FIRST AMENDMENT TO
PROFESSIONAL CONSULTANT SERVICES AGREEMENT

GEOLOGIC ASSOCIATES, INC.

Water Quality Monitoring and Reporting Services
for the Inactive Tequesquite Landfill, Riverside, California (RFP No. 2098)

THIS FIRST AMENDMENT TO PROFESSIONAL CONSULTANT SERVICES AGREEMENT ("First Amendment") is made and entered into this _____ day of _____, 2024, by and between the CITY OF RIVERSIDE, a California charter city and municipal corporation ("City"), and GEOLOGIC ASSOCIATES, INC., a California corporation ("Consultant"), with respect to the following:

RECITALS

WHEREAS, the City and Consultant entered into that certain Professional Consultant Services Agreement dated November 4, 2021 ("Agreement"); and

WHEREAS, the Agreement is set to expire on June 30, 2024; and

WHEREAS, paragraph 2 of the Agreement states that upon mutual agreement of the parties, the term of the Agreement may be extended for up to two (2) additional one- (1) year terms, not to exceed two (2) years based upon the acceptable performance of the Consultant, acceptable fees and subject to the same terms and conditions of the Agreement; and

WHEREAS, the City and Consultant desire to extend the term of the Agreement by one (1) additional year, through June 30, 2025; and

WHEREAS, the City and the Consultant desire to amend the Scope of Services by adding additional services; and

WHEREAS, the City and Consultant desire to add additional Compensation in the amount of Fifty-Nine Thousand Two Hundred Fifty Dollars ($59,250.00), for the extended term of the Agreement; and

WHEREAS, the City and Consultant desire to amend Key Personnel by adding additional personnel.

NOW, THEREFORE, incorporating the recitals set out above, the parties hereto mutually agree to the following amendment to the Agreement.

1. Section 2, Term, is hereby amended to extend the term of the Agreement by one (1) additional year, through June 30, 2025.

2. Exhibit "A" of the Agreement is amended and replaced in its entirety with Exhibit "A-1," attached hereto and incorporated herein by this reference.

3. Section 3, Compensation/Payment, is hereby amended to increase the compensation in the amount of Fifty-Nine Thousand Two Hundred Fifty Dollars ($59,250.00), for the extended term of the Agreement,

4. Exhibit "B" of the Agreement is amended and replaced in its entirety with Exhibit B-1," attached hereto and incorporated herein by this reference.

5. Exhibit "C" of the Agreement is amended and replaced in its entirety with Exhibit "C-1," attached hereto and incorporated herein by this reference.

6. All other terms and conditions of the Agreement between the parties, which are not inconsistent with the terms of this First Amendment, shall remain in full force and effect as if fully set forth herein.

[SIGNATURES ON FOLLOWING PAGE.]

IN WITNESS WHEREOF, the parties hereto have caused this First Amendment to Professional Consultant Services Agreement to be duly executed the day and year first above written.

CITY OF RIVERSIDE,
a California charter city and municipal corporation

By: _____
City Manager

Attest: _____
City Clerk

Certified as to Availability of Funds:

By: _____
Chief Financial Officer

Approved as to Form:

By: _____
Deputy City Attorney

GEOLOGIC ASSOCIATES, INC.,
a California corporation

By: _____
Print Name: John M. Hower
Its: Senior Vice President
(Signature of Board Chair, President, or Vice President)

and

By: _____
Print Name: Michael D. Reason
Its: Corporate Secretary
(Signature of Secretary, Assistant Secretary, CFO, Treasurer, or Assistant Treasurer)

21-0789.1 TAT 4/04/24

EXHIBIT "A-1"

SCOPE OF SERVICES

Exhibit A- Scope of Work

Geo-Logic
ASSOCIATES

March 20, 2024

City of Riverside
Regional Water Quality Control Plant
5950 Acorn Street
Riverside, CA 92504

Attention: Robert Erland

RE: Submittal for Water Quality Monitoring and Reporting Services for the Inactive Tequesquite Landfill, Riverside, California

Geo-Logic Associates (GLA) is pleased to present this contract extension proposal to the City of Riverside (City) to provide groundwater monitoring and reporting services for the inactive Tequesquite Landfill (TL). GLA has been the City's groundwater consultant since 1997, and has provided routine monitoring and reporting program services for the TL since 2006.

GLA understands that the City wishes to retain the services of a qualified environmental consulting firm to provide water quality monitoring and semi-annual reporting services for the TL for one additional year. Our original proposal identifies all necessary and required routine groundwater, surface water, and landfill gas condensate sampling activities, laboratory analyses, and report preparation tasks for this project. All field, laboratory, and reporting services will be conducted in accordance with Title 27 of the California Code of Regulations and Monitoring and Reporting Program (MRP) 98-99-06, which was issued specifically for the TL by the Regional Water Quality Control Board (RWQCB) – Santa Ana Region.

GLA proposes a cost of $59,250 for a one-year extension. Significant increases in the Consumer Price Index during the last three years have necessitated an increase in our consulting fees to keep pace with the rate of inflation. Similarly, costs for laboratory analyses have increased, and will increase again in 2025 due to inflation. GLA has reached out to several analytical laboratories to provide the City with competitive rates for the required analyses, and the laboratory analytical rates provided herein are at or below industry averages.

GLA appreciates the opportunity to submit this Proposal. Should you have any questions regarding this submittal on our qualifications, please do not hesitate to call our Project Manager, Greg Shagam at (909) 290-5314 or gshagam@geo-logic.com.

Geo-Logic Associates, Inc.

Michael Reason, PG, CHG
Principal Geologist

EXHIBIT A

Scope of Services

Proposers must have the capability of providing the full range of services outlined in the following Scope of Services and shall describe their capacity to provide the following services:

A. Groundwater, Surface Water, and October Leachate Sampling
Sample collection, handling, and storage shall be performed in accordance with the most recent version of the Standards USEPA Methods (USEPA Publication "SW-846"). Consultant shall provide all bottles, vials, containers, etc. necessary for sample collection and analysis. Sample containers shall be properly labeled including but not limited to, a unique well or surface sampling point identification, collection time and date, initials of the person collecting the samples, and analyses required for each sample.

Monitoring parameters and frequency for the required water quality, surface water, and landfill gas condensate monitoring are found in Monitoring and Reporting Program 98-99-06 and the Monitoring and Reporting Program 98-99-06 Modification Approval letter from July 2009.

B. Laboratory Analyses
The Consultant will ensure that the samples are analyzed within the EPA-prescribed holding times and are completed in accordance with the most recent version of the Standards USEPA Methods. If the Consultant wishes to contract a laboratory to do the analyses, the Consultant shall ensure the laboratory is accredited by ELAP or NELAP.

The Consultant will review reports from the laboratory to ensure that all required analyses have been performed, and to compare the results with historical data to pre-screen for anomalous or suspect results. Data anomalies will be identified and resolved with field and laboratory personnel and shared with City staff.

C. Data Analysis and Reporting
The Consultant will prepare semi-annual and annual water quality monitoring reports addressing all requirements in the M&RP. The report will contain the following sections:

- Executive Summary
- List of Acronyms and Abbreviations
- List of Definitions
- Introduction
- Sampling and Analysis Plan
- Laboratory Analysis and QA/QC Results
- Data Analysis
    - Statistical Methods
    - ARARs (Applicable or Relevant and Appropriate Requirements)
- Water Quality Monitoring Results
    - Water and Surface Water Monitoring Activities
    - Groundwater Potentiometric Surface Elevations

        - Groundwater Elevation Data (for the quarter covered)
        - Groundwater Elevation Data (for the other quarter covered)
- Monitoring Analytical Results
    - Groundwater
        - New Historical Intrawell Maximum Concentrations
        - Statistical Analysis of Water Quality Data
        - Comparisons with ARARs
        - Concentration Limit Comparison (if applicable)
    - Surface Water
        - New Historical Intrawell Maximum Concentrations
        - Comparisons with ARARs
        - Concentration Limit Comparison (if applicable)
    - Annual Summary (if applicable)
        - Groundwater Data Trends
        - Surface Water Data Trends
    - Conclusions and Recommendations
- Correction Action Program Comparisons (if applicable)
- Closure
- References
- Tables
- Figures
- Appendices
- Field Sample Collection Log
- Chain of Custody Records and Certificates of Analysis
- Facility Standard and Observation Monitoring

The Consultant will report chemistry data analysis in a tabular form; comparing them to historical data. Laboratory reports and field notes will be compiled into appendices. If new releases of volatile compounds or any pollutants are identified, the Consultant will notify the City immediately via email and/or telephone call and advise the City on verification procedures and regulatory notifications. Consultant will provide support to retest as needed and counsel on regulatory negotiations.

The Consultant will prepare semi-annual and annual water quality monitoring reports in time to meet the regulatory deadlines. The City expects to, and the consultant shall allocate sufficient time for, review and comment of draft reports. The consultant will be expected to review City comments, facilitate and support discussion and resolution of any comments and issues raised, and revise reports accordingly.

For the semi-annual reports, drafts will be submitted to the City for review by the 15th of the month of submittal (April and October). The annual summary reports (monitoring period April 1 of previous year to March 31), both in hard copy and electronic version, will be submitted to the RWQCB on or before the submittal due date of April 30 as outlined in Table A of the M&RP. All reports must bear the signature, stamp, and contact information of the preparer or their project manager.

D. Regulatory Liaison Support

The Consultant will provide the City with regulatory liaison support should the RWQCB, or any other agency having jurisdiction over the landfill, have any questions regarding reports, groundwater chemistry data, or conclusions derived from the data.

Geo-Logic
ASSOCIATES

Statement of Understanding and Approach

GLA understands that the City will retain the services of a qualified environmental consultant to provide routine sampling and reporting services to support regulatory compliance with the site-specific groundwater monitoring and reporting program developed by the Santa Ana RWQCB. This work will include quarterly water level gauging, and semiannual sampling, analyses, and reporting. Each monitoring event will include a variety of tasks as outlined below:

Preparation of a Health and Safety Plan: Prior to initiating field work, the GLA Team will review our existing site-specific Health and Safety Plan (HASP) and update the HASP, as needed for the Tequesquite Landfill. The HASP will detail methods and procedures to protect workers from existing and potential hazards during field operations. The HASP will take site-specific conditions into account and will follow CAL-OSHA regulations and the most current U.S. EPA Standard Operating Safety Guides. At a minimum, the HASP will address:

- Site locations and anticipated conditions
- Location of nearby hospitals and emergency control agencies
- Site and office support contacts
- Brief descriptions of anticipated field activities
- Anticipated chemical, biological, and physical hazards
- Brief description of safe field procedures
- Description of relevant mitigation measures
- Personnel and equipment monitoring procedures
- Description of personnel protective equipment
- Description of additional safety equipment
- Contingency plans
- Emergency procedures and protocols

Environmental Sampling: Approximately one to two weeks prior to mobilization for each sampling event, GLA will order sample containers from BC Laboratories, Inc., the contract laboratory. The laboratory will be notified of the number of monitoring points and the appropriate analytical parameters to be analyzed for each sample matrix, and the laboratory will be directed to provide extra containers for collection of appropriate field and equipment blanks. GLA's sampling personnel will ensure that all sample bottles are "clean-certified" from the laboratory or supplier. Sample containers that appear dirty, used, or otherwise compromised will not be used. Sample bottles containing preservatives will be appropriately marked. Sample shipping containers, coolers, ice packs, and any other materials that may contact sample bottles will be regularly inspected for cleanliness, durability, and functionality. Damaged coolers will not be used, as they may compromise sample integrity.

Groundwater Sampling: Single samples will be collected from each monitoring point that is required to be sampled, and these samples will be analyzed for the monitoring parameters specified in the site M&RPs. Groundwater samples will be collected following the procedures outlined in the *Practical Guide for Groundwater Sampling* (Barcelona, et al., 1985), *RCRA Groundwater Monitoring Technical Enforcement Guidance Document* (U.S. EPA, 1986). All sampling will be completed within a maximum 30-day time period. GLA understand that wells are equipped with electronic and bladder pumps, and some wells do not have pumps. Wells equipped with bladder pumps are sampled using low-flow methods, while wells equipped with electronic submersible pumps are sampled using standard purge methods. For wells that are not equipped with dedicated sampling pumps or if the pump is inoperable, the wells will be

sampled with portable equipment, (e.g., decontaminated bailers or pumps) and the actual sampling method though variable will comply with the standard protocols outlined below.

Upon arrival at each wellhead, the well will be inspected and any well-head problems will be noted on the field log. Significant problems with the well-head, such as those that prevent sampling or compromise the integrity of the well, will be reported to the City (verbally and in writing) within 24 hours of observation. Prior to sampling a well, the depth to groundwater will be measured to the nearest 0.01 foot from an established well datum (e.g., top of casing) using a decontaminated electric sounding device. The depth to water will then be used to calculate the water surface elevations in the wells, and to calculate appropriate purge volumes. To evaluate groundwater flow conditions beneath the landfill, during each sampling event, groundwater depths will be measured on the same day, if possible, in all accessible site wells and piezometers.

Well purging will be accomplished using existing dedicated pumps, or in the absence of dedicated systems, using decontaminated pumps or bailers, or no-purge passive HydraSleeve™ samplers. Samples of purged water will be collected and monitored, and purging rates will be low enough so as not to induce turbulent (i.e., non-laminar) flow within the well. As a well is purged, indicator parameters (pH, temperature, specific conductance, dissolved oxygen, and turbidity) will be monitored and recorded until they have stabilized to within 10 percent of the preceding measurements and show no discernible upward or downward trend. Flow-through cells will be used to measure field parameters at wells that are purged with pumps. For sampling locations where pumps are not used (e.g., wells without pumps and surface water sampling locations), a sample will be collected in a clean container, the field instrument probe will be placed in the container, and appropriate field measurements will be recorded on the sample collection log.

GLA recognizes that many of the field parameters (such as pH and dissolved oxygen) have a very short holding time, and therefore careful calibration of the field instruments must be maintained so that accurate results can be obtained in the field. GLA will accomplish this calibration by working closely with our analytical laboratory to establish instrument calibration in a fixed laboratory setting on a regular basis. In the field, the instruments will be calibrated before work begins at each sampling location.

Sampling from wells with dedicated sampling apparatus will be conducted by slowing the pumping rate, as appropriate, and allowing the discharge water to flow gently into appropriate sample containers. Should bailing be required, the bailer will be slowly lowered into the water column to minimize disturbance to the collected sample, and a bottom emptying device will be inserted into the bottom of the bailer to release the sample into the sample containers. For wells that have very slow recharge rates (i.e., more than two hours to recover to 80 percent of its original water level), the well will be purged dry and a sample will be collected after the water level has recovered to within approximately 80 percent of its original level.

Several wells will also be sampled using the no-purge HydraSleeve™ passive sampling device and has been shown to provide comparable results to traditional sampling methods. This sampler has been especially advantageous to use in sampling slow recharge wells, which may require purging the well dry and waiting for the well to recover over a period of several hours or overnight for sufficient water to be present for sampling. The HydraSleeve™ sampling device is a polyethylene sleeve, typically 30 to 36 inches long, but can be as long as 60 inches to obtain a greater sample volume, and is attached to a tether tied to the well cap and deployed into the well with a bottom, and possibly, top weight. The device can be deployed a day before the sampling event (e.g., following measurement of the water level in the well), or will be deployed following a sampling event and left hanging in the well until the next semiannual sampling event.

Water pressure keeps the sleeve collapsed and the check valve closed during deployment. For sampling, the sleeve is removed from the well at a rate faster than one foot per second to allow the check valve to open and completely fill the HydraSleeve™. Once the sleeve is filled, the check valve will close preventing loss of sample and entry of water from zones above the well screen as the sleeve is recovered. A sampling tube is inserted into the sleeve to release the sample into the sample containers.

As permitted by the RWQCB in their letter to the Riverside Department of Public Works dated June 28, 1999, water that is purged from each well and not delivered to a sampling container will be broadcasted to the ground surface near the source well. Steel drums or other containers will not be used to store unused purge water.

Sample containers will be provided by BC and will be stored in an area that is free from dust and exposure to organic chemicals. All groundwater samples will be poured from the pump discharge or bailer directly into the sample containers by pouring the sample down the sides of the container with as little turbulence as possible. Sampling containers will be filled in order of volatility (volatile organic compounds first, then semi-volatile organic compounds, pesticides, herbicides, general chemistry, and metals). Vials for volatile organic analyses will be filled completely to fill all the air space, capped, turned upside down, and tapped to check for air bubbles.

Trip blanks will accompany sample containers from the laboratory, through the field operations, and return to the laboratory as a QC check to determine if contamination has been introduced from the sample containers or laboratory water. Trip blanks will constitute at least ten percent of the total number of groundwater samples. If non-dedicated sampling equipment is used, equipment blanks will also be collected and will consist of distilled, deionized, reagent-grade laboratory water passed through representative sampling equipment (e.g., bailers, bottom emptying devices) as a test of equipment decontamination. One equipment blank will be collected per groundwater monitoring event. Field blanks will be collected at a frequency of one per day by pouring laboratory provided reagent-grade water directly into a set of sample vials as a test of site-specific environmental conditions.

After a sample has been collected, it will be stored in a field ice chest where ice cubes or "blue ice" packs will be used to cool and maintain the samples at a temperature of approximately 4°C. To prevent breakage, bubble wrap or an alternative material will be placed around the samples so they do not touch each other or the side of the shipping container. Each sample will be catalogued on appropriate Chain-of-Custody documentation after it has been collected, and these Chain-of-Custody records, and other appropriate paperwork, will be sealed in a plastic bag taped to the lid of the shipping container and will accompany each sample to the analytical laboratory. It is anticipated that samples will be provided to the laboratory courier at the end of each sampling day, and the field sampler will be responsible for the care and custody of the samples until they are shipped or otherwise delivered to the laboratory custodian.

As discussed in the following sections, GLA will review analytical data promptly upon receipt of certificates of analysis, and will identify any VOCs or other anthropogenic compounds that might indicate landfill release or problematic groundwater treatment system chemistry. During this review, GLA will develop a listing of wells (and thereby the purge water drums) that contain VOCs, the VOC concentrations measured and the approximate purge volumes. The GLA Team will dispose of purge waters in accordance with established protocols. Purge water that does not contain VOCs will be disposed of at the site in a manner that does not impact the monitoring well, other landfill structures, or landfill cover soils.

Surface Water Sampling: Surface water samples will be collected from the designated sampling points when there is sufficient water available for sampling. Samples will be collected without disturbing the channel bottom or otherwise changing the observed flow conditions and sediment load of the channel or pond. Sample bottles will be filled to minimize air space in the sample containers. After the samples are collected, they will be sealed, labeled, and placed in the cooler for transport to the laboratory.

Miscellaneous Liquids Grab Sampling: Annual grab samples will be collected from the landfill gas condensate sampling points during the fourth quarter monitoring event. Grab samples are generally collected by filling laboratory supplied sample containers using a new, factory-sealed disposable bailer equipped with a bottom emptying device or directly from the condensate trap. Stringent health and safety protocols will be followed during condensate and leachate sampling to minimize dermal and respiratory exposure. As each sample bottle is carefully filled, allowing the liquid to stream down the side of the sample container, the bottle will be capped, sealed, and labeled, and then placed in a chilled cooler for transport. The sampling process will follow the protocols described above until all bottles are filled. Individual condensate samples will be collected for VOC and hexavalent chromium testing. Condensate sample collection will also include a composite sample for testing that will be generated using aliquots obtained from each individual condensate sample. All liquid grab samples will be catalogued on appropriate Chain-of-Custody documentation that will accompany the samples to the analytical laboratory..

Landfill Groundwater Data Review and Validation: In accordance with GLA's QA/QC protocols, when laboratory analytical reports are received, they are reviewed for completeness and conformance with holding time requirements. Field, travel, and method blank sample results

are reviewed and blind duplicate samples are compared to primary sample results, and these evaluations are used to validate the data. As laboratory results are received, GLA will review data immediately to identify any data anomalies and to evaluate whether there is evidence of tentative identification of a release from the landfill as a result of a new VOC or elevated concentrations of monitoring parameters. The Team's QA Manager will be responsible for reviewing the field sampling sheets and Chain-of-Custody documentation at the end of each day/week to assess completeness, documentation of equipment calibration, sample handling, 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.

Data evaluation will represent the most significant aspect of the monitoring and reporting program since all of the analytical data must be validated. 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 of the individual site M&RPs and/or RWQCB orders and/or directives.

The validation will be used to assess the adequacy and accuracy of the data, the presence of field or laboratory contamination, and the need for conducting verification retesting as described above.

If a data anomaly is identified, the laboratory is contacted to verify the constituent concentration. Upon verification, this information is transmitted verbally and/or via e-mail to the City's Project Manager with a recommendation for retesting, if appropriate. In some cases (e.g., detection of constituents such as acetone or methylene chloride, which are common laboratory- or field-introduced contaminants), retesting may not be necessary. If the data suggest new evidence of release at any sample point this information will be reported to the City Project Manager immediately.

The semiannual water quality data will be entered into a database and statistically analyzed using RWQCB-accepted statistical methods and the Sanitas® software package. If the current data are consistent with the intrawell historical results and natural spatial variability does not limit the effectiveness of the background comparisons, the current value will be grouped with the historical data and a background-to-compliance contrast test will be performed.

For VOCs and COCs, the California Non-Statistical Data Analysis Method (CNSDAM), as outlined in SWRCB Resolution 93-62 is also performed for those analytes detected less than 10 percent of the time in samples from background wells. GLA will review and evaluate the data and provide prompt identification and notification of non-statistical evidence of a release using CNSDAM. Retests will also be identified in a time frame that can provide meaningful comparison with the primary sample results.

Response Plan for Sampling/Laboratory Contamination: While GLA strives to collect samples that are representative of field conditions, "false positive" indications of release are an expected (and in fact, required) artifact of mandatory statistical evaluations. In addition, identification of

anomalous constituents as a result of environmental conditions, lapses in sampling protocols, or other field conditions can happen with any program of this size. When analytical results indicate that samples have been impacted, the results of the accompanying QA/QC samples will be evaluated to determine if the samples could have been contaminated during the sample collection or analytical processes. When field contamination is suspected, the sampling procedures will be reviewed with the sampling crew and/or analytical laboratory to minimize the potential for a repeat of the error. [For example, if BTEX components are detected in the field blank, it is possible that the samples were collected downwind of a gasoline-powered engine, and correction may include verification that samples are collected upwind of a potential contaminant source.]

In the case of suspected laboratory contamination, GLA will review the data to identify possible contaminant sources, and will meet with the analytical laboratory to discuss the historical data and potential false positive results. The laboratory will be required to take appropriate measures to identify the cause of laboratory-related sample contamination, and will be required to implement a program to reduce the possibility of future contamination. In any event, if the "false positive" cannot be readily dismissed, as a result of analytical or field QA/QC procedures, GLA will perform a retest of that monitoring point as required. Since the State mandated statistical protocols require a false positive rate of no less than 1%, the GLA Team has assumed that 1 or 2 discrete retests will be required during each sampling event.

Verification Sampling: If statistical or non-statistical analyses of the analytical results indicate a new release from the TL has occurred, recommendations for verification and immediate RWQCB notification will be submitted pursuant to 27 CCR § 20420(j)(1-3). For purposes of verification, two discrete retest samples will be collected from each monitoring point where contamination is suspected using the same sampling and analytical protocols employed in obtaining the primary sample. Retest samples will be collected within 30 days of the initial indication of the release, and will be analyzed only for those constituents that were identified at concentrations above background in the initial sample. If the compound is not detected in either of the retest samples, then a false positive detection will be concluded for the primary sample. If the compound is detected in one or both of the retest samples, then the primary detection will have been verified.

Should retesting verify a release, a single sample from each DMP monitoring point at that site will then be analyzed for the full list of Constituents of Concern (COCs). While up to 2 retests are anticipated per monitoring event and this cost is included in the enclosed fee estimate, the need for and extent of release-induced COC monitoring cannot be reasonably estimated and this work will be completed as a non-routine work item.

Landfill Release Notification: When laboratory analytical reports are received, they will be date stamped and reviewed by the QA Manager for completeness and conformance with holding time requirements. In addition, for DMP protocols, wells monitored under the 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 is then transmitted verbally to the County'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, after the statistical analyses are completed, the City will be notified if the statistical conclusions suggest evidence of a new 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. 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 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.

Data Entry: Rather than utilizing a simple digital transfer of data from the laboratory to prepare our tables, GLA proposes to enter all laboratory data manually. We have found this practice to provide the best opportunity for critical review the laboratory data, enabling our staff to identify and resolve potential data anomalies quickly. Laboratory reports will be provided digitally in EDF and PDF format for upload into Geotracker.

Statistical/Non-Statistical Analysis of Groundwater Quality Data: GLA proposes to use Sanitas® statistical software for analysis of groundwater monitoring data. As allowed under CCR Title 27 Section 20415, Both intrawell and interwell statistical methods are used to evaluate the water quality data. If the current data are consistent with the intrawell historical results and natural spatial variability did not limit the effectiveness of the background comparisons, the current value is grouped with the historical data and a background-to-compliance (interwell) contrast test is performed. The statistical software program calculates prediction limits for all routine monitoring parameter data that are normally-distributed or that can be transformed into a normal distribution using logarithmic, exponential, and other mathematical transformation routines. If transformation operations do not result in a normally-distributed database, non-parametric prediction limits will be calculated. The prediction limits will be used to evaluate compliance with water quality standards imposed on the site. In addition, the non-statistical CNSDAM, as outlined in SWRCB Resolution 93-62, will be performed for those analytes detected less than 10 percent of the time in samples from background wells.

Trend Analyses: Analysis of landfill groundwater and surface water quality data trends is an annual reporting requirement for the TL. Trend analyses will be performed by plotting the concentrations of an analyte over the history of monitoring for each well. The Sanitas® statistical software offers an ability to prepare time-series plots for each monitoring parameter or combination of wells. In general, no more than five data sets will be presented on one chart to maximize presentation clarity. The historical sample data from each well will be plotted with a unique symbol marking the data point.

Groundwater Monitoring Report Preparation: Water quality monitoring data will be compiled in semiannual and annual reports. Each semiannual and annual report will contain the information required by Order 98-99-03, as well as information subsequently requested by the Santa Ana RWQCB. At a minimum these reports will include:

- Executive summary
- Table of contents
- Site introduction
- Sampling and analysis plan
- Laboratory analyses and QA/QC results
- Descriptions of sampling and analytical methods 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 monitoring point
- Summary tables of analytical results for the reporting period(s)

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 additional studies will be presented if appropriate.

The second semiannual monitoring report will contain the elements required of the first semiannual report and will also include the required annual presentation of historical site monitoring data as time-series plots. The report will discuss apparent or significant increasing and/or decreasing trends when noted.

Prior to submittal of any work product to the City, GLA will provide comprehensive senior peer review of all deliverable technical documents. One draft copy of each report will be submitted to the City 15 calendar days prior to the RWQCB submittal dates. Following incorporation of City comments, GLA will prepare copies of the final report for distribution. Reports for all landfill sites are due to the RWQCB by October 31st and April 30th (annual summary report) of each year. The final reports will be signed and stamped by our Project Manager, a State of California Registered Professional Geologist.

GLA will upload the landfill data into the 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).

Regulatory Liaison Support: Throughout the course of the project, GLA's Project Manager and Principal-in-Charge will be available to address issues and comments raised by the Santa Ana RWQCB concerning the environmental monitoring and reporting for the TL. Costs for our services include basic interaction with the RWQCB to answer questions about the semiannual monitoring reports, sampling methodologies, data evaluation and other routine questions. Should more complex issues arise that require a higher level of effort to address, GLA will prepare a work scope and cost estimate to address these issues. Costs will be based on the fee schedule provided with our project cost estimate.

Non-Routine Well and Pump Maintenance: In the event that a pump needs to be replaced, these services can be provided by GLA's environmental sampling technicians who have abundant experience in diagnosing and repairing pump problems and replacing inoperable pumps; in many cases during the sampling event. Alternatively, the samplers are equipped with bailers and alternative sampling equipment so that a sample can be collected. If more significant repairs are deemed necessary, the project manager will notify the City and prepare a cost estimate for the needed repair.

Other Non-Routine Services: As a full-service environmental and geotechnical consulting firm, GLA has the resources and technical capabilities to respond to nearly all landfill-related non-routine service requests. Should the City require our services for work outside of the scope of work identified above, GLA will prepare a detailed scope of work and cost estimate based on the fee schedule provided in this proposal.

Company Information

GLA is a privately held multi-disciplinary consulting firm established in 1991. GLA has grown to employ more than 250 highly qualified and experienced professionals located in 27 US offices and an office in Lima, Peru. Principal areas of expertise include civil and geotechnical engineering; geologic and hydrogeologic services; environmental compliance; facility planning and permitting; specialized water resources engineering; construction quality assurance; and geotechnical laboratory services.

GLA has provided a variety of engineering and environmental consulting services to the City at the Tequesquite Landfill (TL) since 1993. This work has included:

- Design and CQA services for closure.
- Routine groundwater monitoring, statistical analysis and reporting;
- Developing and implementing an Evaluation Monitoring Program (EMP) at the site.

GLA succeeded in negotiating significant reductions in the TL routine monitoring program (including a reduction in the number of wells and a reduced frequency from quarterly to semiannual water quality monitoring) that saved the City substantial costs during the post-closure maintenance period; and preparing the site closure certification document that was accepted by the regulatory agencies. As a result of this experience, GLA staff are very familiar with TL groundwater, surface water and condensate monitoring points, the City staff, and perhaps most importantly, with the staff at the Santa Ana Regional Water Quality Control Board who oversee the site's groundwater monitoring and reporting program.

EXHIBIT "B-1"

COMPENSATION

Exhibit B - Compensation

TABLE 1
ESTIMATED PROJECT COSTS - 2024/2025 EXTENSION
GROUNDWATER, SURFACE WATER & CONDENSATE MONITORING AND REPORTING SERVICES
TEQUESQUITE LANDFILL, RIVERSIDE COUNTY, CALIFORNIA

Work Tasks	Princ. Pro. I	Project Pro. III	Project Pro. I	CADD Design.	Tech. IV	Sampl. Equip.	Vehicle	GLA Sub Total	GLA Total	Outside Lab	Task Totals
	$270	$216	$184	$153	$146	$15	$17	($)	($)	($)	($)
FY 24/25											
Task 320 - Third Quarter 2024 Monitoring & Reporting	1	14	20	4	10		10	$9,216	$9,216		$9,216
Task 420 - Fourth Quarter 2024 Monitoring		4			40	40	40	$7,984	$7,984	$12,982	$20,966
Task 121 - First Quarter 2025 Monitoring & Reporting	1	15	25	4	10		10	$10,352	$10,352		$10,352
Task 221 - Second Quarter 2025 Monitoring		4			40	40	40	$7,984	$7,984	$10,732	$18,716
Column totals per quarter	2	37	45	8	100	80	100				
Total Cost:	$540	$7,992	$8,280	$1,224	$14,600	$1,200	$1,700	$35,536	**$35,536**	**$23,714**	**$59,250**

Notes:
1) Project costs include sampling and analyses of 13 groundwater samples and 8 surface water samples per semiannual monitoring event, and 1 landfill gas condensate sample collected per year.

EXHIBIT "C-1"

KEY PERSONNEL

Exhibit C – Key Personnel

1. **Geo-Logic's legal name and address**

   Geo-Logic Associates

   2777 East Guasti Road, Suite 1
   Ontario, California 91761

   909.626.2282

2. **Contact person's name/phone #/email:**

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   Principal Geologist
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