# AGREEMENT TO FURNISH ENGINEERING SERVICES FOR

# ALABAMA STREET LEASE SITE PROJECT

This Agreement is made and entered into as of this 7th day of May, 1996, by and between

City of Redlands Municipal Utilities Department, hereinafter referred to as "CITY"

and

Woodward-Clyde, hereinafter referred to as "ENGINEER".

In consideration of the mutual promises, covenants and conditions hereinafter set forth, the parties do hereby agree as follows:

## ARTICLE 1 - ENGAGEMENT OF THE ENGINEER

1.1 The CITY hereby engages the ENGINEER, and the ENGINEER hereby accepts the engagement to perform engineering services for the Alabama Street Lease Site Project, hereinafter referred to as "Project".

1.2 All services under this Agreement shall be done in a professional manner, and the ENGINEER represents that the firm employs those persons with the demonstrated skill and the professional expertise necessary to provide high quality services under this Agreement.

1.3 The ENGINEER shall be responsible, to the level of competency presently maintained by other practicing professional engineers providing the same type of services, for the professional and technical soundness, accuracy and adequacy of all reports, designs, drawings, specifications, and other services and materials furnished under this Agreement.

## ARTICLE 2 - SERVICES OF THE ENGINEER

2.1 The ENGINEER shall perform the services required for the Project as defined in Attachment A, Scope of Work.

2.2 Additional services may be provided by the ENGINEER when requested and approved by the CITY and agreed to by the ENGINEER.

## ARTICLE 3 - RESPONSIBILITIES OF THE CITY

3.1 The CITY shall place at the disposal of the ENGINEER all available information pertinent to the Project, including previous reports and any other data relative to the Project.

3.2 The CITY shall provide access to and make all provisions for the ENGINEER to enter upon public and private lands as required for the ENGINEER to perform his services under this Agreement.

3.3 The CITY shall provide all environmental assessments or impact reports required for this project and not otherwise specifically required to be provided by the ENGINEER.

3.4 The CITY shall designate in writing a person to act as the CITY'S representative with respect to the services to be performed under this Agreement, such person to have complete authority to transmit instructions, receive information, interpret and define the CITY's policies and decisions with respect to materials, equipment, elements and systems pertinent to the services covered by this Agreement.

## ARTICLE 4 - PERIOD OF SERVICE

4.1 The ENGINEER shall proceed with the engineering services set forth in Article 2 in accordance with the schedule defined in Attachment B: Schedule.

4.2 The ENGINEER shall proceed with the services under this Agreement promptly and shall prosecute them diligently.

## ARTICLE 5 - PAYMENTS TO THE ENGINEER

5.1 For the services performed under Article 2, Owner shall pay the ENGINEER on a time and materials basis at the hourly rates shown in Attachment D, Schedule of Rates, except as provided herein. The manhour estimates and total project budget are shown in Attachment C, Fee Proposal. The total amount of compensation for the Project shall not exceed the total shown in Attachment C, Fee Proposal, unless the scope of the Project is materially changed and agreed to by the Parties.

5.2 Payment for additional services requested by the CITY per Article 2.2 shall be in accordance with a separately negotiated fee or in accordance with the hourly rates shown in Attachment D: Schedule of Rates.

5.3 ENGINEER agrees that at the point 75 percent of budgeted costs have been expended for the Project, the ENGINEER will notify the CITY in writing, including a brief report on job status, percent complete, analysis of budget, and envisioned expenses to complete the contractual effort. The budget shall not be exceeded except if previously approved by CITY.

5.4 The ENGINEER shall bill the CITY within ten (10) days following the close of each month by submitting an invoice indicating the work performed, who performed the work, under which subtask in the Project budget the work was performed, indirect costs, and if requested, the detailed cost of all work including back-up documentation. Payments by CITY to ENGINEER shall be made within 30 days after receipt and approval of ENGINEER'S invoice, by warrant payable to the ENGINEER.

5.5 All notices, bills and payments shall be made in writing and may be given by personal delivery or by mail. Notices, bills and payments sent by mail shall be addressed as follows:

TO CITY:

Gary Phelps
Municipal Utilities Department
35 Cajon Street
P.O. Box 3005
Redlands CA 92373

TO ENGINEER:

Deborah A. Reid, Ph.D.
Woodward-Clyde
2020 East First Street, Suite 400
Santa Ana CA 92705

When so addressed, such notices shall be deemed given upon deposit in the United States Mail. In all other instances, notices, bills and payments shall be deemed given at the time of actual delivery. Changes may be made in the names and addresses of the person to whom notices, bills and payments are to be given by giving notice pursuant to this paragraph.

## ARTICLE 6 - INSURANCE AND INDEMNIFICATION

6.1 ENGINEER shall maintain worker's compensation insurance and, in addition, shall maintain insurance to protect CITY from claims for damage due to bodily injury, personal injury, or death and claims for injury to or destruction of tangible property while performing the services covered by this Agreement. Said public liability and property damage insurance shall be in a minimum combined single limit of $1,000,000, and in the aggregate. The CITY shall be named a primary additional insured on insurance coverage for public liability and property damage. The ENGINEER shall provide CITY with a certificate evidencing such insurance coverage.

6.2 ENGINEER agrees to maintain professional liability insurance pursuant to this paragraph to protect CITY from negligent acts, errors or omissions of a professional nature; the total aggregate of ENGINEER'S professional liability insurance coverage shall be a minimum of $1,000,000.

6.3 ENGINEER agrees to indemnify, hold harmless and defend CITY and any and all of their elected officials, officers, agents, engineers, and employees from and against all claims, loss, damage, charge or expense, to which they or any of them may be put or subjected to in proportion and to the extent that they arise out of or result from any willful misconduct or negligent act or actions, omission or failure to act on the part of the ENGINEER, his contractors, his suppliers, anyone directly or indirectly employed by any of them or anyone for whose acts or omissions any of them may be liable in the performance of the services described in this Agreement.

## ARTICLE 7 - GENERAL CONSIDERATIONS

7.1 In the event of any legal action brought by either party against the other to enforce any of the obligations hereunder or arising out of any dispute concerning the terms and conditions hereby created, the losing party shall pay the prevailing party such reasonable amounts for fees, costs, expenses, including attorney's fees, as may be set by the Court.

7.2 The ENGINEER shall not sublet or assign any of the services covered by this Agreement, except with the prior written approval of the CITY and in strict compliance with the terms, provisions, and conditions of the Agreement.

7.3 The key ENGINEER'S personnel proposed for the Project are as follows:

| | |
|---|---|
| Project Manager: | Deborah Reid, Ph.D. |
| Technical Review: | David Berry, Ph.D. |
| | Paul Ryan, P.E. |
| Health & Safety | Ron Miller, AHERA |
| Phase I ESA | Deborah Reid, Ph.D. |
| Subsurface Investigation | Eric Fordham, R.G., C.HG. |
| Risk Assessment | Denise Clendening, Ph.D. |

ENGINEER agrees that these key people shall be made available and assigned to the CITY'S Project, and that they shall not be replaced without concurrence from the CITY.

7.4 It is understood and agreed by and between the parties that all documents, records, drawings, designs and specifications, cost estimates, and other project documents developed by the ENGINEER pursuant to this Agreement shall become the property of CITY and shall be delivered to CITY upon completion of services. Any reuse of such documents for other projects and any use of incomplete documents shall be at the CITY'S sole risk.

7.5 ENGINEER is for all purposes an independent contractor. All qualified personnel provided by ENGINEER pursuant to the provisions of this Agreement are to be employed by ENGINEER for his account only, and in no event shall ENGINEER or any personnel retained by him be deemed to have been employed by the CITY or engaged by the CITY for the account of or on behalf of the CITY.

7.6 Unless earlier terminated, as stipulated below, this agreement shall terminate upon completion and acceptance by the CITY of all services approved for performance under Article 2 of this Agreement.

7.7 This Agreement may be terminated in writing by either party in the event of failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party: providing, that no such termination may be effected unless the other party is given (1) not less than thirty (30) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate, and (2) an opportunity for consultation with the terminating party prior to termination.

7.8 If this Agreement is terminated by the CITY for reasons of default by the ENGINEER, an adjustment to ENGINEER's compensation shall be made, but (1) no amount shall be allowed for anticipated profit or unperformed services, and (2) any payment due to the ENGINEER at the time of termination may be adjusted to the extent of any additional costs to the CITY occasioned by the ENGINEER'S default. If termination for default is effected by the ENGINEER, the adjustment in compensation shall provide for payment to the ENGINEER to include a reasonable profit for services rendered and reimbursement for expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by the ENGINEER relating to commitments which had become firm and approved by CITY prior to the termination.

7.9 Upon receipt of a termination notice, the ENGINEER shall (1) promptly discontinue all services affected (unless the notice directs otherwise), and (2) deliver or otherwise make available to the CITY, copies of data, design calculations, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by the ENGINEER in performing services under this Agreement.

7.10 ENGINEER shall maintain books and accounts of all project related payroll costs and all expenses and incidental expense. Books shall be available at all reasonable times for examination by the CITY at the office of the ENGINEER.

7.11 This Agreement, including attachments incorporated herein by reference, represents the entire Agreement and understanding between the parties and any negotiations, proposals or oral agreements are intended to be integrated herein and to be superseded by this written Agreement. Any supplement or amendment to this Agreement to be effective shall be in writing and signed by the CITY and ENGINEER.

7.12 This Agreement shall be governed by and construed in accordance with the laws of the State of California.

IN WITNESS WHEREOF, duly authorized representatives of the parties have signed in confirmation of this Agreement.

CITY OF REDLANDS
("CITY")

By: _____
SWEN LARSON
Mayor

ATTEST:

_____
Deputy City Clerk, City of Redlands

Woodward-Clyde
("ENGINEER")

By: _____ for
EDWARD J. ROGAN, P.E.
Vice President

# ATTACHMENT A

# SCOPE OF WORK

# ATTACHMENT A

## TASK 1 - REVIEW EXISTING SITE AND DATA

Woodward-Clyde typically employs a phased approach to site investigations. Our project approach for collecting available information for the Phase I Environmental Site Assessment (ESA) in accordance with ASTM Practice E 1527-94 for ESAs is described in the sections below. A Phase I ESA typically consists of a site reconnaissance, records review and interviews, and report. Previously prepared reports and other existing site data to be provided by the City of Redlands will also be reviewed as part of the Phase I ESA.

Site Reconnaissance

A site reconnaissance will be conducted by a member of the Woodward-Clyde staff experienced in hazardous materials surveys, who will observe surface conditions and current activities on the subject property and on adjoining properties. An inventory of potential contaminant sources on and adjoining the subject property will be completed based upon visual observations. Photographs will be taken to document conditions observed. We suggest that a representative from C.L. Pharris Sand & Gravel, Inc. who is familiar with current and historical site usage be present at the time of our reconnaissance to answer questions and provide access to site facilities.

Records Review and Interviews

The purpose of the records review is to obtain information on the subject property and adjoining properties which will be useful in assessing whether current and past property usage may be potential sources of contamination. The study area for the records review is based on the ASTM standard requirements and ranges from the subject Property and adjoining properties for registered underground storage tanks (USTs, landfill sites, and Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) sites; to a 1-mile radius for RCRA treatment, storage and disposal facilities, and state and federal superfund sites.

Woodward-Clyde contracts with Vista Information Solutions, Inc., an independent data search service, to assist with the public regulatory agency records review. Information will be collected from the following public agencies, either by personal visit, telephone call, or via Vista's database system:

- City of Redlands Building Department
- City of Redlands Fire Department
- San Bernardino County Department of Environmental Health Services
- California Environmental Protection Agency
  - California Regional Water Quality Control Board
  - California Integrated Waste Management Board

- Department of Toxic Substances Control
- United States Environmental Protection Agency

Historical Site Uses

Historical site information is obtained through review of the U.S. Geological Survey topographic maps, historical aerial photographs, and Sanborn Fire Insurance maps. Public agency staff and possibly other persons having knowledge of past site and adjoining property usage may be interviewed to supplement information gathered from the records review. Potential private data sources may include Woodward-Clyde geologic, hydrogeologic, and hazardous waste project experience.

Phase I Assessment Report

A Phase I Assessment report will be prepared addressing the findings of the tasks described above. A discussion of potential and existing contaminant sources, and conclusions regarding our evaluation of the likelihood of contamination on the property will be included. The report will also include recommendations for further investigations of areas of potential contamination, if warranted, in order to refine the Phase II site assessment activities.

## TASK 2 - SUBSURFACE INVESTIGATION

The information provided in the Jorgensen Environmental, Inc. (JEI, 1995) report indicates that the potential chemicals of concern associated with the former septage ponds are lead, beryllium, 1,4-dichlorobenzene, and total petroleum hydrocarbons (TPH). The proposed investigative program will focus on screening soil and sludge materials for the presence of these compounds and other potential contaminants of concern. A secondary objective of the proposed investigative program is to provide baseline information for future phases of work. Specifically, a fate and transport model will be required to develop realistic site-specific soil cleanup levels. The model will require site specific soil parameters to adequately depict site conditions and contaminant transport mechanisms. The site specific soil parameters which are input into the fate and transport model include total organic carbon, bulk density, grain size analysis, and moisture content. For costing purposes, we estimate that up to 10 soil samples will be analyzed for these parameters.

Based on our current understanding of site conditions, 15 soil borings will be needed to complete the site characterization. The objective of this aspect of the proposed investigative program is to demonstrate that the sludge has immobilized the potential chemicals of concern. Three borings will be installed within each of the five septage ponds to a depth of approximately 15 feet below ground surface (bgs). Information included in the subsurface investigation report prepared by JEI (1995) indicated that the thickness of sludge in the ponds ranges from approximately 2 to 4 feet, with the exception of Pond D. The sludge within Pond D is reported to be approximately 10 feet thick. Soil and/or sludge samples will be collected from the borings at depths of 1 foot and 5 feet bgs, and at 5-foot intervals thereafter to the bottom of the

boring (i.e., 10 feet and 15 feet bgs). Additional soil samples will also be collected at the sludge-soil interface.

A total of 75 soil samples will be collected for field screening during the subsurface investigation. Soil samples will be selected for laboratory analyses based on field observations, such as elevated headspace readings using an organic vapor analyzer, odors, staining, or lithology. We estimate that 35 samples will be analyzed for semi-volatile organic compounds (SVOCs) in accordance with EPA Method 8270 and volatile organic compounds (VOCs) in accordance with EPA Method 8240; and 45 samples for California Code of Regulations (CCR) metals, and total petroleum hydrocarbons in accordance with modified EPA Method 8015. Samples with elevated concentrations of CCR metals will also be analyzed for soluble metals in accordance with the modified California waste extraction test (WET) method, which is recognized as an accurate representation of leaching potential.

Seven groundwater monitoring wells are currently located on the property, and the flow direction is reported to be toward the south-southwest. Woodward-Clyde proposes to measure the groundwater level and collect samples from these seven wells as part of the subsurface investigation. Measurement of the groundwater level will allow for evaluation of the local groundwater flow direction and gradient. Laboratory analyses of groundwater samples will provide current groundwater quality data.

The groundwater samples will be collected after the wells have been purged and analyzed for SVOCs by EPA Method 8270; VOCs by EPA Method 8240, and CCR metals.

## INTRODUCTION TO HUMAN HEALTH RISK ASSESSMENT (TASKS 3 TO 7)

A human health and groundwater impact analysis is the recommended method for evaluating whether remediation of the septage ponds is necessary. If remediation is determined to be necessary, the analysis will establish site-specific cleanup levels. Site-specific cleanup levels frequently are less conservative and allow for higher concentrations to remain in place. The purpose of the risk assessment is to estimate the potential risk (current and future) to human health and groundwater posed by the chemicals of concern in the septage ponds in the absence of remediation. If the risk levels are unacceptable, the risk assessment may be used for evaluating specific remedial action goals and making risk management decisions on acceptable levels of risk.

The strategy being proposed involves considering groundwater as a potential receptor because of the proximity of the Santa Ana River and involvement of the Santa Ana Regional Water Quality Control Board. A fate and transport analysis considering groundwater as a receptor may demonstrate that the sludge is immobilizing possible contaminants like lead.

The human health and groundwater screening evaluation will evaluate existing and potential future risk to on-site and off-site receptors and groundwater. On-site receptors consist of workers, visitors, and groundwater. Off-site receptors will be evaluated by vicinity maps and may consist of workers and residents. The screening

evaluation is used to identify chemicals which may pose an unacceptable risk to human health and groundwater. The approach to this screening analysis will follow guidance established by the U.S. EPA (1989a), State of California Office of Scientific Affairs (1993 and 1994), and California Regional Water Quality Control Board (1989). The following sections discuss the proposed approach and scope of work for the screening evaluation assumptions and exposure factors as presented in these guidance documents.

## TASK 3 - IDENTIFICATION OF CHEMICALS OF CONCERNS

The analytical results of the subsurface investigation described in Task 2 will be used during the risk analysis. Data collected during a 1989 groundwater sampling event and by JEI during 1995 will be reviewed for use in the risk analysis. Data validation of those data used to estimate potential human health risks will be performed in accordance with EPA's "Guidance for Data Usability in Risk Assessment (U.S. EPA 1990). The data will be summarized and appropriate statistical parameters will be calculated (such as mean, standard deviation and 95 percent upper confidence limit [UCL]).

The 95 percent UCL for compounds in soil and groundwater will be compared to Region IX Preliminary Remediation Goals (PRGs) and the State of California modified PRGs (1995). This comparison will indicate whether levels in soil and groundwater may pose a potential threat to human health and the environment.

Following the screening with PRGs, a meeting with the regulatory oversight agency is recommended to discuss strategy and obtain early agreement on the subsequent fate and transport models and health risk assessment approach to be employed to evaluate whether remediation is required. If remediation is required, the specific models and input parameters for establishment of site-specific cleanup levels will be discussed.

## TASK 4 - ENVIRONMENTAL FATE AND TRANSPORT MODELING

Environmental fate and transport modeling will be conducted to estimate exposure concentrations from different exposure pathways. Exposure pathways define the migration route that chemicals may take from sources to exposure points. The exposure pathway analysis evaluates environmental transport media: including soil, groundwater, surface water/sediment, and air.

The chemical concentrations at exposure points will be calculated for average and reasonable maximum scenarios. Exposure point concentrations (both average and remedial maximum exposure [RME]) for the assessment of present risks will be derived, where possible, from existing chemical data for soil and groundwater samples. The modeling will be performed in accordance with U.S. EPA modeling guidance and California Department of Toxic Substances Control Guidance. Once receptor point concentrations have been estimated, chemical intake by the receptor can be estimated.

Site-specific data will be used whenever available as input data for fate and transport modeling. Appropriate models will be selected based on site data. One potential model which may be used for the unsaturated zone is

the Jury Behavior Assessment Model; the groundwater model which may be used is AT123D. For input parameters that do not have site-specific data, either data from the literature or default values will be used that are protective of human health and the environment. All input values will be referenced as to their source.

## TASK 5 - DOSE-RESPONSE EVALUATION

Chemicals are taken into the bodies of human populations by inhalation, ingestion and dermal contact. The intake of chemicals will be estimated using site-specific data, appropriate assumptions, and guidance from U.S. EPA's Exposure Factors Handbook. The estimated intake is based on the receptor population's activity patterns, local meteorology, and land use issues.

The toxicity assessment will use toxicity values developed and/or approved by U.S. EPA and the State of California to characterize the potential carcinogenic and non-carcinogenic effects of the chemicals of concern.

The toxicological data regarding the contaminants of concern are obtained from various data bases. The hierarchy of toxicity values to be used in the assessment is as follows:

- Cancer potency factors (slope factors) or chronic reference doses (RfDs) promulgated into California regulations
- Integrated Risk Information Data Base (IRIS, U.S. EPA)
- The most current edition of U.S. EPA's Health Effects Assessment Summary Tables (HEAST, U.S. EPA-ECAO)
- Toxicity values not available through any of the aforementioned sources will be obtained through the OSA "Helpline"

The toxicity assessment considers both carcinogenic risks and non-carcinogenic hazards posed by the chemicals of concern.

## TASK 6 - HEALTH RISK CHARACTERIZATION AND ASSESSMENT

The health risk characterization will combine the results of the exposure assessment and dose-response evaluation to quantify potential health risks. Conservative RME risks will be determined, in accordance with agency guidance, in addition to average or typical risks. The purpose of the risk characterization process is to quantitatively estimate the magnitude of potential health hazards (i.e., non-carcinogenic or toxic effects) and carcinogenic risks posed by the proposed future use at the site.

Potential cancer risks are typically estimated for each chemical in each exposure pathway for each exposed population, and are then summed to yield an overall potential cancer risk. Potential cancer risks are expressed as a unitless probability (e.g., one in a million or $10^{-6}$) of an individual developing cancer over a lifetime as a result of the exposure above his "background" risk of developing cancer. This risk is referred to as the lifetime incremental excess cancer risk.

Potential health hazards (i.e., potential non-carcinogenic effects of chemicals) are evaluated by estimating a value known as the hazard quotient. Hazard quotients may be summed for all compounds of concern and pathways to yield an overall hazard index. Hazard indexes will be calculated for each exposure pathway and population, under average and RME assumptions.

The product of the human health screening evaluation is thus a compilation of carcinogenic risks and non-carcinogenic hazards, for each area of concern at the site, for each pathway, and each receptor population. Non-carcinogenic hazards are considered acceptable if hazard indexes are below 1.0.

## TASK 7 - ESTABLISH HEALTH BASED CLEANUP LEVELS (HBCLs)

This section of the HRA will present the calculation of health-based cleanup levels (HBCLs) for the septage ponds in which unacceptable carcinogenic risks or non-carcinogenic health hazards were estimated in the HRA. HBCLs are chemical-specific medium concentrations set at acceptable risk or hazard levels, considering all exposure pathways associated with that medium.

For ponds in which unacceptable carcinogenic risks or non-carcinogenic health hazards were estimated, HBCLs for the chemicals of concern (COCs) which contribute significant risks will be derived. HBCLs objectives for these individual COCs will be based on the exposure pathway contributing the largest portion to the unacceptable risk or hazard estimate, and will be derived for chemicals contributing the largest percentage (for example, 90%) of the risk and hazard estimate for that pathway. HBCLs will be derived by applying the risk assessment calculations in "reverse".

## TASK 8 - REPORT PREPARATION

Woodward-Clyde will prepare a comprehensive report documenting the results of the subsurface investigation, fate and transport modeling, and risk analysis activities. This document will serve as a basis for additional investigation, if warranted, or preparation of a remedial action plan for the site.

# ATTACHMENT B

# PROJECT SCHEDULE

## ATTACHMENT B - PROJECT SCHEDULE

Woodward-Clyde is prepared to initiate the work described herein immediately upon our receipt of written approval to proceed from the City of Redlands. The estimated time to complete Tasks 1, 2, and 3 is approximately 6 weeks. Activities associated with performance of the Phase I ESA will be initiated immediately and will proceed simultaneously with other activities to achieve the proposed schedule. The estimated duration of Tasks 4 through 8 is approximately 4 to 6 weeks; this schedule may change based on the findings of Tasks 1, 2, and 3, as well as the responsiveness of the lead regulatory agency.

Woodward-Clyde recognizes the importance of meeting deadlines for project deliverables, and is prepared to commit the resources required to complete this project within the time frame desired by the City of Redlands Municipal Utility Department (City) personnel. Woodward-Clyde intends to work closely with, and maintain effective communications with City personnel. We believe that four items are key in our being able to respond effectively to the City requirements: (1) effective communications, (2) planning, (3) commitment of resources, and (4) prompt/effective course correction when necessary.

Dr. Deborah Reid, our proposed Project Manager, will be responsible for ensuring that project activities are completed on schedule and to the satisfaction of City personnel. Weekly meetings of the Woodward-Clyde project team will be held to discuss scheduling, budgetary, and other project issues. She will keep City personnel abreast of current project activities and new developments through telephone conversations and weekly project status updates to be transmitted by fax. In addition, Dr. Reid lives in Riverside and will make herself available for morning or afternoon meetings as requested by City personnel. The project will not be charged for travel time to and from these meetings.

**ATTACHMENT C**

**FEE PROPOSAL**

## ATTACHMENT C - FEE PROPOSAL

Woodward-Clyde proposes to provide its services for the Alabama Street Lease Site Project on a time-and-materials basis. This method of compensation is proposed because of variation in the proposed scope of services which may occur based on the findings of Tasks 1, 2, and 3, as well as interactions with the lead regulatory agency. A detailed breakdown of the estimated fees associated with completion of Tasks 1 through 8 as described in Attachment A is provided in Table 1.

In preparation of this proposal and fee estimate, the following conditions have been assumed:

- Estimated costs for Task 1 include preparation of one draft report for review and comment by the City and one final report.
- Site work may be performed using Level D personal protective equipment.
- Costs assume one-time mobilization and demobilization.
- Costs assume regular laboratory turnaround time of 5 to 7 days.
- Preparation of a site-specific health-and-safety plan has been included as part of Task 2.
- The estimated disposal fees for drummed soil cuttings and purge water from the groundwater monitoring wells generated during the subsurface investigation is based on an average cost of $100 per drum. The actual disposal fees may be lower or higher, depending on whether the cuttings and/or groundwater are hazardous or non-hazardous.
- Management time has been included under Task 3 for one client meeting and one meeting with the regulatory oversight agency.
- Estimated costs for Task 9 include preparation of one draft report for review and comment by the City and one final report.

# TABLE 1
# ESTIMATED COST
# CITY OF REDLANDS

| Category | Rate | Task 1 Site Review | | Task 2 Subsurface Investigation | | Task 3 COC Identification/Meetings | | Tasks 4-7 Risk Analysis | | Task 8 Report Preparation | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Personnel** | | **Hours** | **Cost** | **Hours** | **Cost** | **Hours** | **Cost** | **Hours** | **Cost** | **Hours** | **Cost** |
| Consulting Professional | $150 | 0 | $0 | 0 | $0 | 1 | $150 | 4 | $600 | 2 | $300 |
| Senior Project Professional | $124 | 2 | $248 | 4 | $496 | 16 | $1,984 | 100 | $12,400 | 20 | $2,480 |
| Project Professional | $97 | 8 | $776 | 8 | $776 | 8 | $776 | 24 | $2,328 | 40 | $3,880 |
| Assistant Project Professional | $79 | 0 | $0 | 8 | $632 | 0 | $0 | 0 | $0 | 0 | $0 |
| Senior Staff Professional | $73 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Staff Professional | $61 | 32 | $1,952 | 16 | $976 | 0 | $0 | 0 | $0 | 60 | $3,660 |
| Senior Technician | $79 | 0 | $0 | 40 | $3,160 | 0 | $0 | 0 | $0 | 0 | $0 |
| Senior Drafter/Illustrator | $75 | 8 | $600 | 1 | $75 | 4 | $300 | 8 | $600 | 8 | $600 |
| Tech Asst./Word Processor | $64 | 4 | $256 | 1 | $64 | 2 | $128 | 8 | $512 | 8 | $512 |
| Labor Hours/Cost | | 54 | $3,832 | 78 | $6,179 | 31 | $3,338 | 144 | $16,440 | 138 | $11,432 |
| **Subcontractors** | | **Units** | **Cost** | **Units** | **Cost** | **Units** | **Cost** | **Units** | **Cost** | **Units** | **Cost** |
| Vista | $1,200.00 | 1 | $1,200 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Drilling Sub. (per ft.) | $17.40 | 0 | $0 | 225 | $3,915 | 0 | $0 | 0 | $0 | 0 | $0 |
| Mobilization/Demob. | $240.00 | 0 | $0 | 1 | $240 | 0 | $0 | 0 | $0 | 0 | $0 |
| Laboratory Analyses | $28,260.00 | 0 | $0 | 1 | $28,260 | 0 | $0 | 0 | $0 | 0 | $0 |
| 55-gallon drums | $42.00 | 0 | $0 | 37 | $1,554 | 0 | $0 | 0 | $0 | 0 | $0 |
| Drum disposal | $120.00 | 0 | $0 | 37 | $4,440 | 0 | $0 | 0 | $0 | 0 | $0 |
| ODE Sub-Total | | | $1,200 | | $38,409 | | $0 | | $0 | | $0 |
| **Other Direct Expenses** | | | | | | | | | | | |
| Brass Tubes (each) | $4.00 | 0 | $0 | 300 | $1,200 | 0 | $0 | 0 | $0 | 0 | $0 |
| OVA (per day) | $100.00 | 0 | $0 | 2 | $200 | 0 | $0 | 0 | $0 | 0 | $0 |
| Vehicle Rental (per day) | $75.00 | 0 | $0 | 4 | $300 | 0 | $0 | 0 | $0 | 0 | $0 |
| GW sampling equip. (per day) | $100.00 | 0 | $0 | 2 | $200 | 0 | $0 | 0 | $0 | 0 | $0 |
| Safety Equip. (per day) | $100.00 | 0 | $0 | 4 | $400 | 0 | $0 | 0 | $0 | 0 | $0 |
| ODE Sub-Total | | | $0 | | $2,300 | | $0 | | $0 | | $0 |
| **Communications[1]** | | | | | | | | | | | |
| 3% on Labor Costs | | | $114.96 | | $185.37 | | $100.14 | | $493.20 | | $342.96 |
| Total ODE Sub-Total | | | $114.96 | | $185.37 | | $100.14 | | $493.20 | | $342.96 |
| Task Totals | | | $5,146.96 | | $47,073.37 | | $3,438.14 | | $16,933.20 | | $11,774.96 |

**PROJECT TOTAL $84,366.63**

Notes:

(1) The cost of communications including telephone, telex, facsimile, routine postage and incidental copying costs will be charged at a flat rate of 3% of total gross labor charges.

S:\Redlands\CostEst.xls (4/10/96)

# ATTACHMENT D

# SCHEDULE OF FEES AND CHARGES

# LOS ANGELES AREA OFFICE
# 1996 SCHEDULE OF FEES AND CHARGES

**The following describes the basis for compensation for services performed during the calendar year 1996.**

## PERSONNEL CHARGES

The charge for all time required in the performance of the Scope of Services, including office, field and travel time, will be at the rate of 2.65 times the burdened salary of the W-C staff performing the work or times the rate charged by contract personnel under W-C supervision and using W-C facilities.

When W-C staff appear as expert witnesses at court trials, mediation, arbitration hearings, and depositions, their time will be charged at 5.0 times burdened salary cost. All time spent by personnel preparing for such trials, hearings, and depositions, will be charged at the standard 2.65 times burdened salary rate.

Overtime (hours worked in excess of eight (8) hours per day) by exempt personnel will be charged at the above straight time rate. Overtime by non-exempt personnel will be charged at 1.3 times the above hourly rates.

When staff are performing project field work, a minimum daily charge of 4 hours will apply.

Special project accounting reporting and financial services, including submission of invoice support documentation will be charged.

## W-C LABORATORY SERVICES AND EQUIPMENT CHARGES

The schedules of charges for laboratory testing performed at W-C facilities and/or W-C equipment used on projects are attached.

## OTHER PROJECT CHARGES

Subcontracts and Equipment Rental

The cost of services subcontracted by W-C to others and other costs incurred by W-C will be charges at cost plus 20%.

Communications

The cost of communications including telephone, telex facsimile, routine postage and incidental copying costs will be charged at a flat rate of 3% of total gross labor charges.

Computers

The charge for use of in-house computers for spreadsheets, word processing and other similar functions is $7.20 per hour. The charge for use of Computer Aided Design and Drafting (CADD), Graphics generation, modeling applications and similar technical computing is $26.00 per hour. The charge for use of the Geographic Information Systems (GIS) is $36.00 per hour.

In addition to the above, there will be a charge of $5.00 each for paper plot and $15.00 for each color plot generated by CADD and GIS systems.

Document Reproduction

In-house reproduction will be charged at $.10 a page for black & white and $1.50 a page for color for letter, legal, and 11 x 17 size copies. Other size document copying will be charged at $2.75 a page.

Vehicles and Mileage

Field vehicles (pick-ups, vans, trucks, etc.) used on project assignments will be charged at $60.00 per day. The mileage charge for personal autos will be the then current mileage rate established by the Internal Revenue Service, which is now $.31 per mile.



Woodward-Clyde

For budgeting purposes you should use the following rates when budgeting multiplier projects in 1996:

| Level | Average Hourly Rate |
|---|---|
| Clerk | $ 30.00 |
| Technical Assistant/Word Processor | $ 64.00 |
| Technician | $ 55.00 |
| Drafter/Illustrator | $ 59.00 |
| Senior Drafter/Illustrator | $ 75.00 |
| Senior Technician | $ 79.00 |
| Staff Professional | $ 61.00 |
| Senior Staff Professional | $ 73.00 |
| Assistant Project Professional | $ 79.00 |
| Projects Professional | $ 97.00 |
| Senior Project Professional | $ 124.00 |
| Consulting Professional | $ 155.00 |
| Senior Consulting Professional | $ 184.00 |
| Principal/Senior Principal | $ 229.00 |