EXHIBIT “A”
SCOPE OF SERVICES

BACKGROUND

The Palo Alto Landfill (PALF) is an unlined, Class III municipal solid waste landfill. The landfill is approximately 126 acres, of which approximately 76 acres have been filled to grade and closed in accordance with the relevant closure regulations. Closure activities to date occurred in three construction phases (Phases I, IIA, and IIB) between 1991 and 2000. Closure construction for the remaining approximately 50 acres (Phase IIC) is scheduled for 2012.

After closure, the landfill is being developed as a public park, which is referred to as Byxbee Park. The initial phase of Byxbee Park, encompassing the 29-acre Phase I closure area, was completed in 1991. The Phase IIA and IIB portions of the park were opened to public access in 2011.

The City has been accepting clean fill soil and stockpiling these soils for use in the final closure cover. These soils are being stockpiled on a portion of Phase IIC and along the western portion of Phase IIB. The City anticipates that all soil required for closure will be imported by the start of closure construction.

The scope of work for this Phase IIC closure project involves the preparation of construction plans and specifications for the closure cap, geotechnical and environmental investigation of the former cogeneration facility area (Cogen Area), environmental review in conformance with the California Environmental Quality Act (CEQA), construction and bid support, and construction quality assurance (CQA) monitoring. Golder Associates, Inc. previously prepared the recent Facility Closure and Post-closure Monitoring Plan (FCPMP) that addressed the design and construction of the closure cover and improvements to the landfill gas (LFG) and leachate controls. The LFG and leachate control improvements have since been completed as a separate project in 2011.

WORK PLAN SUMMARY

The major components of the project include:

- Preparation of the final construction plans and specifications for Phase IIC closure will include updating the existing site topography and final grades for closure, updating the plans to show the location of the soil stockpile locations, revising the Phase IIC/IIB closure tie-in to reflect the current Phase IIB grades that are several feet higher than when the FCPMP was prepared in 2008, and updating the plans to reflect the LFG and leachate system improvements that have already been completed.

- The site air compressor is currently located in the Cogen Area, which is surrounded by screening berms. The City believes that a low-permeability soil cover was constructed underneath the Cogen Area based on construction plans that were prepared at the time of construction. The intent was to construct the cogeneration facility on a closed portion of the landfill. However, the City does not have any documentation for the low-permeability soil layer construction, and the regulatory agencies likely have not reviewed
nor provided approval of this small closure area. A portion of this project involves investigating and characterizing the extent and quality of the low-permeability soil to see if it can be certified as closed in compliance with applicable regulations and the FCPMP.

- Support will be provided during bidding and construction to address bidder and contractor’s technical questions and/or design conflicts that may arise during construction.
- The consultant will provide construction quality assurance oversight and prepare a CQA Report to gain regulatory approval of the Phase IIC closure.

The Golder Project Team will apply its extensive site knowledge to cost-effectively prepare the Phase IIC Closure Design and Documentation.

**TASK DETAILS**

**TASK 1 – COGEN AREA CAP CERTIFICATION**

Task 1 consists of the investigation of the existing final cover under the Cogen Area, and assuming favorable cap conditions are confirmed, preparing a letter certifying that the existing cap complies with applicable requirements of Title 27 of the California Code of Regulations.

The focus of this task will be to identify the thickness and extent of the various soil types, and to assess the permeability of the low-permeability soil cover. Specifically, certification requires confirmation of the following:

- The existence of a minimum 2-foot thick foundation layer
- The foundation layer is compacted to a minimum relative compaction of 90 percent
- The existence of a minimum 1-foot thick low-permeability soil layer with a permeability less than or equal to 1 x 10^-6 centimeters per second (cm/s)
- The low-permeability layer is compacted to a minimum relative compaction of 90 percent

We propose excavating a series of 6 to 8 test pits to define the lateral extent and thickness of the various soil types. The City will provide a backhoe and operator for the test pits.

Based on the size of the Cogen Area, we anticipate that the volumes of the foundation layer and the low-permeability soil layer are each less than 1,000 cubic yards (cy). In accordance with the CQA plan prepared by Golder for Phase IIC and testing frequencies typically accepted by Cal Recycle and the RWQCB, we propose to obtain samples using Shelby tubes and drive samples in accordance with American Society for Testing and Materials Test Method D2937 (ASTM D2937) and to perform the following tests:

- Up to four samples of the foundation layer to measure in-situ density per ASTM D2937 and moisture (minimum frequency of 1 test per 250 cy)
- One Modified Proctor test each per ASTM D1557 for the foundation layer and low-
permeability soil layer

- Up to four samples of the low-permeability soil layer to measure in-situ density per ASTM D2937 and moisture (minimum frequency of 1 test per 250 cy)
- One sample of the low-permeability soil layer to measure permeability per ASTM D5084
- Up to four samples of the low-permeability soil layer to measure Atterberg Limits per ASTM D4318 and grain-size distribution per ASTM D422

Although Atterberg Limits and grain-size distribution tests are typically performed at a frequency of 1 test per 1,500 cy for the low-permeability soil layer, we propose four samples to demonstrate consistency of material properties and to assist with correlation of the soil permeability to the in-situ material properties.

Before proceeding with the field investigation and testing, we will submit the proposed sampling and testing plan to the RWQCB for review and approval.

Following completion of the field investigation and testing, Golder will provide a draft certification letter electronically (PDF format) for the City’s review. Following receipt of any City comments, Golder will finalize the certification letter. The final certification letter will be submitted to the RWQCB.

For cost estimating purposes, we have assumed the RWQCB will approved the field investigation and testing program, described above, and that the final cover in the Cogen Area will be determined to be consistent with Title 27 requirements.

**TASK 2 - PREPARE FINAL CLOSURE PLANS AND SPECIFICATIONS**

Golder will update the final closure plans, specifications, CQA Plan, bid schedule, and engineer’s cost estimate under Task 2. The latest version of the FCPMP shows a geomembrane cover as an engineered alternative design to the prescriptive final cover, but includes language to allow the use of the prescriptive cover in the event an economical source of suitable low-permeability soil is identified for the Phase IIIC closure. Golder will revisit this aspect of the design with the City to determine the best approach for the final cover.

Assuming that a geomembrane final cover is the preferred approach, we will contact geomembrane manufacturers to determine the approximate lead time for geomembrane manufacture and delivery. We will also outline the advantages and disadvantages of the City pre-ordering the geomembrane and providing the geomembrane to the closure contractor. If it is determined that pre-ordering the geomembrane is the best approach to meeting the time schedule presented in the RFP, Golder will prepare separate geomembrane material specifications and provide the City the estimated quantity of geomembrane required for closure.

For cost estimating purposes, we have assumed that the City will not pre-order the geomembrane.

As requested in the RFP, we will prepare a remote monitoring plan for the LFG and leachate wells. The remote monitoring plan will include:

- Site plan(s) showing the installation of the required power wiring and signal cables from
each monitoring location to the Cogen Area

- A conceptual design of the required remote monitoring instrumentation and central SCADA processor hardware and software for the City-requested monitoring parameters and locations
- Preliminary budgetary cost estimates for implementing and operating the complete remote monitoring system as presented in the City-approved conceptual design

The following elements are assumed to be included in the remote monitoring plan:

- Methane concentration and pressure (vacuum) for LFG wells
- Water level and pump discharge flow metering for leachate wells
- Integration of LFG flow, system vacuum, and blower speed data from the LFG flare station (expected to be rebid in spring 2012)

At a minimum, the site electrical and communication network plan will be included as an add-alternate bid item for the closure construction.

For the final closure plans, the drawings prepared as part of the FCPMP will be updated to address the following:

- Updated topography (using the latest site topographic map)
- Show the location of the City’s stockpiled soils
- Cover system tie-in at the Phase IIC/IIB boundary. The Phase IIC grades are now several feet higher than the Phase IIB low-permeability soil layer. We propose to show a minimum horizontal overlap between the Phase IIC geomembrane and Phase IIB low-permeability soil liner, but not requiring the geomembrane to directly contact the low-permeability soil, which would otherwise require expensive soil excavation.
- Include rip-rap erosion control where stormwater is concentrated on the south side of the landfill
- Incorporation of the existing Cogen Area Cap as appropriate per the results of Task 1
- Show the updated leachate and landfill gas control system that are currently in place
- Show the general arrangement with remote monitoring stations, wiring requirements, communications network diagram, and one-line power diagram

The technical specifications and CQA Plan will be updated to address the following:

- Updated specifications to address stormwater and erosion controls
- Revisit the maximum particle size and screening requirements for the foundation layer and vegetative soil cover. Soil that the City has imported contains rocks and other debris that could damage the geomembrane, and therefore it is expected to require some level of screening. Soil screening adds cost to the project and the requirements need to be carefully considered.
- Construction sequencing including specifying limits for the time and number of leachate and landfill gas wells that can be temporarily taken out of service to facilitate construction of the cover.
- Performance specification for selected remote monitoring system

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• Update the CQA Plan to reflect our proposed CQA approach discussed in Task 6.

As part of this task, Golder will also complete the following:

• Prepare a written scope of work for the contractor that describes the work necessary for the construction project
• Update bid quantities and prepare a detailed bid schedule
• Prepare an updated engineer’s cost estimate

Golder will provide a draft copy each of the deliverable work products electronically (PDF format) for the City’s review. Following receipt of any City comments, Golder will finalize the various deliverables and issue one hard copy and one electronic copy. The deliverables for this task consist of the following:

• Construction plans (34"x22")
• Remote Monitoring Plan
• Technical Specifications
• CQA Plan
• Contractor Scope of Work
• Bid Schedule and Quantities
• Engineer’s Cost Estimate

TASK 3 - FACILITY CLOSURE SAMPLING AND ANALYSES

Task 3 consists of verifying whether a hazardous-materials release has occurred at the Recycling Center or the Cogen Area, and if so, determining the nature and extent of the release so that appropriate corrective action can be taken by the City before the site is capped. Golder performed a Phase I/Phase II environmental site assessment at the Cogen Area in late 2002 and submitted the report in 2003. We concluded that less than 20 square feet of shallow soils were impacted by petroleum hydrocarbons and metals. In 2009, Golder performed an environmental assessment at the Recycling Center for soil impacts that may have resulted from temporary storage of recycled hazardous and universal wastes. We concluded that impacts were limited to petroleum hydrocarbons in two small areas where used motor oil had been stored.

Based on Golder’s knowledge of site conditions at the Recycling Center and Cogen Area, we believe that a limited assessment of the nature and extent of soil impacts is appropriate to confirm conditions and develop cost-efficient corrective action. After reviewing available documents, Golder will prepare a sampling and analysis plan for each facility, seek City approval, implement the plan, and prepare cleanup recommendations that are appropriate for the protection of human health and the environment. The recommendations may vary from no action to removal of contaminated soils. Appropriate cleanup goals will be based on regulatory criteria such as Environmental Screening Levels (ESLs) established by the San Francisco RWQCB or Regional Screening Levels (RSLs) established by the US Environmental Protection Agency. After corrective actions are complete, Golder will prepare a summary report suitable for submittal to regulatory agencies to support the implemented corrective action.

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TASK 4 - ENVIRONMENTAL REVIEW

During this task, TRA Environmental Services (TRA) will prepare an Initial Study (IS) Checklist according to Appendix G of the State CEQA Guidelines (Title 14, Section 15000 et seq of the California Code of Regulations) to assess the potential environmental effects of constructing the closure cap. The IS will follow the format specified in the CEQA Guidelines, which includes a detailed project description with supporting maps, photos, and figures, a description of the environmental setting of the proposed site, complete responses to each Initial Study Checklist question with a clear statement as to the level of impact (less than significant or significant) and, where necessary, measures to mitigate potentially significant effects.

Construction of the closure cap involves the spreading and compacting of soil, geomembrane, and vegetative soil over the surface of the landfill. The IS/MND will reference appropriate information from the FCPMP, Baylands Master Plan, and Byxbee Park Master Plan. The closure of Phase IIC of the landfill is guided by a number of permit and regulatory documents, as well as the Baylands Master Plan and Byxbee Park Master Plan. The landfill is the focus of a host of complex land use issues, which will be thoroughly described in the IS/MND. The closure of Phase IIC of the landfill and its conversion to non-irrigated pastoral park is consistent with existing land use plans for the area.

The anticipated impacts of these proposed activities are related to aesthetics, temporary air quality/greenhouse gas emissions during construction, and water quality impacts. These impacts are considered minor and can be mitigated to a less-than-significant level, therefore the anticipated level of CEQA documentation would be a Mitigated Negative Declaration (MND).

TRA will conduct a kick-off meeting with City staff and conduct a site visit to evaluate the on-site conditions and take representative site photos to develop a detailed project description. Any remaining questions will be posed through a data request to the City. Once all the questions are answered, a complete project description will be prepared then reviewed for technical accuracy with the City. TRA will then proceed with responding to the Checklist questions. Once completed, the entire document will be submitted to the City for administrative review. Any comments or edits will be incorporated into a public review IS/MND and then circulated to the public for 30 days. As a cost saving measure, we assume that TRA will provide the City with an electronic version of the administrative draft and public review version of the IS/MND and that the City will make any paper copies of the public review version of the document.

It is TRA's understanding that the traffic associated with the closure construction will not exceed the traffic levels currently allowed under the existing solid waste facility permit, which is 475 trips per day. If, at a later date, a traffic study does become necessary, TRA will contract with Hexagon Transportation Consultants (San Jose) to prepare a traffic report.

**Mitigation Monitoring and Reporting Plan**

After closure of the public review period for the CEQA document, TRA will provide the City with an electronic version of the Mitigation Monitoring and Reporting Plan (MMRP).

**CEQA Notices and Public Noticing**
TRA will prepare a Notice of Completion and Notice of Determination and provide the City with an electronic version of each notice. TRA assumes that the City will conduct the legal noticing required under CEQA and mail the required number of documents to the State Clearinghouse.

Meetings and Hearings
For cost estimating purposes, we have assumed attendance by the TRA Project Manager and Senior Analyst at one meeting with City staff (2 hours), one Planning and Transportation Commission meeting (4 hours for each staff person) and one City Council meeting (4 hours for each staff person). We can attend additional meetings at the request of the City on a time and materials basis.

TASK 5 - CONSTRUCTION AND BID SUPPORT

Golder will provide construction and bid support as follows:

- Attend one Pre-Bid Meeting. Our design Engineer-of-Record and CQA Engineer-of-Record will attend this meeting. Golder will record the meeting minutes and transmit the minutes to the City for review.
- Attend one Pre-Construction Meeting. Our CQA Engineer-of-Record will attend this meeting and record the meeting minutes. The minutes will be transmitted to the City for review.
- Attend weekly Construction Meetings. Our CQA Engineer-of-Record will attend up to 12 weekly construction meetings. For each meeting, we will record the meeting minutes, which will be transmitted to the City for review.
- Provide responses to technical Requests for Information (RFI's) and contractor submittals. Based on our experience with similar projects, we have budgeted 40 hours of staff time to review contractor submittals and address technical issues in RFI's submitted by the contractor.

TASK 6 - CONSTRUCTION QUALITY ASSURANCE

Task 6 consists of providing CQA oversight and preparation of a CQA Report at the completion of the Phase IIC closure construction. We have outlined our general approach and specific task elements below.

General Approach
For past closure projects, the City has had the construction contractors hire a firm to complete the construction quality assurance testing and then the City compiled the testing and observation data and prepared a CQA Report.

The City’s past approach to CQA follows what Golder refers to as the “Federal Approach,” in which most of the field and laboratory testing and observations are completed by the contractor’s subcontracted testing firm. The CQA Engineer-of-Record’s role is then to provide oversight to check that the tests are being completed correctly, including completing side-by-side test comparisons, verifying the minimum testing frequencies are being met, and the observation and documentation requirements of the CQA Plan are being fulfilled.

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In contrast, “Owner Retained QC/QA Approach” differs in that the majority of the field and laboratory CQA testing is completed by a firm retained by the owner. This approach is more commonly used for landfills that are constructed or closed in California. This approach puts more distance and independence between the firm performing the field and laboratory testing and the contractor.

Golder has extensive experience in providing CQA services under both approaches. In fact, this past summer, Golder provided CQA services for closures at the Pacheco Pass Landfill (Gilroy) and Pescadero Landfill (San Mateo County) using the Owner Retained QC/QA Approach. We were also the CQA Engineer-of-Record using the Federal Approach for a closure located on U.S. Forest Service lands in Tuolumne County, California. We also provided CQA field testing and observation service to a general contractor for a project that involved capping waste materials with a geomembrane cover on a Superfund site near Redding, California.

The advantage of the “Federal Approach” is that it can be cost-effective and provides fewer potential conflicts between the firm providing the CQA testing and the contractor. The disadvantage is that the contractors solicit bids for CQA testing firms and typically select one on the basis of cost and not qualifications. Therefore, the CQA testing firm sometimes has marginal qualifications to perform the work. For these cases, the CQA Engineer-of-Record often needs to increase on-site oversight, which can offset any cost savings provided by having the contractor retain the CQA testing firm.

For this project, Golder proposes using a “modified Federal Approach” in which the contractor retains a CQA testing firm to perform the routine soils testing and observation. There are numerous local firms that are qualified to do this work. Golder will then provide testing and observation services for specialized items, such as the geomembrane cover. As part of the CQA Plan, Golder will include minimum experience requirements for the CQA testing firm and clearly define the roles of the CQA Engineer and CQA testing firm. We believe this will approach provide the City with the optimum balance between cost effectiveness and quality.

**CQA Oversight**

Golder proposes to implement the above “Federal Approach” for the routine earthworks QA/QC inspection and testing to ensure that the City gets the most cost-effective QA/QC services. Golder will provide field QA/QC inspection and testing for the geomembrane and geocomposite, which involves a specialty inspection service that is provided by only a limited number of companies in the Bay Area. All QA/QC inspection and testing will be completed under the oversight by Golder’s CQA Engineer-of-Record to confirm that inspection and testing protocols are being properly implemented including verification of test methods and test frequencies.

Golder anticipates that the closure construction will take approximately 12 to 16 weeks to complete. We anticipate that Golder’s active involvement, using the QA/QC approach described above, will be 12 weeks. We anticipate that the geomembrane and geocomposite will take approximately 6 weeks to complete assuming the geosynthetics installer works 6 days per week.

Golder’s CQA Engineer-of-Record will coordinate with the contractor’s QA/QC testing firm and Golder’s field technician to ensure that the following data is recorded:

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• A daily field report describing the work completed and any construction conflicts or non-compliance issues and their status and/or resolution
• Weather conditions including impacts to construction progress (i.e. high winds during geomembrane deployment or precipitation)
• Document that the contractor’s construction methods comply with the plans and specifications including construction sequencing for the landfill gas and leachate controls
• Document that the materials used comply with the plans and specifications
• The location and results of all field and laboratory testing
• Representative construction photographs

At the completion of the construction project, Golder will prepare a CQA Certification Report that summarizes the following:

• Summarize the work performed by the prime contractor and its subcontractors, including the dates that various components of the closure was completed
• Summarize the roles of the contractor’s firm and Golder’s CQA team in providing overall QA/QC services.
• Document design changes or clarifications
• Document the location and results of all field and laboratory testing
• Document the construction methods and materials used by the Contractor
• Provide representative construction photographs
• Provide a certification statement that closure construction was completed in accordance with the plans, specifications, CQA Plan and applicable requirements of Title 27 of the California Code of Regulations.

Golder will provide a draft CQA Report electronically (PDF format) for the City’s review. Following receipt of any City comments, Golder will finalize the report and issue four hard copies and one electronic copy.

PROPOSED INNOVATIONS

For this project, Golder offers the City a number of innovations and unique knowledge that we believe will result in cost savings. Specific innovations include:

• Our CQA approach provides the best combination of using a “Federal Approach” and “Owner Retained Approach” to ensure the City gets the best combination of value and quality of construction
• Our involvement in the sampling and testing for the closure of the Recycling Center area and Cogen Area ensures that we can complete this work cost effectively and provide the City with substantial cost savings. We anticipate that this work can be completed significantly less than $20,000 budget specified in the RFP.