

mailed 12/11/98

#1

AGREEMENT TO FURNISH
GROUNDWATER MONITORING PROGRAM
ANALYTICAL AND REPORTING SERVICES
FOR THE CALIFORNIA STREET LANDFILL

This Agreement is made and entered into this 1st day of December, 1998 by and between the City of Redlands, a municipal corporation (hereinafter "City") and 3D GeoServices, Inc., (hereinafter "Consultant").

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

ARTICLE 1 - ENGAGEMENT OF CONSULTANT

- 1.1 City hereby engages Consultant, and Consultant hereby accepts the engagement, to perform professional hydrogeologic consulting services ("Services") for the Groundwater Monitoring Program Analyses and Reporting for the City's California Street Landfill (the "Project").
- 1.2 The Services shall be performed by Consultant in a professional manner, and Consultant represents that it has the skill and the professional expertise necessary to provide high quality Services for the Project at the level of competency presently maintained by other practicing professional consultants in the industry providing similar types of services.

ARTICLE 2 - SERVICES OF CONSULTANT

- 2.1 The specific Services which Consultant shall perform are more particularly described in Attachment "A," entitled "Scope of Work," which is attached hereto and incorporated herein by this reference.

ARTICLE 3 - RESPONSIBILITIES OF CITY

- 3.1 City shall make available to Consultant information in its possession that is pertinent to the performance of Consultant's Services.
- 3.2 City will provide access to and make provisions for Consultant to enter upon City-owned property as required by Consultant to perform the Services.
- 3.3 City designates Valorie Shatynski, Solid Waste Manager, to act as its representative with respect to the Services to be performed under this Agreement.

ARTICLE 4 - PERIOD OF SERVICE

- 4.1 Consultant shall perform the Services in a diligent manner and in accordance with the Project Schedule set forth in Attachment B.

ARTICLE 5 - PAYMENTS TO THE CONSULTANT

- 5.1 The total compensation for Consultant's performance of the Services shall not exceed \$84,280, in accordance with Attachment C - Project Fee. City shall pay Consultant on a time and materials basis at the hourly rates shown in Attachment D - Rate Schedule.
- 5.2 Consultant shall bill City within ten days following the close of each month by submitting an invoice indicating the Services performed, who performed the Services, indirect costs, and the detailed cost of all Services including backup documentation. Payments by City to Consultant shall be made within 30 days after receipt and approval of Consultant's invoice, by warrant payable to Consultant.
- 5.3 All contractual 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:

City

Valorie Shatynski
Municipal Utilities Department
35 Cajon Street
P.O. Box 3005
Redlands, CA 92373

Consultant

Mercedes Murillo, President
3D GeoServices, Inc.
26042 Mirage Court
Moreno Valley, CA 92555

When so addressed, such notices shall be deemed given upon deposit in the United States Mail. In all other instances, notices, bill 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 Consultant 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 and death, and claims for injury to or destruction of tangible property while performing the Services required 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. Consultant shall maintain professional liability insurance in the aggregate amount of \$1,000,000 with

**1999-2000 GROUNDWATER MONITORING PROGRAM
ANALYTICAL AND REPORTING SERVICES**

ATTACHMENT A

SCOPE OF WORK

Attachment A - Scope of Work

3D GeoServices understands that this agreement is for the monitoring year 1999-2000, to commence upon authorization from the City of Redlands (City). The agreement will require submittal of five quarterly monitoring reports and one annual report to the Santa Ana RWQCB. 3D GeoServices will follow an established format to provide consistency to the City's program and ease RWQCB review of the reports. This attachment describes the agreement scope of work for the California Street Landfill (CSL) groundwater monitoring program.

Task 1 - Quarterly Groundwater Monitoring Reports - 3D GeoServices understands that the City personnel collect the required samples from the designated sampling locations and samples are submitted to APCL Laboratories for analysis. 3D GeoServices will review field notes and laboratory data in a timely fashion so that data review is completed quickly and any required RWQCB notification meets the deadlines established in Orders 81-172 and 98-99-06. The data review will include:

- Providing technical and regulatory expertise to City staff
- Review of all field notes to verify that proper sampling techniques were utilized
- A thorough data quality check to verify that holding times, required analyses, reporting limits and laboratory precision requirements have been met
- Updating water level and groundwater quality data bases
- Performance of a thorough quality control check on all data to verify that only correct information is input into the data bases.

Statistical analysis of the water quality data will be performed by 3D GeoServices. The quarterly groundwater monitoring reports will include the following information:

- A transmittal letter containing an abbreviated summary, including discussions on violations and any actions taken or planned
- An executive summary of current monitoring results
- A brief description of the purpose and scope of the groundwater monitoring program
- A background discussion on site operations, landfill waste description and disposal volumes, physical setting, and related studies at the CSL
- A discussion of groundwater occurrence and movement, including hydrographs for each well, a groundwater elevation contour map, and groundwater gradient calculation
- A discussion of groundwater quality, including field and laboratory methods, statistical methodology and results, tabulated analytical results, copies of laboratory reports and chain of custody forms, copies of field forms, and graphs of constituents detected at concentrations exceeding Basin Plan Objectives (BPOS)
- Sludge chemical analyses
- Groundwater levels and chemical data for the Church Street Burn Site
- Conclusions and recommendations

Attachment A - Scope of Work

Task 2 - 1999-2000 Annual Groundwater Monitoring Reports - Two annual groundwater monitoring reports will be prepared in combination with the first quarter (Winter) 1999 and 2000 quarterly reports. In addition to the requirements listed in Task 1, the following items will be included in the annual reports:

- Groundwater monitoring well data summaries, including tabular and graphical summaries of groundwater levels and sampling results for all annual data, graphical presentation of groundwater constituents that equaled or exceeded BPOs or maximum concentration levels during any quarter of the monitoring period, and summary tables of vadose zone sample results
- A discussion of groundwater quality at the CSL, a discussion of vadose zone quality and potential impacts to groundwater quality, and updated information relating to the groundwater monitoring system and hydrogeology of the CSL.

Task 3 - Laboratory Data Entry and Quality Check - The procedure for laboratory data entry includes manual and electronic transfer of data into the existing data base. All electronic data are checked to verify that correct formats have been generated and correct information is present on the electronic disks. After electronic data are verified, the data are transferred into the data base and the information is checked to ensure that the data base is accurate. Data management specialists will manually input water level information and laboratory data not available in electronic format; 100 percent of the data will be checked to verify accuracy.

All sample analyses will be checked against sample collection dates to verify that holding times were met. Analytical results will also be checked to verify that all required analyses have been performed and that laboratory quality assurance results were within acceptable limits. Any identified problems will be detailed in the quarterly reports. Laboratory reporting limits, BPOs, and maximum concentration levels will be highlighted with bold font so that the reader can easily discern potential problems.

Task 4 - General Consulting and Regulatory Compliance Assistance Services - 3D GeoServices will provide the City with general consulting services to assist in strategic planning for the CSL. While performing this task, 3D GeoServices will work closely with the City's project manager and sampling technicians, forming a cohesive extension of City staff.

In order to meet the City's needs, and at the City's request, 3D GeoServices personnel will answer any questions or issues the City, regulators, or general public may have regarding groundwater and vadose zone quality at the landfill. The project team may identify modifications that could improve

Attachment A - Scope of Work

the monitoring program for the City while minimizing costs; written justification and possible presentations would be needed prior to obtaining regulatory approval for changes in the program.

If a release is tentatively identified at the landfill, the City is required to immediately notify the RWQCB verbally and within 7 days by certified mail. 3D GeoServices will assist the City with these notifications so that the RWQCB is kept apprised of site conditions. 3D GeoServices will also keep the City informed of any potential regulatory changes that could impact the landfill monitoring program.

Deliverables - Deliverables will consist of memorandums, letter reports, text and faxed information to be provided to City staff on a time and materials basis upon request. One draft copy of each groundwater monitoring report will be submitted to the City for review. After incorporation of the City's comments, six bound copies, two stapled copies of the executive summary, and one copy of the final report in electronic format will be submitted to the City for each of the Quarterly and Annual Reports. All technical reports submitted will be certified by a geologist currently registered in the State of California.

**GROUNDWATER MONITORING PROGRAM
ANALYTICAL AND REPORTING SERVICES**

ATTACHMENT B

PROJECT SCHEDULE

Attachment B

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**GROUNDWATER MONITORING PROGRAM
ANALYTICAL AND REPORTING SERVICES**

ATTACHMENT C

PROJECT FEE

Attachment C
Joint Technical Document & Revised Preliminary Closure Plan Reporting Services Fee Schedule
California Street Landfill Vertical Expansion

Task Description	Mercedes Murillo-CEG (\$80/hour)		David R. Bachtel-PE (\$80/hour)		Anne Saffell (\$80/hour)		Ernesto Rodriguez-CAD (\$65/hour)		Other Direct Costs	Hours Per Task	Costs Per Task
	Hours	Costs	Hours	Costs	Hours	Costs	Hours	Costs			
Task 1 - Infiltration Modeling	60.0	\$ 4,800.00	0.0	\$ -	0.0	\$ -	0.0	\$ -	\$ -	60.0	\$ 4,800.00
Task 2 - Emergency Plan	0.0	\$ -	0.0	\$ -	40.0	\$ 3,200.00	0.0	\$ -	\$ -	40.0	\$ 3,200.00
Task 3 - Report Revision	96.0	\$ 7,680.00	0.0	\$ -	40.0	\$ 3,200.00	0.0	\$ -	\$ -	136.0	\$ 10,880.00
Task 4 - Database, Model Output (Appendix) Revision	40.0	\$ 3,200.00	0.0	\$ -	0.0	\$ -	0.0	\$ -	\$ -	40.0	\$ 3,200.00
Task 5 - Publish JTD, PCP	30.0	\$ 2,400.00	0.0	\$ -	30.0	\$ 2,400.00	0.0	\$ -	\$ 2,000.00	60.0	\$ 6,800.00
Task 6 - Consultant Coordination	30.0	\$ 2,400.00	0.0	\$ -	0.0	\$ -	0.0	\$ -	\$ -	30.0	\$ 2,400.00
Task 7 - Regulatory Design Advisement, Meetings *	20.0	\$ 1,600.00	20.0	\$ 1,600.00	0.0	\$ -	0.0	\$ -	\$ -	40.0	\$ 3,200.00
Total	276.0	\$ 22,080.00	20.0	\$ 1,600.00	110.0	\$ 8,800.00	0.0	\$ -	\$ 2,000.00	406.0	\$ 34,480.00
*Contingency											

**GROUNDWATER MONITORING PROGRAM
ANALYTICAL AND REPORTING SERVICES**

ATTACHMENT D

RATE SCHEDULE

Attachment D 1999-2000 Groundwater Monitoring Reporting Program Rate Schedule	
Item	Rate
Professional Personnel (P.E., C.E.G., C.H.G., includes Computer Charges)	\$80.00 per hour
CAD Operator (includes CAD/GIS Equip)	\$65.00 per hour
Subcontracted Professional Services, Supplies	Cost plus 15%
Miscellaneous Out of Pocket Expenses (Copies, long distance telephone charges, special order office supplies, slide preparation, report and other presentation media, other direct costs)	Cost