

**CONTRACT #C24-12
AGREEMENT FOR CONSULTANT SERVICES
BETWEEN
THE CITY OF ALBANY
AND
GSI**

**FOR PROJECT:
ALUM MUD SUPPORT**

AMENDMENT OF AGREEMENT No. 1

This AMENDMENT OF AGREEMENT FOR CONSULTANT SERVICES is made and entered into on this ____ day of _____, 2024, by and among the City of Albany a California charter city ("CITY") and GSI Environmental, Inc., ("CONSULTANT").

In consideration of the mutual covenants and conditions set forth herein Contract No. C24-12, the parties agree as follows:

Per request by the CITY, Contract No. C24-12 shall be modified as follows: additional scope for the implementation of the site investigation work plan as required by the Water Board's January 18, 2024 letter. The scope for work plan implementation is as described in the Proposal for Implementation of Site Investigation Work Plan – Albany Bulb (Attachment 1). This AMENDMENT OF AGREEMENT shall be made part of the original AGREEMENT, Contract No. C24-12. Original Contract was for the period of 12 months and is extended until June 3, 2025.

Compensation for the AMENDMENT OF AGREEMENT shall be in the amount not to exceed \$328,300. (Increase Original Contract of \$ 25,400 to \$353,700).

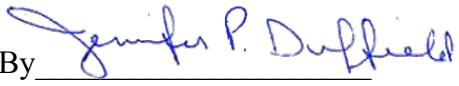
All work shall continue to be in compliance with Contract No. C24-12, and in accordance with the approved Scope of Work, including any agreed upon modifications or extensions to the Scope of Work.

IN WITNESS WHEREOF, the parties hereto have caused this AMENDMENT OF AGREEMENT to Contract No. C24-12 to be executed the day and year first above written.

CITY OF ALBANY:

By _____
Nicole Almaguer,
City Manager

CONSULTANT:

By 
Jennifer P. Duffield,
Principal Engineer

Attest _____
City Clerk

Attachments:

Attachment 1 – Proposal for Implementation of Site Investigation Plan – Albany Bulb

May 24, 2024

Mr. David Lam
Associate Engineer
City of Albany Public Works
540 Cleveland Ave.
Albany, California 94710

Via email: dlam@albanyca.org

**RE: Proposal for Implementation of Site Investigation Work Plan – Albany Bulb
End of Buchanan Street
Albany, California**

Dear Mr. Lam:

GSI Environmental Inc. (GSI), has prepared this proposal to provide environmental services on behalf of the City of Albany (City) with respect to the former Albany Landfill, currently referred to as the Albany Bulb, located at the western end of Buchanan Street on the east shore of San Francisco Bay in Albany, California (the Site).

On February 1, 2024, the City requested a proposal to prepare a soil and groundwater investigation work plan in response to a San Francisco Bay Regional Water Quality Control Board (Water Board) letter issued January 18, 2024. In that letter, the Water Board required the City to submit a work plan to collect representative soil and groundwater samples on a one-time basis for chemical and radiological testing at the Site by April 1, 2024. The City retained GSI to provide environmental services for two tasks consisting of: (1) a historical document and aerial photograph review for the Site and (2) preparation of a soil and groundwater investigation work plan to investigate the presence of potential “alum mud” at the Site.

GSI prepared a Site Investigation Work Plan (Work Plan), dated April 1, 2024,¹ that proposed a stepwise investigation approach with initial activities consisting of: (1) the historical document and aerial photograph review for the Site and (2) a gamma radiation walk-over survey (GWS) of the Site. Upon completion of these initial activities, the Work Plan proposes the preparation and submittal of a Soil and Groundwater Sampling Plan (SAP), implementation of the Water Board approved SAP, and preparation of a Soil and Groundwater Investigation Completion Report. The City submitted this Work Plan to the Water Board on April 1, 2024. The Water Board issued a letter on May 14, 2024 providing concurring with the initial activities.²

The City has requested GSI to prepare this proposal for the implementation of the submitted Work Plan, including the initial gamma survey activities and presumed follow-up soil and groundwater sampling activities. This proposal provides a presumed scope of work to facilitate City Council funding approval to implement the initial activities and avoid potential delays implementing the subsequent preparation of a SAP and implementation of the SAP upon Water Board approval. The scope of work outlined in this proposal may change based on findings of the initial activities and Water Board comments on the SAP.

¹ GSI, 2024, Site Investigation Work Plan, Former Albany Landfill (Albany Bulb), End of Buchanan Street, Albany, California 94706, April 1.

² Water Board, 2024, Concurrence with Site Investigation Work Plan at Albany Landfill, Alameda County, May 14.

Background

The Site is an approximately 40-acre closed, unlined, Class III landfill. The Site is regulated under the Water Board's Waste Discharge Requirements Order 99-068 (WDR). According to the WDR, the landfill received approximately 2,000,000 tons of waste from 1963³ until December 1983 and has an average depth of 40 feet. The waste stream consisted primarily of construction and demolition wastes. Prior to 1975, some non-hazardous solid waste, such as wood and vegetable solid waste, was disposed of at the Site. Metals and unionized ammonia have previously been detected in leachate from the landfill; however, the WDR states that the landfill does not pose a water quality threat to San Francisco Bay. The landfill remains undeveloped and is used as public open space.

On January 18, 2024, the Water Board issued a letter stating that it had recently discovered evidence that industrial waste from the Zeneca Richmond Plant was disposed of at the Site from 1960 to 1971. A March 28, 1980, letter from Stauffer Chemical, attached to the Water Board correspondence, indicated that the waste contained a substantial amount of "alum mud" generated from the processing of aluminum from bauxite ore. The primary constituents in alum mud include heavy metals and trace metals including iron, manganese, magnesium, zinc, cadmium, copper, trivalent chromium, and lead. Alum mud also commonly contains radionuclides, referred to as "technically enhanced naturally occurring radioactive material" (TENORM). Similar waste was disposed of at Blair Southern Pacific Landfill in Richmond, California. The Water Board letter indicated that radioisotopes associated with TENORM and pesticides that were produced at the Zeneca Richmond Plant have been detected at the Blair Southern Pacific landfill.

In its letter, the Water Board indicated that the presence of waste from the Zeneca Richmond Plant was not known at the time of the previous WDR finding, and that it is possible that not all wastes within the landfill and their potential impacts have been thoroughly investigated. It is important to note that the WDR focused on groundwater and surface water quality with respect to their potential impact to San Francisco Bay, should these waters be impacted from landfill wastes. Therefore, the Water Board required the City to submit a work plan to conduct a one-time representative soil and groundwater investigation at the Site by April 1, 2024. The Water Board indicated that samples must be analyzed for metals; radionuclides (including, but not limited to, thorium-232, uranium-238, and uranium-235); and pesticides (including, but not limited to, 4-4'-DDT and dieldrin).

The WDR for the Site focuses on impacts to San Francisco Bay from groundwater discharge and surface water runoff; therefore, these potential sources will be the primary focus of proposed investigation. The proposed investigation approach will focus on near surface soil, which could potentially leach constituents of concern into surface water runoff, and groundwater. Additionally, because the landfill is currently open to recreational users, near-surface soil data will also be evaluated relative to the public and potential maintenance workers.

Work Plan Approach

In GSI's April 1, 2024 Work Plan submitted to the Water Board, GSI proposed a stepwise investigation approach with initial activities consisting of a comprehensive historical document review and walk-over gamma radiation survey of the Site to:

³ The January 18, 2024 Water Board letter indicates the landfill operated intermittently beginning in the 1940s.

- Identify areas within the Site that may have received Zeneca Richmond Plant waste streams (thus potential “alum mud”);
- Obtain and review existing soil and groundwater investigation data for the Site with respect to metals and pesticides; and
- Identify potential near-surface gamma radiation sources at the Site that may indicate the presence of TENORM.

Upon completion of the activities described in the Work Plan, the findings will be presented to the Water Board along with a proposed focused soil and groundwater sampling and analysis program informed by the results. Following discussion with the Water Board and with its concurrence on a proposed sampling program, GSI will prepare and submit a focused Soil and Groundwater Sampling and Analysis Plan (SAP). Following Water Board approval and subsequent implementation of the SAP, a Soil and Groundwater Investigation Completion Report (Completion Report) will be prepared and submitted to the Water Board.

Scope of Work

Portions of the GSI Work Plan not completed and budgeted to date are described in this section. As noted previously, the scope of the sampling and analysis work summarized below may be subject to change following meeting and consultation with the Water Board.

Task 1: Gamma Radiation Survey

GSI will contract with Cabrera Services (Cabrera) to perform a gamma walkover survey (GWS) at the Albany Landfill prior to performing intrusive investigations. The purpose of the GWS is to identify sources of radiation on or near ground surface. The results of the GWS will assist in determining radiological risks to workers or members of the public from TENORM material potentially disposed of in the landfill and provide an estimate of the lateral extent of any surface radioactivity that may be present. This task will include the following:

- Cabrera will perform a GWS of accessible areas within the former waste cells using a gamma ray detector connected to a ratemeter/scaler. Access may be limited in areas of the Site due to the presence of steep slopes, standing water, piles and/or chunks of immovable debris, or dense vegetation. Cabrera estimates the survey will require approximately 5 days to complete, assuming an accessible area of 10 acres.
- GSI will participate in a field kick-off meeting with Cabrera and provide periodic field oversight during the radiological survey activities. For cost estimating purposes, we have assumed a total of 16 hours for GSI field oversight.
- GSI will coordinate with the City of Albany and Cabrera regarding access and schedule. It is assumed that an encroachment permit is not required for the GWS.
- Cabrera will present the results of the GWS including the gamma radiation levels at the ground surface and the calculation of the average and standard deviation. Results will be presented in units of standard deviation above the mean.

Task 2: Soil and Groundwater Sampling and Analysis Plan (SAP)

GSI will prepare a SAP for the soil and groundwater sampling activities requested by the Water Board. The SAP will propose collection of soil samples to assess potential leaching into surface water runoff and impacts to the potential receptors (noted above) that are the focus of the investigation. The proposed soil sample locations will be determined based on the results of the historical document and aerial photograph review, GWS, and accessibility and feasibility considerations. The SAP will also propose collection of groundwater samples. Results of the

historical data review will also be used to determine the location and number of groundwater samples.

The SAP will include the following components:

- A summary of site historical data and background information obtained, including data tables and figures presenting historical metals and organochlorine pesticide (OCP) data;
- A summary of the gamma radiation survey results;
- The data quality objective of the proposed sampling program;
- The proposed sampling approach and rationale;
- A detailed description of proposed soil and groundwater sampling and analytical methodology;
- A discussion of the risk-based data evaluation process, including screening levels that will be used to evaluate the data; and
- A description of and schedule for submittal of the Soil and Groundwater Investigation Completion Report.

A draft of the SAP will be submitted to the City for review and comment. The City's comments will be incorporated, and the SAP will be finalized and submitted to the Water Board and uploaded to State Water Resources Control Board's (State Water Board) GeoTracker database.

Task 3: SAP Implementation

GSI will implement the Water Board-approved SAP and provide direct oversight for the collection of soil and groundwater samples in accordance with the approved SAP. A State of California-licensed Professional Geologist and/or Professional Civil Engineer will supervise drilling, trenching, and sampling activities.

Pre-field Activities

Prior to any subsurface field activities, GSI will perform the following tasks:

- Obtain a drilling permit from the Alameda County Public Works Agency;
- Obtain an encroachment permit from the City of Albany Community Development Department;
- Mark proposed drilling and trenching locations and notify Underground Service Alert (USA) a minimum of two working days head of proposed subsurface work;
- Prepare a site-specific health and safety plan;
- Prepare sampling equipment, personal protective equipment (PPE) and field supplies needed for the duration of the project;
- Retain a California-licensed C57 contractor for drilling services;
- Retain a California-licensed A-C21-HAZ contractor for trenching services;
- Retain a geophysical contractor for subsurface geophysical surveying services;
- Retain Cabrera Services, a radiological specialist, for radioisotope screening and sampling services; and
- Conduct a site walk with drillers and general contractors to confirm proposed sampling locations are accessible for the necessary drilling and excavation equipment.

Trenching and Soil Sampling

GSI assumes up to 16 test pits (four per former waste cell) will be excavated with a backhoe to a total depth of approximately 10 feet below the ground surface (feet bgs) to observe lithology and/or waste composition, identify any potential "alum mud", conduct a radiological screening of

subsurface materials, and collect discrete soil samples. The proposed locations will be selected based on the historical document and aerial photograph review, GWS results, and access consideration for excavation equipment. Additionally, a subsurface geophysical survey will be conducted via ground penetrating radar and electromagnetic induction methods on all 16 proposed test pit locations to assess the presence of subsurface obstructions such as reinforced concrete and other large demolition debris. GSI assumes three soil samples will be collected per test pit at depths of approximately 1, 5 and 10 feet bgs. The sample depths will be adjusted if “alum mud” is observed or if radioactive material is detected while screening the excavated material. During test pit activities, excavated material will be placed on 10-mil polyethylene sheeting to allow for visual observation, radiological screening, and discrete-depth soil sampling. Trench locations will be recorded by GSI staff with a portable GPS device. It is assumed each sample will be analyzed for Title 22 metals by United States Environmental Protection Agency (USEPA) method 6010B/7471A, organochlorine pesticides by USEPA 8081As, and naturally occurring radioisotopes (including Europium 152, 154 and 155) by Department of Energy (DOE) method GA-01-R. Following sampling collection, the test pit will be backfilled with the excavated material in a “last out, first in” manner and compacted in approximately 1-foot lifts with a wheel roller. The backhoe and supporting equipment that comes in contact with excavated material will be thoroughly decontaminated between each test pit location. At the end of each day, the backhoe and supporting equipment be decontaminated and screened for radioisotopes to ensure no potential contaminants leave the Site. No off-site disposal of excavated soil and/or waste is assumed.

It is assumed that trenching field activities will require approximately 5 days to complete.

Drilling and Groundwater Sampling

GSI assumes up to five soil borings with temporary wells will be drilled along the perimeter of waste cells to collect grab groundwater samples. Soil borings will be drilled at proposed locations via sonic drilling method. The sonic drilling method was selected as the preferred drilling method as it has the capability to drill through concrete and other demolition debris where direct push or auger methods cannot. Sonic drilling does not require drilling mud or foam as is required for rotary drilling and thus produces significantly less waste requiring characterization and, ultimately, disposal. Additionally, sonic drilling has the advantage of collecting a continuous soil core to allow for a detailed assessment of lithology and/or waste composition.

GSI assumes two of the borings will be drilled to a maximum depth of 60 feet bgs and three of the borings will be drilled to a maximum depth of 30 feet bgs. During drilling, soil and/or waste cuttings will be placed on 10-mil polyethylene sheeting to allow for visual observation and radiological screening. Each boring will be logged for lithologic information in accordance with the American Society of Testing Materials Standard Practice for the Description and Identification of Soils, Visual Manual Procedure (ASTM D2488) by a GSI field staff under the supervision of a California Professional Geologist. Boring locations will be recorded by GSI staff with a portable GPS device

After drilling to total depth, a new, 2-inch diameter PVC well casing and slotted screen will be placed into each boring. Grab groundwater samples will be collected from each temporary well and analyzed for dissolved Title 22 metals by USEPA 6010B/7471A, organochlorine pesticides by USEPA 8081A and naturally occurring radioisotopes (including Europium 152, 154 and 155) by DOE method GA-01-R1. Following sample collection, the soil borings will be backfilled with a neat cement grout to the ground surface in accordance with Alameda County permit requirements. Grouting activities will be conducted under the observation of an Alameda County Public Works Agency representative. The drilling rig and supporting equipment that contacts subsurface material will be decontaminated between drilling locations. At the end of each day,

the drilling rig and supporting equipment will be decontaminated and screened for radioisotopes so that no potential contaminants leave the Site.

It is assumed that drilling and grab groundwater sampling field activities will require approximately 5 days to complete.

Equipment and Vehicle Staging

GSI assumes that all equipment, vehicles, and trailers will be stored on Site or at a nearby location specified by the City. Due to the public and open nature of the site, it is assumed that temporary fencing will be rented and used to secure the staging area and that after-hours security will be retained for the duration of the drilling and trenching activities.

Investigation-derived Waste

Investigation-derived wastes (IDW) generated during the work will be labelled and stored in accordance with applicable regulations and in coordination with the City. GSI anticipates IDW will consist of soil cuttings from drilling activities and decontamination water. IDW will be placed into DOT-approved 55-gallon drums and stored in the equipment and vehicle staging area. GSI will submit one soil and one groundwater sample to the analytical laboratory for waste profiling. Following waste profiling, GSI will assist with coordinating the transportation and disposal of all IDW to an appropriate landfill. For cost estimating purposes, we have included an allowance of \$8,000 for the disposal of IDW assuming it is non-RCRA California hazardous waste.

Task 4: Soil and Groundwater Investigation Completion Report

Following implementation of the SAP, GSI will prepare a Soil and Groundwater Investigation Completion Report (Completion Report) and submit it to the Water Board within 4 weeks of receipt of analytical data. The components of the Completion Report will be described in detail in the SAP, but at a minimum, will include:

- A summary of the Site historical data and background information obtained from the historical information review and the gamma radiation survey results.
- A description of soil and groundwater sampling activities, sampling methodologies and laboratory analytical methods;
- An evaluation of the soil and groundwater analytical data;
- Tables summarizing laboratory analytical results;
- Site maps showing sample locations and depths;
- Boring and/or trench logs;
- Temporary and/or permanent well construction details; and
- A data validation summary.

A draft of the Completion Report will be submitted to the City for review and comment. The City's comments will be incorporated into the Completion Report and the report will be finalized and submitted to the Water Board via email and uploaded to the State Water Board's GeoTracker online database. Additionally, site maps, laboratory data, and boring/trench logs will also be uploaded to the GeoTracker database in the appropriate electronic data file (EDF) format.

Task 5: Consultation and Project Management

This task includes an allowance of 40 hours of senior-level time for project management and to provide general consultation, as needed, outside the scope described herein. GSI will manage the project budget, schedule, perform internal QA/QC and communicate, and correspond with the City as needed throughout the duration of the work described in Task 1 to Task 4. Additionally,

GSI is available to assist with public communication, remedial cost estimating, and other non-scoped project-related tasks, if requested to do so by the City. Costs associated with the proposed level-of-effort are estimated at \$10,800 and will be billed on a time-and-materials basis. We will keep you apprised of the status of the budget for this task and will request additional funding, should it appear necessary.

Estimated Costs

The estimated costs to complete this scope of work are \$328,300. A breakdown by task is below.

| Task | Estimated Cost |
|---|------------------|
| Task 1 – Gamma Radiation Survey | \$43,000 |
| Task 2 – Soil and Groundwater Sampling and Analysis Plan Preparation | \$15,800 |
| Task 3 – Soil and Groundwater Sampling and Analysis Plan Implementation | \$241,100 |
| Task 4 – Soil and Groundwater Investigation Completion Report | \$17,600 |
| Task 5 – Project Management | \$10,800 |
| TOTAL | \$328,300 |

Work will be conducted on a time and materials basis in accordance with the schedule of charges in effect at the time the work is performed (currently the February 2024 Fee Schedule for the City of Albany, attached). GSI will not exceed the estimated costs presented above without prior authorization. We understand that the City will issue contract documents to authorize this work.

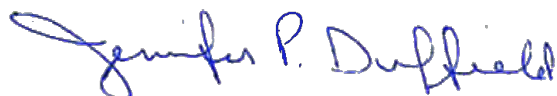
Schedule

GSI is available to begin work immediately upon receipt of authorization from the City.

Closing

Thank you for the opportunity to submit this proposal. Should you have any questions, please contact me at 510-821-8925. We look forward to working together on this project.

Sincerely,



Jennifer P. Duffield, P.E.
Principal Engineer

Attachments:

Table 1 – 2024 Fee Schedule, City of Albany

TABLE 1
GSI Environmental Inc.

FEE

SCHEDULE

CITY OF
ALBANY

Effective
February
2024

| P E R S O N N E L | H O U R L Y R A T E |
|---|----------------------------|
| Project Assistant | \$90 |
| Environmental Technician | \$90 |
| Senior Environmental Technician | \$115 |
| CADD/Graphics Specialist..... | \$115 |
| GIS Specialist, Senior Data Scientist, Senior Programmer, Senior Researcher | \$155 |
| Engineer/Scientist/Geologist I..... | \$130 |
| Engineer/Scientist/Geologist II..... | \$150 |
| Engineer/Scientist/Geologist III..... | \$165 |
| Engineer/Scientist/Geologist IV | \$180 |
| Senior Engineer/Scientist/Geologist I | \$205 |
| Senior Engineer/Scientist/Geologist II | \$225 |
| Senior Associate | \$245 |
| Principal | \$270 |

E Q U I P M E N T

| | |
|--|-----------------|
| Field Vehicle | \$150/day |
| Standard Sampling and Field Equipment..... | \$100/day |
| Photoionization Detector (PID)..... | \$120/day |
| Portable Generator..... | \$100/day |
| Air Sampling Equipment..... | \$120/day |
| Low-Flow Sampling Instrumentation..... | \$120/day |
| Submersible Pump | \$220/day |
| Sampling Pumps..... | \$75/day |
| Trimble T10/R1 Precision GPS Unit | \$175/day |
| Level C Personal Protective Equipment..... | \$45/person/day |
| Level D Personal Protective Equipment..... | \$30/person/day |
| Portable GC/MS | \$1,100/day |
| Rental Equipment Cost | cost + 10% |

O T H E R E X P E N S E S

| | |
|---|-------------|
| Outside Subcontractor Services | cost + 10% |
| Miscellaneous Expense (Travel, Shipping, Supplies, etc.)..... | cost + 10% |
| Mileage - Private Vehicles (subject to change in accordance with IRS adjustments) | \$0.67/mile |
| Insurance Certificates Cost (Specific Endorsements and/or Waiver of Subrogation)..... | cost + 10% |

P A Y M E N T

All invoices are due and payable within 30 days of the billing date. Attorney's fees, court costs, and other related expenses incurred in the collection of delinquent accounts will be paid by the client. A charge of 1.5 percent per month applies to delinquent bills.

**This fee schedule
 applies to services
 rendered in 2024.
 Charges for all services
 in subsequent years
 will be based on a new
 fee schedule effective
 January 1 of that year.**