

AGREEMENT TO FURNISH PROFESSIONAL CONSULTING SERVICES FOR THE
HYDROGEOLOGIC SUPPORT, TECHNICAL ANALYSIS AND REPORTING
SERVICES FOR THE CITY OF REDLANDS' CALIFORNIA STREET LANDFILL

This agreement for the provision of professional consulting services for the hydrogeologic support, technical analysis and reporting services for the City of Redlands' California Street Landfill ("Agreement") is made and entered into this 7th day of September, 2010 ("Effective Date"), by and between the City of Redlands ("City") and Geo-Logic Associates ("Consultant"). City and Consultant are sometimes individually referred to herein as a "Party" and, together, as the "Parties."

In consideration of the mutual promises contained herein, City and Consultant agree as follows:

ARTICLE 1 - ENGAGEMENT OF CONSULTANT

- 1.1 City hereby engages Consultant to perform professional consulting services for the hydrogeologic support, technical analysis and reporting requirements associated with City's operation of the California Street Landfill (the "Services").
- 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 the Services to City at a level of competency presently maintained by other practicing professional consultants in the industry providing like and similar types of Services.

ARTICLE 2 - SERVICES OF CONSULTANT

- 2.1 The Services which Consultant shall perform are more particularly described in Exhibit "A," entitled "Scope of Services," which is attached hereto and incorporated herein by this reference.
- 2.2 Consultant shall comply with all applicable Federal, State and local laws and regulations in the performance of this Agreement including, but not limited to, the Americans with Disabilities Act, the Fair Employment and Housing Act and all applicable Labor Code and prevailing wage laws.

ARTICLE 3 - RESPONSIBILITIES OF CITY

- 3.1 City shall make available to Consultant information in its possession that may assist Consultant in performing the Services.

- 3.2 City will make reasonable provision for Consultant to enter upon City-owned property, as required by Consultant, to perform the Services.
- 3.3 City designates Les Jolly, City's Interim Quality of Life Director, as City's representative with respect to performance of the Services, and such person shall have the authority to transmit instructions, receive information, interpret and define City's policies and decisions with respect to performance of the Services.

ARTICLE 4 - PERFORMANCE OF SERVICES

- 4.1 Consultant shall perform the Services in a prompt and diligent manner and in accordance with the schedule set forth in Exhibit "B," entitled "Project Schedule," which is attached hereto and incorporated herein by reference.
- 4.2 At any time during the term of this Agreement, City may request that Consultant perform Extra Services. As used herein, "Extra Services" means any work which is determined necessary by City for the proper completion of the project or work for which the Services are being performed, but which the Parties did not reasonably anticipate would be necessary at the time of execution of this Agreement. Provided the Extra Work does not exceed twenty percent (20%) of the compensation to be paid by City to Consultant for the Services, such Extra Work may be agreed to by the Parties, by written amendment to this Agreement, executed by an authorized City official in accordance with the requirements of Chapter 2.16 of the Redlands Municipal Code. Consultant shall not perform, nor be compensated for, Extra Work without such written authorization from City.

ARTICLE 5 - PAYMENTS TO CONSULTANT

- 5.1 The total compensation for Consultant's performance of the Services shall not exceed the amount of Forty One Thousand Two Hundred Forty Seven Dollars (\$41,247). City shall pay Consultant on a time and materials basis up to the "not to exceed" amount in accordance with Exhibit "C," entitled "Project Fee," and based on the hourly rates shown in Exhibit "D," both of which are attached hereto and incorporated herein by this reference.
- 5.2 Consultant shall submit monthly invoices to City describing the work performed during the preceding month. Consultant's invoices shall include a brief description of the Services performed, the dates the Services were performed, the number of hours spent and by whom, and a description of reimbursable expenses, if any. City shall pay Consultant no later than thirty (30) days after receipt and approval by City of Consultant's invoice, provided the Services reflected in the invoice were performed to the reasonable satisfaction of City in accordance with the terms of this Agreement.

- 5.3 All notices shall be given in writing by personal delivery or by mail. Notices sent by mail should be addressed as follows:

City

Les Jolly, Interim Director
Quality of Life Department
City of Redlands
35 Cajon Street
P.O. Box 3005 (mailing)
Redland, CA 92373

Consultant

Michael D. Reason, Sr. Hydrologist
Geo-Logic Associates
1831 Commercenter East
San Bernardino, CA 92408

When so addressed, such notices shall be deemed given upon deposit in the United States Mail. Changes may be made in the names and addresses of the person to who notices and payments are to be given by giving notice pursuant to this section 5.3.

ARTICLE 6 - INSURANCE AND INDEMNIFICATION

- 6.1 Certificates and Endorsements. All insurance required by this Agreement shall be maintained by Consultant for the duration of its performance of the Services. Consultant shall not perform any Services unless and until all required insurance listed below is obtained by Consultant. Consultant shall provide City with certificates of insurance and endorsements evidencing such insurance prior to commencement of the Services. All insurance policies shall include a provision prohibiting cancellation or modification of the coverage limits of the policy, except upon thirty (30) days prior written notice to City.
- 6.2 Workers Compensation and Employer's Liability. Consultant shall secure and maintain Workers Compensation and Employer's Liability insurance throughout the duration of this Agreement in accordance with the laws of the State of California, with an insurance carrier acceptable to City.
- 6.3 Hold Harmless and Indemnification. Consultant shall defend, indemnify and hold harmless City and its elected officials, employees and agents from and against any and all claims, losses or liability, including attorneys fees, arising from injury or death to persons or damage to property occasioned by Consultant's and its officers', employees' and agents' sole negligent acts or omissions in performing the Services.
- 6.4 Comprehensive General Liability Insurance. Consultant shall secure and maintain in force throughout the term of this Agreement comprehensive general liability insurance with carriers acceptable to City. Minimum coverage of One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate for public liability, property damage and personal injury is required. City shall be named as an additional

insured. Such insurance shall be primary and non-contributing to any insurance or self-insurance maintained by City.

- 6.5 Professional Liability Insurance. Consultant shall secure and maintain professional liability insurance throughout the term of this Agreement in the amount of One Million Dollars (\$1,000,000) per claim made.
- 6.6 Business Auto Liability Insurance. Consultant shall have business auto liability coverage, with minimum limits of One Million Dollars (\$1,000,000) per occurrence, combined single limit for bodily injury liability and property damage liability. This coverage shall include all Consultant owned vehicles used in connection with Consultant's provision of the Services, hired and non-owned vehicles, and employee non-ownership vehicles. City shall be named as an additional insured. Such insurance shall be primary and non-contributing to any insurance or self insurance maintained by City.

ARTICLE 7 - CONFLICTS OF INTEREST

- 7.1 Consultant covenants and represents that it does not have any investment or interest in real property and shall not acquire any interest, direct or indirect, in the geographical area covered by this Agreement or any other source of income, interest in real property or investment which would be affected in any manner or degree by the performance of Consultant's Services. Consultant further covenants and represents that in the performance of its duties hereunder, no person having any such interest shall perform any Services under this Agreement.
- 7.2 Consultant agrees it is not a designated employee within the meaning of the Political Reform Act because Consultant:
- A. Does not make or participate in:
- (i) the making or any City governmental decisions regarding approval of a rate, rule or regulation, or the adoption or enforcement of laws;
 - (ii) the issuance, denial, suspension or revocation of City permits, licenses, applications, certifications, approvals, orders or similar authorizations or entitlements;
 - (iii) authorizing City to enter into, modify or renew a contract;
 - (iv) granting City approval to a contract that requires City approval and to which City is a party, or to the specifications for such a contract;
 - (v) granting City approval to a plan, design, report, study or similar item;

- (vi) Adopting, or granting City approval of, policies, standards or guidelines for City or for any subdivision thereof.
 - B. Does not serve in a staff capacity with City and in that capacity participate in making a governmental decision or otherwise perform the same or substantially all the same duties for City that would otherwise be performed by an individual holding a position specified in City's Conflict of Interest Code under Government Code section 87302.
- 7.3 In the event City officially determines that Consultant must disclose its financial interests by completing and filing a Fair Political Practices Commission Form 700, Statement of Economic Interests, Consultant shall file the subject Form 700 with the City Clerk's office pursuant to the written instructions provided by the Office of the City Clerk.

ARTICLE 8 - GENERAL CONSIDERATIONS

- 8.1 Attorneys' Fees. In the event any action is commenced to enforce or interpret any of the terms or conditions of this Agreement the prevailing Party shall, in addition to any costs and other relief, be entitled to the recovery of its reasonable attorneys' fees, including fees for the use of in-house counsel of the Parties.
- 8.2 Prohibition Against Assignment. Consultant shall not assign any of the Services, except with the prior written approval of City and in strict compliance with the terms, and conditions of this Agreement.
- 8.3 Documents and Records. All documents, records, drawings, designs, cost estimates, electronic data files, databases and other documents developed by Consultant in connection with its performance of the Services, and any copyright interest in such documents, shall become the property of City and shall be delivered to City upon completion of the Services, or upon the request of City. Any reuse of such documents, and any use of incomplete documents, shall be at City's sole risk.
- 8.4 Independent Contractor Status. Consultant is for all purposes under this Agreement an independent contractor and should perform the Services as an independent contractor. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as herein set forth. Consultant shall supply all tools and instrumentalities required to perform the Services. All personnel employed by Consultant are for its account only, and in no event shall Consultant or any personnel retained by it be deemed to have been employed by City or engaged by City for the account of, or on behalf of City. Consultant shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent, nor shall Consultant have any authority, express or implied, to bind City to any obligation.

8.5 Termination.

- A. Unless earlier terminated, as provided for below, this Agreement shall terminate upon completion and acceptance of the Services by City.
- B. This Agreement may be terminated by City, in its sole discretion, by providing five (5) business days prior written notice to Consultant (delivered by certified mail, return receipt requested) of City's intent to terminate.
- C. If this Agreement is terminated by City, an adjustment to Consultant's compensation shall be made, but (1) no amount shall be allowed for anticipated profit or unperformed services, and (2) any payment due Consultant at the time of termination may be adjusted to the extent of any additional costs to City occasioned by any default by Consultant.
- D. Upon receipt of a termination notice, Consultant shall immediately discontinue its provision of the Services and, within five (5) days of the date of the termination notice, deliver or otherwise make available to City, copies (in both hard copy and electronic form, where applicable) of any data, design calculations, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by Consultant in performing the Services. Consultant shall be compensated on a pro-rata basis for Services completed up to the date of termination.

8.6 Books and Records. Consultant shall maintain any and all books, ledgers, invoices, accounts and all other records and documents evidencing costs and expenses related to the Services for a period of three (3) years, or for any longer period required by law, from the date of final payment to Consultant pursuant to this Agreement. Such books shall be available at all reasonable times for examination by City at the office of Consultant.

8.7 Entire Agreement/Amendment. This Agreement, including the Exhibits incorporated herein by reference, represents the entire agreement and understanding between the Parties as to the matters contained herein, and any prior negotiations, written proposals or verbal agreements relating to such matters are superseded by this Agreement. Any amendment to this Agreement shall be in writing, approved by City and signed by City and Consultant.

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

8.9 Severability. If one or more of the sentences, clauses, paragraphs or sections contained in this Agreement is declared invalid, void or unenforceable by a court of competent jurisdiction, the same shall be deemed severable from the remainder of this Agreement

and shall not affect, impair or invalidate any of the remaining sentences, clauses, paragraphs or sections contained herein, unless to do so would deprive a Party of a material benefit of its bargain under this Agreement.

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

CITY OF REDLANDS

By: Pat Gilbreath
Pat Gilbreath, Mayor

Attest:

Sam Irwin
Sam Irwin, City Clerk

GEO-LOGIC ASSOCIATES

By: Gary Lass
Gary Lass, President

Exhibit A

Scope of Services

The following paragraphs describe the work tasks that Geo-Logic Associates, Inc. (GLA), will complete to meet the requirements of the groundwater monitoring and reporting program (M&RP) and other special services that might be required for the California Street Landfill (CSL).

The routine groundwater monitoring work will include the following activities:

- Inspection of monitoring points.
- Groundwater elevation measurements.
- Collection of groundwater, vadose zone liquid, landfill gas, and leachate samples.
- Preparation of tables and graphs showing historical and current constituent concentrations.
- Statistical analyses of current and historical analytical data.
- Preparation of quarterly and annual monitoring reports that describe the sampling efforts and analytical results.

In the event that either a well or sampling equipment is found to require repair or replacement, the field supervisor will notify the GLA's Project Manager of the problem, who will in turn notify the City of Redlands (City) Project Manager within 24 hours, and submit a proposal for maintenance action(s) to the City. If a significant repair requires purchase of major materials or subcontractor assistance, a cost estimate for the well repair will be prepared and submitted to the City for review and approval. GLA will provide experienced staff to make the necessary repair only after receiving authorization from the City. In the case of less significant maintenance, such as replacement of a corroded well lock or limited clearing of the well site of weeds or debris (such as after a rain event), the well maintenance will be implemented immediately to assure well integrity and/or access and the City will be notified at the end of the sampling operation. All necessary maintenance activities will be recorded in daily field notes.

A.1 ROUTINE SERVICES

A.1.1 Field Services

Groundwater Sampling Procedures – GLA understands that monitoring activities will occur quarterly during the contract period. Groundwater samples will be collected from seven wells using the following protocols:

- Upon arrival at the wellhead, each monitoring point will be inspected for evidence of tampering and/or vandalism, and the well identification (ID) and condition will be

recorded on a Well Data Sheet. If any damage or vandalism is noted, the City's project manager will be notified immediately.

- Prior to sounding each well, a weighted water level indicator (sounder) will be decontaminated using an Alconox[®] soap solution followed by two rinses with deionized water. The wells will then be sounded and the initial water level (measured to a depth of +/- 0.01 foot) and the total depth of the well will be recorded on a Well Data Sheet.
- Purged water will be evacuated from each well using the dedicated bladder pump and low-flow purging techniques. The pumps will be operated at a discharge rate (nominal 500 milliliters per minute) that minimizes the decline in water level. Purge water will be discharged in the vicinity of the well in accordance with RWQCB Resolution R8-2002-0044, which allows for the use of monitoring well purge water as long as the water is discharged in the vicinity of the well from which it was obtained and does not contact surface water.
- To assess the presence of fresh water coming into the well, discharged water will be routed through a sampling flow cell equipped with probes for measuring electrical conductivity (EC), pH, dissolved oxygen (DO), temperature, and turbidity. The readings will be recorded on a field data sheet at approximate 3- to 5-minute intervals. GLA assumes that the parameters will stabilize before 15 liters of groundwater have been purged from the well.
- Sampling will be performed when the EC, pH, DO, temperature, and turbidity have stabilized to within 10 percent between a minimum of three consecutive readings.
- Samples will be collected in approved sample containers obtained from the laboratory, and each container will be filled completely and immediately capped, labeled, and placed in a cooler with ice. Samples for VOC analysis will be filled by pouring the sample down the sides of the container to minimize aeration, and these sample vials will be capped with no airspace. GLA assumes that a maximum of 2.5 liters of groundwater will be collected per sampling event.
- After collection, the samples will be immediately placed in an ice-filled cooler for transport to a state-certified testing laboratory. Samples will be kept chilled (at about 4°C) until delivery.
- A completed Chain-of-Custody form, detailing the sample ID numbers, date and time collected, analyses requested, and other project information will accompany each sample to the laboratory. The Chain-of-Custody forms will be signed and dated by all personnel retaining custody of the samples.

Soil-Pore Liquid Sampling Procedures – Soil-pore liquid samples will be collected from four lysimeters when they contain sufficient liquid for sampling. Where possible, soil-pore liquid samples will be collected using the following procedures:

- A vacuum will be applied to the sampling system for approximately one hour to draw vadose zone liquids into the sampling device.
- To collect the liquid sample, the vacuum/pressure line will be attached to a hand pump, and pumped gently to create enough pressure to push the sample out of the lysimeter into approved sample containers. Each container will be filled completely

and immediately capped, labeled, and placed in a cooler with ice. Samples for VOC analysis will be filled by pouring the sample down the sides of the container to minimize aeration, and these sample vials will be capped with no airspace.

- After collection, the samples will be immediately placed in an ice-filled cooler for transport to a state-certified testing laboratory. Samples will be kept chilled (at about 4°C) until delivery.
- A completed Chain-of-Custody form, detailing the sample ID numbers, date and time collected, analyses requested, and other project information will accompany each sample to the laboratory. The Chain-of-Custody forms will be signed and dated by all personnel retaining custody of the samples.

Soil-Pore Gas Sampling Procedures – Gas monitoring will be performed at station P-4A. Gas sample collection will be completed as follows:

- Gas extraction will be performed using a stainless steel gas-sampling pump with a non-lubricated Viton[®] diaphragm and a maximum no-load flow rate of 34.8 liters per minute.
- Clean, new laboratory-prepared 10-liter Tedlar[®] sample bags will be placed into light-sealed receptacles (to prevent photochemical reactions) and fitted with aluminum or stainless steel tube fittings for sampling and transport.
- For purging and sampling, the gas-sampling pump will be attached with Teflon[®] tubing to a sample port located at the top of the monitoring probe. After attaching the sample train to the probe, the probe will be purged for 30 to 50 seconds to flush out the probe and sample train. After the probe and train have been flushed, the pump and tubing will be attached to the Tedlar[®] sample bag. All gas samples will be pumped directly from the gas-monitoring probe via the stainless steel sampling pump and through new factory-cleaned Teflon[®] tubing into the Tedlar[®] bags. After sampling, a 30- to 50-second post-purge of the probe and sampling train will also be conducted.
- After collection, the samples will be labeled and entered onto the Chain-of-Custody.

Leachate Sampling Procedures – Leachate sampling is required during the months of April and October of each year. The samples are collected from both the Phase 1 and Phase 2 sumps. Leachate sample collection will be performed by transferring leachate to laboratory supplied vessels. Each container will be filled completely, capped, labeled, placed on ice, and entered onto the Chain-of-Custody. Leachate monitoring results will be submitted with the Second and Fourth Quarter monitoring reports each year.

Sample Handling and Transportation – GLA will coordinate with the City-selected laboratory to transfer all samples to the laboratory. All samples will be relinquished to a laboratory representative using chain-of-custody procedures. The individual who collects the samples will prepare them for shipment, describe them on the chain-of-custody form, and signed the form when transferring the samples to the laboratory. The individual who accepts the samples at the laboratory will note the sample conditions upon receipt and sign the chain-of-custody form.

Quality Assurance/Quality Control (QA/QC) Procedures – The QA/QC program will include collection and testing of one field blank and one trip blank during each monitoring event. Each blank sample will be tested for volatile organic compounds (VOCs). The purpose of each of these blanks is described in the following paragraphs.

During collection of groundwater samples, the water may be exposed to ambient air for a few moments and could absorb airborne contaminants. For this reason, a field blank (consisting of deionized water transferred from its original container to a sample container in the field) will be used to quantify the types and amounts of airborne contaminants absorbed by the groundwater samples.

If the sampling program includes use of non-dedicated equipment (for instances when an existing dedicated pump cannot be repaired or replaced during a monitoring event), an equipment blank will be collected to determine whether contamination may have been introduced to the samples from the sampling equipment. After proper decontamination measures have been completed, the equipment blank will be collected. The equipment blank will consist of deionized water poured through the decontaminated sampling equipment.

Trip blanks are used to determine whether any contamination might have been introduced during sample transport or storage. Trip blanks consist of laboratory-prepared deionized water samples that are carried into the field by sampling personnel, shipped along with the actual samples to the laboratory, and analyzed for the same volatile organic parameters as the other samples. One trip blank will accompany each sample shipment to the laboratory.

A.1.2 Reporting

Quarterly monitoring reports will be prepared following each monitoring period. Recognizing that City and RWQCB staff have a limited amount of time available to review monitoring reports, the Team will work to streamline the reports so that the data required by the Waste Discharge Requirements (WDRs) is presented with minimal redundancies. Reporting requirements are described in the following paragraphs.

Data Validation – Data evaluation will represent the most significant aspect of the monitoring and reporting program as it must be documented that the data is valid. Once validated, the data will be used to provide a basis for interpretation of site conditions at a level that satisfies all of the requirements needed to complete the monitoring reports.

The data validation process will include QA/QC review of all field data and laboratory data. The field data validation will include oversight by a California Certified Hydrogeologist, who will review all field operations to assess the protocols being employed by field personnel for equipment calibration, log book entries, sampling and sample handling, and chain-of-custody procedures. A field audit checklist will be completed to document field investigation compliance with the established protocols to provide valid data. The audit checklist and comments will be reviewed with the field personnel to ensure proper fulfillment of the field program objectives.

The Reporting Task Manager will be responsible for reviewing the logbooks submitted for QA/QC review at the end of each day/week to include completeness, documentation of equipment calibration and sample handling and chain-of-custody protocols, and consistency of field measurements with historical data. By this frequent review procedure, any deviations in procedures or protocols can be corrected immediately.

The laboratory data will undergo a detailed QA review to assess its precision and accuracy with the use of laboratory and field sample analyses. The QA program will include the collection, by the field sampling personnel, of liquid field duplicates and field blanks for submittal to the analytical laboratory. All blank and duplicate samples will be forwarded to the analytical laboratory with labels that do not indicate their source. In accordance with the laboratory QA/QC program, the laboratory will also prepare and document matrix spikes, matrix spike duplicates, surrogates and method blank results.

As the data is received, the data will be reviewed by the Reporting Task Manager to verify that the laboratory analyses were conducted within the prescribed holding times for the various tests. Rigorous data validation procedures will then be employed to assess the precision of the data (its reproducibility) by determining the relative percent difference (RPD) and relative standard deviation (RSD) of the sample and the duplicate results. Accuracy will be evaluated from information obtained on the spiked samples by evaluating the percent recovery compared with the known spike amount. Surrogates (compounds that act and react similarly to the compounds of interest but which do not interfere with the constituent being analyzed) may also be spiked into the sample and used to evaluate the accuracy of certain organics methods.

In accordance with GLA's current QA/QC protocols, when laboratory analytical reports are received, they are date stamped and reviewed by responsible staff for completeness and conformance with holding time requirements. In addition, for DMP protocols, non-statistical VOC/COC Special analysis will be carried out to evaluate whether there is evidence for tentative identification of a release from the landfill. If a VOC/COC Special "hit" is identified, this information will then be transmitted verbally to the City's Project Manager with a recommendation for retesting, if appropriate. [It should be noted that in some cases (e.g., detection of constituents such as methylene chloride and toluene, which are common laboratory or field-introduced contaminants), retesting may not be necessary. This conclusion will be reviewed with the City and, if appropriate, negotiated with the RWQCB.] Similarly, within 24 hours of receipt of the statistical analyses, the summary tables and supporting data will be reviewed for potential indications of release. If the data suggest evidence of release at any DMP well, this information will be reported to the City's Project Manager immediately so that appropriate responses (i.e., RWQCB notifications and retesting) can be implemented. At the direction of the City, GLA can provide verbal notification to the appropriate RWQCB by phone within the required 24-hour time period. A follow-up letter to provide written documentation and notification of a tentatively identified release to the RWQCB will then be prepared and submitted to the City. This notice will include a summary of the laboratory findings, and a copy of the relevant laboratory analytical report(s). The City can then use the letter and laboratory analytical report(s) as a basis for providing the 7-day tentative release notification to the RWQCB required by regulation.

Statistical/Non-Statistical Analysis of Groundwater Quality Data – In response to Federal (40 CFR), State (27 CCR), and RWQCB requirements, groundwater monitoring programs for Class III landfills must include statistical analyses to evaluate the groundwater quality conditions. For the CSL, GLA understands that the City has identified spatial variability in the aquifer underlying the landfill, and uses intrawell prediction limit statistical analyses to minimize the false positive rate that could be seen using interwell analyses. For the prediction limit analyses, the City has identified two separate statistical areas of influence: the East Side Group (background well B-1C and compliance well B-10C) and the West Side Group (background wells B-11, B-12, B-13, and B-14, and compliance well B-4R). GLA will use Sanitas™ software to predict the upper concentration limit for each monitoring parameter of the next sample that will be collected from that well. The upper concentration limit is compared to the numerical value of monitoring parameter concentration; if the actual concentration exceeds the upper concentration limit, evidence of release will be concluded.

Trend Analysis – Analysis of groundwater and surface water quality and soil-pore gas data trends is an annual reporting requirement for the CSL. Trend analyses will be performed by plotting the analyte concentrations over five years or the period of time that a well or probe has been sampled, whichever is less. GLA will use Microsoft™ Excel® to prepare the time-series plots. These charts will be prepared using graphics with distinctive data markers and line patterns for each well or analyte so that the charts can be photocopied with acceptable quality.

For time-series plots of general minerals and metals concentrations, GLA will prepare plots comparing background and compliance well data (interwell charts). In general, to maximize presentation clarity, no more than five data sets will be presented on any single chart. The historical sample data from each well will be plotted with a unique symbol marking the data point, and the trend lines connecting background well data will be dashed to distinguish it from compliance well data. On these charts, the historical data will also be compared with Federal maximum contaminant levels (MCLs). Concentrations that are below the method detection limit (MDL) will be plotted at one-half of the MDL reported specifically during each monitoring period.

With respect to VOCs, GLA will prepare both intrawell and interwell time-series charts. Charts will be prepared for each VOC that has been regularly detected at least 10 percent of the time in samples from at least one monitoring well at a given site. On interwell charts, historical VOC data in samples from each impacted well will be plotted and compared against the MDL and the Federal MCL, if appropriate. If a VOC was not detected during a particular monitoring period, the concentration will be plotted at one-half the MDL reported for that constituent during that monitoring period. Intrawell charts will also be prepared for VOCs. On these charts, GLA will attempt to display the historical concentrations of related VOCs, such as chlorinated ethenes, in samples collected from a single well. Intrawell charts of VOCs are useful in determining any relationship of increasing or decreasing trends that may be the result of the breakdown of “parent compounds” and the formation of “daughter products.”

For soil-pore gas, charts will be prepared for methane and the cumulative concentrations of related soil-pore gas constituents. Since samples of soil-pore gas may contain 20 or more different VOCs, charting individual VOC trends can be time-consuming. Given the fact that

individual VOC concentrations in soil-pore gas are extremely variable and do not individually lead to defensible conclusions regarding landfill releases or potential releases, GLA has found it more useful to chart the combined concentrations of related VOCs to summarize soil-pore gas data trends (e.g., Total Petroleum Hydrocarbons for the sum of the concentrations of benzene, ethylbenzene, toluene and total xylenes). Using this approach, up to seven charts may be developed (depending on the occurrence of VOCs in individual samples).

Data trends will be summarized in tables within the annual reports. In analyzing time-series charts, it is important not to describe a trend simply according to the slope of a mathematically calculated data trendline. Rather, it is important to review historical seasonal fluctuations in data, changes in MDLs, and concentration changes that may be the result of a change in laboratory analytical methods or field sampling protocols. As a result, our approach to trend analysis is somewhat qualitative, as this provides a better opportunity to evaluate changes in groundwater by accounting for factors that are not typically accounted for in pure mathematical evaluations. Significant increasing or decreasing trends will be described in detail following presentation of the summary table, with the level of discussion particularly enhanced when changes in historical trends appear to be developing.

Each report will contain the information required by the site WDRs, including:

- ☐ Transmittal letter containing an abbreviated summary from the reporting period
- ☐ Executive summary
- ☐ Table of contents
- ☐ Site introduction
- ☐ Sampling and analysis plan
- ☐ Laboratory analyses and QA/QC results
- ☐ Descriptions of sampling and analytical procedures and parameters
- ☐ Discussion of statistical and/or non-statistical data evaluation
- ☐ Historical groundwater elevation data
- ☐ A groundwater elevation contour map
- ☐ Historical tables of laboratory test results for each well or other sampling points
- ☐ Summary tables of analytical results for the reporting period(s)
- ☐ A discussion of the results of the water quality monitoring, soil-pore gas monitoring, and statistical analyses

As required, monitoring reports will also integrate data collected by GLA's sampling crew including visual observations and photographs of site conditions, copies of the regulatory agency inspections, and copies of the diversion and drainage facilities inspection and evaluation logs. Discussions will be more detailed when chemical and/or elevation variations are noted from earlier reporting periods, and recommendations for verification and/or initiation of an Evaluation Monitoring Program will be presented if a release is indicated.

An annual groundwater monitoring report will be prepared in conjunction with the First Quarter Monitoring Report each year (due April 30). In addition to the elements required in a routine quarterly report event, these annual reports will also include an evaluation of trends interpreted from the time-series plots for at least the previous five calendar years; descriptions of any apparent increasing and/or decreasing trends; comparison of analyte concentrations with Basin Plan Objectives; a summary of any monitoring changes made or observed since the last annual

report; discussion and recommendations for VOCs detected during the year; and evaluations of groundwater and vadose zone conditions in the vicinity of the California Street Landfill.

Report Submittals – Prior to submittal of any work product to the City, GLA will provide comprehensive senior peer review of all deliverable technical documents. Approximately 30 days after the end of a sampling event, GLA will submit two draft copies of the draft report to the City for review. Following incorporation of City comments, 2 bound copies and one digital copy of each final report will be distributed to the City, and 1 bound and one digital copy will be submitted to the RWQCB prior to the report due date (defined as 30 days following the end of the quarterly period). One electronic copy will be provided to the Lead Enforcement Agency. A California Certified Hydrogeologist will sign and stamp each monitoring report prior to submittal to the regulatory agencies.

GLA will also upload the data into the site's Geotracker database concurrent with submittal of the groundwater monitoring reports. For this task, electronic data files will be prepared by the laboratory and delivered to GLA by email. GLA will then review the files and upload the electronic data to the State's database. A full copy of the report will also be uploaded in portable document format (PDF).

A.2 NON-ROUTINE LANDFILL SUPPORT

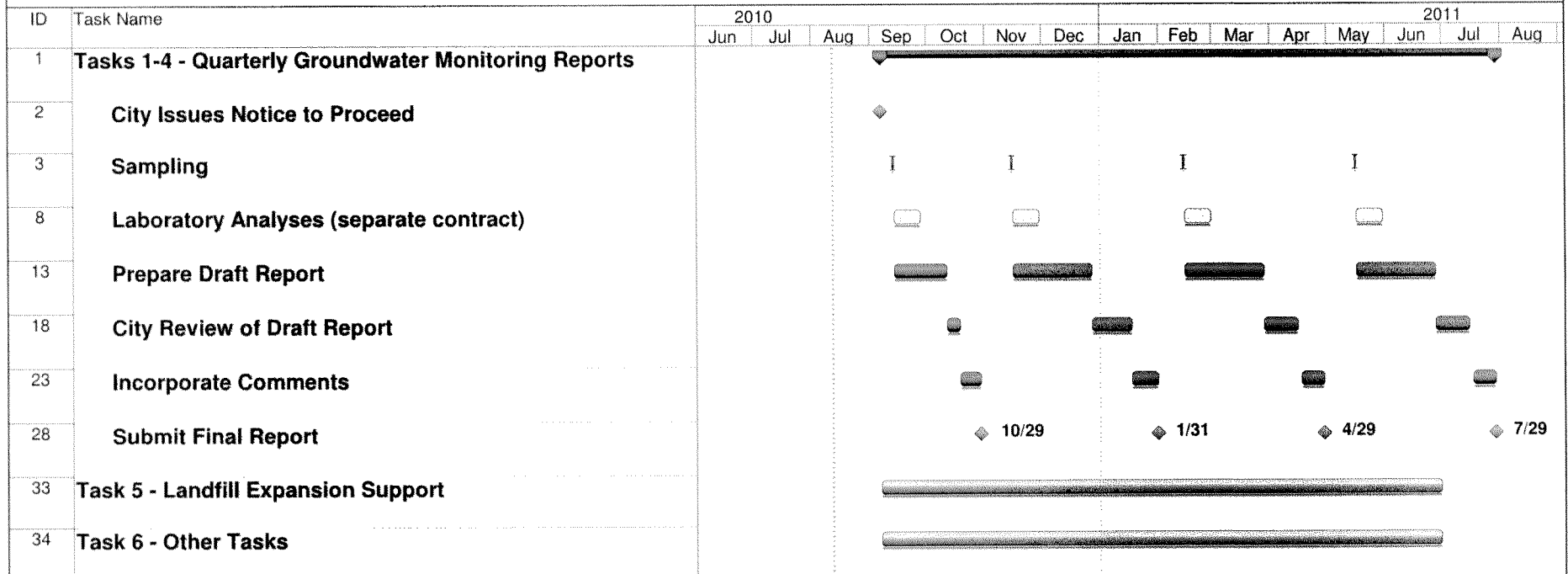
Landfill Expansion Support (if needed) – GLA has supervised the drilling, installation, and decommissioning of hundreds of wells throughout California. If required, GLA will assist the City with monitoring well decommissioning and/or replacement. The work will include development of a work plan that describes the field procedures that will be used to drill/install or decommission a well, permitting support, drilling, borehole logging, well installation or abandonment, and preparation of a report describing the field activities.

Other Tasks (if needed) – GLA has extensive experience in all of the geotechnical and hydrogeological components of Class I and Class III landfill facilities in California. This broad based landfill experience is an important advantage in interpreting potential groundwater impacts since landfill design and operational history are important considerations when evaluating potential impacts to groundwater. In gaining its broad base of landfill design and operational knowledge, GLA has managed the construction of virtually every major component of a landfill facility, including:

- | | |
|---|------------------------------------|
| ▪ Earthwork | ▪ Landfill Gas Control Systems |
| ▪ Liner Systems | ▪ Flare Stations |
| ▪ Cover Systems | ▪ Auxiliary Facilities |
| ▪ Drainage Systems | ▪ Landscape/Irrigation Systems |
| ▪ Leachate Collection Systems | ▪ Refuse Excavation and Relocation |
| ▪ Leachate and Groundwater Treatment Plants | ▪ Landslide Mitigation |

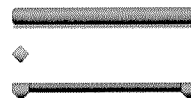
GLA will use this experience to assist the City with unforeseen events related to groundwater, vadose zone, or surface water impacts at the CSL.

EXHIBIT B
ESTIMATED PROJECT SCHEDULE
HYDROGEOLOGIC SUPPORT, TECHNICAL ANALYSES, AND REPORTING SERVICES
CALIFORNIA STREET LANDFILL
CITY OF REDLANDS



Project: California Street Landfill 2010
Date: Thu 8/12/10

GLA Task
Milestone
Summary



Only performed on as-needed basis

Completed by lab under separate contract



EXHIBIT C
PROJECT FEES
HYDROGEOLOGIC SUPPORT, TECHNICAL ANALYSIS, AND REPORTING SERVICES
CALIFORNIA STREET LANDFILL

Work Task	Prin. Eng/Geo	Sr. Hydrogeo.	Project Geo.	Staff Geo.	CADD Draftsman	Word Processor	Chief Eng Tech	Field Tech	Labor Subtotal	Expenses (1% rpt labor)	Vehicle	Sampling Equipment and Supplies	Total Cost
	Battelle	Reason	White	Satterfield	Levin	Ragsdale	Salinas	Campbell/ Shaw					
rate	176	141	109	88	90	62	101	81	(\$)	(1%)	\$12	\$15	(\$)
Tasks 1-4 Sampling and Reporting of Groundwater, Gas, Leachate, and Other Matrices													
Third Quarter 2010													
Sampling	0	0.5	11	0	0	0	4	22	\$3,456	\$0	22	22	\$4,050
Reporting	1	4	8	25	2	8	0	0	\$4,488	\$45	0	0	\$4,533
Fourth Quarter 2010													
Sampling	0	0.5	14	0	0	0	4	28	\$4,269	\$0	28	28	\$5,025
Reporting	1	4	8	25	2	8	0	0	\$4,488	\$45	0	0	\$4,533
First Quarter 2011													
Sampling	0	0.5	11	0	0	0	4	22	\$3,456	\$0	22	22	\$4,050
Reporting (includes annual report)	1	4	10	32	2	10	0	0	\$5,446	\$54	0	0	\$5,500
Second Quarter 2011													
Sampling	0	0.5	14	0	0	0	4	28	\$4,269	\$0	28	28	\$5,025
Reporting	1	4	8	25	2	8	0	0	\$4,488	\$45	0	0	\$4,533
Task 5 - Landfill Expansion Support													
Labor and incidental costs for expansion support, as directed by City													\$2,000
Task 6 - Other Tasks													
Labor and incidental costs for other tasks, as directed by City													\$2,000

TOTAL ESTIMATED COST FOR ONE YEAR OF MONITORING: \$41,247

Assumptions:

- Monitoring costs include coordination with City-selected lab to obtain sample containers, sampling of groundwater monitoring wells, lysimeters, soil-pore gas probes, and leachate.
- Reporting costs include database management, data validation, statistical analyses, preparation of groundwater elevation contour maps, preparation of text describing the monitoring event and results, and distribution of reports to appropriate agencies. Reporting costs also include uploading data to the State's Geotracker Database.
- Annual reports will be combined with the First Quarter Monitoring Report, due April 30 of each year.
- Each quarterly report will include results for all samples collected during the quarter.
- Field tech rates include labor, equipment, vehicle, and miscellaneous costs (ice, coolers) associated with sampling.
- Analytical costs are not included based on the RFP indicating that samples will be submitted to the City selected Laboratory.
- One percent miscellaneous fee applies to reporting costs only and are related to postage/delivery of reports to City, RWQCB, and LEA, and costs of items such as binders, paper, and photocopying.

Tasks 1-4 Sampling and Reporting of Groundwater, Gas, Leachate, and Other Matrices

Third Quarter 2010	\$8,582
Fourth Quarter 2010	\$9,557
First Quarter 2011	\$9,550
Second Quarter 2011	\$9,557

Task 5 - Landfill Expansion Support
\$2,000

Task 6 - Other Tasks
\$2,000

EXHIBIT D
RATE SCHEDULE

PERSONNEL CHARGES

PROFESSIONAL STAFF:

Staff Engineering Geologist/Hydrogeologist/Engineer	88.00/Hour
Project Engineering Geologist/Hydrogeologist/Engineer	109.00/Hour
Senior Engineering Geologist/Hydrogeologist/Engineer	141.00/Hour
Supervising Engineering Geologist/Hydrogeologist/Engineer.....	158.00/Hour
Principal Engineering Geologist/Hydrogeologist/Engineer	175.00/Hour
Court Appearance (Expert Witness, Deposition, etc.)	1.75 x HourlyRate (4 Hour Minimum)

FIELD STAFF:

Field Technician I.....	60.00/Hour
Field Technician II.....	70.00/Hour
Senior Field Technician	81.00/Hour
Prevailing Wage Minimum	87.00/Hour Min.
Supervising Field Technician	101.00/Hour

SUPPORT STAFF:

Laboratory Technician	90.00/Hour
CADD/Designer.....	90.00/Hour
Geotechnical Draftsperson	62.00/Hour
Geotechnical Clerk/Typist	52.00/Hour
Word Processor.....	62.00/Hour

*Overtime Premium is 35% of PERSONNEL CHARGE

*A surcharge of 20% of PERSONNEL CHARGES is applicable to personnel working in hazardous materials environments to compensate for costs associated with hazardous materials operations training and personnel medical examinations.

EQUIPMENT CHARGES

ReMi/Refraction Seismograph.....	600.00/Day
BAT Permeameter.....	100.00/Day
Compaction Testing Equipment & Supplies	50.00/Day
Slope Inclinator.....	250.00/Day

EXPENSES

Vehicle Use for Field Services (added to appropriate "PERSONNEL CHARGE")	12.00/Hour
Soil Sampling Equipment & Drilling Supplies	5.00/Hour
Groundwater Sampling Equipment and Supplies	15.00/Hour
Per Diem.....	Lesser of (Cost +15%) or (Local Government Rate)
Outside Services (Consultants, Surveys, Chemical lab Tests, etc.).....	Cost + 15%
Reimbursables (Maps, Photos, Permits, Expendable Supplies, etc.)	Cost + 15%
Outside Equipment (Drill Rig, Backhoe, Monitoring Equipment, etc.).....	Cost + 15%

PERMITS, FEES AND BONDS

The costs of all permits, fees, and performance bonds required by government agencies are to be paid by the Client, unless stated otherwise in an accompanying proposal.

INSURANCE

GeoLogic Associates, Inc. carries workers' compensation, comprehensive general liability and automobile with policy limits normally acceptable to most clients. The cost for this insurance is covered by the fees listed in this schedule. Cost of any special insurance required by the Client, including increases in policy limits, adding additional insured parties and waivers of subrogation, are charged at cost plus 15%. Unless otherwise stated, such charges are in addition to the estimated or maximum charges stated in any accompanying proposal.

LABORATORY TESTING

California Bearing Ratio (excluding moisture-density curve).....	\$150.00/Point
Chloride Content.....	60.00/Test
Corrosivity Series (resistivity, Ph, Sulfate, Chloride).....	150.00/Test
Consolidation Test (without rate data – up to 8 loading increments).....	140.00/Test
Consolidation Test (single point).....	95.00/Test
Consolidation Test Rate Data (per load increment).....	70.00/each
Direct Shear Test (at natural moisture).....	55.00/Point
Direct Shear Test (saturated – strain rate 0.0084 inch/min.).....	65.00/Point
Direct Shear Test (saturated, recycled – strain rate 0.0084 inch/min.).....	120.00/Point
Direct Shear Test (ASTM 3080 – consolidated drained).....	125.00/Point
Direct Shear Test (ASTM 3080 – consolidated drained, residual).....	280.00/Point
Durability Index - Coarse.....	125.00/Test
Durability Index – Fine.....	115.00/Test
Expansion Index Test.....	110.00/Test
Grain-Size Analysis - Sand-Clay, including Hydrometer.....	160.00/Test
Grain-Size Analysis - Gravel-Clay, including Hydrometer.....	200.00/Test
Liquid Limit.....	65.00/Test
Los Angeles Abrasion Test (500 revolutions).....	145.00/Test
Los Angeles Abrasion Test (1000 revolutions).....	160.00/Test
Mechanical Analysis - ASTM D1140 (wash 200 sieve).....	60.00/Test
Mechanical Analysis - Sand or Gravel (dry sieve).....	70.00/Test
Mechanical Analysis Sand and Gravel (wash sieve).....	155.00/Test
Mechanical Analysis Sand or Gravel (wash sieve).....	100.00/Test
Moisture Content.....	13.00/Test
Moisture-Density Curve for Compacted Fill (4-inch Mold).....	140.00/Test
Moisture-Density Curve for Compacted Fills (6-inch Mold).....	175.00/Test
Moisture-Density Single Point.....	70.00/Test
Moisture-Density Curve (Calif. 216).....	145.00/Test
Permeability (falling head).....	160.00/Test
Permeability (flexible wall - ASTM).....	300.00/Test
Permeability (rigid wall – constant head pressure).....	250.00/Test
Plastic Limit.....	65.00/Test
Plasticity Index.....	120.00/Test
Resistance Value.....	200.00/Test
Resistivity & pH Test (Calif. 532 or 643).....	90.00/Test
Sand Equivalent.....	65.00/Test
Specific Gravity and Absorption - Gravel.....	71.00/Test
Specific Gravity - Fine-Grained Soils.....	76.00/Test
Sulfate Content.....	50.00/Test
Triaxial Compression Test (CD with pore pressure).....	575.00/Test
Triaxial Compression Test (CU with pore pressure).....	425.00/Test
Triaxial Compression Test (UU).....	115.00/Test
Unconfined Compression Test (undisturbed sample).....	75.00/Test
Unit Dry Weight and Moisture Content (undisturbed sample).....	18.50/Test

Special Sample Preparation and Laboratory Testing not listed above will be charged at applicable personnel rates.

TERMS

Payment is due upon presentation of invoice and is past due thirty (30) days from invoice date. Past due accounts are subject to a finance charge of one and one-half percent (1-1/2%) per month, or the maximum rate allowed by law.

PROPOSAL PERIOD

Unless otherwise stated, a proposal accompanying this schedule is effective for sixty (60) days. If authorization to proceed is not received within this period, GeoLogic Associates, Inc. reserves the right to renegotiate the fee.

Schedule 2010..... Effective through 06/30/11