenance (O&M) manuals; and periodic performance of groundwater, soil, and sediment sampling and analyses in accordance with the approved Groundwater Monitoring Plan (GMP) and Quality Assurance Project Plan (QAPP). The period of performance defined in the WA is 24 months.

### **1.2 Project Background**

The Onalaska Municipal Landfill site is located in the Township of Onalaska, La Crosse County, Wisconsin (Figure 1). The site consists of the town's former landfill (about 8 acres in area and up to 15 feet deep) and adjacent property to which the groundwater contaminant plume has migrated (Figure 2). Fifty 5-gallon drums of waste solvents and other municipal and commercial wastes are reported to have been disposed of at the site. The remedial investigation (RI) determined that, as a result of hazardous waste disposal at the landfill, various chemical contaminants have leached into the groundwater and are flowing toward the Black River. The Record of Decision (ROD), which the U.S. Environmental Protection Agency (EPA) signed in August 1990, specified that the following Remedial Action (RA) efforts be undertaken to protect human health and the environment.

- Design, construct, operate, and maintain a groundwater extraction, treatment, and discharge system to meet designated cleanup standards and discharge requirements
- In situ bioremediation of the layer of soil immediately above the groundwater table that has been smeared with naphtha contaminants
- Periodically monitor groundwater, soil, and sediments for the protection of human health and the environment
- Design, construct, and maintain a landfill cap meeting state requirements under applicable or relevant and appropriate laws





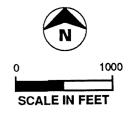


FIGURE 1 SITE LOCATION MAP ONALASKA MUNICIPAL LANDFILL SITE Long Term Response Action Work Plan

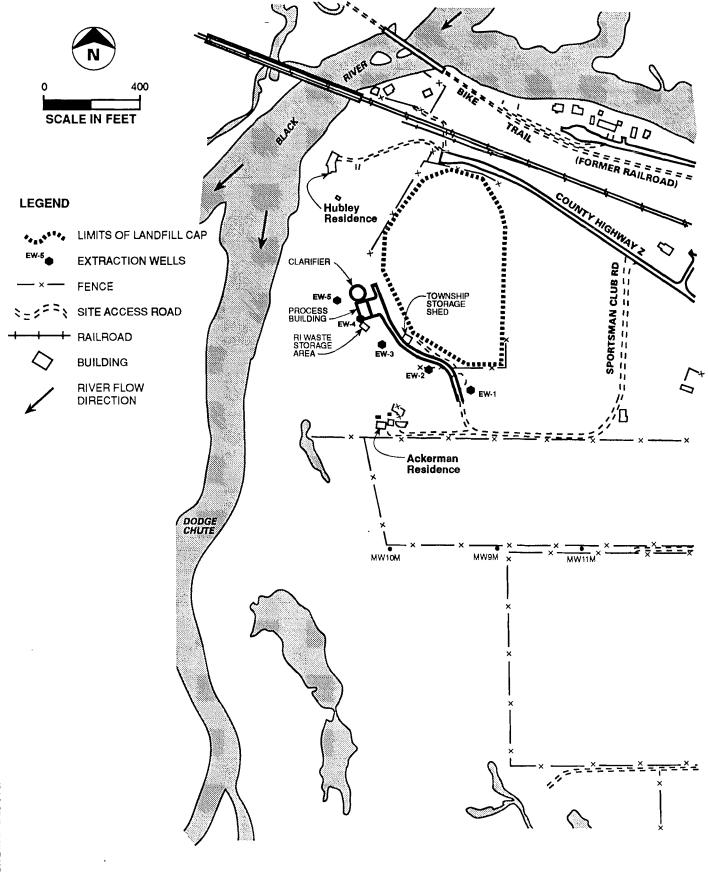


FIGURE 2 SITE MAP ONALASKA LANDFILL Long Term Response Action CH2M HILL designed the groundwater extraction and treatment system and the landfill cap under WA 38-5NL5, and is currently constructing the designs under WA 47-5RL5. The cap and treatment facility construction is scheduled to be completed in May 1994.

MKE10039E9.WP5

### Section 2 2.0 Scope of Work and Task Descriptions

The long-term response portion of the RA will be executed through the performance of the following tasks:

- Project planning (PP)
- Remedial action implementation (RA)
- Cleanup validation (CV)
- Subcontractor procurement (EP)
- Project closeout (PC)

### **2.1** Task PP—Project Planning

Task PP consists of overall project planning and management activities. It includes the activities performed in preparation of the work plan. This work plan was prepared under interim authorization.

### 2.1.1 Subtask PP.PM—Project Management

Activities performed under Subtask PP.PM consist of project management duties related to monthly reporting to the EPA for the duration of the WA, and include:

- Manage project staff
- Prepare monthly technical status reports
- Monitor project costs and schedules and review them with the EPA
- Prepare monthly budgets and schedules (forecasting)
- Filing and document control
- Regular coordination discussions with the WA manager (WAM) on general project progress or issues not specific to a particular task

Project management and administration costs are estimated on the basis of project duration. For the LTRA, the project management level of effort (LOE) estimates assume the project duration will be 24 months (July 1994 through June 1996).

The estimated LOE for this subtask is 813 hours.

### 2.1.2 Subtask PP.WP—Prepare Work Plan

This work plan was prepared under Subtask PP.WP and interim authorization funding. The purpose of the work plan is to define and describe the tasks necessary to execute the LTRA. Work plan development activities include:

- Developing scope of work and associated budget
- Preparing a project schedule
- Identifying staff for administration, inspection, and health and safety
- Establishing lines of responsibility of organizations and personnel involved
- Preparing and submitting the draft and final work plans

This subtask also includes labor hours for the initial kickoff meeting between CH2M HILL and the EPA. The meeting was conducted by conference call on February 15, 1994, during which the EPA project officer (PO), WAM, and CH2M HILL's site manager (SM), Steve Keith, participated.

Work plan revision requests (WPRR), if necessary, will be made under this subtask. WPRRs will be required when work needs to be conducted that was not included in the original statement of work. The budget for Subtask PP.PP does not include LOE hours for WPRRs initiated by revisions to the WA by the EPA. Individual WA Forms will include the LOE hours needed to prepare the WPRR.

This subtask is complete with the approval of the work plan. The estimated LOE for this subtask is 100 hours.

### 2.1.3 Subtask PP.QC—Quality Control

Internal quality control (QC) review of the work plan is performed under Subtask PP.QC. The draft work plan will be reviewed by three senior staff. Comments by the senior reviewers will be incorporated in the final version.

The estimated LOE for this task is 16 hours.

### 2.2 Task RA—Remedial Action Implementation

Task RA includes operating and maintaining the groundwater treatment facility. Operation of the groundwater treatment plant will be performed by a subcontractor; CH2M HILL will monitor subcontractor performance. Field sampling will be performed by CH2M HILL. All subcontractor invoices will be managed under this task.

### 2.2.1 Subtask RA.11—Primary Operation

The costs directly associated with operating and maintaining the treatment facility and administration of facilities maintenance subcontracts are included in this subtask. The landfill cap maintenance is not addressed in this work plan.

Facility equipment will be operated and maintained as specified in the Groundwater Treatment O&M manual and in compliance with established effluent limits. The Groundwater Treatment O&M manual describes general equipment operation and maintenance procedures. More specific vendor-supplied information will be provided and incorporated into the manual when it becomes available.

Duties to be performed by the treatment system operator include troubleshooting, adjusting chemical dosages, operating the filter press, conducting basic laboratory analyses (described below), and taking readings of process conditions, groundwater levels, soil gas oxygen and methane levels, and other parameters discussed in the O&M manual; and filling out operational logs and documents with the information.

The operator will sample process streams (liquids and solids) and perform basic laboratory analyses consisting of temperature, pH, conductivity, and dissolved oxygen as specified in the O&M manual. Effluent samples will be tested by a laboratory certified in the State of Wisconsin. The collection of samples will conform to the O&M manual's procedures for proper handling, protocol, analysis, and chain of custody.

Housekeeping and groundskeeping activities will be performed under the treatment facility subcontract. The interior and exterior of the facility will be kept clean of extraneous equipment and trash. Physical hazards, such as water on floors and snow and ice in pedestrian traffic areas, will be removed to the extent practicable. Snow removal will be provided as needed for the entire length of the access road. Grass and weed cutting will be provided in the immediate area of the facility.

The treatment facility operator will procure all chemicals, materials, and services as may be required for satisfactory maintenance of the facility. Such items may include, but are not limited to transportation and disposal of filter cake at a landfill that is in compliance with the EPA *Offsite Policy* (OSWER Directive No. 9834.11, and CERCLA Section 121(d)(3)); sewage and general trash disposal with federal, state, and local requirements; propane for heating; 50 percent sodium hydroxide solution for pH adjustment of the clarifier; liquid cationic, medium charge/low molecular weight polymer for clarifier; diatomaceous earth for filter press precoat; 98 percent sulfuric acid for pH adjustment; oils and greases for lubrication; calibration standards and solutions; hand tools; sampling equipment and containers; laboratory glassware; snow removal services; weed and grass cutting services in the immediate vicinity of the facility; cleaning supplies; personal hygiene supplies; office supplies and labels; personal protective equipment; and telephone service.

This subcontract assumes that the sludge generated from the iron removal process is nonhazardous and can be managed as a special waste. Samples of sludge generated during bench-scale testing during the remedial design indicated that the sludge would not be a characteristically hazardous waste. Because there were no listed wastes identified to be present onsite during the remedial investigation, it is assumed that the sludge would not need to be managed as a hazardous waste. The subcontractors who will be performing routine onsite work will prepare and implement a site health and safety plan including a hazard communications program as specified in the subcontract documents. This plan will address all the health and safety aspects of operating and maintaining the systems and equipment at the Onalaska Municipal Landfill site.

A telecommunications device or system will be provided to alert the treatment facility operator when there is an emergency at the groundwater treatment facility. The operator will be available 24 hours per day, 7 days per week to respond to emergencies when alerted by the system.

The work performed by subcontractors will be reviewed each month by the SM and one other engineer. The review may include a process operations inspection, process operation logs and process stream sample analytical results review, and brief meetings with the operator to ascertain whether the subcontractor is in conformance with subcontract requirements.

This subtask also includes subcontractor expenses and CH2M HILL labor for a training session to be conducted at the end of this WA. This assumes the treatment facility operation is transferred to a third party. The operations subcontract will include this work as a separate bid item.

Under this subtask, a technical memorandum will be prepared each month describing the following:

- General operational performance
- Groundwater pumping rates during the month
- Major maintenance performed
- Summaries of effluent data
- Operational difficulties
- Suggested improvements

The estimated LOE for this subtask is 792 hours.

### 2.2.2 Subtask RA.ML—Revisions to the O&M Manual

The O&M manual was drafted under the RD WA and revised under the RA WA. Under Subtask RA.ML, the manual published in May 1992 will be updated to include any revised maintenance needs for installed components. The updated version will include a chapter on the operating and maintaining the in situ treatment system equipment and measuring vadose zone gases from soil gas probes. Maintenance requirements may need to be revised depending on the performance of the treatment system and additional information provided by the vendors.

The estimated LOE to perform this subtask is 104 hours.

### 2.2.3 Subtask RA.MG—Meetings

Activities performed under Subtask RA.MG include labor hours for participation in public meetings and meetings with the WDNR. The purpose of the meetings will be to update the interested parties on project progress. The meetings will allow the interested parties to monitor project performance and provide a forum for discussion. The budget for this task assumes that CH2M HILL will provide technical assistance to the EPA at one public meeting and one meeting with the WDNR. The budget for this subtask assumes that the meetings will be held near the site and attended by the SM and one other engineer. The meeting dates have not been determined at this time.

The estimated LOE for this subtask is 64 hours.

### 2.2.4 Subtask RA.QS—QAPP

A LTRA QAPP and GMP will be prepared. The existing *Onalaska Municipal Landfill QAPP and Monitoring Plan* (May 1992) will be modified to meet the requirements of the LTRA. Revisions to the monitoring plan have been suggested by the WDNR and EPA. The suggested revisions include adding two residential wells in the current groundwater sampling network and reducing the frequency of the groundwater sampling events from monthly to bimonthly. Associated sampling sections of the report will be updated. The revised monitoring plan will contain sample collection methods, analyses, and schedules and both the QAPP and GMP must receive EPA approval before implementation.

The estimated LOE to perform this task is 76 hours.

### 2.2.5 Subtask RA.QC—Quality Control

Regular senior review will be performed under Subtask RA.QC. The frequency of the meetings will depend on the number of problems encountered during operation. This work plan assumes a 1-hour monthly meeting will be held and attended by the PM and three senior reviewers. The general project progress, problems, and performance will be discussed and assessed. The senior review process will assist the PM in directing project activities.

The estimated LOE for this task is 105 hours.

### 2.3 Task CV—Cleanup Validation

Work performed under this task relates to sampling groundwater, soil, and sediment to determine the efficacy of the remedial action.

Summary o	f the Estimated N	Table umber of Gro		mples & Ana	lytical Costs	
Analytes	Method	No. of Samples per Event	No. of QC Samples per Event	Total No. of Samples	Cost per Sample	Tota Analyt Cos
Groundwater						
Select VOCs	8260	12	7	19	\$300	\$5,
Select Metals	SW-846 7000 Series	12	3	15	\$270	\$4,
Odor	EPA140.1	12	0	12	\$25	\$
Color	EPA 110.1	12	0	12	\$40	\$
Hardness	EPA 130.1	12	2	14	\$20	\$
Oil&Grease	EPA 413.2	12	2	14	\$75	\$1,
Chloride	EPA325.1/325.3	12	2	14	\$25	\$
TDS	EPA 160.1	12	2	14	\$25	\$
Alkalinity	EPA310.1	12	2	14	\$25	\$
TOC	EPA415.1	12	2	14	\$50	\$
COD	EPA410.4	12	2	14	\$40	\$
					Subtotal	\$14,
Sediment						
Select VOCs	8260	2	2	4	\$310	\$1,
Select Metals	SW-846 7000 Series	2	2	4	\$270	\$1,
					Subtotal	\$2,

## 2.3.1 Subtask CV.FQ—Groundwater, Surface Water, and Sediment Sampling

### Sampling

CH2M HILL will conduct groundwater samples from each of the monitoring wells on a bimonthly basis during the first year of operation and quarterly thereafter. CH2M HILL will also conduct annual sampling of surface water and sediment according to the GMP. Field teams will consist of two members who will travel to the site from CH2M HILL's Milwaukee office. Collecting and analyzing the groundwater, soil, and sediment samples will follow the revised GMP and QAPP version approval. The sampling events are expected to last about 3 days beginning May 1994 and ending July 1996.

Sampling will generally be conducted under Level D conditions (as defined by Occupational Safety and Health Act [OSHA] CFR 1920.120). If breathing zone volatile emission detections by the HNu or OVA exceed QAPP guidance, then personnel will upgrade to Level C.

### Sample Analysis

The total number of samples to be collected are summarized in Table 2-1. The samples will undergo special analytical services (SAS) and be sent to a laboratory procured by CH2M HILL. Rationale for the analyses selected and other sampling information will be contained in the QAPP and GMP.

### **Budget**

The budget for this subtask assumes that the required samples can be collected during one 3-day trip. Budget development assumptions are shown on the schedule in Table 2-1. Those costs are preliminary. Actual analytical costs will be determined by bidding among laboratories accessed through a Blanket Ordering Agreement (BOA). This work plan assumes that standard turnaround times are acceptable to the EPA and WDNR.

Sample management, data evaluation, and reporting are covered in Subtask CV.SM and Subtask CV.DE.

The estimated LOE for this subtask is 686 hours.

### 2.3.2 Subtask CV.SM—Sample Management

Activities performed under Subtask CV.SM consist of laboratory procurement and data management and validation. A CH2M HILL chemist will obtain the services of a laboratory for SAS sample analyses, track samples, and act as intermediary with the laboratory before and during sample events.

All generated analytical data will be checked and reviewed by the analyst generating the data and an experienced data reviewer.

The analyst will review the data to verify that:

- Sample preparation information is correct and complete.
- Analysis information is correct and complete.
- The appropriate standard operating procedures were followed.
- Analytical results are correct and complete.
- QC samples are within established control limits.
- Blanks were within the appropriate QC limits.
- Documentation is complete.

The data reviewer will review the data package to verify that:

- Calibration data are scientifically sound and appropriate.
- QC samples are within established guidelines.
- Qualitative and quantitative results are correct.
- Documentation is complete.
- The data package is complete and ready for document archiving.

All analytical results issued by the laboratory will be accompanied by a case narrative report. The case narrative will be issued for each QC batch of samples processed through the laboratory. The case narrative will include but not be limited to the following:

- Sample summary cross referencing the field and laboratory sample identification, matrix, and date sample was collected in the field and received by the laboratory
- Project summary referencing the analytical methodology
- Discussion of any protocol deviations that may have occurred during sample testing
- Discussion of QC questions that were encountered and the corrective measure taken
- Summary and discussion of samples that are diluted by the presence of an interference, nontarget analyte, or target analyte
- Any QC samples exceeding established control limits

All data generated for the project will be collected in a manner that facilitates generating data packages that can be used by an external data auditor to reconstruct the analytical

process. The data provided by the laboratory will be legible and properly labeled. The laboratory will provide one hard copy of the data package.

The estimated LOE for this subtask is 1,560 hours.

### 2.3.3 Subtask CV.DE—Data Evaluation

Groundwater, soil, and sediment data that is obtained from sampling will be evaluated and tabulated under this subtask. Preparing quarterly groundwater quality reports for the WDNR and GWMP is included in this subtask. Data evaluation methods and report contents are outlined in the QAPP.

Groundwater treatment process effluent data will be evaluated under this subtask. A report will be prepared for each package of treatment system effluent data. The reports are expected to be prepared monthly and will compare the sample analytical results with WDNR-computed effluent limits.

This submittal assumes there will be a total of 36 data packages that will require input into spreadsheets and a report prepared that summarizes the results for the EPA and WDNR.

The estimated LOE for this subtask is 1,136.

### 2.4 Task EP—Subcontractor Procurement

Procuring the treatment plant operation and maintenance subcontractor will be conducted according procedures outlined in *Two-Step Sealed Bidding* (FAR Subpart 14.5), and will result in a fixed-price subcontract (combination of lump sum and unit prices). Task EP assumes that the project specifications are not absolutely defined or complete, making discussions necessary to reach a mutual understanding of the work scope. This task assumes more than one technically qualified firm will propose on the work.

### 2.4.1 Subtask EP.RF—Request for Proposals

The following activities will be performed under this subtask to procure a 24-month groundwater treatment facility operating subcontract.

- Prepare Commerce Business Daily synopsis.
- Prepare a list of parties interested in reviewing the Request for Technical Proposals (RFTP).
- Prepare Step 1-RFTP solicitation documents.

- Define requirements for technical proposals (for example, to provide that technical proposals not include prices or pricing information).
- Define evaluation requirements for Step 1 including significant factors and subfactors. The evaluation criteria may include:
  - Record of performance
  - Experience and qualification including both work performed in a toxic and hazardous waste environment and references
  - Financial capability to perform work
  - Capacity and capability to perform work
  - Complete subcontract forms
- Prepare Step 2 documents.
- Produce 50 copies of solicitation documents for distribution and internal use. Produce 50 copies of the O&M manual.
- Distribute according to the source list Commerce Business Daily announcement.
- Respond to inquiries regarding the RFTP.
- Prepare and distribute any amendments and addendum based on responses to solicitation. The budget for this task assumes one addendum will be prepared.
- Set date by which technical proposals shall be required.
- Prepare for presolicitation conference at La Crosse. CH2M HILL will prepare and distribute meeting minutes to attendees and plan holders of record after the meeting.
- Conduct 1-day site visit during the presolicitation conference. This subtask assumes that two members from CH2M HILL will attend.
- Receive technical proposals, evaluate, rank, make competitive range determination; conduct discussions with those in competitive range; and make memorandum of negotiations for each subcontractor file (to be performed under Subtask EP.BA—Bid Award).

- Conduct Step 2 (sealed bids) with all technically acceptable offerors.
- Evaluate low bidder responsiveness.

Also under this subtask, a subcontractor will be procured to chlorinate the groundwater extraction wells on a one-time basis. The need to perform this activity will depend on the extent of iron bacteria growth on the extraction well casings. For the purposes of this work plan, budget has been included for a subcontractor to perform this once during the LTRA. Procurement will be done by preparing a work scope and soliciting bids (1-step) from three or more qualified subcontractors.

This subtask also includes procuring three laboratories (one for groundwater, one for effluent, and one for bioassay testing) by preparing a work scope and soliciting bids (1-step) from three or more qualified subcontractors. This assumes that a Blanket Ordering Agreement (BOA) has been established under ARCS program management to provide access to laboratories for SAS.

The estimated LOE for this subtask is 318 hours.

### 2.4.2 Subtask EP.BA—Bidding Award

For each procurement, sealed bids will be opened, read, and recorded. Bids will be reviewed to determine if the bidders are both responsive to the requirements of the bid solicitations and responsible. The bid review will include:

- Verify low bidders' price.
- Confirm that there were no "mistakes" in the bid packages.
- Conduct administrative and legal review of subcontract.
- Notify the EPA of intent to award and request consent from the CO to award the subcontract.
- Award the subcontract.

The subcontract will be awarded on the basis of lowest responsive, responsible bid amount.

Responsive bidders must provide the supporting documents required with the bid. CH2M HILL will conduct legal and administrative review of the subcontractor's bid and submittals before the Notice of Award, as well as the review of performance and payment bonds and certificates of insurance submitted after the Notice of Award. Neither the scope nor budget incorporated in this work plan address bid protests. If a protest is lodged, then CH2M HILL will submit a WPRR for the costs incurred for managing the protest. The WPRR will address procedures for dealing with the protest.

This subtask includes award of the operating subcontract and three laboratories and one well cleaning subcontractor. This subtask also includes LOE for issuing task orders to the laboratories, assuming a BOA has been established.

The estimated LOE for this subtask is 224 hours.

### 2.5 Task PC—Project Closeout

Task PC includes work efforts related to the project completion and closeout phases. This task begins before construction completion and ends after construction completion.

### 2.5.1 Subtask PC.PC—Project Closeout

All project files will be consolidated and indexed according to EPA guidance for storage and microfilming.

Time and expenses required to close out the project after the WA has been completed will be managed under Subtask PC.PC. Those activities will involve collecting and organizing the project files to prepare for final archiving and shipment to a central repository for final processing and storage. A WA closeout request will also be prepared under this subtask and submitted to the EPA.

The estimated LOE for this subtask is 80 hours.

MKE100139E9.WP5

### Section 3 **3.0 Staff Organization**

Figure 3 is the organization chart for the LTRA WA. The responsibilities of key members of this project team are summarized below.

### 3.1 Site Manager

The site manager will be responsible for executing all phases of the project and efficiently applying the full resources of the project team to the project. The SM will be the point of contact with the EPA's WAM. The SM will be responsible for all technical, financial, administrative, and agency-related aspects of the project.

Initially, Steve Keith will serve as the SM. This work plan assumes that within 3 months of the operation subcontract, he will be replaced by a new SM that is also familiar with the project and is acceptable to the EPA. The work plan budget assumes a P2-grade level for the new SM.

### 3.2 Review Team

The senior review team has been selected to meet specific technical needs of the project. Each team member is given a specific area to review. The QC team will consist of:

- Subcontract manager (Bill Hubbard)
- Site safety reviewer (Al Sloan or Chris Culligan)
- System process reviewer (Roger Yolo or Steve Keith)

Each has prior experience with the design or construction of the project.

MKE10039E9.WP5

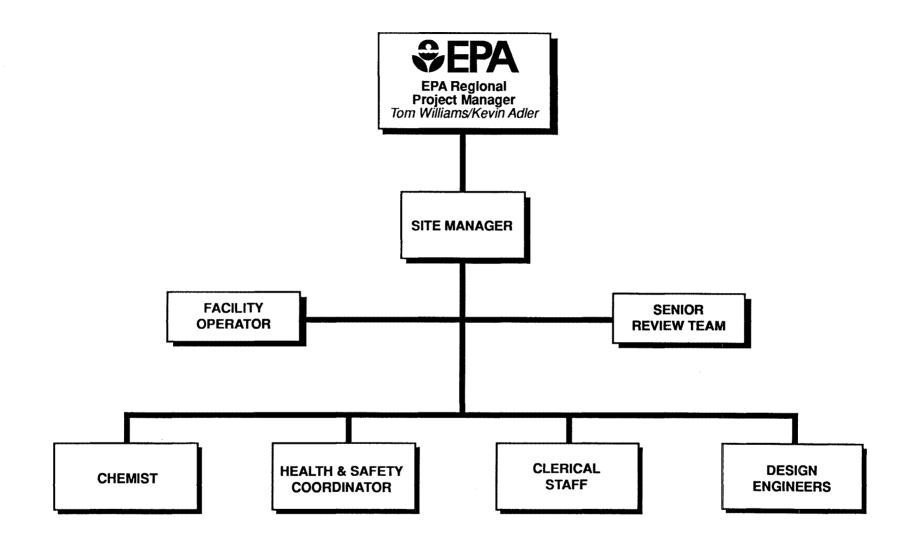
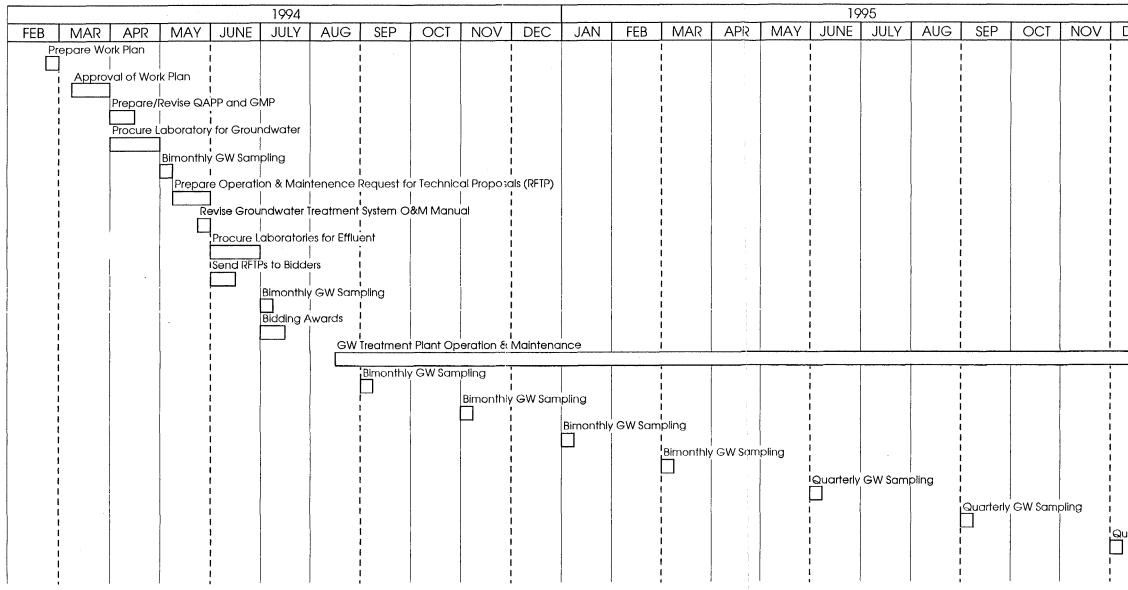


FIGURE 3 PROJECT ORGANIZATION ONALASKA MUNICIPAL LANDFILL SITE Long Term Response Action

### Section 4 4.0 Schedule

A schedule for the project is presented in Figure 4. The schedule assumes that the RA, including the 3 month operating subcontract, is completed in late July. It also assumes that the first round of groundwater sampling is performed in May of 1994 and that groundwater monitoring continues through July of 1996 (27 months).

MKE100139E9.WP5



a a second a

4

				1996			
DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY
-							
		i					
						1	
						E I	
					i		
		1					
						1	
		1					
		l					
		1					
		1					
l uarterly	GW Samp	oling					
			Quarterly	GW Sam	oling	Quarterly	GW Sampl
							Gwaunp

FIGURE 4 SCHEDULE ONALASKA LANDFILL Long Term Response Action

## Section 5 5.0 Budget

Table 5-1 presents the estimated costs to complete the LTRA tasks described above.

MKE100139E9.WP5

### Table 5-1

Client Proj No.: 79-5HL5 Master Project: 6567200							Pag Run	Date: Time:	,,	
SUBTASK Code Description	Status	-Project Prof. Hours	To Date- Total Cost	-Est To Prof. Hours	Complete- Total Cost	Prof. Hours	Complete- Total Cost	H Prof. Hours	Budget Total Cost	
CLEANUP VALIDATION: 65672CV DE Data Evaluation FQ Fieldwork - Groundwater SM Sample and Data Management ZZ General	P P P P	0 0 0 0	0 0 0 0	1136 686 1560 0	107943 242704 122751 0	1136 686 1560 0	107943 242704 122751 0	0 0 0 0	0 0 0 0	
	Total	0	0	3382	473398	3382	473398	0	0	
PROCUREMENT: 65672EP BA Bidding/Award RF Request For Proposal ZZ General	P P P Total	0 0  0	0 0 0 0	224 318 0 	24904 40001 0  64905	224 318 0 	24904 40001 0 	0 0 0	0 0 0 0	
PROJECT CLOSEOUT: 65672PC PC Project Closeout Procedures ZZ General	P P Total	0 0 0	0 0 0	80 0 	7012 0 7012	80 0 	7012 0 7012	0 0 0	0 0 0	
PROJECT PLANNING - RA: 65672PP PM Project Management PP Project Planning General QC Quality Control WP EPA Workplan ZZ General	A A P A A	0 0 0 0 0	0 0 0 0 0	813 0 16 100 0	75822 0 1798 10324 0	813 0 16 100 0	75822 0 1798 10324 0	60 40 0 100 0	5300 3700 0 11000 0	
	Total	0	0	929	87944	929	87944	200	20000	
REMEDIAL ACTION IMPLEMENTATION: 65672RA 11 Construction Budget MG Meetings (External) ML Manuals - Operations and Maintenance QC Quality Control	P P P P	0 0 0	0 0 0 0	792 64 104 105	521679 6839 10632 10741	792 64 104 105	521679 6839 10632 10741	0 0 0 0	0 0 0	

Internal Standard Tasks, Subtasks, Milestones Excluded. \* With invoiced fee only (see PRJ090 for Total with estimated full fee).

#### Table 5-1

Client Proj No.: 79-5HL5 Master Project: 6567200								e Date: Time:	PRJ200 2 03/04/94 11:41:46 01/94
SUBTASK Code Description	Status	-Project To Prof. Hours	Date- Total Cost	-Est To Prof. Hours	Complete- Total Cost	-Est At Prof. Hours	Complete- Total Cost	B Prof. Hours	Budget Total Cost
REMEDIAL ACTION IMPLEMENTATION: 65672RA QS QAPP/SSP/FSP ZZ General	(con't) P P Total	0 0 0	0 0 0	76 0 	7323 0 557214	76 0  1141	7323 0 557214	0	0 0 0
Master Proje		0	0*	6074	1190473	6074	1,190,473	200	20000

Internal Standard Tasks, Subtasks, Milestones Excluded. \* With invoiced fee only (see PRJ090 for Total with estimated full fee).