AGREEMENT FOR SERVICES OF INDEPENDENT CONTRACTOR

THIS AGREEMENT (hereafter Agreement) is made by and between the County of Santa Barbara, a political subdivision of the State of California (hereafter COUNTY) and Geo-Logic Associates, Inc. with an address at 2777 East Guasti Road, Ontario, California 91761 (hereafter CONTRACTOR) wherein CONTRACTOR agrees to provide and COUNTY agrees to accept the services specified herein.

WHEREAS, CONTRACTOR represents that it is specially trained, skilled, experienced, and competent to perform the special services required by COUNTY and COUNTY desires to retain the services of CONTRACTOR pursuant to the terms, covenants, and conditions herein set forth;

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein, the parties agree as follows:

1. DESIGNATED REPRESENTATIVE

Mr. Todd Curtis at phone number 805-882-3621 is the representative of COUNTY and will administer this Agreement for and on behalf of COUNTY. Mr. Stacy Baird at phone number 909-626-2282 is the authorized representative for CONTRACTOR. Changes in designated representatives shall be made only after advance written notice to the other party.

2. NOTICES

Any notice or consent required or permitted to be given under this Agreement shall be given to the respective parties in writing, by personal delivery or facsimile, or with postage prepaid by first class mail, registered or certified mail, or express courier service, as follows:

To COUNTY: Mr. Todd Curtis, County of Santa Barbara, 130 E. Victoria Street, Suite 100, Santa Barbara, CA 93101, 805-882-3601 (Fax)

To CONTRACTOR: Mr. Stacy Baird, Geo-Logic Associates, Inc. 2777 East Guasti Road, Ontario, CA 91761, 909-626-1233 (Fax)

or at such other address or to such other person that the parties may from time to time designate in accordance with this Notices section. If sent by first class mail, notices and consents under this section shall be deemed to be received five (5) days following their deposit in the U.S. mail. This Notices section shall not be construed as meaning that either party agrees to service of process except as required by applicable law.

3. SCOPE OF SERVICES

CONTRACTOR agrees to provide services to COUNTY in accordance with EXHIBIT A attached hereto and incorporated herein by reference.

4. TERM

CONTRACTOR shall commence performance on May 4, 2016 and end performance upon completion, but no later than October 31, 2018 unless otherwise directed by COUNTY or unless earlier terminated.

5. COMPENSATION OF CONTRACTOR

In full consideration for CONTRACTOR's services, CONTRACTOR shall be paid for performance under this Agreement in accordance with the terms of EXHIBIT B attached hereto and incorporated herein by reference. Billing shall be made by invoice, which shall include the contract number assigned by COUNTY and which is delivered to the address given in Section 2 NOTICES above following completion of the increments identified on EXHIBIT B. Unless otherwise specified on EXHIBIT B, payment shall be net thirty (30) days from presentation of invoice.

6. **INDEPENDENT CONTRACTOR**

It is mutually understood and agreed that CONTRACTOR (including any and all of its officers, agents, and employees), shall perform all of its services under this Agreement as an independent contractor as to COUNTY and not as an officer, agent, servant, employee, joint venturer, partner, or associate of COUNTY. Furthermore, COUNTY shall have no right to control, supervise, or direct the manner or method by which CONTRACTOR shall perform its work and function. However, COUNTY shall retain the right to administer this Agreement so as to verify that CONTRACTOR is performing its obligations in accordance with the terms and conditions hereof. CONTRACTOR understands and acknowledges that it shall not be entitled to any of the benefits of a COUNTY employee, including but not limited to vacation, sick leave, administrative leave, health insurance, disability insurance, retirement, unemployment insurance, workers' compensation and protection of tenure. CONTRACTOR shall be solely liable and responsible for providing to, or on behalf of, its employees all legally-required employee benefits. In addition, CONTRACTOR shall be solely responsible and save COUNTY harmless from all matters relating to payment of CONTRACTOR's employees, including compliance with Social Security withholding and all other regulations governing such matters. It is acknowledged that during the term of this Agreement, CONTRACTOR may be providing services to others unrelated to the COUNTY or to this Agreement.

7. **STANDARD OF PERFORMANCE**

CONTRACTOR represents that it has the skills, expertise, and licenses/permits necessary to perform the services required under this Agreement. Accordingly, CONTRACTOR shall perform all such services in the manner and according to the standards observed by a competent practitioner of the same profession in which CONTRACTOR is engaged. All products of whatsoever nature, which CONTRACTOR delivers to COUNTY pursuant to this Agreement, shall be prepared in a first class and workmanlike manner and shall conform to the standards of quality normally observed by a person practicing in CONTRACTOR's profession. CONTRACTOR shall correct or revise any errors or omissions, at COUNTY'S request without additional compensation. Permits and/or licenses shall be obtained and maintained by CONTRACTOR without additional compensation.

8. **DEBARMENT AND SUSPENSION**

CONTRACTOR certifies to COUNTY that it and its employees and principals are not debarred, suspended, or otherwise excluded from or ineligible for, participation in federal, state, or county government contracts. CONTRACTOR certifies that it shall not contract with a subcontractor that is so debarred or suspended.

9. **TAXES**

CONTRACTOR shall pay all taxes, levies, duties, and assessments of every nature due in connection with any work under this Agreement and shall make any and all payroll deductions required by law. COUNTY shall not be responsible for paying any taxes on CONTRACTOR's behalf, and should COUNTY be required to do so by state, federal, or local taxing agencies, CONTRACTOR agrees to promptly reimburse COUNTY for the full value of such paid taxes plus interest and penalty, if any. These taxes shall include, but not be limited to, the following: FICA (Social Security), unemployment insurance contributions, income tax, disability insurance, and workers' compensation insurance.

10. **CONFLICT OF INTEREST**

CONTRACTOR covenants that CONTRACTOR presently has no employment or interest and shall not acquire any employment or interest, direct or indirect, including any interest in any business, property, or source of income, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement. CONTRACTOR further covenants that in the performance of this Agreement, no person having any such interest shall be employed by CONTRACTOR. CONTRACTOR must promptly disclose to COUNTY, in writing, any potential conflict of interest. COUNTY retains the right to waive a conflict of interest disclosed by CONTRACTOR if COUNTY determines it to be immaterial, and such waiver is only effective if provided by COUNTY to CONTRACTOR in writing.

11. **OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY**

COUNTY shall be the owner of the following items incidental to this Agreement upon production, whether or not completed: all data collected, all documents of any type whatsoever, all photos, designs, sound or audiovisual recordings, software code, inventions, technologies, and other materials, and any material necessary for the practical use of such items, from the time of collection and/or production whether or not performance under this Agreement is completed or terminated prior to completion. CONTRACTOR shall not release any of such items to other parties except after prior written approval of COUNTY.

Unless otherwise specified in Exhibit A, CONTRACTOR hereby assigns to COUNTY all copyright, patent, and other intellectual property and proprietary rights to all data, documents, reports, photos, designs, sound or audiovisual recordings, software code, inventions, technologies, and other materials prepared or provided by CONTRACTOR pursuant to this Agreement (collectively referred to as "Copyrightable Works and Inventions"). COUNTY shall have the unrestricted authority to copy, adapt, perform, display, publish, disclose, distribute, create derivative works from, and otherwise use in whole or in part, any Copyrightable Works and Inventions. CONTRACTOR agrees to take such actions and execute and deliver such documents as may be needed to validate, protect and confirm the rights and assignments provided hereunder. CONTRACTOR warrants that any Copyrightable Works and Inventions and other items provided under this Agreement will not infringe upon any intellectual property or proprietary rights of any third party. CONTRACTOR at its own expense shall defend, indemnify, and hold harmless COUNTY against any claim that any Copyrightable Works or Inventions or other items provided by CONTRACTOR hereunder infringe upon intellectual or other proprietary rights of a third party, and CONTRACTOR shall pay any damages, costs, settlement amounts, and fees (including attorneys' fees) that may be incurred by COUNTY in connection with any such claims. This Ownership of Documents and Intellectual Property provision shall survive expiration or termination of this Agreement.

12. NO PUBLICITY OR ENDORSEMENT

CONTRACTOR shall not use COUNTY's name or logo or any variation of such name or logo in any publicity, advertising or promotional materials. CONTRACTOR shall not use COUNTY's name or logo in any manner that would give the appearance that the COUNTY is endorsing CONTRACTOR. CONTRACTOR shall not in any way contract on behalf of or in the name of COUNTY. CONTRACTOR shall not release any informational pamphlets, notices, press releases, research reports, or similar public notices concerning the COUNTY or its projects, without obtaining the prior written approval of COUNTY.

13. **COUNTY PROPERTY AND INFORMATION**

All of COUNTY's property, documents, and information provided for CONTRACTOR's use in connection with the services shall remain COUNTY's property, and CONTRACTOR shall return any such items whenever requested by COUNTY and whenever required according to the Termination section of this Agreement. CONTRACTOR may use such items only in connection with providing the services. CONTRACTOR shall not disseminate any COUNTY property, documents, or information without COUNTY's prior written consent.

14. **RECORDS, AUDIT, AND REVIEW**

CONTRACTOR shall keep such business records pursuant to this Agreement as would be kept by a reasonably prudent practitioner of CONTRACTOR's profession and shall maintain such records for at least four (4) years following the termination of this Agreement. All accounting records shall be kept in accordance with generally accepted accounting principles. COUNTY shall have the right to audit and review all such documents and records at any time during CONTRACTOR's regular business hours or upon reasonable notice. In addition, if this Agreement exceeds ten thousand dollars ($10,000.00), CONTRACTOR shall be subject to the examination and audit of the California State Auditor, at the request of the COUNTY or as part of any audit of the COUNTY, for a period of three (3) years after final payment under the Agreement (Cal. Govt. Code Section 8546.7). CONTRACTOR shall participate in any audits and reviews, whether by COUNTY or the State, at no charge to COUNTY.

If federal, state or COUNTY audit exceptions are made relating to this Agreement, CONTRACTOR shall reimburse all costs incurred by federal, state, and/or COUNTY governments associated with defending against the audit exceptions or performing any audits or follow-up audits, including but not limited to: audit fees, court costs, attorneys' fees based upon a reasonable hourly amount for attorneys in the community, travel costs, penalty assessments and all other costs of whatever nature. Immediately upon notification from COUNTY, CONTRACTOR shall reimburse the amount of the audit exceptions and any other related costs directly to COUNTY as specified by COUNTY in the notification.

15. **INDEMNIFICATION AND INSURANCE**

CONTRACTOR agrees to the indemnification and insurance provisions as set forth in EXHIBIT C attached hereto and incorporated herein by reference.

16. **NONDISCRIMINATION**

COUNTY hereby notifies CONTRACTOR that COUNTY's Unlawful Discrimination Ordinance (Article XIII of Chapter 2 of the Santa Barbara County Code) applies to this Agreement and is incorporated herein by this reference with the same force and effect as if the ordinance were specifically set out herein and CONTRACTOR agrees to comply with said ordinance.

17. **NONEXCLUSIVE AGREEMENT**

CONTRACTOR understands that this is not an exclusive Agreement and that COUNTY shall have the right to negotiate with and enter into contracts with others providing the same or similar services as those provided by CONTRACTOR as the COUNTY desires.

18. **NON-ASSIGNMENT**

CONTRACTOR shall not assign, transfer or subcontract this Agreement or any of its rights or obligations under this Agreement without the prior written consent of COUNTY and any attempt to so assign, subcontract or transfer without such consent shall be void and without legal effect and shall constitute grounds for termination.

19. **TERMINATION**

A. By COUNTY. COUNTY may, by written notice to CONTRACTOR, terminate this Agreement in whole or in part at any time, whether for COUNTY's convenience, for nonappropriation of funds, or because of the failure of CONTRACTOR to fulfill the obligations herein.

1. **For Convenience**. COUNTY may terminate this Agreement in whole or in part upon thirty (30) days written notice. During the thirty (30) day period, CONTRACTOR shall, as directed by COUNTY, wind down and cease its services as quickly and efficiently as reasonably possible, without performing

unnecessary services or activities and by minimizing negative effects on COUNTY from such winding down and cessation of services.

2. **For Nonappropriation of Funds**. Notwithstanding any other provision of this Agreement, in the event that no funds or insufficient funds are appropriated or budgeted by federal, state or COUNTY governments, or funds are not otherwise available for payments in the fiscal year(s) covered by the term of this Agreement, then COUNTY will notify CONTRACTOR of such occurrence and COUNTY may terminate or suspend this Agreement in whole or in part, with or without a prior notice period. Subsequent to termination of this Agreement under this provision, COUNTY shall have no obligation to make payments with regard to the remainder of the term.

3. **For Cause**. Should CONTRACTOR default in the performance of this Agreement or materially breach any of its provisions, COUNTY may, at COUNTY's sole option, terminate or suspend this Agreement in whole or in part by written notice. Upon receipt of notice, CONTRACTOR shall immediately discontinue all services affected (unless the notice directs otherwise) and notify COUNTY as to the status of its performance. The date of termination shall be the date the notice is received by CONTRACTOR, unless the notice directs otherwise.

B. By CONTRACTOR. Should COUNTY fail to pay CONTRACTOR all or any part of the payment set forth in EXHIBIT B, CONTRACTOR may, at CONTRACTOR's option terminate this Agreement if such failure is not remedied by COUNTY within thirty (30) days of written notice to COUNTY of such late payment.

C. Upon termination, CONTRACTOR shall deliver to COUNTY all data, estimates, graphs, summaries, reports, and all other property, records, documents or papers as may have been accumulated or produced by CONTRACTOR in performing this Agreement, whether completed or in process, except such items as COUNTY may, by written permission, permit CONTRACTOR to retain. Notwithstanding any other payment provision of this Agreement, COUNTY shall pay CONTRACTOR for satisfactory services performed to the date of termination to include a prorated amount of compensation due hereunder less payments, if any, previously made. In no event shall CONTRACTOR be paid an amount in excess of the full price under this Agreement nor for profit on unperformed portions of service. CONTRACTOR shall furnish to COUNTY such financial information as in the judgment of COUNTY is necessary to determine the reasonable value of the services rendered by CONTRACTOR. In the event of a dispute as to the reasonable value of the services rendered by CONTRACTOR, the decision of COUNTY shall be final. The foregoing is cumulative and shall not affect any right or remedy which COUNTY may have in law or equity.

20. **SECTION HEADINGS**

The headings of the several sections, and any Table of Contents appended hereto, shall be solely for convenience of reference and shall not affect the meaning, construction or effect hereof.

21. **SEVERABILITY**

If any one or more of the provisions contained herein shall for any reason be held to be invalid, illegal or unenforceable in any respect, then such provision or provisions shall be deemed severable from the remaining provisions hereof, and such invalidity, illegality or unenforceability shall not affect any other provision hereof, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

22. **REMEDIES NOT EXCLUSIVE**

No remedy herein conferred upon or reserved to COUNTY is intended to be exclusive of any other remedy or remedies, and each and every such remedy, to the extent permitted by law, shall be cumulative and in addition to any other remedy given hereunder or now or hereafter existing at law or in equity or otherwise.

23. **TIME IS OF THE ESSENCE**

Time is of the essence in this Agreement and each covenant and term is a condition herein.

24. **NO WAIVER OF DEFAULT**

No delay or omission of COUNTY to exercise any right or power arising upon the occurrence of any event of default shall impair any such right or power or shall be construed to be a waiver of any such default or an acquiescence therein; and every power and remedy given by this Agreement to COUNTY shall be exercised from time to time and as often as may be deemed expedient in the sole discretion of COUNTY.

25. **ENTIRE AGREEMENT AND AMENDMENT**

In conjunction with the matters considered herein, this Agreement contains the entire understanding and agreement of the parties and there have been no promises, representations, agreements, warranties or undertakings by any of the parties, either oral or written, of any character or nature hereafter binding except as set forth herein. This Agreement may be altered, amended or modified only by an instrument in writing, executed by the parties to this Agreement and by no other means. Each party waives their future right to claim, contest or assert that this Agreement was modified, canceled, superseded, or changed by any oral agreements, course of conduct, waiver or estoppel.

26. **SUCCESSORS AND ASSIGNS**

All representations, covenants and warranties set forth in this Agreement, by or on behalf of, or for the benefit of any or all of the parties hereto, shall be binding upon and inure to the benefit of such party, its successors and assigns.

27. **COMPLIANCE WITH LAW**

CONTRACTOR shall, at its sole cost and expense, comply with all County, State and Federal ordinances and statutes now in force or which may hereafter be in force with regard to this Agreement. The judgment of any court of competent jurisdiction, or the admission of CONTRACTOR in any action or proceeding against CONTRACTOR, whether COUNTY is a party thereto or not, that CONTRACTOR has violated any such ordinance or statute, shall be conclusive of that fact as between CONTRACTOR and COUNTY.

28. **CALIFORNIA LAW AND JURISDICTION**

This Agreement shall be governed by the laws of the State of California. Any litigation regarding this Agreement or its contents shall be filed in the County of Santa Barbara, if in state court, or in the federal district court nearest to Santa Barbara County, if in federal court.

29. **EXECUTION OF COUNTERPARTS**

This Agreement may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original; and all such counterparts, or as many of them as the parties shall preserve undestroyed, shall together constitute one and the same instrument.

30. **AUTHORITY**

All signatories and parties to this Agreement warrant and represent that they have the power and authority to enter into this Agreement in the names, titles and capacities herein stated and on behalf of any entities, persons, or firms represented or purported to be represented by such entity(ies), person(s), or firm(s) and that all formal requirements necessary or required by any state and/or federal law in order to enter into this Agreement have been fully complied with. Furthermore, by entering into this Agreement, CONTRACTOR hereby warrants that it shall not have breached the terms or conditions of any other contract or agreement to which CONTRACTOR is obligated, which breach would have a material effect hereon.

31. **SURVIVAL**

All provisions of this Agreement which by their nature are intended to survive the termination or expiration of this Agreement shall survive such termination or expiration.

32. **PRECEDENCE**

In the event of conflict between the provisions contained in the numbered sections of this Agreement and the provisions contained in the Exhibits, the provisions of the Exhibits shall prevail over those in the numbered sections.

Agreement for Services of Independent Contractor between the **County of Santa Barbara** and Geo-Logic Associates, Inc.

IN WITNESS WHEREOF, the parties have executed this Agreement to be effective on the date executed by COUNTY.

ATTEST:

Mona Miyasato
County Executive Officer
Clerk of the Board

By: _____
Deputy Clerk

COUNTY OF SANTA BARBARA:

By: _____
Chair, Board of Supervisors

Date: _____

RECOMMENDED FOR APPROVAL:

Public Works Department

By: _____
Department Head

Name: Scott McGolpin

Title: Director of Public Works

CONTRACTOR:

Geo-Logic Associates, Inc.

By: _____
Authorized Representative

Name: Gary L. Lass

Title: President

APPROVED AS TO FORM:

Michael C. Ghizzoni
County Counsel

By: _____
Deputy County Counsel

APPROVED AS TO ACCOUNTING FORM:

Theodore A. Fallati, CPA
Auditor-Controller

By: _____
Deputy

APPROVED AS TO FORM:

Risk Management

By: _____
Risk Management

EXHIBIT A

STATEMENT OF WORK

Contractor shall provide construction quality assurance services as set forth in the Geo-Logic Associates, Inc. "Proposal to Provide Construction Quality Assurance Services for the Tajiguas Landfill Phase 2 & 3 Partial Final Closure Construction – Project No. 129913" dated March 10, 2016. The detailed scope of work is stipulated in Attachment A-1 and is incorporated by reference. Geo-Logic Associates, Inc. Fee Estimate for proposed services is provided in Attachment A-2 and is incorporated by reference.

Gary Lass, Stacy Baird, Luis Mariscal, and Thomas Runyan shall be the primary individual(s) personally responsible for construction quality assurance services as specified in Attachment A-1. CONTRACTOR may not substitute other persons without the prior written approval of CONTRACTOR's Designated Representative.

ATTACHMENT A-1

Geo-Logic
ASSOCIATES



PROPOSAL

Construction Quality Assurance Services for Phase 2 and 3 Partial Final Closure Construction Project at the Tajiguas Sanitary Landfill

P16.079 | March 10, 2016

Prepared for

County of Santa Barbara, Public Works Department
Resource Recovery and Waste Management Division
130 E. Victoria Street, Suite 100
Santa Barbara, CA 93101

Prepared by:

Geo-Logic Associates
2777 East Guasti Road, Suite 1
Ontario, CA 91761
909-626-2282

Geo-Logic
ASSOCIATES

March 10, 2016
Proposal P16.079

County of Santa Barbara, Public Works Department
Resource Recovery & Waste Management Division
130 East Victoria Street, Suite 100
Santa Barbara, California 93101

Attention: Mr. Todd Curtis, Civil Engineer

Proposal to Provide Construction Quality Assurance Services for the Tajiguas Landfill Phase 2 & 3 Partial Final Closure Construction – Project No. 129913

Geo-Logic Associates (GLA) is pleased to present this Proposal to the County of Santa Barbara Public Works Department, Resource Recovery & Waste Management Division (County) to demonstrate our expertise in providing all aspects of construction quality assurance (CQA) services related to landfill closure construction in support of the Phase 2 & 3 Partial Final Closure Construction at the County's Tajiguas Sanitary Landfill.

The GLA Team has reviewed the Project Plans and Specifications and we are committed to providing the County with the highest level of services as described in this proposal. We are committed to working with the County's selected construction manager and general contractor to pace the level of construction so that work can be completed in an efficient and seamless manner. By submitting this proposal, GLA acknowledges that the scope of services and associated costs provided herein will remain valid throughout the projected 130 working day construction schedule for Phase 2 and the projected 85 working day construction schedule for Phase 3. Our Project Manager for the Project will be our CQA Manager, Mr. Stacy Baird. Mr. Baird's contact information is provided below:

Stacy Baird, Vice President
2777 East Guasti Road, Suite 1
Ontario, California 91761
Office Phone: 909-626-2282 Mobile Phone: 909-772-4355
srbaird@geo-logic.com

GLA appreciates the opportunity to submit this Proposal. Should you have any questions regarding this submittal or our qualifications, please do not hesitate to call me or Mr. Stacy Baird at your convenience.

Geo-Logic Associates

Gary L. Lass, PG, CEG, CHg, President

1.0 Executive Summary

Geo-Logic Associates (GLA) is pleased to provide this Proposal to the Santa Barbara County Public Works Department, Resource Recovery and Waste Management Division (County) to provide Construction Quality Assurance (CQA) services during the Phase 2 & 3 partial final closure construction at the Tajiguas Sanitary Landfill (TSL). This work will include: CQA observation, testing, and documentation during construction of a landfill final cover system; associated landfill gas (LFG) system modifications; drainage & erosion control modification; and final cover revegetation landscaping.

Information regarding the project office and contact information is provided in Section 8.0. Of note is the fact that GLA's subsidiary, Daniel B. Stephens & Associates, has an office located in Santa Barbara and can be utilized by the project staff as needed.

GLA has been working with the County for nearly 20 years. Stacy Baird, proposed CQA Manager, and his team completed the CQA of the Southeast Stockpile and H_2S Treatment System Pad at the TSL. Other work has included landfill permitting, design, slope stability, expansion, and closure projects at the Tajiguas, Foxen Canyon, and Ballard Canyon Landfills. As a result of this 20-year-long working relationship, GLA understands the County's preferences, the site-specific conditions at the TSL, and has in depth knowledge and understanding of the County's procedures, experience working with the Central Coast Regional Water Quality Control Board (RWQCB), as well as a thorough understanding of the State and Federal regulations regarding the construction of landfills in the State of California.

GLA has been working with the County for over 20 years including the CQA of Southeast Stockpile and H_2S Treatment System Pad at the TSL

GLA has abundant experience in all aspects of final cover system permitting, design, and CQA. GLA believes that our experience in providing CQA services on monolithic final cover systems throughout the State, as well as cover systems with geosynthetic and landfill gas (LFG) components, will be invaluable to the County during partial final closure construction at the TSL. **Few firms have as much landfill CQA experience as GLA, highlighted by the fact that we have provided design and CQA for over 600 million square yards of geosynthetic material and as well as over 200 million cubic yards of soil.** A large portion of this work has been in California and spans every RWQCB jurisdiction in the State.

The proposed GLA project team has abundant experience in all aspects of final cover system permitting, design, and CQA, many of these covers had a geosynthetic as well as LFG component.

GLA has provided CQA services to the County for many projects at the TSL, and we are confident that we can continue to provide the same level of excellent service as well as fulfill the CQA requirements for this project, working closely with the County, its staff and its contractors, to provide an exemplary project that meets the State of California and federal regulatory requirements for landfill closure.

Since 1993, when the State of California adopted the federal "Subtitle D" regulations, GLA has provided CQA services during the construction of both prescriptive and alternative final cover systems at numerous landfills in California. As a result, GLA has an unparalleled level of experience in providing CQA observation, documentation, testing, and reporting services during construction activities for many final cover projects. The following summary highlights our unique qualifications and **key differentiators** that make us the perfect firm to provide services to the County for this project. They include:

An experienced and trusted Project Team: Each member of our proposed project team has an impressive resume of similar project experience. These key staff members have provided services to the County of Santa Barbara and have excellent working relationships with County staff.

Work with Santa Barbara County Department of Public Works: GLA has been working with the County for nearly 20 years, and during that time, we have worked with the County on a number of landfill permitting, design, slope stability, expansion, and closure projects at its Tajiquas, Foxen Canyon, and Ballard Canyon Landfills. As a result of this long working relationship, GLA understands the County's procedures and preferences, and we understand the site-specific conditions at the TSL.

Relationship with the Central Coast Regional Water Quality Control Board: GLA has worked extensively with the staff at the Central Coast RWQCB on landfill siting, design, expansion and closure CQA, groundwater monitoring, and corrective action projects. We currently work on more than 20 landfills within their jurisdiction, and as a result, we believe that we have excellent relationships with the Central Coast RWQCB staff.

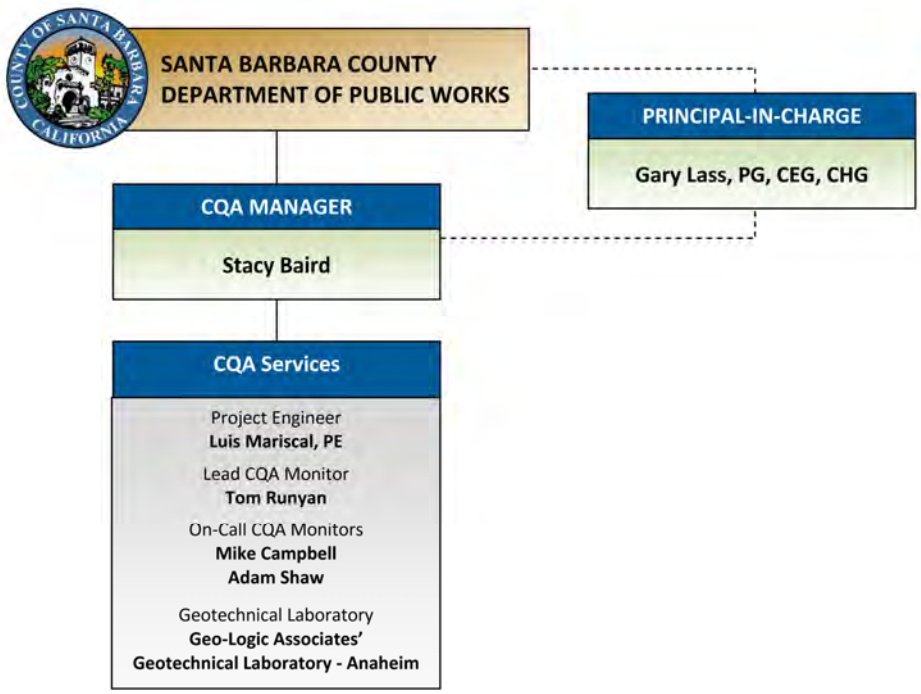
In-House Geotechnical Laboratory: GLA operates two full-service geotechnical laboratories out of our Anaheim and Grass Valley, California offices. GLA's laboratory services include both standard and custom testing equipment for soils, rock, geosynthetics, and other materials as required by clients. Testing is conducted using the most up to date test standards available.

This Proposal is prepared in accordance with the County's RFP. It includes the following:

- Section 2.0 (page 3) contains information regarding the Project Team organization and personnel qualifications.
- Section 3.0 (page 10) outlines the qualification and experience competence of the GLA team and provides the County with substantiated information as to why we believe GLA is the perfect firm to provide the County with services for this project.
- Section 4.0 (page 14) explains the proposed method GLA will employ to complete this project on time and within budget.
- Section 5.0 (page 25) describes GLA's experience working within the County of Santa Barbara and the various regulatory agencies that oversee the landfill.
- Section 6.0 (page 26) addresses any addenda that were issued for this RFP.
- Section 7.0 (page 26) includes a narrative regarding the separate, sealed cost estimate.
- Section 8.0 (page 26) provides the information as requested on page 5 of the County's RFP.

2.0 Project Team Organization and Key Personnel

As shown on our project organization chart (below), GLA proposes a very simple, but focused project team of professionals, each of whom has abundant experience in providing project management, CQA observation and testing services specifically for landfill monolithic final cover systems, many with geosynthetic and landfill gas system components. All members of our proposed team are GLA employees who have the specific experience as outlined in the County's RFP. In this way, GLA can provide the County with a very cohesive team with full control over all project resources.



As shown above, the Team will be managed by Mr. Stacy Baird who will receive principal-level support from Mr. Gary Lass, the company President. Mr. Baird will be supported by highly experienced field technicians who will carry out all field tasks required to complete this project. As demonstrated herein, GLA offers unsurpassed professional and technical staff with extensive experience in all aspects of CQA monitoring, testing, observation, and documentation services for construction of final cover systems at landfill sites throughout California.

Our construction services team offers an average of more than 20 years of related experience. All of GLA's CQA Monitors have completed 40-hour HAZWOPER training and receive annual 8-hour refresher training in accordance with 29 CFR Section 1910.120(e), (q)(6)(ii), (q)(8) and 8 CCR Section 5192(e)(q). In addition, all of our CQA Monitors have completed radiation safety training for the use of nuclear density gauges and are certified by the Geosynthetic Certification Institute for Construction Quality Assurance of Geosynthetic Materials and Compacted Clay Liner Inspectors.

One page resumes of these key project team members are provided on the following page.

Principal-In-Charge

Gary Lass, PG, CEG, CHG

Education
MS, Geochemistry, California State University, Los Angeles
BS, Geology, California State University, Los Angeles

License and Certifications
Registered Professional Geologist No. 3655, California
Certified Engineering Geologist No. 1093, California
Certified Hydrogeologist No. 18, California

Mr. Lass founded Geo-Logic Associates in 1991, and has served as the company President since that time. With more than 30 years of experience in all aspects of engineering geology, geotechnical, environmental, and construction services, Mr. Lass' diverse background will be well-utilized for the successful completion of this project. For the last 15+ years, Mr. Lass has been at the forefront of alternative final cover permitting, design, and demonstration monitoring. He is the sole consultant to the Alternative Final Cover Technical Committee, and his leadership in this position has fostered regulatory acceptance of the monolithic final cover system throughout California and the southwestern United States. Since 1993, Mr. Lass has overseen the design, permitting, construction, and long-term monitoring of more than 60 landfill closure projects in California. He will bring this experience to the County during closure of the Phases 2 and 3 at the TSL to facilitate regulatory approval of the final CQA reports.

Mr. Lass has been the Principal-in-Charge for the borrow source evaluation, design, and permitting of 50 landfill final (prescriptive and alternative/monolithic) cover systems , highlights include:

Summary of Experience

Tajiguas Landfill, Santa Barbara County, California. CQA of Southeast Stockpile Fill and H_2S Pad Construction.

Vandenberg AFB Landfill Final Closure, Phase 1 and 2, **Lompoc, California**. CQA project with soil, geosynthetic, and LFG components.

Ballard Landfill, Ventura County, California. Characterization and Evaluation of existing cover system.

Coastal Landfill, Ventura County, California. Characterization and Evaluation of existing interim cover system for proposed change in land-use permitting for construction of golf course over site.

Big Bear Landfill, San Bernardino County, California. Alternative final cover design, construction CQA services. The approved design combines monolithic and geosynthetic elements. Currently undergoing construction.

Frank R. Bowerman Landfill, Orange County, California. Alternative Final Cover Design with CQA services and post-closure soil moisture monitoring.

Colton Landfill, San Bernardino County, California. Design and partial final closure construction.

Edom Hill Landfill, Riverside County, California. Monolithic alternative final cover design with CQA construction services – Site is first known with a 3-foot cover thickness.

Ocotillo Solid Waste Site, Imperial County, California. Design and CQA project.

Twenty-Nine Palms Sanitary Landfill, San Bernardino, California. Design and construction project.

Yermo Sanitary Landfill, San Bernardino County, California. Design and construction project

Anza Landfill, Riverside County, California. Design and construction CQA project.

Baker Landfill, San Bernardino County, California. Design and construction project.

Project Manager

Stacy Baird

Stacy Baird is the Team's Project Manager. He will be responsible for implementation of the CQA Plan, reviewing contractor submittals for constructability, coordinating field and laboratory CQA activities, ensuring adequate staffing to pace final closure construction, attending routine construction progress meetings, and preparing the final closure certification report. Mr. Baird is very familiar with the CQA requirements for the project, as he prepared the project CQA Plan.

Education

BS, Geology, California State University, Fullerton

License and Certifications

Nuclear Gauge Training and Certification

Certified Geosynthetic Material/Compacted Clay Liner Inspector-GCI

OSHA 40-hour/8-hour HAZWOPER Certification

Mr. Baird is GLA's Vice President of Construction. He has been an employee of the firm since its inception in 1991. With more than 20 years of construction management and CQA experience, Mr. Baird has participated in the closure of more than 40 landfills in California, including several projects within the jurisdiction of the Central Coast RWQCB. Recent project experience includes Project Manager for CQA Services for the Unit 1 Partial Final Closure and the Unit 3, Phase 6 and 7 Liner Construction at the Mid-Valley Sanitary Landfill in San Bernardino County, California, as well as the Vandenberg AFB Phase 1&2 closure - a project which included a LFG and geosynthetic components, and is under the regulatory jurisdiction of the Central Coast RWQCB. Mr. Baird has worked extensively at the TSL during construction of three composite liner systems, and as a result, he has a strong working knowledge of County procedures and site conditions. Mr. Baird also has expertise in working with the landfill regulatory community, and also brings his understanding and practical working relationships with many of the general contractors who will be bidding on this project. He has the unique ability to view projects not only from a regulatory compliance perspective, but also from the viewpoint of constructability. Mr. Baird will be a tremendous asset to this project, using his experience to minimize construction delays and facilitate regulatory approval of the project. He has filled the role of CQA Manager for the following select projects:

Summary of Landfill Final Cover CQA Project Management Experience for Stacy Baird

Composite Liner System CQA, Phases 1, 1A, and 1B, Tajiguas Landfill, Santa Barbara County, California. Construction of the 8-acre Phase 1, 5-acre Phase 1A, and the 5-acre Phase 1B composite liner systems.

Vandenberg AFB Landfill Final Closure, Phase 1 and 2, Lompoc, California. CQA project with soil, geosynthetic, and LFG components.

Southeast Stockpile Fill and Construction of the H_2S Treatment System Pad, Tajiguas Landfill, Santa Barbara County, California. Excavation and processing of approximately 70,000 cy of on-site soil.

Ballard Canyon Landfill Closure Construction, Santa Barbara County, California. CQA of Composite final cover system with (LLDPE) geomembrane overlain by soil cover.

CQA Services for Unit 1 Partial Final Closure Construction and Unit 3, Phase 6 and 7 Liner Construction, Mid-Valley Landfill, San Bernardino, California. Included the excavation and processing of approximately 190,000 cubic yards of select on-site soil. Also included installation of 18 landfill gas wells up to 120 feet deep, and new gas header piping and support structures.

Project Engineer / CQA Officer

Luis Mariscal, PE

Mr. Mariscal is a Registered Civil Engineer with 19 years of experience in all aspects of landfill construction, specializing in designing, modeling, developing and implementing field demonstrations, and performing CQA monitoring of alternative final cover systems throughout the southwestern United States. As part of this experience, Mr. Mariscal has managed a series of monolithic final cover projects including CQA, alternative final cover infiltration modeling, soil moisture monitoring equipment installation and data evaluation, corrective action feasibility studies, and slope stability analyses. In addition, he has performed a variety of geotechnical tasks in support of landfill liner and prescriptive cover construction, including work as the Lead CQA Monitor or Project Manager.

Education

BS, Cornell University

License and Certifications

California Civil Engineer No. 68667

Nuclear Gauge Training and Certification

OSHA 40-hour/8-hour HAZWOPER Certification

Relevent Project Experience

Project and Field Engineer - Coastal Sanitary Landfill Existing Cover Evaluation, Ventura County, California. . The existing cover was characterized via field permeability testing, geotechnical soils testing and the results of these field and lab test data were used to model site performance given the corrective action measures selected.

Field Investigation - Santa Clara Landfill Existing Cover Evaluation, Ventura County, California. Included proposing infiltration mitigation measures (i.e., liner, gas line header improvements, gas well leachate collection improvements, irrigation application monitoring, zero-scape vegetation zones, and improving post closure maintenance procedures to address settlement and ponding issues).

Project and Field Engineer - Sunshine Canyon City Landfill Existing Cover Evaluation, Los Angeles, California. Developed a workplan for approval of the in place soils, installed moisture monitoring equipment (TDR probes) at 5 locations at the site and monitored the data for over 3 years.

Field Engineer - Milliken Sanitary Landfill AFC Demonstration Project, Ontario, California. Performed remote monitoring and infiltration modeling of the monofill alternative final cover to evaluate whether the alternative final cover system could achieve equivalent infiltration performance to a prescriptive landfill cover.

CQA Monitor - West Miramar Landfill Module A Liner CQA, San Diego, California. CQA Monitor during installation of nearly 1 million square feet of 80-mil geomembrane across approximately 22 acres of floor and slope area. Managed and monitored installation of eight-ounce and sixteen-ounce geotextile, and the leachate collection and recovery system.

CQA Monitor - Composite Liner System CQA, Phases I and IV, Badlands Landfill, Riverside County, California. CQA Monitor during construction of a composite liner system for Phases I and IV expansion. Project included CQA for a total of 13,000 cubic yards of low-permeability soil and 610,000 square feet of each geosynthetic component.

Composite Liner System CQA, Phases A, A1, and C1, Prima Deshecha Landfill, Orange County, California. CQA Monitor for construction of three composite liner phases at this landfill. The liner system totaled over 45,000 cubic yards of low-permeability soil liner and LCRS sand and gravel and over 1.2 million square feet of each geosynthetic liner component.

Lead CQA Monitor

Thomas Runyan

Education
AS, Crafton Hills College

License and Certifications
Nuclear Gauge Training and Certification

Certified Geosynthetic Material/Compacted Clay Liner Inspector-GCI

OSHA 40-hour/8-hour HAZWOPER Certification

Mr. Runyan is a Construction Manager/Field CQA Monitor with over 15 years of experience in all aspects of landfill CQA observation and testing and has served as a CQA Monitor on more than 20 landfill construction projects, including ten monolithic alternative final cover projects. Recent project experience includes Lead Monitor for CQA Services for the Unit 1 Partial Final Closure Construction and the Unit 3, Phase 6 and 7 Liner Construction at the Mid-Valley Sanitary Landfill in San Bernardino County, California; as well as the Vandenberg AFB Phase 1&2 closure - a project which included a LFG as well as a geosynthetic component and is under the regulatory jurisdiction of the Central Coast RWQCB. Mr. Runyan has provided CQA services on monolithic alternative final cover projects totaling approximately 3.5 million cubic yards of soil placement, including the 29 Palms Landfill and Edom Hill Landfill final cover projects where he performed nearly 100 Boutwell permeability tests. An outline of Mr. Runyan's relevant experience is presented below.

Monolithic Alternative Final Cover CQA Projects

Lead CQA Monitor – Edom Hill Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – 29 Palms Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – Santiago Canyon Landfill Monolithic Alternative Final Cover
CQA Monitor – Milliken Landfill Monolithic Alternative Final Cover
CQA Monitor – Huntington Beach Landfill Monolithic Alternative Final Cover

Other Cover CQA Projects

Lead CQA Monitor – Final Cover for the Vandenberg AFB Landfill Closure
Lead CQA Monitor – Mid Valley Landfill Unit 1 Partial Final Closure
Lead CQA Monitor – Geosynthetic/Soil Composite Final Cover System the Big Bear Sanitary Landfill
Lead CQA Monitor – Geosynthetic Alternative Final Cover for the Groveland Landfill
Lead CQA Monitor – Geosynthetic Alternative Final Cover for Big Bear Sanitary Landfill
Lead CQA Monitor – Geosynthetic Alternative Final Cover for the Ballard Canyon Landfill
CQA Monitor – Geosynthetic Alternative Final Cover for the Kern Valley Landfill

Other CQA Experience

Lead CQA Monitor – Lancaster Water Reclamation Plan Surface Impoundments
Lead CQA Monitor – Phase 1B, Stage 2 Composite Liner System at the Victorville Sanitary Landfill
Lead CQA Monitor – Phase V-D Composite Liner System at the FRB Landfill
Lead CQA Monitor – Phase B Composite Liner System at the Prima Deshecha Landfill
Lead CQA Monitor – Phase 5 Composite Liner System at the Mid Valley Sanitary Landfill
Lead CQA Monitor – Phase DM-4.2 Composite Liner System at the Hay Road Landfill
Lead CQA Monitor – Phase DM-2.2 Composite Liner System at the Hay Road Landfill
CQA Monitor – Composite Liner System construction at the Toland Road Sanitary Landfill.
CQA Monitor – Phase 3+4 Composite Liner System at the Mid-Valley Sanitary Landfill
CQA Monitor – Phase II Composite Liner System at Lamb Canyon Landfill (Colorado River Basin RWQCB)
CQA Monitor – Composite Liner System at the Toland Road Sanitary Landfill

CQA Monitor

Michael Campbell

Mr. Campbell is one of GLA's most senior CQA technicians, and has almost 30 years of experience in all aspects of landfill construction observation, testing, and documentation services. As shown in the table below, He has served as Lead CQA Monitor on numerous landfill construction projects, including 13 final cover projects with approximately 5 million cubic yards of cover soil placement and numerous landfill liner projects, with observation, sampling, and testing of over 24 million square feet of geomembrane. Perhaps even more important than the large number of projects is the number of clients who have continued to utilize GLA and Mr. Campbell to provide CQA services on their projects, demonstrating his technical competence and the client satisfaction in his work product.

Education

BS, Environmental Science, California Polytechnic University, San Luis Obispo

License and Certifications

Nuclear Gauge Training and Certification

Certified Geosynthetic Material/Compacted Clay Liner Inspector-GCI

OSHA 40-hour/8-hour HAZWOPER Certification

Final Cover CQA Projects

Lead CQA Monitor – Anza Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – Yermo Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – Newberry Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – Colton Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – Milliken Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – Phelan Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – Needles Landfill Monolithic Alternative Final Cover (Colorado River Basin RWQCB)
Lead CQA Monitor – Baker Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – Tequesquite Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – Huntington Beach Landfill Monolithic Alternative Final Cover
CQA Monitor – Crittenden Canyon Landfill Monolithic Alternative Final Cover
CQA Monitor – Coachella Landfill Monolithic Alternative Final Cover (Colorado River Basin RWQCB)
CQA Monitor – Santiago Canyon Landfill Monolithic Alternative Final Cover
Lead CQA Monitor – Geosynthetic Alternative Final Cover for the Kern Valley Landfill
CQA Monitor – Prescriptive Final Cover for the BKK Class I and Class III Landfills

Other Landfill CQA Experience

Lead CQA Monitor – Phase 1 Composite Liner System at the Mid-Valley Sanitary Landfill
Lead CQA Monitor – Phase 2 Composite Liner System at the Mid-Valley Sanitary Landfill
Lead CQA Monitor – Phase 3+4 Composite Liner System at the Mid-Valley Sanitary Landfill
Lead CQA Monitor – Phase A Composite Liner System at the Prima Deshecha Landfill
Lead CQA Monitor – Phase A1 Composite Liner System at the Prima Deshecha Landfill
Lead CQA Monitor – Module A Composite Liner System at the Miramar Landfill
Lead CQA Monitor – Module B Composite Liner System at the Miramar Landfill
Lead CQA Monitor – Module C Composite Liner System at the Miramar Landfill
Lead CQA Monitor – Module D Composite Liner System at the Miramar Landfill
Lead CQA Monitor – Module 2/3 Composite Liner System at the Miramar Landfill
Lead CQA Monitor – Phase 1 Composite Liner System at the Tajiguas Landfill
Lead CQA Monitor – Phase IIIA Composite Liner System at Sunshine Canyon Landfill
CQA Monitor – Phase 5A Composite Liner System at the Mid-Valley Sanitary Landfill

CQA Monitor

Adam Shaw

Adam Shaw has been providing CQA services for GLA since 2001. In this capacity, Mr. Shaw has provided construction documentation, testing, and oversight on many final cover systems totaling over 2 million cubic yards of cover soil, as well as composite liner system projects with geosynthetic elements totaling over 2 million square feet. He has also participated in geotechnical investigations including geophysical surveys, moisture monitoring probe data collection, and aquifer testing. He has experience performing groundwater, surface water, leachate, condensate, and soil-pore gas sampling at more than 40 landfills throughout California. The following tables summarize Mr. Shaw's relevant experience.

Education

B.A., Environmental Studies, California State University, San Bernardino

License and Certifications

Nuclear Gauge Training and Certification

Certified Geosynthetic Material/Compacted Clay Liner Inspector-GCI

OSHA 40-hour/8-hour HAZWOPER Certification

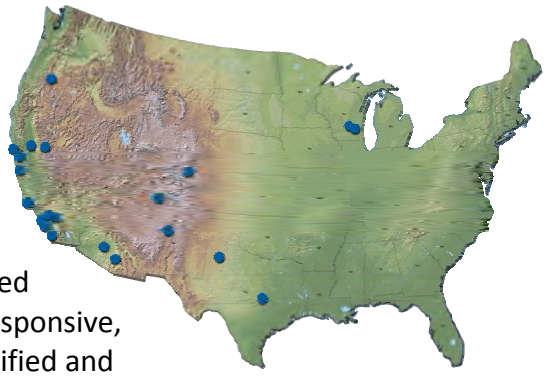
Final Cover CQA Projects
Lead CQA Monitor – Holtville Landfill Monolithic Alternative Final Cover (Colorado River Basin RWQCB)
CQA Monitor – Yermo Landfill Monolithic Alternative Final Cover
CQA Monitor – Newberry Landfill Monolithic Alternative Final Cover
CQA Monitor – Milliken Sanitary Landfill Monolithic Alternative Final Cover
CQA Monitor – Santiago Canyon Landfill Monolithic Alternative Final Cover
CQA Monitor – Ocotillo Landfill Monolithic Alternative Final Cover (Colorado River Basin RWQCB)
CQA Monitor – Phelan Landfill Monolithic Alternative Final Cover
Other Landfill CQA Experience
CQA Monitor – Phase V-D Composite Liner System at the FRB Landfill
CQA Monitor – Phase 1, Module 1 Composite Liner System at American Avenue Landfill
CQA Monitor – Cells 4 and 5 Composite Liner System at the Chiquita Canyon Landfill
CQA Monitor – Phase 2 Composite Liner System at the Tajiguas Landfill
CQA Monitor – Phase C1 Composite Liner System at the Prima Deshecha Landfill
CQA Monitor – Cell 4B Composite Liner System at the Caja Del Rio Landfill (New Mexico)
CQA Monitor – Phase 2 Composite Liner System at the Mid Valley Sanitary Landfill
CQA Monitor – Phase 3+4 Composite Liner System at the Mid Valley Sanitary Landfill
CQA Monitor – Phase 5 Composite Liner System at the Mid Valley Sanitary Landfill

Extent of Commitment of Project Team

The proposed Project Team will be available as warranted for this project. From 100% commitment for our Lead CQA Monitor that will be on-site, to the appropriate time commitment for our CQA Manager to attend all appropriate meetings as well as periodic site visits, to Mr. Lass, whose flexibility will allow him to be available should any technical or other assistance is needed.

GLA maintains a staff utilization ratio of about 70 percent, so there is sufficient availability to incorporate new projects with little effect on our existing schedule. Because of this, GLA can commit to the County that there will be no rotation of the above personnel without prior discussion and consent by the County's Project Manager. Alternate qualifications have been provided just as a indication of GLA's strong depth of staff.

3.0 Qualifications and Experience Competence



GLA is an employee-owned Corporation with 21 office locations in the United States and an affiliate company in Peru. The firm has been providing consulting services to the waste management industry for almost 25 years. Well established in its home state of California, GLA has provided services at over 228 landfills in 50 California counties. Our solid waste business was developed by a handful of dedicated professionals who gained a reputation for providing responsive, quality services. GLA has a group of over 200 well-qualified and experienced professionals. Among its permanent staff, GLA includes California registered geologists, certified engineering geologists, certified hydrogeologists, registered civil and geotechnical engineers, staff and project geologists, and more than 20 certified CQA technicians.

The firm also operates full-service geotechnical laboratories in our Anaheim and Northern California offices, as well as 3 other satellite geotechnical laboratories in other offices. As a result, GLA has the resources, capabilities, and manpower to conduct all of the work required for this project utilizing in-house staff. Testing capabilities of these laboratories include:

- Grain Size Distribution with Hydrometer
- Atterberg Limits
- In-situ Moisture Content and Dry Density
- Maximum Density/Optimum Moisture Content
- Permeability – Falling Head and Constant Head
- Direct Shear, Residual Shear, Ultimate Shear
- Triaxial Compression
- Unconfined Compression
- Expansion Index
- Consolidation
- Sulfate and Chloride Content
- Corrosivity Series
- Resistance and pH
- Sand Equivalent
- R-Value
- Specific Gravity

Our firm also maintains a full complement of field equipment for CQA testing and geological, geotechnical, and geophysical sampling and assessment. A listing of our field sampling and testing equipment is provided below.

Construction Quality Assurance Testing Equipment	
25 Nuclear Density Gauges	5 Electronic/Digital scales
7 BAT Permeameters	12 Sand Cone Test Kits
4 Boutwell Permeameters	Neutron Probe
2 Sealed Double Ring Infiltrometers	Multiple sets of standard sieves
Multiple field ovens/microwaves	Multiple Mechanical shakers
Miscellaneous Geotechnical Testing Equipment	
4 Slope Inclinometers	GPS Unit with tripod & antenna
2 Settlement Meters	Seismograph and 26 geophones
3 Hydroprobes	Survey Rod, Level, tripod
Multiple drive ring samplers with hammers and barrels	Multiple measuring wheels

As shown above, GLA maintains all the types of field and laboratory equipment that are needed to provide comprehensive and responsive CQA services for landfill projects. Note that all nuclear density/neutron probe equipment is maintained under full licensure with the State of California Department of Health Services Radiologic Health Branch, and all CQA field personnel have received nuclear gauge safety training and are under full-time radiation exposure monitoring to comply with the terms of the license. All field personnel have completed the required 40-hour HAZWOPER training, as well as 8-hour annual HAZWOPER refresher training.

Similar Project Experience

The County has requested that GLA describe three successfully completed projects. Provided below are three descriptions of similar projects which include all of the items listed in the County's RFP. GLA invites the County to contact the clients listed on these project descriptions below.

CQA Services for Construction-Southeast Stockpile & H_2S Treatment System Pad

Tajiguas Sanitary Landfill, Santa Barbara County, California
Client: County of Santa Barbara, Department of Public Works
Contact: Imelda Cragin 805-882-3613

Year completed:	2014
Cost:	$77,000
Personnel:	Stacy Baird – CQA Manager/Gary Lass – Principal-in-Charge/ Thomas Runyan – CQA Monitor/Adam Shaw – CQA Monitor

In 2014, GLA provided the County of Santa Barbara with CQA services during construction of the Southeast Stockpile Fill and Construction of the H_2S Treatment System Pad at the TSL. In general, construction of the Southeast Stockpile Fill included the excavation and processing of approximately 70,000 cubic yards of on-site soil, and placement and compaction of these processed soils to form a minimum five-foot thick engineered fill section consistent with requirements for an alternative final cover. The Southeast Stockpile Foundation Fill was constructed 5-feet thick and provided a field-scale demonstration of the monolithic alternative final cover system performance. GLA performed field and laboratory tests of the constructed engineered fill soils to document the in-place engineering properties of the fill soils and to develop a database for ultimate approval as completed final cover soils. Construction of the H_2S Treatment System Pad closure included excavation of existing soils and re-compaction of select soil materials within the H_2S Treatment System Pad footprint to form a two-foot-thick foundation layer for the installation of a 60-mil LLDPE geomembrane and drainage geocomposite.

During construction, GLA provided daily or as-needed construction observation, monitoring, and testing of soils and geosynthetic elements of construction. CQA testing for soils included sampling and analysis for grain-size distribution, moisture-density relationship, soils classification, permeability, and compaction. During geosynthetics installation for the H_2S Pad, GLA observed and documented material shipping, storage, deployment, and seaming. At the completion of construction, a final CQA Report was submitted to the County for ultimate approval by the RWQCB.

CQA Services for Unit 1 Partial Final Closure Construction and Unit 3, Phase 6 and 7 Liner Construction

Mid-Valley Sanitary Landfill, Santa Bernardino County, California
Client: County of Santa Bernardino, Department of Public Works
Contact: Darren Meeka 909.386.9017

Year completed: 2015
Cost: $385,000
Personnel: Stacy Baird – CQA Manager/Gary Lass – Principal-in-Charge/ Thomas Runyan – CQA Monitor/Adam Shaw – CQA Monitor

In 2015, GLA provided the County of San Bernardino with CQA services during construction of the Unit 1 Partial Final Closure and the Unit 3, Phase 6 and 7 Liner at the Mid-Valley Sanitary Landfill. The Unit 1 Partial Final Closure area encompasses approximately 23 acres and construction of the final cover included the excavation and processing of approximately 190,000 cubic yards of select on-site soil, and placement and compaction of these processed soils to form a minimum five-foot-thick engineered fill section consistent with the requirements of an alternative final cover. The Unit 1 Partial Final Closure Project also included the installation of 18 landfill gas wells up to 120 feet deep, and the installation of new gas header piping and support structures. GLA performed field and laboratory tests of the final cover engineered fill soils to document the in-place engineering properties and permeability of the fill soils and to confirm compliance with the Project Specifications. Prior to construction of the alternative final cover soils, GLA monitored the contractor's clear and grub operations and the placement of unclassified engineered fill soils that were placed to achieve design subgrade elevations and gradients on the benches, and to fill-in low areas on the landfill slopes.

During construction, GLA provided daily construction observation, monitoring, and testing of processing operations in the stockpile area and during placement of the final cover soils to verify material performance and contractor compliance with the Project Specifications. CQA testing for soils included sampling and analysis for grain-size distribution, moisture-density relationship, soils classification, permeability, and compaction. GLA also logged the boreholes excavated for the landfill gas wells and documented the well construction materials to verify compliance with the Project requirements.

Final Closure CQA

Ballard Canyon Landfill, Santa Barbara County, California
Client: County of Santa Barbara, Department of Public Works
Contact: Imelda Cragin 805-882-3613 (original contact Chris Wilson)

Year completed: 2003
Cost: $95,000
Personnel: Stacy Baird – CQA Manager/Gary Lass – Principal-in-Charge/ Thomas Runyan – CQA Monitor/Adam Shaw – CQA Monitor

GLA provided constructability review and CQA services for closure construction at the Ballard Canyon Landfill in Santa Barbara County. Construction included removing the existing landfill gas extraction header system, regrading and compacting the 24,000 cubic yards of foundation

layer, installation of 350,000 square feet of 60-mil double-sided textured linear low density polyethylene (LLDPE) geomembrane and geonet drainage strips, placement of vegetative soil layer, installation of storm water collection and conveyance system and perimeter fencing. The final cover system was an alternative to the prescriptive cover design that utilized geomembrane in place of the low hydraulic-conductivity soil material utilized in a prescriptive cover. This configuration was selected due to the lack of an on-site or regional source of appropriate soil material. Other components of the cover design were consistent with CCR 27 prescriptive cover design requirements, with an additional foot of soil proposed for the vegetative layer. Factors taken into consideration for the cover included the geometry of the existing landfill, effectiveness as a water infiltration barrier, climatic conditions, potential settlement, gas control, surficial stability, vegetation reliability, environmental impacts, available cover materials, erosion control, constructability, end use, and cost.

Additional Similar Project Experience

GLA has provided CQA services all types of landfill cover systems including prescriptive, monolithic alternative, and geosynthetic alternative final covers throughout California. The table below lists additional projects, many of these completed by the proposed Project Team and all completed by current GLA staff members.

Site	Client	Project Summary
Anza Landfill Year Completed: 2008	Riverside County Waste Management Department	108,000 cy soil CQA Cost: $95,000
Baker Landfill Year Completed: 1998	County of San Bernardino, Solid Waste Management Division	100,000 cy soil CQA Cost: $80,000.
Big Bear Landfill Year Completed: 2010	County of San Bernardino, Solid Waste Management Division	159,000 cy soil; 268,950 sf geomembrane cost $89,000
Carson Marketplace Year Completed: 2009	Los Angeles County	1,800,000 sf geomembrane CQA Cost: $N/A
Coachella Landfill Year Completed: 2002	Riverside County Waste Management Department	1.1 million cy soil CQA Cost: $185,000
Colton Sanitary Landfill Year Completed: 2000	County of San Bernardino, Solid Waste Management Division	75,000 cy soil CQA Cost: $60,000
Coyote Canyon Landfill Year Completed: 1994	Orange County Waste & Recycling	968,000 cy soil CQA Cost: $120,000
Crazy Horse Sanitary Landfill Year Completed: 2013	Salinas Valley Solid Waste Authority	10,000 cy soil cover; 3,28,000 sf geomembrane CQA Cost: $602,000
Cummings Road Landfill Year Completed: 2012	County of Del Norte, California	52,000 cy soil cover; 1,1M sf geomembrane CQA Cost: 250,000
Edom Hill Landfill Year Completed: 2008	Riverside County Waste Management Department	750,000 cy soil cover CQA Cost: $359,000
Forward Landfill Year Completed: 2012	Republic Services, Inc.	132,000 cy soil cover CQA Cost: 78,000
Highgrove Landfill Year Completed: 2002	Riverside County Waste Management Department	700,000 cy soil cover CQA Cost: $186,000
Holtville Solid Waste Site Year Completed: 2009	Imperial County Department of Public Works	240,000 cy soil cover CQA Cost: $125,000
Huntington Beach Landfill Year Completed: 2003	City of Huntington Beach	180,000 cy soil cover CQA Cost: $120,000
Kern Valley Landfill Year Completed: 2004	Kern County Department of Public Works	103,000 cy soil cover; 1.4M sf geomembrane CQA Cost: $99,500

Site	Client	Project Summary
Mead Valley Landfill Year Completed: 2001	Riverside County Waste Management Department	412,000 cy soil cover CQA Cost: $87,000
Milliken Sanitary Landfill Year Completed: 2005	County of San Bernardino, Solid Waste Management Division	1.21 million cy soil cover CQA Cost: $392,000
Needles Sanitary Landfill Year Completed: 1999	County of San Bernardino, Solid Waste Management Division	600,000 cy soil cover CQA Cost: $116,400
Newby Island Landfill Year Completed: 2012	Republic Services, Inc.	7,600 cy soil cover CQA Cost: $127,000
Ocotillo Solid Waste Site Year Completed: 2008	Imperial County Department of Public Works	33,000 cy soil cover CQA Cost: $68,000
Phelan Sanitary Landfill Year Completed: 2006	County of San Bernardino, Solid Waste Management Division	180,000 cy soil cover; 522,000 sf geomembrane CQA Cost: $145,300.
Rock Creek Landfill Year Completed: 2012	Calaveras County Department of Public Works	40,000 cy soil cover; 522,000 sf geomembrane $246,000
Santiago Canyon Landfill Year Completed: 2005	Orange County Waste & Recycling	1 million cy soil cover CQA Cost: $229,000
Spadra Landfill Year Completed: 2003	County Sanitation Districts of Los Angeles County	325,000 cy soil cover CQA Cost: $222,000
Sunrise Mountain Landfill (NV) Year Completed: 2013	Republic Services, Inc.	1,320,000 cy soil cover CQA Cost: 674,000
Tequesquite Landfill Year Completed: 1997	City of Riverside Department of Public Works	750,000 cy soil cover CQA Cost: $120,000
Trona-Argus Sanitary Landfill Year Completed: 2001	County of San Bernardino, Solid Waste Management Division	400,000 cy soil cover CQA Cost: $86,000
29 Palms Sanitary Landfill Year Completed: 2006	County of San Bernardino, Solid Waste Management Division	270,000 cy soil cover CQA Cost: $242,000
UC Davis Landfill Year Completed: 2015	University of California, Davis	42,800 cy soil cover, 317,000 sf geomembrane CQA Cost: $200,000
Vasco Road Landfill Year Completed: 2011	Republic Services, Inc.	180,000 cy soil cover CQA Cost: $49,000
Yermo and Newberry Landfills Year Completed: 2008	County of San Bernardino, Solid Waste Management Division	Yermo - 71,000 cy cover; Newberry – 20,000 cy cover; CQA Cost: $167,000

Through this experience, GLA brings to the County understanding of how to construct final cover systems similar to that approved for the Tajiguas Landfill. We know the Contractors who will likely be selected to construct the final cover system, and we know the regulators who will evaluate the quality of construction. GLA will use our relationships with County, contractor, and regulatory to ensure that the final cover system is constructed in accordance with the project plans and specifications, and facilitate and regulatory approval of the project.

4.0 Proposed Method to Accomplish the Services

Project Understanding and Technical Approach

GLA understands that the County wishes to retain the services of a qualified consultant to provide CQA services during Phase 2 and 3 Partial Final Closure Construction at the TSL. CQA services will be provided in accordance with the October 2015 (revised January 2016) CQA Plan prepared by GLA. We further understand that this will include providing a CQA Manager, CQA Officer, lead and on-call CQA monitors, field laboratory services, and supporting off-site soil laboratory services that, together, will provide sufficient resources to complete full CQA services and pace construction activity. Upon completion of construction, the GLA Team will provide an "as-built" report documenting the work performed and the results of all testing

completed and certification by a California Registered Civil Engineer or Certified Engineering Geologist that the work was performed in accordance with the requirements of the contract specifications and approved CQA Plan.

As shown on the Construction Drawings and the CQA Plan, the Phase 2 Partial Final Closure design calls for the construction of a minimum 3-foot thick alternative final cover soil layer placed over the existing interim cover soil over an area of approximately 48 acres. The Phase 3 Partial Final Closure encompasses an area of approximately 14 acres with the final cover design including from bottom to top: a 1-foot thick foundation soil layer, a 60-mil LLDPE geomembrane, a drainage geocomposite, and a 2-foot thick protective soil cover. The design for each final cover section is shown on the Construction Drawings and the location for where each final section will be constructed is also shown on the Construction Drawings.

Implementation of the CQA program will be based on the construction specifications and the CQA Plan prepared by GLA. In general, the required services will include the following:

- Project Start-Up, including attending the Preconstruction Meeting, preparing a project-specific Health and Safety Plan, reviewing project Plans and Specifications, and mobilizing the field office.
- Participation in bi-weekly construction meetings and Special Meetings (if necessary).
- Providing daily CQA observation, sampling, testing, and documentation during construction of the final cover system, including: subgrade preparation, general engineered fills, foundation layer and alternative final cover layers, protective cover soils, and geosynthetics.
- Providing observation and inspection services for the miscellaneous civil improvements including the basin and earthen berms.
- Certification of the final cover system elements.
- Supporting the County in their communications with the Regulatory Agencies.
- Preparation of a certified, as-built report.

To address these general work elements and the work tasks outlined in the RFP and CQA Plan, the scope of work has been divided into a number of work tasks, with supporting discussions and methodologies presented to demonstrate our understanding of the project and our obligations to provide these services to the County.

Scope of Work – Construction Quality Assurance

Construction quality assurance for the landfill partial final cover system will require close cooperation between the County, the Construction Manager, the contractor, the CQA consultant, and the regulatory agencies. It is important to have a CQA consultant who understands that the alternative final cover system is an integral part of the landfill's environmental protection system, and that thorough and detailed daily observation, testing, and documentation are necessary to ensure final approval of the Project. In general, CQA can be broken down into three principal tasks: administration and meetings, construction

observation and testing, and documentation and reporting. Each of these three CQA components is described below.

Task 1 – Project Administration, Meetings, And Communications

This task includes coordination and participation in the preconstruction meeting, bi-weekly progress meetings, and the daily tailgate meetings. Prior to the start of work, a preconstruction meeting is anticipated and this meeting should be attended by the County, Construction Manager, CQA consultant, Design Engineer, General Contractor, and other parties as directed by the County. Prior to the preconstruction meeting, GLA will assist the County and/or Construction Manager in developing a meeting agenda. Based on our experience, we anticipate the following topics will be covered at the preconstruction meeting:

- Introduction of Project parties.
- Establish personnel assignments, responsibilities, and key personnel.
- Establish lines of communication.
- Review site safety procedures, site security, and establish emergency notification protocols.
- Review project construction plans, documents, and special provisions.
- Review the project schedule.
- Establish reporting and documentation procedures.
- Review testing equipment, procedures, and establish a protocol for correcting and documenting deficiencies.
- Conduct a site visit to inspect various work sites, including stockpiles, equipment storage, field offices, access and haul roads.

The Construction Manager will record the discussions and decisions in the meeting, and will provide the attendees with copies of the meeting minutes.

During the course of the Project, CQA staff will participate in daily tailgate meetings with the Construction Manager, Contractor, and County staff to review the daily work areas, discuss CQA observations and test results, and address any site safety issues related to construction. GLA's CQA personnel will document the daily meetings in the CQA Daily Field Report.

Weekly progress meetings will be held at the site and will be attended by GLA's CQA Manager, County staff, the Construction Manager, the Contractor, and other project parties as deemed necessary by the County. The purpose of the bi-weekly progress meetings is to review project progress, including material conformance data and submittal status, discuss CQA observations and test results, and review the look-ahead schedule. The Construction Manager will prepare progress meeting minutes for distribution to the project parties.

Special meetings may be necessary to address and resolve unforeseen problems that develop during the project. As necessary, GLA will be available to attend these problem-resolution meetings, and will provide assistance as necessary to provide cost-effective, technically-sound solutions to problems that may arise. The Construction Manager will prepare meeting minutes for distribution to project parties.

GLA's CQA Project Manager will administer and oversee the CQA aspects of the Project and will prepare monthly invoices, including a project status and budget summary report, and will provide technical support to the Project team should field construction problems arise. The CQA Project Manager will work closely with the Principal-In-Charge and the CQA field staff to ensure that the Project is adequately and appropriately staffed at all times.

Task 2 - Field CQA Inspection and Testing

CQA services for Phase 2 and 3 Partial Final Cover Construction will include observation, field and laboratory testing and documentation of the materials and construction practices employed to build the final cover system. Each component of the cover system must be constructed according to the Plans and Specifications to ensure that the final cover functions according to the design. For the Phase 2 and 3 Project, the final cover construction elements include:

- Mobilization.
- Clearing and grubbing of the existing landfill surface.
- Re-grading of the interim cover to create the minimum 1-foot thick foundation layer.
- Moisture conditioning and processing of foundation layer and final cover soils obtained from the approved on-site borrow area.
- Placement and compaction of the alternative final cover soils.
- Construction of the geomembrane and geocomposite on the Phase 3 area.
- Construction of the basin and top deck berms.
- Demobilization.

While the precise sequence of construction will not be known until the General Contractor submits a construction schedule, the construction process and CQA procedures will generally follow those used in past alternative final cover projects.

Mobilization - Following the first preconstruction meeting, CQA equipment, materials and staff will be mobilized as necessary to correspond with Contractor mobilization and the start of construction. The main aspect of geotechnical mobilization will be setting up the field laboratory. The GLA Team will obtain a field office trailer and generator with ample equipment and supplies so that our field CQA staff is relatively self-sufficient. The field office trailer will be equipped with mobile telephones and computers, geotechnical testing equipment, soil sampling equipment, field forms, health and safety plans and equipment, and a set of the project plans, the CQA Plan, and special provisions. We anticipate that most of the required soils testing will be completed in the field laboratory. This arrangement provides a benefit not only by minimizing CQA costs, but also allows the County, the Project Contractor, and Regulatory Agencies immediate access to information; a critical consideration when evaluating field conditions that might influence the Contractor's schedule. A short turn-around is particularly important on landfill final cover construction projects when the design involves different types and layers of soil and/or geosynthetic materials since coordination between the

County, Contractor, Subcontractors and CQA staff is critical to the successful completion of the project.

Clearing and Grubbing – The CQA Monitors will document that the clearing and grubbing is completed in accordance with the Plans and Specifications. Typically, this includes temporarily decommissioning or raising the existing landfill gas wells and/or header pipes, and removing vegetation and soils that do not meet the Project Specifications for final cover soils. During this phase of construction, GLA will observe and document that all the vegetation and unqualified soils are removed and stockpiled in such a manner as to prevent mingling with the select final cover soils. Often times it is not practical to clear and grub the entire final cover fill area in one operation and in that case the contractor may clear and grub sections of the work area as the work progresses. In this event, the CQA Monitor will track the contractor's progress and the areas that are sufficiently "stripped" and therefore ready for the processing and compaction of the foundation layer material.

Interim Cover Thickness Verification/Foundation Layer Grading – As specified in the CQA Plan, the existing interim cover soils will be investigated by potholing or augering to verify the minimum foundation layer thickness. In areas where the existing interim cover soil thickness is deficient, additional fill soils will be processed, placed, and compacted to ensure the specified thickness of foundation layer soils is achieved. In areas where the existing interim cover soils have the specified thickness, these soils will be moisture conditioned, processed and compacted to form the foundation layer of the final cover system.

The Phase 2 foundation layer (interim cover) is designed to have a minimum thickness of 1-foot and it is assumed that 1-foot of interim cover material is in place in most places. The existing interim cover surface will be stripped of vegetation during the clearing and grubbing operation and we recommend that the clearing and grubbing operation be performed prior to the potholing of the existing cover to accurately identify any areas that may require additional foundation layer fill to meet the minimum specified thickness. After clearing and grubbing, the interim cover/foundation layer will be potholed to verify the thickness of existing cover material.

Following the pothole survey conducted by the contractor's surveyor, the GLA Team will develop a map illustrating deficiencies and surpluses of foundation layer soils, and provide this to the County and the Contractor so that additional foundation layer grading can be planned. Should additional soil placement be required to construct the foundation layer, the GLA Team will observe construction staking to ensure all deficient areas are included and provide construction observation and testing services for the additional soils. Sufficient samples will be collected from the borrow source and analyzed for moisture-density relationships, particle size, and soils classification. During construction, the CQA Monitors will observe and test fill placement for compaction and we anticipate foundation layer CQA testing will be conducted in accordance with the following schedule:

Foundation Layer Testing

Test	Method	Frequency
Modified Proctor	ASTM D1557	1 test per 10,000 cubic yards placed and/or one per week
Visual Inspection	ASTM D2488	Continuous Observation
In-Place Moisture/Density (Nuclear Gauge or Drive Ring)	ASTMD 6938 ASTM D2937	4 tests per 1,000 cubic yards or a minimum of 4 tests per day
In-Place Moisture/Density (Sand Cone)	ASTM D1556	10 percent of required density tests

The foundation layer serves to support the 3-foot thick monolithic cover soil layer, or the geomembrane liner of the Phase 3 final cover system. As such, it must be relatively unyielding and free of rapid grade changes. As a result, the GLA Team will verify that the foundation layer is constructed according to the lines and grades established following the pothole survey, and utilizing materials from the approved on-site borrow source(s). Though not specified in the CQA Plan, the GLA Team recommends that after the vegetation is removed from the interim cover, the entire surface be scarified to a depth of at least 6 inches, moisture conditioned, and then re-compacted. Additional foundation layer soils would be placed in thin lifts after the existing interim cover soils are scarified and moisture conditioned to form a relatively uniform foundation layer.

Foundation layer soils will be compacted to a minimum density of 90 percent of the maximum dry density and compaction test data will be conveyed to County and the Contractor immediately. Failing test locations will be marked in the field. The CQA Monitors will observe reworking of failing test locations and will re-test the location as soon as it is ready.

Following completion of the above inspections, the GLA Team will coordinate with the contractor's surveyor to record the topography of the foundation layer. The survey will be used to generate the foundation layer topographic map that will be compared to the project plans and specifications for compliance with the design grades. After all CQA observation and documentation are completed, the Team's Lead CQA Monitor, upon concurrence with the County's Project Manager, will issue a certification of subgrade acceptance.

Task 2.2 - General Engineered Fill CQA

During construction of the Phase 2 and 3 Partial Final Cover, general engineered fill soils will be required to construct the earthen berms, the basin subgrade, foundation layer, protective cover soil, as well as potential areas to achieve design gradients. General Engineered Fill soils will be obtained from the designated on-site borrow areas, and upon start of this project, the Team will collect a sufficient number of samples to characterize the borrow area soils. During general engineered fill placement operations, the CQA Monitors will observe and document excavation, screening (if necessary), moisture conditioning, placement, and compaction. The CQA Monitor will document that lift thickness, compaction equipment, and construction effort. Testing of general engineered fill soils will be conducted in accordance with the following schedule:

General Engineered Fill CQA Testing

Test	Method	Frequency
Modified Proctor	ASTM D1557	1 test per 10,000 cubic yards placed or one per material type
In-Place Moisture/Density (Nuclear or Drive Ring)	ASTM D6938 ASTM D2937	4 tests per 1,000 cubic yards placed or a minimum of 4 tests per day.
Sand Cone Test or Drive Ring Test	ASTM D1556 or ASTM D2937	One test for every 20 nuclear gauge density tests
Visual Inspection	ASTM D2488	Continuous Observation

The GLA Team notes that the frequency for the Modified Proctor test should be considered a minimum, and that additional moisture-density curves may be required if the general engineered fill material is borrow from more than one source or is internally heterogeneous. In such cases, special attention will be required to correlate the appropriate moisture-density curves with the material being placed as backfill. Should compaction testing yield unacceptable results, the Team will immediately conduct additional testing in the vicinity to verify the results. Should these verification tests also fail, the Team will mark the failed test locations and immediately notify the Contractor of the results. The Team will be prepared to discuss the meaning of the failed results and advise the Contractor of methods to mitigate the failure.

Except where noted in the Project Specifications, general engineered fill soils will be compacted to a minimum density of 90 percent of the maximum dry density and compaction test data will be conveyed to County and the Contractor immediately. Failing test locations will be marked in the field. The CQA Monitors will observe reworking of failing test locations and will re-test the location as soon as it is ready.

Task 2.3- Monolithic Final Cover Soil Layer

As shown on the Construction Drawings, the monolithic final cover layer for Phase 2 will be a minimum of 3-foot thick and will be composed of materials generated from the on-site borrow area. The borrow soils will be moisture conditioned to between optimum moisture content and 3 percent above optimum moisture content and processed to obtain a uniform moisture content throughout the material. Borrow soils will also be processed to generally exclude oversize (plus 3-inch) materials as approved by the CQA Monitor. The CQA Monitor will observe and document that final cover soils are obtained from the designated borrow sources and processed in compliance with the Project requirements. Following moisture conditioning and processing, the monolithic final cover soils will be placed in relatively thin lifts (6-8-inches) and compacted to a minimum of 90 percent density when compared to the maximum dry density (ASTM D1557). During construction, the CQA Monitor will perform the following tests on the monolithic final cover layer soils.

Alternative (Monolithic) Final Cover Layer CQA Testing

Test	Method	Frequency
Moisture/Density Relationship	ASTM D1557	1 test per 5,000 cubic yards or 1 per week
In-Place Moisture/Density (Nuclear Gauge or Drive Ring)	ASTM D6938 and D2937	4 tests per 1000 cubic yards placed or a minimum of 4 tests per day
In-Place Moisture/Density (Sand Cone)	ASTM D1556	10 percent of required nuclear gauge tests

Test	Method	Frequency
Grain Size Analysis	ASTM D422	1 test per 5,000 cubic yards placed or 1 test per day
Atterberg Limits	ASTM D4318	1 test per 5,000 cubic yards placed
Visual Inspection	ASTM D2488	Continuous observation
Soil Classification	ASTM D2487	1 test per 5,000 cubic yards placed or 1 per day

The monolithic final cover soils will be compacted to a minimum of 90 percent of the maximum dry density and at a moisture content between optimum moisture content and three percent above optimum moisture content. Final cover fill soils will also be required to generally have a maximum particle size of 3-inches and have a minimum of 25 percent by weight passing the No. 200 sieve and a minimum of 15 percent by weight passing the 5-microns.

During moisture conditioning, processing, and placement of the monolithic final cover soils, the CQA Monitor will observe, monitor and test the cover materials to ensure compliance with the Project requirements. CQA testing will be conducted in compliance with the approved CQA Plan and any areas of non-compliance will be reported to the contractor and Construction Manager for remediation. Any non-compliant fills will be re-worked and re-tested to verify that the end product meets the Project requirements.

Following construction of the final cover, the CQA Monitor will verify the thickness by observing the hike up poles installed by the contractor, and by documenting test holes excavated by the contractor at the designated locations. The CQA Monitor will measure the final cover thickness at each location and verify that the minimum cover thickness has been achieved. Any deficiencies in the final cover thickness will be reported to the Construction Manager and contractor for corrective action. Excavations (auger holes) to verify cover thickness will be backfilled with compacted final cover soils following measurement.

Task 2.4 - Geosynthetics CQA (Phase 3)

GLA understands that the geosynthetic elements of the Phase 2 and 3 Partial Final Cover Construction include a 60-mil LLDPE double-sided textured geomembrane and a geocomposite drainage layer. In general, the CQA process for each geosynthetic includes: 1) review of manufacturer material certification and performance of conformance testing by the Contractor; and 2) inspection and approval of geosynthetic material installation, including destructive seam test results. The following paragraphs detail the main elements of material certification and installation approval.

Geosynthetic Material Approval – During manufacture, geosynthetic material manufacturers routinely sample and test their products to ensure minimum quality control parameters are achieved. Sampling frequency and material performance parameters have been established by the geosynthetics industry and by ASTM to ensure product consistency and performance. Following production and manufacturer quality control testing, manufacturers typically provide a certification for each roll of geosynthetic produced. These "manufacturer certifications" are submitted to the Contractor, Design Engineer, and CQA Consultant prior to delivery to ensure that the geosynthetic materials meet the minimum requirements of the Project Specifications.

Once the manufacturers' certifications are approved, the geosynthetic materials will be sampled by the Contractor or his represenative in order to perform the specified conformance tests. Samples of each type of geosynthetic material will be collected at a frequency of no less than one sample per 100,000 square feet of material for conformance testing. The Contractor will select a certified geosynthetics laboratory that will perform the material-specific geosynthetic testing using the samples received from the Contractor. Conformance tests usually involve fewer parameters than quality control testing, and are used primarily to independently verify the material parameter values reported by the manufacturer. It is recommended that conformance test results for geosynthetics meet or exceed the Minimum Average Roll Values (MARV) of each material's physical properties indicated at a 95 percent confidence level.

Following review and approval of the manufacturers' quality control certifications and the geosynthetic laboratory's conformance test results, material approval will be granted and geosynthetic installation can proceed.

Geosynthetic Material Delivery and Storage – As geosynthetic materials arrive at the TSL, GLA will document that the delivered materials are those covered by the manufacturer's quality control certifications and conformance test results (if conformance test sampling is conducted at the manufacturing plan). GLA will document that the materials are stored in a manner that does not expose the materials to sunlight, and that materials are stored in accordance with the Project Specifications and the manufacturer's requirements. GLA will also monitor and document that the equipment used to transport and move the geosynthetic rolls to not damage these materials.

Geosynthetic Installation – Prior to installation of any geosynthetic component (geomembrane, geocomposite), CQA staff will review and approve the contractor's installation drawings, and the CQA Monitor will verify that all appropriate certifications and test results have been received, reviewed and approved for both the earth material subgrade and any underlying geosynthetics. The CQA Monitor will also verify that all installation related issues (welding, air testing, etc.) have been completed for underlying geosynthetic materials. For example, prior to deployment of geocomposite over the geomembrane, it is important to verify that all geomembrane CQA issues have been addressed.

During geosynthetic material deployment, the CQA Monitor will verify that installation is conducted in accordance with the approved installation drawings, and will visually inspect the materials to identify any defects and will coordinate with the Contractor regarding the disposition of any identified defects. The CQA Monitor will also document and observe all geosynthetic deployment, seam overlap welding and/or sewing and will observe and document all non-destructive seam testing (air test, vacuum box testing, etc.) as specified in the Project Specifications and CQA Plan. The CQA Monitor will also observe destructive seam sampling for the geomembrane and assist the Contractor in shipping these samples to the geosynthetic laboratory for testing.

The results of all deployment, seaming, welding and testing will be documented on the appropriate CQA forms identified below.

- Geosynthetic material Received.
- Geosynthetic material conformance test results.
- Acceptance of soil subgrade for the support of geosynthetic material.
- Geosynthetic panel placement log summary.
- Geosynthetic panel placement log.
- Geomembrane seam trial welds.
- Geomembrane seam log summary.
- Geomembrane destructive test result summary.

Approval of geosynthetic material installation will be contingent upon all CQA observations and test results meeting the minimum requirements of the Project Specifications.

Task 3 - Documentation and Reporting

Task 3 includes four subtasks defined to ensure sufficient documentation of all project construction elements and testing results. Each subtask is described in more detail below:

Task 3.1 - Daily Record Keeping

Through our extensive experience with landfill construction projects and landfill liner and final cover projects in particular, GLA's CQA Monitors are acutely aware of the importance of accurate and timely daily record keeping, to properly document visual observations, laboratory/field test data, soils observation and testing data sheets, manufacturer's certificates and quality assurance data sheets, daily meetings, discussions with project personnel, and other important information. To facilitate this record keeping, the field office will be equipped with a computer and copy machine so that CQA staff can maintain databases of testing data. Field logs will be prepared daily, and these logs along with summaries of CQA data will be submitted to the County on a weekly basis, or as needed. Photographs will be routinely taken to document the progress of work or to highlight areas of concern. A photograph log containing reference to numbered photographs and subject matter will be maintained at the field trailer.

Task 3.2 - Construction Problem and Resolution Documentation

As described in Task 1.5, construction problems may arise that cannot be resolved simply, and require a formal meeting of the project parties to discuss solutions and develop a resolution. Because these issues often result in a design or material specification change, it is important to document the problem and solution, so that these changes are justified and recorded when the time comes for regulatory review and project approval.

The GLA Team will attend the Problem and Resolution Meetings. The Team will document the problem, its cause, location, and the solution developed during the meeting. A problem / resolution memorandum will be prepared for review, and the final form will be signed by the project parties, and a copy will be included in the final CQA report.

Task 3.3 - Design and Specification Changes

Field conditions often differ from the assumptions and conditions used to design a project. As a result, design and specification changes may occur due to changes in equipment or materials availability, new construction or testing techniques, and field conditions. When these circumstances arise, the CQA Monitor will notify the County's Project Manager who will notify the Design Engineer. A formal agreement documenting the design/specification change will be signed by the project parties and included in the final construction certification report.

Task 3.4 - Preparation of Draft and Final Reports

The GLA Team will prepare a final Construction Certification reports in conformance with the Contract Documents. This final report will include the field notes, field and laboratory CQA test data, field records, meeting minutes, manufacturer quality control (MQC) data and certifications, completed field correspondences, project photographs, approved plans, all approved modifications to the plans and specifications, and a narrative description of the project; final cover construction observation and field test results; and as-built drawings (based on certified surveys). CQA data and manufacturer quality control data will be presented in summary spreadsheets that compare the data results with the project specifications, and contain simple results statistics (minimum, maximum, and average values). Where CQA or MQC data differ from the specifications, the CQA report will explain the deviations and any affect the deviation is expected to have on the long-term performance of the final cover system (if any). All plans, specifications, manuals, and technical reports reviewed or utilized during the project will be appropriately referenced in the report.

The Final Report will include a statement certifying that the final cover system was constructed in accordance with the Project Plans and Special Provisions, and any design changes made to those documents. Furthermore, the statement will certify that the project was completed in accordance with applicable state and federal laws governing construction of Class III solid waste disposal facilities. The Final Report will be signed and certified by Mr. Gary Lass, the Team's Principal-In-Charge who is a State of California Registered Engineering Geologist.

The draft Construction Certification report will be submitted to the County's Project Manager within 30 calendar days following completion of this project. Within one week after receiving the County's comments, the GLA Team will provide the final Construction Certification Report. The final report will include original project drawings in reproducible form (mylar, or other acceptable medium), photographs, project-derived data and calculations, all field logs, all laboratory data, and all other information to which the County are entitled. In addition to print copies of the report, the Team will provide the report, including all graphical, tabulated, and analytical information, in digital (PDF) format on CD-ROM.

Task 4 - Project Management

During the course of the project, the Project Manager and Principal-in-Charge will meet internally to review project progress, staffing requirements, the status and results of CQA testing. The Project Manager will prepare monthly progress reports summarizing all project work completed to date. The reports will include a summary of CQA test results, copies of daily

field reports and photographs, and a budget utilization summary. The progress report will be submitted to the County along with monthly invoices.

Project Schedule

The function of a good CQA Consultant is to pace the schedule prepared by the Client and Contractor in such a way that CQA services do not interfere with or delay construction progress. GLA understands that Phase 2 construction is scheduled to begin in May 2016 and the contractor will be given 130 working days to complete the project. We also understand that Phase 3 construction is scheduled to begin in August 2017 and the contractor will be given 85 working days to complete the Phase 3 project.

GLA will be prepared to mobilize to the site within 10 working days of receipt of the Notice to Proceed, and will maintain an on-site presence throughout the duration of construction, or as otherwise agreed upon between our firm and the County and Contractor. Our on-site presence will be commensurate with the level of construction activity, and will be sufficient to provide the level of inspection, testing, and documentation that is expected by the Regional Water Quality Control Board and California Department of Resources, Recycling, and Recovery.

During construction, GLA's CQA Project Manager and/or Principal-in-Charge will be available to attend meetings with the County, Contractor, and regulatory personnel as described in our scope of work, or as requested during the course of the project.

Within 30 days after construction is completed, laboratory data are received, and final survey is completed, GLA will provide the County with a draft Construction Certification Report. GLA will endeavor to submit a revised draft report that incorporates the County's comments within 10 days of receipt of the comments. The draft report will be submitted to the County and regulatory agencies for review and comment. The Final Construction Completion Report will be submitted to the County and regulatory agencies within 10 days after receipt of comments on the second draft report.

5.0 Knowledge and Understanding of Federal/State/County Procedures

Since 1993, when the State of California adopted the federal "Subtitle D" regulations, GLA has provided CQA services during the construction of both prescriptive and alternative final cover systems at numerous landfills in California. As a result, GLA has an unparalleled level of experience in providing CQA observation, documentation, testing, and reporting services during construction activities for many final cover projects.

GLA has been working with the County for nearly 20 years, and during that time, we have worked with the County on a number of landfill permitting, design, slope stability, expansion, and closure projects at its Tajiguas, Foxen Canyon, and Ballard Canyon Landfills. As a result of this long working relationship, GLA understands the County's procedures and preferences, and we understand the site-specific conditions at the Tajiguas Landfill.

GLA has worked extensively with the staff at the Central Coast RWQCB on landfill siting, design, expansion and closure CQA, groundwater monitoring, and corrective action projects. We

currently work on more than 20 landfills within their jurisdiction, and as a result, we believe that we have excellent relationships with the Central Coast RWQCB staff.

6.0 Addenda to this RFP

GLA has confirmed that there are no addenda issued for this project.

7.0 Fee Proposal

Our Fee Proposal is provided in a separate, sealed envelope in conformance with the County's RFP. This proposal presents our estimated cost to provide CQA services for the Phase 2 and 3 Partial Final Closure Construction at the Tajiguas Landfill. Our cost estimate is based on the 130-working day construction schedule for Phase 2, and the 85 working day schedule for Phase 3, and the field and laboratory testing detailed in the CQA Plan. The cost estimate is also based on the Contractor working Monday through Friday, ten (10) hours per day. Personnel rates are based on our current Fee Schedule and field staff rates are based on Prevailing Wage Rates as established by the State of California. We have endeavored to produce a Cost Estimate based on the requirements of the Project and a realistic estimate of the manpower necessary to meet the specified construction schedule for Phase 2 and 3.

8.0 Required information

In conformance with the County's RFP, we have provided the following:

Address of the project office:	Geo-Logic Associates, Inc. 2777 East Guasti Road, Suite 1 Ontario, California 91761 909.383.8729
Address of the office near Santa Barbara that can service project personnel	Daniel B. Stephens, Inc., a subsidiary of Geo-Logic Associates 3916 State Street, Suite 1A Santa Barbara, CA 93105 805.683.2409
Number of years the company has maintained offices in Southern California	25 years
Name, title, address, telephone number and email address of contact person	Stacy Baird Geo-Logic Associates, Inc. 2777 East Guasti Road Ontario, California 91761 909.383.8729 srbaird@geo-logic.com

ATTACHMENT A-2

Geo-Logic
ASSOCIATES

March 10, 2016
Proposal No. P16.079

County of Santa Barbara, Public Works Department
Resource Recovery & Waste Management Division
130 East Victoria Street, Suite 100
Santa Barbara, California 93101

Attention: Mr. Todd Curtis, Civil Engineer

Cost Estimate for Construction Quality Assurance Services
During the Phase 2 and 3 Partial Final Closure Construction
at the Tajiguas Sanitary Landfill, Santa Barbara County, California

Pursuant to your request, Geo-Logic Associates (GLA) is pleased to present this cost estimate to provide construction quality assurance (CQA) services during Phase 2 and 3 Partial Final Closure Construction at the Tajiguas Sanitary Landfill in Santa Barbara County, California. Table 1 (attached) presents a spreadsheet detailing the personnel rates of proposed staff, estimated man-hours by task and personnel category, and our estimate of laboratory testing and expenses. Personnel rates are based on our 2016 Fee Schedule (attached) and our estimated cost is based on the following assumptions regarding final cover construction.

Final cover construction for the Phase 2 area will include the placement and compaction of approximately 190,000 cubic yards of select soils to form the minimum 3-foot thick final cover section. Phase 3 final cover construction will include the placement and compaction of foundation layer fill soils, select final cover soils and geosynthetic material to form the final cover section. Based on the RFP, the final cover construction schedule for Phase 2 is estimated to be 130 working days and the construction schedule for Phase 3 is 85 working days. For cost estimating purposes we have assumed that the contractor will work 5-days per week (Monday through Friday) and ten hours per day. Based on this assumed schedule, we have estimated ten hours of over time per week for CQA field staff. Personnel rates for CQA field staff are based on prevailing wage rates pursuant to California Labor Code Part 7, Chapter 1, Article 2, Sections 1770, 1773, and 1773.1.

Laboratory testing will be performed in our geotechnical laboratory in Anaheim, California, with the type and frequency of tests conforming to the requirements of the approved CQA Plan.

GLA appreciates the opportunity to submit this cost estimate and we look forward to working with the County of Santa Barbara on the Phase 2 and 3 Partial Final Closure Construction Project at the Tajiguas Sanitary Landfill. Should you have any questions regarding this cost estimate, please do not hesitate to contact us at your convenience.

Geo-Logic Associates

Gary L. Lass, PG, CEG
President

250 West First Street, Suite 228, Claremont, CA 91711. Phone: (909) 626-2282 Fax: (909) 626-1233

Table 1
Cost Estimate for Construction Quality Assurance Services
Phase 2 & 3 Partial Final Cover Closure Construction
Tajiguas Sanitary Landfill, Santa Barbara County, California

Billing Category	Supervising Geo./Engr.	CQA Manager	Project Engineer	Sr. Tech./ Inspector	Sr. Tech./ Inspector Overtime	CADD Draft.	Clerk/Typist	Laboratory Testing Services	Vehicle Use [2]	Total Labor	Expenses	Field Equipment	Total Estimated Cost
Unit Rate	hr. $203	hr. $178	hr. $138	hr. $97	hr. $131	hr. $92	hr. $59	Unit rate $1	(see note 2)		3%	Day $30	
Task 1 - Meetings, and Communications		32	64						1540	16068	482		16550
Task 2 - Field CQA Inspection and Testing Services													
Task 2.a - Phase 2 CQA Services (46 acres)	12	24	48	1040	260			18520	6760	173552	5207	130	182659
Task 2.b - Phase 3 CQA Services (14 acres)	8	16	24	680	170			5970	4420	106404	3192	85	112146
Task 3 - Documentation and CQA Certification Reporting	16	48	80	40		60	40			34592	1038		35630
Task 4 - Project Administration		48	92							21240	637		21877
Total Hours	36	168	308	1760	430	60	40	24490					
Total	7308	29904	42504	170720	56330	5520	2360	24490	12720	351856	10556	6450	368862

Notes:

1. The estimated manhours for Tasks 2 & 3 are based on the asumed schedule to complete the project (total of 130-days Phase 2 & 85-days Phase 3, 10-hour working day; 5 days a week for construction).
   Tasks 2 & 3 includes 2-hours per day of overtime for the Field Technician based on the 10-hours per day schedule.
2. Vehicle use rate is $260/week for 43 weeks (assuming 130 days to complete Phase 2 and 85 days to complete Phase 3 project; with five 10-hour/days to complete 1 week of work) or $14/hr. for weekly meetings.
3. Tasks 2 & 3 includes fill soil and material testing as detailed in the RFP Phase 2 & 3 Partial Final Closure Construction, Project 129913 documentation (2016).

EXHIBIT B

PAYMENT ARRANGEMENTS
Periodic Compensation (with attached Schedule of Fees)

A. For CONTRACTOR services to be rendered under this Agreement, CONTRACTOR shall be paid a total contract amount, including cost reimbursements, not to exceed $ **368,862**.

B. Extra Work required to complete the project may be authorized only if CONTRACTOR receives written approval by the COUNTY's designated representative as identified in Paragraph 1 of the Agreement at the same rate per unit as defined in Attachment B1 (Schedule of Fees). The total amount of this contingency fund is 10% of the agreement amount or **$36,886**.

C. Payment for services and /or reimbursement of costs shall be made upon CONTRACTOR's satisfactory performance, based upon the scope and methodology contained in **EXHIBIT A** as determined by COUNTY. Payment for services and/or reimbursement of costs shall be based upon the costs, expenses, overhead charges and hourly rates for personnel, as defined in **Attachment B1** (Schedule of Fees). Invoices submitted for payment that are based upon **Attachment B1** must contain sufficient detail to enable an audit of the charges and provide supporting documentation if so specified in **EXHIBIT A.**

D. Monthly, CONTRACTOR shall submit to the COUNTY DESIGNATED REPRESENTATIVE an invoice or certified claim on the County Treasury for the service performed over the period specified. These invoices or certified claims must cite the assigned Board Contract Number. COUNTY DESIGNATED REPRESENTATIVE shall evaluate the quality of the service performed and if found to be satisfactory and within the cost basis of **Attachment B1** shall initiate payment processing. COUNTY shall pay invoices or claims for satisfactory work within 30 days of receipt of correct and complete invoices or claims from CONTRACTOR.

E. COUNTY's failure to discover or object to any unsatisfactory work or billings prior to payment will not constitute a waiver of COUNTY's right to require CONTRACTOR to correct such work or billings or seek any other legal remedy.

ATTACHMENT B1

SCHEDULE OF FEES

Geo-Logic ASSOCIATES

2015-2016 FEE SCHEDULE

PROFESSIONAL STAFF	UNIT RATE
Staff Professional	$110.00/Hour
Project Professional I	135.00/Hour
Project Professional II	160.00/Hour
Senior Professional	175.00/Hour
Supervising Professional	199.00/Hour
Principal Professional	220.00/Hour
Court Appearance (Expert Witness, Deposition, etc.; four-hour minimum)	2 x HourlyRate

FIELD/LABORATORY STAFF	
Technician I	78.00/Hour
Technician II	85.00/Hour
Senior Technician (or Minimum Prevailing Wage)	95.00/Hour
Supervising Technician	110.00/Hour
Managing Technician	125.00/Hour

SUPPORT STAFF	
CADD/Designer	110.00/Hour
CADD Operator/Geotechnical Draftsperson	90.00/Hour
Geotechnical Clerk/Typist	58.00/Hour
Word Processor	80.00/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	
BAT Permeameter	200.00/Day
Compaction Testing Equipment & Supplies	50.00/Day
Peel & Shear Strength Apparatus (FML Seams)	900.00/Month
Portable Laboratory (8' x 32' trailer) with equipment	1,200/Month
Portable Laboratory (mobilization / demobilization)	1,500.00
ReMi/Refraction Seismograph	600.00/Day
Sealed Single Ring Infiltrometer (SSRI)	200.00/Day or 750.00/Month
Sealed Double Ring Infiltrometer (SDRI)	Call for Quote
Slope Inclinometer	250.00/Day

EXPENSES	
Vehicle Use for Field Services	14.00/Hour or 320.00/week
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%

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Geo-Logic
ASSOCIATES

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

Geo-Logic 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.

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, Geo-Logic Associates, Inc. reserves the right to renegotiate the fee.

Geo-Logic ASSOCIATES

2015-2016 FEE SCHEDULE

SOIL TESTING	TEST METHOD	UNIT RATE
Atterberg Limits (LL, PL, and PI)	D4318	$150.00/Test
California Bearing Ratio (excluding moisture-density curve)	D1883	200.00/Point
Chloride Content		50.00/Test
Corrosivity Series (resistivity, pH, sulfate, chloride)		170.00/Test
Consolidation Test (without rate data – up to 8 loading increments)	D2435	150.00/Test
Consolidation Test (single point)	D2435	95.00/Test
Consolidation Test Rate Data (per load increment)	D2435	60.00/each
Direct Shear Test (at natural moisture)	D3080	65.00/Point
Direct Shear Test (saturated – strain rate 0.0084 inch/min.)	D3080	75.00/Point
Direct Shear Test (saturated, recycled – strain rate 0.0084 inch/min.)	D3080	120.00/Point
Direct Shear Test (consolidated drained)	D3080	150.00/Point
Direct Shear Test (consolidated drained, residual)	D3080	200.00/Point
Direct Shear Test (large shear box, 12 x 12)	D3080	270.00/Point
Expansion Index Test	D4829	125.00/Test
Grain-Size Mechanical Analysis - Sand-Clay, including Hydrometer	D422/D6913	150.00/Test
Grain-Size Mechanical Analysis - Gravel-Clay, including Hydrometer	D422/D6913	190.00/Test
Harvard Miniature Compaction Test		235.00/Test
Mechanical Analysis, Percent Passing #200	D1140/C117	75.00/Test
Mechanical Analysis - Sand or Gravel (no wash)	D422/C136	85.00/Test
Mechanical Analysis - Sand and Gravel	D422/C136	155.00/Test
Mechanical Analysis - Sand or Gravel	D422/C136	120.00/Test
Mechanical Analysis - Minus 3" to 200 Sieve, Full Sieve	D422/C136	155.00/Test
Moisture Content	D2216/D4643	16.00/Test
Moisture Density Curve for Compacted Fill (4-inch Mold)	D698	150.00/Test
Moisture Density Curve for Compacted Fill (6-inch Mold)	D698	175.00/Test
Moisture-Density Curve for Compacted Fill (4-inch Mold)	D1557	165.00/Test
Moisture-Density Curve – Compacted Fill (6-inch Mold)	D1557	200.00/Test
Moisture-Density Curve – Lime or Cement Treated (4-inch Mold)	D1557	210.00/Test
Moisture-Density Curve – Lime or Cement Treated (6-inch Mold)	D1557	250.00/Test
Moisture-Density Single Point	T272	80.00/Test
Moisture-Density Curve	Cal 216	175.00/Test
Organic Matter	D2974	85.00/Test
Permeability (falling head)	CAL220	180.00/Test
Permeability (flexible wall)	D5084	300.00/Test
Permeability (rigid wall - constant head pressure, 2" to 8" mold)	D2434	250.00/Test
Permeability (rigid wall - constant head pressure, 12" mold)	D2434	410.00/Test
Permeability (additional consolidation stresses)		95.00/stage
Permeability (air)	D6539	325.00/Test
Pinhole Dispersion Test; 4 increments (remold sample)	D4647	400.00/Test
Resistance Value	D2844	210.00/Test
Resistance Value – Lime or Cement Treated	D2844/CA301	260.00/Test
Resistivity & pH Test	Cal 532 or 643	90.00/Test
Sand Equivalent	Caltrans 217/D2419	75.00/Test
Soil pH	D4972	20.00/Test
Specific Gravity - Fine-Grained Soils	D854	75.00/Test
Sulfate Content		50.00/Test

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Geo-Logic ASSOCIATES

SOIL TESTING (continued)	TEST METHOD	UNIT RATE
Triaxial Compression Test (CD)	D4767 (modified)	575.00/Point
Triaxial Compression Test (CU with pore pressure)	D4767	425.00/Point
Triaxial Compression Test (UU)	D2850	125.00/Test
Triaxial Compression Test [Stage (Progressive) Test; CU]	D4767	1,000.00/Set
Unconfined Compression Test (undisturbed sample)	D2166	90.00/Test
Unit Dry Weight and Moisture Content (undisturbed sample)	D7263/D2216	22.00/Test

All test methods are ASTM unless otherwise noted.

Special sample preparation and laboratory testing not listed above will be charged at applicable personnel rates.

All laboratory test rates are for standard turn-around time and normal reporting procedures. Rush orders will be subject to a 25 percent premium. Manpower requirements or test protocol may preclude the granting of a rush request.

Geo-Logic ASSOCIATES

2015-2016 FEE SCHEDULE

AGGREGATE TESTING	TEST METHOD	UNIT RATE
Clay Lumps and Friable Particles	C142	$80.00/Test
Crushed Particles (Fractured Faces)		95.00/Test
Durability Index – Fine	D3744	120.00/Test
Durability Index – Coarse	D3744	140.00/Test
Flat and Elongated Particles	CRD119, 120	105.00/Test
Injurious Organic Matter	C40	60.00/Test
Insoluble Residue in Carbonate Aggregates	D3042	275.00/Test
Lightweight Pieces in Aggregate	C123	95.00/Test
Los Angeles Abrasion Test (500 revolutions)	C131	160.00/Test
Los Angeles Abrasion Test (1000 revolutions)	C535	180.00/Test
Mechanical Analysis - Sand or Gravel (dry sieve)	C136	70.00/Test
Mechanical Analysis (wash 200 sieve)	C117	65.00/Test
Mechanical Analysis (fine with wash 200 sieve)	C136	100.00/Test
Rapid Determination of Carbonate Content of Rock	4373	120.00/Test
Sample Crushing		85.00/Hour
Sand Equivalent	D2419	75.00/Test
Specific Gravity, Bulk, SSD with Absorption	C128/C127	110.00 Each
Sulfate Soundness, per sieve size	C88	135.00/Test

ROCK TESTING	TEST METHOD	UNIT RATE
Density	D7263	$35.00/Test
Density, Porosity, Specific Gravity, Water Content		110.00/Test
Indirect Tensile Strength (Brazilian), Single Break	D3967	55.00/Test
Indirect Tensile Strength (Brazilian), 10-15 Breaks	D3967	210.00/Test
Point Load Index, Single Break	D5731	35.00/Test
Point Load Index, 10-15 Breaks	D5731	180.00/Test
Rip-Rap (wet / dry, 10 cycles)	D5318	1,000.00/Test
Rip-Rap (freeze / thaw, 10 cycles)	D5312	800.00/Test
Rip-Rap (specific gravity)	D6473	110.00/Test
Rip-Rap Soundness (sodium)	D5240	400.00/Test
Rock Joint Direct Shear		260.00/Point
Rock Joint Direct Shear, additional normal load		95.00/Test
Slake Durability	D4644	200.00/Test
Triaxial Compression, with Young's modulus and Poisson's ratio		495.00/point
Uniaxial Strength (peak only; 2.5" maximum)	D7012	130.00/Test
Uniaxial Strength (with stress-strain curve)		call for quote
Uniaxial Strength (with stress-strain curve, add modulus and Poisson ratio)		call for quote
Rock preparation, cutting, and grinding		85.00/Hour

All test methods are ASTM unless otherwise noted.

Special sample preparation and laboratory testing not listed above will be charged at applicable personnel rates.

All laboratory test rates are for standard turn-around time and normal reporting procedures. Rush orders will be subject to a 25 percent premium. Manpower requirements or test protocol may preclude the granting of a rush request.

Geo-Logic ASSOCIATES

2015-2016 FEE SCHEDULE

GEOSYNTHETIC MATERIALS	TEST METHOD	UNIT RATE
Seam Coupon Series (thickness, peel, and shear)		
Set of 5 each (Quantity 1-10)	D6392	$75.00/Test
Set of 5 each (Quantity 10 or more)	D6392	55.00/Test
Asperity Height	GRI GM12	35.00/Test
Liner Puncture Testing up to 350 psi		260.00/Test
Liner Puncture Testing over 350 psi		410.00/Test
Large Scale Direct Shear (ASTM D5321 and D6321)		
Geosynthetic vs Geosynthetic – Method A		210.00/Point
Soil vs Geosynthetic Friction – Method B		260.00/Point
GCL Internal Shear		310.00/Point
Shear Speed (<0.04)		110.00/Point
(Shear rate dependent on soil drainage characteristics and engineering specifications)		
Substrate Remolding Fee		60.00/Test
Additional Saturation Time (>24 hours)		60.00/Day
GCL Testing		
Index Flux Testing	D5887	270.00/Test
Fluid Loss	D5891	75.00/Test
Swell Index	D5890	70.00/Test
Mass per Unit Area	D5993	70.00/Sample
Custom Liner Testing		call for quote

All test methods are ASTM unless otherwise noted.

Special sample preparation and laboratory testing not listed above will be charged at applicable personnel rates.

All laboratory test rates are for standard turn-around time and normal reporting procedures. Rush orders will be subject to a 25 percent premium. Manpower requirements or test protocol may preclude the granting of a rush request.

EXHIBIT C

Indemnification and Insurance Requirements
(For Design Professional Contracts)

INDEMNIFICATION

CONTRACTOR agrees to indemnify, defend (with counsel reasonably approved by COUNTY) and hold harmless COUNTY and its officers, officials, employees, agents and volunteers from and against any and all claims, actions, losses, damages, costs, expenses (including but not limited to attorneys' fees), judgments and/or liabilities that arise out of, or pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONTRACTOR and its employees, subcontractors, or agents in the performance of services under this Agreement, but this indemnity does not apply to liability for damages arising from the sole negligence, active negligence, or willful acts of the COUNTY.

NOTIFICATION OF ACCIDENTS AND SURVIVAL OF INDEMNIFICATION PROVISIONS

CONTRACTOR shall notify COUNTY immediately in the event of any accident or injury arising out of or in connection with this Agreement. The indemnification provisions in this Agreement shall survive any expiration or termination of this Agreement.

INSURANCE

CONTRACTOR shall procure and maintain for the duration of this Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the CONTRACTOR, his agents, representatives, employees or subcontractors.

A. Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. **Commercial General Liability (CGL):** Insurance Services Office (ISO) Form CG 00 01 covering CGL on an "occurrence" basis, including products-completed operations, personal & advertising injury, with limits no less than $1,000,000 per occurrence and $2,000,000 in the aggregate.
2. **Automobile Liability**: ISO Form Number CA 00 01 covering any auto (Code 1), or if CONTRACTOR has no owned autos, hired, (Code 8) and non-owned autos (Code 9), with limit no less than $1,000,000 per accident for bodily injury and property damage.
3. **Workers' Compensation**: as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than $1,000,000 per accident for bodily injury or disease.
4. **Professional Liability** (Errors and Omissions) Insurance appropriate to the CONTRACTOR'S profession, with limit of no less than $1,000,000 per occurrence or claim, $2,000,000 aggregate.

If the CONTRACTOR maintains higher limits than the minimums shown above, the COUNTY requires and shall be entitled to coverage for the higher limits maintained by the CONTRACTOR. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the COUNTY.

B. Other Insurance Provisions

The insurance policies are to contain, or be endorsed to contain, the following provisions:

1. **Additional Insured** – COUNTY, its officers, officials, employees, agents and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the CONTRACTOR including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the CONTRACTOR's insurance at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of both CG 20 10 and CG 20 37 if a later edition is used).
2. **Primary Coverage** – For any claims related to this Agreement, the CONTRACTOR's insurance coverage shall be primary insurance as respects the COUNTY, its officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by the COUNTY, its officers, officials, employees, agents or volunteers shall be excess of the CONTRACTOR's insurance and shall not contribute with it.
3. **Notice of Cancellation** – Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the COUNTY.
4. **Waiver of Subrogation Rights** – CONTRACTOR hereby grants to COUNTY a waiver of any right to subrogation which any insurer of said CONTRACTOR may acquire against the COUNTY by virtue of the payment of any loss under such insurance. CONTRACTOR agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation, but this provision applies regardless of whether or not the COUNTY has received a waiver of subrogation endorsement from the insurer.
5. **Deductibles and Self-Insured Retention** – Any deductibles or self-insured retentions must be declared to and approved by the COUNTY. The COUNTY may require the CONTRACTOR to purchase coverage with a lower deductible or retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.
6. **Acceptability of Insurers** – Unless otherwise approved by Risk Management, insurance shall be written by insurers authorized to do business in the State of California and with a minimum A.M. Best's Insurance Guide rating of "A- VII".
7. **Verification of Coverage** – CONTRACTOR shall furnish the COUNTY with proof of insurance, original certificates and amendatory endorsements as required by this Agreement. The proof of insurance, certificates and endorsements are to be received and approved by the COUNTY before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the CONTRACTOR's obligation to provide them. The CONTRACTOR shall furnish evidence of renewal of coverage throughout the term of the Agreement. The COUNTY reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.
8. **Failure to Procure Coverage** – In the event that any policy of insurance required under this Agreement does not comply with the requirements, is not procured, or is canceled and not replaced, COUNTY has the right but not the obligation or duty to terminate the Agreement. Maintenance of required insurance coverage is a material element of the Agreement and failure to maintain or renew such coverage or to provide evidence of renewal may be treated by COUNTY as a material breach of contract.
9. **Subcontractors** – CONTRACTOR shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and CONTRACTOR shall ensure that COUNTY is an additional insured on insurance required from subcontractors.
10. **Claims Made Policies** – If any of the required policies provide coverage on a claims-made basis:

i. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
ii. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of contract work.
iii. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the CONTRACTOR must purchase “extended reporting” coverage for a minimum of five (5) years after completion of contract work.

11. **Special Risks or Circumstances** – COUNTY reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Any change requiring additional types of insurance coverage or higher coverage limits must be made by amendment to this Agreement. CONTRACTOR agrees to execute any such amendment within thirty (30) days of receipt.

Any failure, actual or alleged, on the part of COUNTY to monitor or enforce compliance with any of the insurance and indemnification requirements will not be deemed as a waiver of any rights on the part of COUNTY.