

Discussion/Action Item #: 8

Meeting Date: May 19, 2023



To: Felipe Melchor, General Manager From: David Ramirez, Senior Engineer Approved by: Felipe Melchor, General Manager

Subject: Module 7 Phase 3 Construction Quality Assurance Monitoring Contract

RECOMENDATION:

That the Board of Directors approve agreement with Geo-Logic Associates, of Grass Valley, CA, for Construction Quality Assurance (CQA) Monitoring of Module 7 Landfill Liner Construction. The cost for the required services will be billed on a time and materials basis, with prevailing wages, in the amount of \$385,000 (includes 15% contingency). Funds have been included in the Capital Outlay portion of the Budget for FY 2022/2023 and are included in the Preliminary Budget for FY 2023/2024 for this work.

BACKGROUND

At the March 24, 2023 meeting the Board awarded a contract for the construction of the Module 7 Phase 3 Landfill Liner Project to the low qualified bidder, Granite Rock Construction of Watsonville, CA in the amount of \$7,991,500. The proposed 18-acre Module 7 will have an Engineered Alternative Design (EAD) liner system meeting the requirements of Title 27 of the California Code of Regulations. This EAD liner system is being deployed for the first time at the MPL. Previous liner systems installed at MPL have consisted of the Prescriptive Title 27 Liner system (60mil HDPE geomembrane & min. 2-foot-thick low permeability soil layer). In contrast to the Prescriptive Liner System, the EAD liner system is constructed with multiple geosynthetic layers that are layered on top of one and other. This results a greater amount of CQA testing, monitoring, and reporting costs compared to the Prescriptive single composite liner system.

State regulations require that a qualified third-party independent, California licensed civil engineer or engineering geologist be retained to perform Construction Quality Assurance (CQA) Monitoring and Reporting for the construction of a lined landfill module. CQA services shall be provided in accordance with a regulatory approved CQA Plan that has been prepared for the project.

DISCUSSION

The CQA consultant's work will consist of performing CQA Services during construction of the Module 7 composite landfill liner at the Monterey Peninsula Landfill site. The consultant will be required to retain a qualified geosynthetic materials testing laboratory to perform testing of the high-density polyethylene (HDPE) Geomembrane, Geosynthetic Clay Liner (GCL), Geotextiles, and Geocomposite products as described in the CQA Plan.

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Let's not waste this.



The performance of CQA activities shall be sufficient to verify that all constructed facilities and related materials comply with the project's requirements, as follows:

- CQA Plan
- Construction Plans and Specification
- Waste Discharge Requirements Order No. R3-2006-0017
- Title 27, Division 2, of the California Code of Regulations
- Subtitle D of the Resource Conservation and Recovery Act

The CQA Plan sets forth the responsibilities and procedures to evaluate whether the installation of the general earthwork, geomembrane, GCL, geocomposite, geotextile, pipe, gravel, and other components of the project are in accordance with the regulations and Special Provisions and Construction Drawings. Implementation of the CQA Plan will ensure that Module 7 is constructed in accordance with the design plans and specifications.

The proposal was reviewed and evaluated by staff based on the following evaluation criteria:

- Specialized Experience and Technical Competence: Extent of the proposed Project Team's qualifications and specialized experience directly related to conducting CQA Services at municipal solid waste landfills in California.
- Project Understanding and Approach/Work Plan: Extent to which the firm's proposal demonstrates a thorough understanding of the required scope-of-work and the proposed method to accomplish the work, including where appropriate demonstrated capability to explore and develop innovative or advanced techniques. In addition, lead members of staff at Geo-Logic were involved in the CQA work for Modules 5 and 6 construction.
- Recommendations from References: The CQA Project Team's performance on recent and relevant work, including such factors as control of costs, quality of work, ability to meet schedule, cooperation, and responsiveness.
- Proposed Budget: The ability to complete this project within the original approved budget must be demonstrated. Contracts for professional services are not subject to bidding but are awarded based on demonstrated competence and on the professional qualifications necessary for the satisfactory services required.

The proposal submitted by Geo-Logic has been judged by staff to be responsive and in the best interests of the District, based on the following criteria:

- Geo-Logic is highly qualified to perform this work and has significant specialized experience directly related to conducting CQA Services at municipal solid waste landfills in California.
- Geo-Logic staff is familiar with the Monterey Peninsula's and provided CQA services for the Module 5 liner construction.
- Geo-Logic's proposed Project Team is strong and has a long-term track record in landfill liner construction in general and experience with MPL's Modules 5 and 6, specifically.
- Geo-Logic's cost proposal is realistic for the level of effort required to complete the scope of work.

Geo-Logic has, in staff's opinion, adequately estimated the amount of field work and hours required to perform the CQA Services.



CONCLUSION

Geo-Logic has submitted a proposal for CQA services which is responsive to the District's needs and in the best interest of the District. It is therefore recommended that the Board of Directors approve an agreement with Geo-Logic Associates of Grass Valley, CA to provide CQA monitoring of Module 7 landfill liner construction. The cost for the required CQA services will be billed on a time and materials basis, with a not-to-exceed prevailing wage amount of \$385,000 (includes 15% contingency). Funds have been included in the Capital Outlay portion of the Budget for FY 2022/24 and are included in the Preliminary Budget for FY 2023/24 for this work.

Attachment:

Proposal to Provide Construction Quality Assurance Management Services for the Module 7, Phase 3 Project at the Monterey Peninsula Landfill

RMCGeoscience, Inc.

Engineering Geology Environmental Geoscience 775 Baywood Drive Suite 305 Petaluma, CA 94954 415-699-8073

May 5, 2023

Mr. Guy Petraborg, PE, GE Mr. David Ramirez, PE ReGen Monterey 14201 Del Monte Boulevard P.O. Box 1670 Marina, CA 93933

Subject: Proposal to Provide Construction Quality Assurance Management Services for the Module 7, Phase 3 Project at the Monterey Peninsula Landfill

Dear Mr. Petraborg and Mr. Ramirez:

Following your request, Geo-Logic Associates dba RMC Geoscience, Inc. (GLA-RMC) is pleased to submit this proposal the Regen Monterey (Regen) for Construction Quality Assurance (CQA) Monitoring and Reporting for the construction of the Module 7, Phase 3 landfill liner system at the Monterey Peninsula Landfill (MPL). Our proposal is based on: (i) the Construction Documents and CQA Plan for project; (ii) our recent experience providing construction management and CQA monitoring services for the Module 5 and Module 6 projects; (iii) our overall experience and site knowledge of the MPL; and (iv) our CQA project experience at other northern California landfills and waste disposal facilities.

PROJECT UNDERSTANDING AND APPROACH

The MPL is a Class III landfill located in unincorporated Monterey County, approximately two miles north of the City of Marina, California. The MPL is owned and operated by the MRWMD and began accepting waste in 1966. The landfill encompasses 470 acres, of which 315 acres are permitted for landfill disposal, and is currently operating under Central Coast Regional Water Quality Control Board (CCRWQCB) Waste Discharge Requirements (WDRs) Order No. R3-2020-0001. Module 7 will incorporate a composite liner meeting the requirements of Title 27 of the California Code of Regulations (Title 27 CCR) and will cover an area of about 19-acres directly adjacent to Module 6. The objective of the CQA Monitoring services described in this proposal is to observe, test, and document construction of the Module 7 project in accordance with the approved CQA Plan, the Construction Plans and Specifications, and other applicable requirements.

The project was designed by WRS/Golder (WRS) and the contractor will be Granite Construction (Granite). Based on Granite's preliminary construction schedule, work on the composite liner will begin on or about May 23, 2023 and will be completed on or about August 17, 2023. Our proposal

labor cost estimate is based on this duration. Because this schedule is aggressive, our approach relies on the following:

- An experienced project team who has successfully completed similar projects, who know where bottlenecks may occur in the process and how to avoid or overcome them, and who can anticipate and resolve technical, financial, schedule, engineering, and reporting challenges before they become problems.
- Leveraging our existing professional relationship with CCRWQCB staff and use of CQA monitoring and reporting procedures, field forms, and a Final Certification Report format that have been previously reviewed and accepted by the CCRWQCB. This relationship and use of familiar documents and formats will significantly reduce the amount of time between substantial completion of the project and approval to open Module 7.
- Maintaining constant coordination with the project general contractor and subcontractors, as warranted, to avoid unnecessary impacts to the construction schedule and reduce the potential for change orders/claims.
- Compilation and preparation of the Construction Certification Report "on-the-fly" or concurrently with field CQA monitoring. In this manner, the Draft Construction Certification Report will be substantially complete and ready to submit to the Regen for review shortly after substantial completion. Because the field and laboratory data will be reviewed and compiled as it is generated, the potential for delay and/or additional review and evaluation at the completion of the project will be minimized.
- Close communication with Regen and its representatives during all phases of the project so that the project requirements and goals are fully addressed.

Our project team has the experience necessary to understand the *purpose* of the design, *how* the specified CQA field and laboratory tests relate to the design, *why* the tests are being performed, and *what* the test results mean. In our experience, CQA monitoring and testing just to document compliance with a specification without the context of these understandings is likely to result in a variety of project issues either during the project or later when others may review the project data.

SCOPE OF WORK

Our proposed scope of work includes:

• Task 1 – Project setup and internal project management.

- Task 2 Field CQA monitoring during construction.
- Task 3 Laboratory testing.
- Task 4 Construction meetings and submittals.
- Task 5 Construction Certification Report preparation.

Task 1 – Project Setup and Internal Project Management

Work under this task will include setting up the project and mobilizing for the field monitoring work. As part of this task, we will complete an internal review of the construction documents and prepare sets of documents and field forms that will be used and maintained by the field staff for the duration of this project. We will also prepare a project-specific Health and Safety Plan that will be used by our field staff. This task also includes internal management of the project, including project tracking, budgeting, and invoicing.

Task 2 - CQA Monitoring During Construction

Work under this task will include providing all labor and equipment required to complete the scope of CQA monitoring and testing services identified in the RFP, CQA Plan, and Technical Specifications for Module 7. Principal activities associated with this task are summarized below.

General Earthwork Monitoring and Testing

General earthwork performed by the Contractor will be observed, tested, and documented by GLA-RMC field CQA personnel in accordance with the CQA Plan and Technical Specification requirements. Field CQA personnel will collect samples and ship them to the geotechnical testing laboratory for index property (classification and grain size analysis) and compaction testing at no less than the frequency listed in the CQA Plan for the project. The anticipated numbers of these tests are identified in the cost tables included with this proposal.

The field moisture and density will be tested using calibrated and properly maintained nuclear density gauges (density gauge calibration and maintenance certifications will be included in a Certification Report appendix) at no less than the frequency specified by the construction documents. Additional tests may be performed at the discretion of the CQA Monitor or at the request of the contractor. The nuclear density tests will be confirmed by field sand cone or drive tube samples and by moisture content by oven or microwave methods. All nuclear gauge and associated confirmation test results will be entered into final, "report-ready" spreadsheets that will be updated each day that data are collected or available. Field forms will similarly be scanned,

archived, and added to the draft Certification Report that will be continuously compiled during the project.

Low Permeability Test Pad and Liner Monitoring and Testing (Contingency Procedures)¹

If necessary, field personnel will be responsible for construction observation and field testing of the low permeability test pad and compacted clay liner in accordance with the project CQA Plan and Technical Specifications. The field CQA personnel will also collect the bulk and drive samples necessary for laboratory testing at frequencies no lower than those required by the project construction documents for the different tests. The number of anticipated tests based on the CQA Plan and the Technical Specifications are identified in the cost tables associated with this proposal.

In-situ moisture content and dry density will be measured in the field with a nuclear density gauge. The nuclear density test results will be confirmed by sand cone or drive samples and the nuclear moisture content results will be confirmed by laboratory moisture content tests. Because moisture content and dry density are critical to meeting the project hydraulic conductivity requirements, we will use an on-site laboratory to obtain real-time nuclear gauge test confirmation. In accordance with the CQA Plan, we will also evaluate the in-situ hydraulic conductivity of the test pad using a two-stage borehole permeameter in accordance with ASTM D6391.

Observations and Testing During Geosynthetic Deployment

Principal CQA activities associated with geosynthetic material delivery, deployment, installation, and testing will include:

- Review of initial contractor submittals for compliance with the Project Specifications.
- Geosynthetic material conformance sample collection and laboratory testing in accordance with the CQA Plan and Technical Specifications.
- Identification of field destructive seam test locations, observation of seam sample collection by the Contractor, seam sample shipment, seam sample laboratory testing, and review of the seam sample test results.

¹ We understand that the project will include an Engineered Alternative liner system that will not require the test pad or compacted clay liner. Therefore, the procedures summarized below are included as a contingency in the event a compacted clay liner is ultimately required for the project.

> Observation and documentation of the Contractor's installation and quality control procedures.

The field records will be reviewed, approved, and added to the Draft Construction Certification Report as each portion of the work is completed.

Field Documentation

In addition to CQA field forms and documentation, all field CQA personnel will maintain a Daily Field Report (DFR) during each day they are on the site. Each DFR will provide a narrative summary of the work performed, relevant observations, site visitors, unusual occurrences, contractor hours, equipment used, and related information. In addition to the DFR, each CQA Monitor will compile a digital photographic record each day. These photographs will be archived by date and the photograph file name will include a descriptor of the work shown. Selected and representative photographs that show the work performed during the day will be appended to the DFR and will include a caption that describes what it shows and its significance to the project. The field forms will be signed and dated each day.

At the end of every working day, the Lead CQA Monitor will collect the field forms and review them for completeness and/or discrepancies that may require immediate attention. The Lead CQA Monitor will also be responsible for updating and maintaining the running summary and final "report-ready" documentation of field and laboratory test data and results. At the end of each week, the Lead CQA Monitor will transmit the compiled DFRs and report-ready field forms to the CQA Engineer for final review, approval, and signature.

Task 3 - Laboratory Testing

Laboratory testing for this project will include:

- Soil laboratory testing, including index properties, compaction characteristics, and laboratory hydraulic conductivity.²
- Geosynthetic conformance tests.
- Geosynthetic-geosynthetic and geosynthetic-soil interface shear tests.
- Destructive testing of geomembrane seams.

The geosynthetic conformance tests and interface shear tests will be performed by TRI. As part of its scope of work, TRI will provide in-plant sampling and shipping of actual materials used for

² Index property tests typically include Atterberg limits, particle size analysis, moisture content, and density.

the project. In this manner, the conformance test results will be available much earlier than if the materials were manufactured, delivered to the site, sampled, shipped to the laboratory, and then tested. The laboratory test methods and test frequencies are summarized in the cost tables included with this proposal.

Task 4 – Meetings and Submittal Review

Close communication between all parties involved in the project is essential. The CQA Plan for Module 7 indicates that meetings to be held before and during construction include: (i) a preconstruction meeting; (ii) progress meetings; and (iii) work deficiency meetings. The CQA Plan does not specify the frequency of progress meetings. Our cost proposal assumes that one remote construction meeting will be held each week by conference call or video conference for the duration of the work.

Work under this task will also include review and approval of Contractor submittals for the project. Our review of the General Requirements indicates that the Contractor is not required to prepare a submittal log. Accordingly, as part of this task, we will prepare a submittal log to ensure that all required submittals are provided, reviewed, revised as necessary, and approved. For the purposes of submittal review, we can use our standard review and documentation forms or alternative forms that may be provided by the Contractor or Regen.

All submittals and submittal correspondence will be retained in the project file and approved submittals will be compiled in the Draft Construction Certification Report that will be prepared concurrently with the construction project. Material submittals that do not strictly meet a Technical Specification but appear to meet the intent of the specification will be reviewed and approved by the Engineer before acceptance. We will also notify the CCRWQCB if any materials that fall into this category are tentatively approved for use to obtain staff input and concurrence before final acceptance.

Task 5 - Construction Certification Report

The objective of this task is to prepare a Construction Certification Report that is complete, correct, and that will be easy for the CCRWQCB to review and approve. Towards that end, we propose to use the same format that was used for the MPL Modules 5 and 6 projects, the Cold Canyon Modules 11A and 11B projects, and the JSRL Modules 2, 3A, 3B, 4, 5, 6, and 7-8A through 7-8C projects because CCRWCB staff have seen this format before, have endorsed these documents, and have approved the projects based on the information included in the reports. The report will be signed and stamped by the CQA Engineer.

ESTIMATED COST

We propose that this work be performed on a time-and-materials basis in accordance with our existing Agreement with the Regen and our current schedule of charges that is included in Attachment 1. The estimated not-to-exceed costs for the scope of services described above are summarized by task in Table 1. These costs assume the Prevailing Wage requirements will be in force for this project.³ Information and unit rates regarding Tasks 2 through 4 are summarized in Tables 2 through 4. The GLA 2023 rate sheet in Attachment 1 includes geotechnical laboratory unit rate testing costs. Principal assumptions used to estimate the project costs include:

- The project duration will be equal to the preliminary project schedule that was developed by Granite plus four additional weeks to account for the delays that are relatively common with these types of projects. The Granite schedule is included in Attachment 2 to this proposal.
- CQA monitoring will require 1.5 Full Time Equivalent (FTE) field personnel with a field vehicle for the estimated duration of the project. Although this assumption is judged to be appropriate, it is highly dependent on the contractor's planned schedule, progress, schedule changes, and unforeseen conditions that can affect completion of the work.
- All work on the project will be performed Monday through Friday and no work will be performed on Saturdays, Sundays, or holidays. The estimate assumes 10-hour field days that will include 8 hours standard time and 2 hours overtime. Per Diem for field staff will be \$275 per day in general accordance with the 2023 governmental rate for Monterey County.
- Geosynthetic and soil material testing will be in accordance with the project Specifications and CQA Plan and the fill and geosynthetic quantities will be consistent with the bid quantities included in Attachment 3 to this proposal. The testing costs are summarized in Tables 3 and 4. We understand that the containment system for Module 7 will be an engineered alternative that will not include the compacted clay layer. Therefore, the field and laboratory costs associated with the test pad and production liner are not included in the estimate.

Unforeseen conditions sometimes occur that require an increase in effort; therefore, we recommend including a 15 percent contingency in the event there are substantial project

³ As a practical matter, Prevailing Wage unit rates only apply to field CQA staff and are not substantially different than non-Prevailing Wage unit rates.

schedule delays, design revisions are required, and/or significant regulatory agency interaction is necessary. The contingency budget would not be charged without prior authorization from Regen. As a point of reference, CQA costs for similar landfill liner projects are typically about 6 to 8 percent of construction costs. Comparison of our estimated total with the estimated project cost indicates CQA costs are approximately 4.2 percent of construction without the contingency and 4.8 percent of construction if the contingency is included in the total.

I trust this proposal provides the information you need, and I look forward to working with you on this project. In the meantime, please contact me if you have any questions or need additional information.

Very truly yours, RMC Geoscience, Inc.

Richard A. Mitchell, PG, CEG Principal Engineering Geologist

Table 1 ESTIMATED MODULE 7 PART 3 CONSTRUCTION QUALITY ASSURANCE COSTS Module 7, Phase 3 Monterey Peninsula Landfill					
TASK	DESCRIPTION		AMOUNT		
1	Setup and Internal Project Management	\$	16,266.57		
2	CQA Labor and Direct Expense	\$	260,829.86		
3	Laboratory Testing				
3.1	Geosynthetics Testing	\$	22,121.00		
3.2	Soil Laboratory Testing	\$	22,580.00		
4	Construction Meetings and Submittals	\$	16,416.00		
5	Certification Report	\$	11,560.00		
	CQA Monitoring Subtotal \$ 333,506.8				
	Recommended Contingency (15 Percent) \$ 50,026.03				
	TOTAL (W/CONTINGENCY) \$ 383,532.89				

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Table 2 LABOR AND DIRECT EXPENSE COST ESTIMATE Module 7, Phase 3 Monterey Peninsula Landfill						
FIELD CQA	UN	IT RATE	UNITS	NO. UNITS	EΣ	TENDED COST
Lead CQA Monitor						
Labor (Field)	\$	135.00	hours	977	\$	131,914.29
Labor (Overtime)	\$	202.50	hours	244	\$	49,467.86
Per Diem	\$	275.00	days	171	\$	47,025.00
Field Vehicle	\$	350.00	week	16	\$	5,700.00
Compaction Testing Equipment	\$	50.00	days	81	\$	4,071.43
CQA Officer/Asst. CQA Officer						
Labor (Assume 6 Hours/Week)	\$	289.00	hours	65	\$	18,826.29
Per Diem	\$	275.00	days	8	\$	2,200.00
Mileage	\$	0.65	mile	2,500	\$	1,625.00
TOTAL ESTIMATED FIELD CQA COST					\$	260,829.86
CONSTRUCTION MEETINGS & SUBMITTALS						
Meetings (CQA Officer, Assume 2 Hours/Week)	\$	289.00	hours	33	\$	9,413.14
Submittal Review (Asst. CQA Officer, Assume 2 Hours/Week)	\$	215.00	hours	33	\$	7,002.86
Mileage (Meetings)	\$	0.65	mile	0	\$	-
TOTAL ESTIMATED MEETINGS AND SUBMITTALS					\$	16,416.00
SET UP AND PROJECT MANAGEMENT						
Setup and HASP	\$	289.00	hours	40	\$	11,560.00
Internal Project Management (Assume 1 Hour/Week)	\$	289.00	hours	16	\$	4,706.57
TOTAL SETUP AND PROJECT MANAGEMENT					\$	16,266.57
CERTIFICATION REPORT						
Labor (CQA Officer)	\$	289.00	hours	40	\$	11,560.00
Labor (CQA Monitor/Technician)	\$	160.00	hours	0	\$	-
Labor (Clerical)	\$	55.00	hours	0	\$	-
Reproduction	\$	200.00	LS	0	\$	-
Materials	\$	50.00	LS	0	\$	-
TOTAL ESTIMATED CERTIFICATION REPORT COST					\$	11,560.00
TOTAL ESTIMATED LABOR AND DIRECT COST					\$	305,072.43

Table 3 GEOSYNTHETIC LABORATORY TESTING COST ESTIMATE Module 7, Phase 3 Monterey Peninsula Landfill									
LABORATORY TESTING (GEOSYNTHETICS)	Method	Project Quantity	Test Frequency	Number	U	nit Cost	Mark-Up	E	xtended Cost
Geocomposite									
Geonet Density (Before Bonding)	ASTM D1505	306,000	250,000	2	\$	30.00	1.10	\$	66.00
Geonet Thickness (Before Bonding)	ASTM D5199	306,000	250,000	2	\$	25.00	1.10	\$	55.00
Geotextile Mass per Unit Area (Before Bonding)	ASTM D5261	306,000	250,000	4	\$	25.00	1.10	\$	110.00
Geotextile Permittivity (Before Bonding)	ASTM D4491	306,000	250,000	4	\$	100.00	1.10	\$	440.00
Gecomposite Peel Strength	ASTM D7005	306,000	250,000	2	\$	60.00	1.10	\$	132.00
In-Plant Sampling	N/A	1	1	5	\$	70.00	1.10	\$	385.00
Conformance Test Shipping (Paid for by Manufacturer)	N/A	N/A	N/A	N/A		N/A			N/A
60-mil Single-Side Textured HDPE									
Thickness	ASTM D5994	266,000	150,000	2	\$	25.00	1.10	\$	55.00
Density	ASTM D1505	266,000	150,000	2	\$	30.00	1.10	\$	66.00
Carbon Black Content	ASTM D4218	266,000	150,000	2	\$	45.00	1.10	\$	99.00
Tensile Properties	ASTM D6693	266,000	150,000	2	\$	60.00	1.10	\$	132.00
Carbon Black Dispersion	ASTM D5596	266,000	150,000	2	\$	45.00	1.10	\$	99.00
Puncture Resistance	ASTM D4833	266,000	150,000	2	\$	55.00	1.10	\$	121.00
Tear Resistance	ASTM D1004	266,000	150,000	2	\$	60.00	1.10	\$	132.00
In-Plant Sampling	N/A	1	1	4	\$	70.00	1.10	\$	308.00
Destructive Seam Testing (Laboratory) No. Panels	ASTM D6392	22	500	22	\$	40.00	1.10	\$	968.00
Destructive Seam Shipping				1	\$	300.00	1.10	\$	330.00
Conformance Test Shipping (Paid for by Manufacturer)	N/A	N/A	N/A	N/A			N/A		N/A
60-mil Double-Side Textured HDPE									
Thickness	ASTM D5994	546,000	150,000	4	\$	25.00	1.10	\$	110.00
Density	ASTM D1505	546,000	150,000	4	\$	30.00	1.10	\$	132.00
Carbon Black Content	ASTM D4218	546,000	150,000	4	\$	45.00	1.10	\$	198.00
Tensile Properties	ASTM D6693	546,000	150,000	4	\$	60.00	1.10	\$	264.00
Carbon Black Dispersion	ASTM D5596	546,000	150,000	4	\$	45.00	1.10	\$	198.00
Puncture Resistance	ASTM D4833	546,000	150,000	4	\$	55.00	1.10	\$	242.00
lear Resistance	ASTM D1004	546,000	150,000	4	\$	60.00	1.10	\$	264.00
In-Plant Sampling		1	1	8	\$	/0.00	1.10	\$	616.00
Destructive Seam Testing (Laboratory) No. Panels	ASTIVI D6392	45	500	45	\$	40.00	1.10	\$	1,980.00
Destructive Seam Shipping	N1 (A	N1/A		1	\$	300.00	1.10	\$	330.00
Conformance Test Shipping (Paid for by Manufacturer)	N/A	N/A	N/A	N/A		N/A			N/A
40-mil Double-Side Textured HDPE		002.000	150.000	-	¢	25.00	1 10	¢	107 50
Inickness		802,000	150,000	5	\$	25.00	1.10	\$	137.50
Density Carbon Plack Contant		802,000	150,000	5	\$	30.00	1.10	\$	165.00
Carbon Black Content		802,000	150,000	5	\$	45.00	1.10	\$ ¢	247.50
Carbon Black Dispersion		802,000	150,000	5	\$	60.00	1.10	\$ ¢	330.00
		802,000	150,000	5	\$	45.00	1.10	\$ ¢	247.50
		802,000	150,000	о Г	\$	55.00	1.10	\$ ¢	302.50
Tensile Properties	ASTIVI D6693	802,000	150,000	5	\$	60.00	1.10	\$	330.00
In-Plant Sampling				10	\$	/0.00	1.10	\$ ¢	770.00
Destructive Seam Testing (Laboratory) No. Panels	ASTIVI D0392	66	500	00	\$	40.00	1.10	\$	2,904.00
Destructive Seam Snipping	N1/A	NI / A	N1/A		>	300.00	1.10	\$	330.00
Conformance Test Snipping (Paid for by Manufacturer)	IN/A	N/A	N/A	N/A		N/A			N/A
Mass per Unit Area (ASTM DE261)		102.000	150.000	1	¢	25.00	1 10	¢	27 50
Crah Tonsilo Strongth (ASTM D4622)	Δ	102,000	150,000	1	¢	20.00	1.10	¢	27.30
Water Flow Pate (ASTM D4401)	ASTNI D4032	102,000	150,000	1	¢	100.00	1.10	¢	110.00
Apparent Opening Size (ASTM D4751)	ASTIVI D4491	102,000	150,000	1	¢	125.00	1.10	ф Ф	127 50
In Diant Sampling		N/A	N/A	2	¢	70.00	1.10	ф Ф	221 00
Conformance Test Shinning (Daid for by Manufacturer)	N/A N/A			5 N/A	↓	70.00 N/A	1.10	φ	231.00 N/A
Comormance rest simpling (Paid for by Manufacturer)				IN/A		IN/A			IN/A

Table 3 GEOSYNTHETIC LABORATORY TESTING COST ESTIMATE Module 7, Phase 3 Monterey Peninsula Landfill							
LABORATORY TESTING (GEOSYNTHETICS)	Method	Project Quantity	Test Frequency	Number	Unit Cost	Mark-Up	Extended Cost
Geosynthetic Clay Liner							
Mass Per Unit Area	ASTM D5993	802,000	150,000	6	\$ 40.00	1.10	\$ 264.00
Permeability	ASTM D5084	802,000	150,000	6	\$ 225.00	1.10	\$ 1,485.00
In-Plant Sampling	N/A	N/A	N/A	12	\$ 70.00	1.10	\$ 924.00
Conformance Test Shipping (Paid for by Manufacturer)	N/A	N/A	N/A	N/A	N/A		N/A
Direct Shear Testing							
Direct Shear Testing (4 points; 4,000; 8,000; 13,000; 19,000 ps	ASTM D5321	827,350	200,000	4	\$ 1,200.00	1.10	\$ 5,280.00
Grain Size	ASTM D422	N/A	N/A	θ		1.05	\$
Modified Proctor	ASTM D1557	N/A	N/A	θ		1.05	\$
Atterberg Limits	ASTM D4318	N/A	N/A	θ		1.05	\$
Material Handling and Shipping				θ		1.05	\$
TOTAL ESTIMATED COST							\$22,121.00

Table 4 SOIL LABORATORY TESTING COST ESTIMATE Module 7, Phase 3 Monterey Peninsula Landfill								
Engineered Fil	I Construction Testing R	equirement	s (CQA Plan Tab	le 1)				
Test	Method	QUANTITY	FREQUENCY	No. of Tests	Co	ost Per Test		Total
Identification & Classification of Soil Type ¹	ASTM D2488	39,400	Continuous	N/A	\$	-	\$	-
Moisture-Density (Compaction)	ASTM D1557	39,400	5,000	8	\$ 3	265.00	\$	2,120.00
Sieve Analysis	ASTM D422/ or D1140	39,400	1,500	26	\$.	200.00	\$	5,200.00
Atterberg Limits	ASTM D4318	39,400	1,500	26	\$	170.00	\$	4,420.00
Moisture and Density (Nuclear Gauge) ²	ASTM D2922/D3017	39,400	500	79	\$	-	\$	-
Dry Density (Sand Cone or Drive Tube) ³	ASTM D1156/D2937	39,400	1 per 20 Gauge	4	\$	-	\$	-
Moisture Content by Oven or Microwave ⁴	ASTM D2216	39,400	1 per 20 Gauge	0	\$	-	\$	-
Engineered Fill Subtotal							\$ `	11,740.00
Low Permeability Test Pad Cor	nstruction Testing Requi	rements Inc	luding Subgrade	e (CQA P	Plan T	[able 2) ⁵		
Test	Method			No. of Tests	Co	ost Per Test		Total
Identification & Classification of Soil Type ¹	ASTM D2488		Continuous	N/A	\$	-	\$	-
Moisture-Density (Compaction)	ASTM D1557		Per Table 2	0	\$ 3	265.00	\$	-
Sieve Analysis	ASTM D422/ or D1140		Per Table 2	0	\$	200.00	\$	-
Atterberg Limits	ASTM D4318		Per Table 2	0	\$	170.00	\$	-
Moisture and Density (Nuclear Gauge) ²	ASTM D2922/D3017		Per Table 2	0	\$	-	\$	-
Moisture Content by Oven or Microwave ⁴	ASTM D2216 or D4643		Per Table 2	0	\$	-	\$	-
Dry Density (Sand Cone or Drive Tube) ³	ASTM D1156/D2937		Per Table 2	0	\$	-	\$	-
Laboratory Hydraulic Conductivity (5 psi)	ASTM D5084		Per Table 2	0	\$	370.00	\$	-
In-Situ Hydraulic Conductivity	ASTM D6391		Per Table 2	0	\$8,	000.00	\$	-
Low Permeability Test Pad Subtotal							\$	-
Low Permeability Soi	I Layer Construction Tes	ting Require	ements (CQA Pla	n Table	3) ⁵			
Test	Method			No. of Tests	Co	ost Per Test		Total
Identification & Classification of Soil Type ¹	ASTM D2488	28,900	Continuous	N/A	\$	-	\$	-
Moisture-Density (Compaction)	ASTM D1557	28,900	5,000	0	\$ 3	265.00	\$	-
Sieve Analysis	ASTM D422/ or D1140	28,900	1,500	0	\$.	200.00	\$	-
Atterberg Limits	ASTM D4318	28,900	1,500	0	\$	170.00	\$	-
Moisture and Density (Nuclear Gauge) ²	ASTM D2922/D3017	28,900	250	0	\$	-	\$	-
Moisture Content by Oven or Microwave ⁴	ASTM D3017 or D4643	28,900	1 per 5 Gauge	0	\$	-	\$	-
Dry Density (Sand Cone or Drive Tube) ³	ASTM D1156/D2937	28,900	1 per 20 Gauge	0	\$	-	\$	-
Laboratory Hydraulic Conductivity (5 psi)	ASTM D5084	28,900	1,500	0	\$	370.00	\$	-
Low Permeability Soil Layer Subtotal							\$	-
Drainage Gravel L	ayer Construction Testin	ng Requirem	ents (CQA Plan	Table 4))			
Test	Method			No. of Tests	Co	ost Per Test		Total
Identification & Classification of Soil Type ¹	ASTM D2488	20,250	Continuous	N/A	\$	-	\$	-
Particle Size Analysis	ASTM D428	20,250	1,500	14	\$	180.00	\$	2,520.00
Permeability	ASTM D2434	20,250	1,500	14	\$	380.00	\$	5,320.00
Drainage Gravel Layer Subtotal							\$	7,840.00

301	Module 7	hase 3	STIVIATE					
	Module 7, Thise S Monterey Peninsula Landfill							
Operations Layer Construction Testing Requirements (CQA Plan Table 5)								
Test	Method			No. of	Cost Per	Per Total		
1051	i est Metiloa				Test	Total		
Identification & Classification of Soil Type ¹	ASTM D2488	21,800	Continuous	N/A	\$-	\$-		
Sieve Analysis	ASTM D428	21,800	1,500	15	\$ 200.00	\$ 3,000.00		
Operations Layer Subtotal	ns Layer Subtotal \$ 3,000.00							
TASK TOTAL						\$ 22,580.00		

Notes:

¹ASTM D2488 is a visual-manual procedure that is performed in the field. Therefore, there are no laboratory charges associated with this test.

²Nuclear density tests are performed in the field and there are no associated laboratory charges associated with this test. Nuclear gauge equipment costs are included in Table 3.

³Sand cone tests are performed in the field and there are no associated laboratory charges associated with this test. ⁴We will set up an onsite laboratory for moisture content and dry density testing and there will be no laboratory charges associated with this test.

⁵Assumed not required (Engineered Alternative substitutes GCL for compacted clay liner).

Attachment 1 2023 GLA STANDARD FEE SCHEDULE



2023 FEE SCHEDULE

PROFESSIONAL STAFF

Staff Professional I	\$128.00/Hour
Staff Professional II	142.00/Hour
Staff Professional III	156.00/Hour
Project Professional I	170.00/Hour
Project Professional II	185.00/Hour
Project Professional III	200.00/Hour
Senior Professional I	215.00/Hour
Senior Professional II	230.00/Hour
Senior Professional III	245.00/Hour
Principal Professional I	260.00/Hour
Principal Professional II	274.00/Hour
Principal Professional III	
Court Appearance (Expert Witness, Deposition, etc.; four-hour minimum)	2 x HourlyRate

FIELD/LABORATORY STAFF

Technician I	95.00/Hour
Technician II	
Technician III (or Minimum Prevailing Wage)	122.00/Hour
Technician IV	
Laboratory Manager	
Principal Technician	

CADD/GIS

CADD/GIS/Database Manager I	.108.00/Hour
CADD/GIS/Database Manager II	.128.00/Hour
CADD Designer	.142.00/Hour
GIS Specialist	.142.00/Hour

SUPPORT STAFF

Administrative Assistant I	95.00/Hour
Administrative Assistant II	
Administrative Assistant III	122.00/Hour
Technical Editor	
Senior Technical Editor	142.00/Hour
*Overtime Premium is 35% of PERSONNEL CHARGE	

EQUIPMENT CHARGES

BAT Permeameter	
Compaction Testing Equipment & Supplies	50.00/Day
Peel & Shear Strength Apparatus (FML Seams)	900.00/Month
Portable Laboratory (8' x 32' trailer) with equipment	
Portable Laboratory (mobilization / demobilization)	1,500.00
ReMi/Refraction Seismograph	
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
Unmanned Aerial Vehicle (Drone) Reconnaissance	



EXPENSES

Vehicle Use for Field Services	15.00/Hour or 350.00/week
Soil Sampling Equipment & Drilling Supplies	5.00/Hour
Groundwater Sampling Equipment and Supplies	
Per DiemLesser of (Cost +15%	6) or (Local Government Rate)
Outside Services (Consultants, Surveys, Chemical lab Tests, etc.)	Cost + 15%
Reimbursables (Maps, Photos, Permits, Expendable Supplies, etc.)	Cost + 15%
Outside Equipment (Drill Rig, Backhoe, Monitoring Equipment, etc.)	Cost + 15%

PERMITS, FEES AND BONDS

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

INSURANCE

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.



2023 FEE SCHEDULE

TEST NAME	TEST METHOD	UNIT RATE
Geotechnical / Physical Propertie	<u>s</u>	
Moisture Content, gravimetric	D2216/AASHTO T265	\$26/Test
Moisture Content (volumetric and gravimetric) and Bulk Density	D2216/D7263	\$60/Test
Porosity		\$60/Test
Particle Size Analyses		
Standard Sieves and Hydrometer	D422	\$225/Test
Standard Sieves; no Hydrometer	D422	\$180/Test
Particle Size Analysis – Aggregate, no hydrometer	D422/C136/CT202	\$180/Test
Particle Size Analysis with Gravel with hydrometer	D422	\$230/Test
Percent Passing #200 Sieve	D1140/C117	\$90/Test
Particle Size Analysis, #4, #40, #200 with wash		\$70/Test
Atterberg Limits		
Liquid Limit, Plastic Limit, Plasticity Index (LL, PL, and PI)	D4318	\$170/Test
Wet preparation, add		\$55/Test
USCS Classification (included with sieve and Atterberg Limits)	D2487	\$350/Test
Specific Gravity, Fine (<4.75mm diameter materials)	D854	\$115/Test
Specific Gravity, Coarse (>4.75mm diameter materials)	C127	\$125/Test
Dispersion Testing		
Double Hydrometer (add second hydrometer)	D4221	\$150/Test
Proctor Compaction Test		
Method A or B (<25% retained on a 3/8" sieve)	D698/D1557	\$250/Test
Method C (>25% retained on a 3/8" sieve)	D698/D1557	\$265/Test
Moisture Density Single Point, std/mod (Proctor check point)	D698/D1557	\$125/Point
Percent Organic Matter by Muffle Furnace	D2974	\$105/Test

Permeability / Conductivity Testing

Permeability / Conductivity T	esting	
Hydraulic Conductivity, Fixed Wall		
up to 8" Diameter Cell	D5856/USBR 5	600-89 \$380/Test
up to 12" Diameter Cell	D5856/USBR 5	600-89 \$540/Test
Extra Load per Test		\$140/Load
Hydraulic Conductivity, Flexible Wall		
Falling Head, Rising Tail, 1" to 4" Diameter Sample	D5084	\$370/Test
Falling Head, Rising Tail, 6" Diameter Sample	D5084	\$665/Test
High Pressure (<1200 psi) per sample, add		\$65/Test
Ksat with other permeant fluid, long term	D7100	\$5,000/Test
Added machine time per day		\$80/Day
Intrinsic Permeability (Calculation)	Fetter	No Charge

Strength and Consolidation Testing

	in resemb	
Consolidation Testing		
Consolidation Test – Method A	D2435A	\$460/Test
Consolidation Test – Method B	D2435B	\$560/Test
Consolidation Test (single point)	D2435	\$125/Test
Consolidation Test (without rate data)	D2435	\$190/Test
Test rate data per load increment	D2435	\$90/Test-Load
Consolidate Test (multiple points and time rates)	D2435	\$465/Test
Strength Testing		
Unconfined Compressive Strength (UC), 2-3"	D2166	\$110/Test
Unconfined Compressive Strength (UC), 4 or 6"	D2166	\$150/Test



Strength and Consolidation Testing, Continued

Triaxial Compression

UnconsolUndrained Triax. Compression (UU), 2-3", 1-pt testD2	850 \$215/Test
UnconsolUndrained Triax. Compression (UU), 4", 1-pt testD2	850 \$255/Test
UnconsolUndrained Triax. Compression (UU), 6", 1-pt testD2	850 \$450/Test
Consolidated Undrained Triax. Compression (CU), 2-3" (3 pt. test)D4	767 \$1,500/Test
Consolidated Undrained Triax. Compression (CU), 2-3" (per point) D4	767\$500/Point
Consolidated Undrained Triax. Compression (CU), 4" (3 pt. test)D4	767 \$1,665/Test
Consolidated Undrained Triax. Compression (CU), 4" (per point)D4	767\$555/Point
Consolidated Undrained Triax. Compression (CU), 6" (3 pt. test)D4	767 \$3,015/Test
Consolidated Undrained Triax. Compression (CU), 6" (per point)D4	767\$1,055/Point
CU – add per point for progressive (staged) test	\$315/Point
Consolidated Drained Triax. Compression (CD), 2-3" (3 pt. test)D7	181\$1,890/Test
Consolidated Drained Triax. Compression (CD), 2-3" (per point)D7	181\$630/Point
Consolidated Drained Triax. Compression (CD), 4" (3 pt. test)D7	181\$2,115/Test
Consolidated Drained Triax. Compression (CD), 4" (per point)D7	181\$705/Point
Consolidated Drained Triax. Compression (CD), 6" (3 pt. test)D7	181\$3,300/Test
Consolidated Drained Triax. Compression (CD), 6" (per point)D7	181\$1,100/Point
High Pressure (>120 psi), add	\$80/Point
Direct Shear	
Direct Shear, 2.5" (3 pt. test)D3	080\$615/Test
Direct Shear, 2.5" (per point)D3	080\$205/Point
Additional Cycles (per load)D3	080\$55/Load
Direct Shear, 12" (3 pt. test)D3	080\$1,155/Test
Direct Shear, 12" (per point)D3	080\$385/Point
California Bearing Ratio (per point)D1	383\$350/Point
Added machine time when > 2 days of shear	\$80/Day

Aggregate and Rock Testing

Dry Rodded Unit Weight	C29	\$90/Test
Rock Density	D7263	\$60/Test
Saturated Hydraulic Conductivity	D5084	\$370/Test
Rock Point Load Index, 1-break	D5731	\$55/Test
Rock Point Load Index, multiple breaks	D5731	\$210/Test
Rock Joint Direct Shear, per point	D5607	\$290/Point
Rock Joint Direct Shear, add per load	D5607	\$105/Load
Uniaxial Strength, Peak Only	D7012	\$145/Test

Geosynthetics Testing

Large Scale Direct Shear		
Geosynthetic/Geosynthetic, 3-point test	D5321	\$750/Test
Geosynthetic/Geosynthetic, per point	D5321	\$250/Test
Soil/Geosynthetic, 3-point test	D5321	\$1,005/Test
Soil/Geosynthetic, per point	D5321	\$335/Test
Geosynthetic Clay Liner (GCL), 3-point test	D6243	\$1,065/Test
Geosynthetic Clay Liner (GCL), per point	D6243	\$355/Test
Soil/GCL, 3-point test	D6243	\$1,005/Test
Soil/GCL, per point	D6243	\$335/Test
Sandwich (multiple layers), 3-point test		\$1,410/Test
Sandwich (multiple layers), per point		\$470/Point
Large Scale Puncture		
Large Scale Puncture, modified	D5514	\$465/Test
Puncture Test High Pressure (>120 psi), per point		\$95/Point



Soil with Amendments and Slurry Testing

Slurry Wall Soil/Bentonite Saturated Hydraulic Conductivity, Fall	ing Head, Rising Tail	
1-100 samples	D5084	\$325/Test
101-200 samples	D5084	\$315/Test
201-300 samples	D5084	\$305/Test
301-400 samples	D5084	\$294/Test
Greater than 400 samples	D5084	\$290/Test
Soi/Cement/Bentonite, Unconfined Compressive (UC) Strength .	D4832	\$28/Test
Soil / Bentonite Mix Evaluation		\$325/Test
Soil / Cement / Bentonite Mix Evaluation		\$430/Test
Pocket Penetrometer		\$20/Test

Soil Chemistry

pH of Soil\$25)/T	es	st
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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 50 percent premium. Manpower requirements or test protocol may preclude the granting of a rush request.

Attachment 2 GRANITE CONSTRUCTION PRELIMINARY SCHEDULE

													and the second se			
Module 7 Phase 3 - Excavation Liner: Proposed Construction Schedule			Graniterock Module 7 Phase 3 - Excavation & Liner Proposed Construction Schedule					24-Feb-2023 09:45					09:43			
Activity ID	Activity Name	Responsibility		riginal Re	maining Start	Finish	Mar	ch 2023	April 2023		Way 2023	June 2023	July 2023	August 2	023	N 2023
March 10 T) Rhan D. Francisco B. Land			ALC: N	total an owner Sec. 2	10 Aug 27 34	27 06 20-Mar-	2023	03 10 17 24	10110	0 13 22	29 05 12 19	28 03 10 17 1	24 31 07 14	▼ 19-Aug	-2023
Module /	Priase J - Excavation & Citer		and the second	-		10 4 - 0000		02 4					:		10 Aug	2022
Project D	urations			139	139 03-Apt-2023	19-Aug-2023		03-Apr-202.		1					r Is-Aug	: 2023
P1000	Construction Duration	Graniterock		139	139 03-Apr-2023	19-Aug-2023		Ē		;		1	1	:	<u> </u>	4
Administ	rative & Preconstruction Activities	et al a state		13	13 20-Mar-2023	05-Apr-2023	20-Mar-	2023	U5-Apr-2023							
A1000	Submittal Procurement & Review Period	Graniterock & M	IRWMD	10	10 20-Mar-2023	31-Mar-2023	20-Mar-20	23	31-Mar-2023							.j
A1010	Install Basin Dewatering - First Working Day	Graniterock		1	1 03-Apr-2023	03-Apr-2023		03-Apr-2023	03-Apr-2023							
A1020	Perform OG Site Topo & Survey	Survey Sub		3	3 03-Apr-2023	05-Apr-2023		03-Apr-2023	05-Apr-2023	1						1
A1030	Perform Clay Liner Test Pad	Graniterock & M	IRWMD	1	1 03-Apr-2023	03-Apr-2023		03-Apr-2023	03-Apr-2023							1
Earthwor	k & Liner Activities			92	92 04-Apr-2023	11-Aug-2023		04-Apr-202	234	1			1	11-/	ug 2023	
E1000	Strip Site / Pioneer Access	Graniterock		5	5 04-Apr-2023	10-Apr-2023		04-Apr-2023	10-Apr-2023							
E1010	Excavate & Stockpile Onsite Cut Material & Ballast Rock	Graniterock		30	30 11-Apr-2023	22-May-2023		11-Apr-	2023		22-M	ay 2023				
E1020	Prep OG for Fill	Graniterock		3	3 23-May-2023	25-May-2023		:		23-M	ay-2023 25	May-2023		1		1
E1030	Install 6" Perforated Underdrain & Gravel	Graniterock		6	6 26-May-2023	05-Jun-2023				26-	May-2023	05-Jun-2023		1		
E1040	Haul & Place Compacted Clay Liner or Compacted Soil	Graniterock		6	6 06-Jun-2023	13-Jun-2023		1		1	06-Jun-20	23 - 13-Jun-	2023			
E1050	Install HDPE Geomebranes & GCL	Geomembrane S	Sub	20	20 14-Jun-2023	12-Jul-2023					14-	Jun-2023	12-Jul-20	23		
E1060	Construct Anchor Trench	Graniterock		6	6 05-Jul-2023	12-Jul-2023				1		05-Ju	-2023 -2-Jul-20	23		
E1070	Haul & Place LCRS Drainage Layer	Graniterock		4	4 05-Jul-2023	10-Jul-2023		1		1		05~Ju	-2023 10-Jul-2023	1		1
E1080	Install LCRS Leachate Drainage & Leachate Sumps	Graniterock		4	4 11-Jul-2023	14-Jul-2023	1	1				1	1-Ju-2023 - 14-Ju-2	023	1	1
E1090	Haul & Place Operations Layer	Graniterock		5	5 17-Jul-2023	21-Jul-2023		1					17-Jul-2023 - 2	1-Jul-2023		
E1100	Module 6 Tie-In's	Graniterock		5	5 24-Jul-2023	28-Jul-2023							24-Jul-2023	28-Jul-2023		.j
E1110	Install Final Geomembranes & Sacrificial Liners	Geomembrane	Sub	10	10 31-Jul-2023	11-Aug-2023							31-Jul-202	23-11-/	ug 2023	1
E1120	Install Exterior Above Ground Subdrain	Graniterock		6	6 31-Jul-2023	07-Aug-2023		1					31-Jul-202	23 - 07-Aug	-2023	1
Permane	nt Erosion Control			14	14 31-Jul-2023	17-Aug-2023		1					31-Jul-:	2023	17-Aug-2	.023
D1000	Track-Walk Slopes	Graniterock		6	6 31-Jul-2023	07-Aug-2023	1	1					31-Jui-202	23- 07-Aug	-2023	1
D1010	Install Permanent Erosion Control Measures	Erosion Control	Sub	6	8 08-Aug-2023	17-Aug-2023							08-/	ug-2023	17-Aug-2	2023
Finish Pr	oject Activities		A CARLES AND A CARLES	2	2 18-Aug-2023	19-Aug-2023				1				18-Aug-2023	19-Aug	-2023
FP1000	Final FG Topo & Survey	Survey Sub	and a strategy of the second strategy and the second strat	2	2 18-Aug-2023	19-Aug-2023	1	1						18-Aug-2023-	19-Aug	-2023
FP1110	Project Cleanup & De-Mobilize	All Parties		2	2 18-Aug-2023	19-Aug-2023				1				18-Aug-2023	-19-Aug	-2023

Please note: This schedule represents the major construction activities on the project and is not intended to show every activity. A detailed CPM Baseline Schedule and Weekly Project Schedules would be prepared showing a further level of activity breakdown. Activity sequencing and durations may also change to suit the needs of the project as construction operations progress.

This schedule assumes a Monday, April 4, 2023 start date for reference only. Actual start date may vary based upon Contract Award and discussions with MRWMD.

Level of Effort	Actual Work	•	 Milestone 	Page 1 of 1	TASK filter: All Activities	
Remaining Work	Critical Remaining Work	Y	V Summary			© Oracle Corporation

Attachment 3 MODULE 7 BID SCHEDULE

Document 00405

SCHEDULE OF UNIT PRICE WORK

Name of Bidder:

Date:_____

This Document 00405 constitutes an attachment to Document 00300 - Bid Form for Module 7 Phase 3 Excavation and Liner, Monterey Regional Waste Management District (OWNER). When a Contract is awarded, this Document becomes an attachment to Document 00500 - Agreement Between Monterey Regional Waste Management District (OWNER) and Contractor (CONTRACTOR). Refer to Section 01025 for detail on bid items.

			EAD-A Bid Table				EAD-B E	Bid Tabl	e
Bid Item	Description	Unit	Quantity	Unit Price	Extension	Unit	Quantity	Unit Price	Extension
1	Mobilization/Demobilization	LS	1			LS	1		
2	Layout of Work and Surveys	LS	1			LS	1		
3	Clearing, Grubbing, and Stripping	LS	1			LS	1		
4	Excavation and Stockpiling	CY	133,900			СҮ	133,900		
5	Remove and Stockpile Ballast Rock	LS	1			LS	1		
6	Groundwater Underdrain	LF	2,580			LF	2,580		
7	Geocomposite for Sideslope Groundwater Collection	SF	306,000			SF	306,000		
8	Engineered Fill	CY	39,400			СҮ	39,400		
9	Anchor Trench Backfill	LF	3,320			LF	3,320		
10	Compacted Clay Liner Test Pad (Optional Bid Item)	LS	1			LS	0		
11	Clay Berm Plug	CY	6,040			СҮ	6,040		
12A	Compacted Clay Liner (Optional Bid Item)	СҮ	28,900			СҮ	0		
12B	Compacted Soil	CY	0			CY	28,900		

Monte	rey Peninsula Landfill, Monterey Cou	nty, CA		BID FORM					
13	LCRS & Underdrain Drainage Gravel	СҮ	1,100			СҮ	1,100		
14	LCRS Drainage Layer	CY	19,150			СҮ	19,150		
15	Operations Layer	СҮ	21,800			СҮ	21,800		
16	Single-Sided Textured HDPE 60-mill Geomembrane	SF	266,000			SF	266,000		
17	Double-Sided Textured HDPE 60-mill Geomembrane	SF	546,000			SF	1,084,000		
18	Double-Sided Textured HDPE 40-mil Geomembrane	SF	802,000			SF	802,000		
19	Geosynthetic Clay Liner	SF	802,000			SF	802,000		
20	Geotextile	SF	102,000			SF	102,000		
21	Sacrificial Geomembrane	SF	216,000			SF	216,000		
22	12" Lysimeter Riser Pipes	LF	200			LF	200		
23	LCRS 6-inch Dia. HDPE Pipe	LF	3,060			LF	3,060		
24	LCRS 18-inch Dia. HDPE Riser Pipe	LF	440			LF	440		
25	6" Solid HDPE Pipe	LF	80			LF	80		
26	Groundwater Underdrain 12-inch Dia HDPE Riser Pipe	LF	200			LF	200		
27	Subdrain Discharge Pipe	LF	3,660			LF	3,660		
28	Alternate Subdrain Discharge Pipe	LF	3,440			LF	3,440		
29	LCRS Tie in to Module 6	LS	1			LS	1		
30	Liner Tie-in	LF	1,960			LF	1,960		
31	Rain Gutter	LS	1			LS	1		
32	Temporary Sand Bag Lines	LS	1			LS	1		
33	Erosion Control Blanket and Straw Wattles	SF	403,060			SF	403,060		
34	Hydroseeding	SF	126,840			SF	126,840		
35	Culverts and Miscellaneous Drainage Related Work	LS	1			LS	1		
36	Bonds - Payment and Performance Bonds	LS	1			LS	1		

Module 7 Phase 3 – Excavation and Liner Monterey Peninsula Landfill, Monterey County, CA

BID FORM

37	Basin Dewatering	LS	1			LS	1		
38	Wet Well Extension	LS	1			LS	1		
TOTAL BID									

END OF DOCUMENT