STATEMENT OF QUALIFICATIONS

COUNTY OF HAWAII

DEPARTMENT OF PARKS AND RECREATION

NOTICE TO PROVIDERS OF PROFESSIONAL SERVICES

FISCAL YEAR 2023—2024

(July 1, 2023 - June 20, 2024)

PR.3) INDUSTRIAL HYGIENE (HAZARDOUS MATERIALS SURVEY, ASSESSMENT & PLANNING)

98-030 Hekaha Street, Unit 9, Aiea, Hawaii 96701

tel: (808) 488-1200 **fax**: (808) 488-1300

www.e2hi.com

element environmental llc

environmental · engineering · water resources

element environmental llc
environmental · engineering · water resources

June 30, 2023

Mr. Maurice Messina, Director
Department of Parks and Recreation
County of Hawaii
101 Pauahi Street,
Hilo, Hawaii 96720
Email: parks_recreation@hawaiicounty.gov

Subject: **Element Environmental, LLC's Statement of Qualifications in Response to the Department of Parks and Recreation, County of Hawaii's Notice to Providers of Professional Services, Fiscal Year 2023-24**

Dear Mr. Messina,

Element Environmental, LLC (E2) is pleased to submit our Statement of Qualifications (SOQ) to the County of Hawaii, Department of Parks and Recreation per the "*Notice to Providers of Professional Services"* solicitation notice for the fiscal year 2023 to 2024.

This serves as our **expression of interest** to provide services for **PR.3) Industrial Hygiene (Hazardous Materials Survey, Assessment & Planning).** In accordance with the notice, we have enclosed our completed Federal Form 330 (SFR330) which includes the following:

(1) The name of our firm, contact information, and principal place of business;

(2) The age of our firm and its average number of employees over the past five years;

(3) The education, training, and qualifications of our key employees;

(4) A list of recent projects and the names of five clients who may be contacted, including two for whom services were rendered during the preceding year; and

(5) Promotional/descriptive literature.

Please call me on my cellular phone number (808) 864-3952 or email ryamauchi@e2hi.com should you have any questions regarding this submittal.

Sincerely,

Ryan S.W. Yamauchi, P.E.
President

98-030 Hekaha Street, Unit 9, Aiea, Hawaii 96701 **tel:** (808) 488-1200 **fax:** (808) 488-1300
www.e2hi.com

PROFESSIONAL SERVICES QUALIFICATIONS

PART I - SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. PUBLIC NOTICE DATE	2. PROJECT CATEGORY
June 1, 2023	**PR.3) Industrial Hygiene (Hazardous Materials Survey, Assessment & Planning)**

B. POINT OF CONTACT

3. NAME AND TITLE

Ryan S.W. Yamauchi, P.E., President

4. NAME OF FIRM

Element Environmental, LLC

5. TELEPHONE NUMBER	6. FAX NUMBER	7. E-MAIL ADDRESS
(808) 488-1200	**(808) 488-1300**	**ryamauchi@e2hi.com**

C. PROPOSED TEAM

(THIS SECTION MUST BE COMPLETED FOR PROJECT CATEGORIES)

	(Check) PRIME	J-V PARTNER	SUBCON-TRACTOR	8. FIRM NAME	9. ADDRESS	10. ROLE IN THIS CONTRACT
a.	☒	☐	☐	**Element Environmental, LLC** ☐ CHECK IF BRANCH OFFICE	**98-030 Hekaha Street Unit 9, Aiea, Hawaii 96701**	**Prime Contractor** **PR.3) Industrial Hygiene (Hazardous Materials Survey, Assessment & Planning)**
b.	☐	☐	☐	☐ CHECK IF BRANCH OFFICE		
c.	☐	☐	☐	☐ CHECK IF BRANCH OFFICE		
d.	☐	☐	☐	☐ CHECK IF BRANCH OFFICE		

☒ **D. ORGANIZATIONAL CHART OF PROPOSED TEAM** ☒ *(Attachment 1)*

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Ryan S.W. Yamauchi, P.E.	**Principal Engineer**	**31**	**18**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Mstr., Civil/Environmental Engineering, UC Berkeley B.S., Civil Engineering, University of Hawaii at Manoa	• Professional Engineer, Hawaii - Civil No. 9566 • Certified Asbestos Inspector, HIASB-2905 • Certified Lead Risk Assessor/Inspector, PB-0117

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Hazardous Waste Site Supervisor Training
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Kaneohe Bay No. 2 Wastewater Pump Station Force Main Improvements, Kaneohe, Oahu, Hawaii	2017	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Design alternatives analysis for the replacement of the existing 14-inch force main. Alternatives analyzed included horizontal directional drilling, pilot tube microtunneling, and open-cut trenching the new alignment across an existing waterway. Completed design drawings and specifications for the selected alternative, horizontal directional drilling. Prepared the Engineering Design Alternatives Report, completed design calculations for the pumps and force main design, prepared design drawings and specifications, and other necessary permit documents. **Fee**: $520,000. **Role**: Project Manager/Principal Engineer.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Reconstruction/Replacement of Sewers, Ho'omaluhia Botanical Gardens, Kaneohe, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed planning, design, and preparation of construction documents for the reconstruction/replacement of existing sewer lines. Phase I included the cleaning and inspection of CCTV in accordance with the Pipeline Assessment Certification Program. Phase II assessed the sewer line deficiencies from the CCTV data, developed rehabilitation/replacement alternatives for the system, prepared schematic and concept drawings for the recommended alternatives, and prepared a cost estimate for the recommended improvements. E2 is preparing construction documents for phase III. **Fee**: $165,350. **Role**: Project Manager/Principal Engineer.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Large Capacity Cesspool Closures Hickam Field, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii	2015	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed an engineering design for five facilities' active cesspools. Three of the cesspool facilities were replaced with a septic tank, pump station, and raised leach field. Two of the cesspools were replaced with pump stations that pump wastewater to the existing wastewater collection system. Evaluated present and future wastewater flows, sizing and selecting new septic tanks, pump stations, and leach fields, and completed construction documents. **Fee**: $362,372. **Role**: Project Manager/Principal Engineer.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Waimanalo Wastewater Treatment Plant Effluent Reuse Feasibility Study, Waimanalo, Oahu, Hawaii	2014	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted a study to assess the technical, environmental, and economic feasibility of wastewater effluent reuse from the Waimanalo Wastewater Treatment Plant. Responsible for the identification of potential users and locations, including the reuse demand, and transmission and storage requirements. Tasks included public outreach, data collection, research of prior studies, and evaluation of costs. Prepared a conceptual layout and cost estimate for the preferred WWTP upgrades and transmission and storage requirements for users with strong interest in reuse. **Fee**: $219,345. **Role**: Project Manager/Principal Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Roger C. Aoki, P.E.	**Senior Environmental Engineer**	**27**	**17**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Mstr., Civil Environmental Engineering, Purdue University B.S., Civil Engineering, University of Hawaii at Manoa	• Professional Engineer, Hawaii – Civil No. 10019 • Certified Asbestos Inspector, HIASB-2902 • Certified Lead Inspector, PB-0118

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- 40-hour Construction Safety Hazard Awareness Training for Contractors
- Hazardous Waste Site Supervisor Training
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Site Investigation, Abandoned AVGAS/MOGAS Pipeline, Pearl City Peninsula, JBPHH, Oahu, Hawaii	2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted a Site Investigation for the abandoned aviation gasoline (AVGAS) and motor gasoline (MOGAS) pipeline running from the former Pearl City Fuel Annex to the waterfront fueling and cargo wharves on Pearl City Peninsula within JBPHH. Delineated and characterized the nature and extent of contamination in the soil, groundwater, and soil gas caused by historic releases of AVGAS/MOGAS, conducted an environmental hazard evaluation, and to provide a basis for developing effective remedial measures and response actions for the area. **Fee**: $375,000. **Role**: Project Manager/Senior Environmental Engineer.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Stormwater Drainage System Survey, JBPHH, and Outlying Areas, Oahu, Hawaii	2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Created an integrated, scaled, and detailed storm drainage map and database. The maps and results of the survey were used to determine areas in need of repair or cleaning. Conducted a survey and condition assessment of all storm drain features, and in specified situations, sediment sampling and analysis, to create a detailed base-wide storm drainage map and database. **Fee:** $1,799,119. **Role:** Project Manager/Senior Environmental Engineer.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Pier 29 Container Yard Improvements, Honolulu Harbor, Honolulu, Oahu, Hawaii	2012	2012

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Prepared design specifications for the handling of contaminated soil and groundwater to be encountered during the construction. The improvements include a new pavement structure to accommodate a new container yard. E2 prepared design specifications to address air monitoring during construction and the removal of abandoned fuel pipelines encountered. E2 participated in coordination meetings with the Harbors Division and the IDPP. E2 also addressed comments by HDOH who reviewed the construction documents. **Fee**: $30,340. **Role**: Senior Environmental Engineer. ***COMMENDATION LETTER - EXCELLENT PERFORMANCE***

e.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Kalewa Wastewater Pump Station Improvements Design Honolulu, Oahu, Hawaii	2018	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed an engineering design of a new packaged wastewater pump station and new dual relief force main for the Kalewa Street wastewater pump station. Evaluated present and future wastewater flows from the tributary, sizing and selecting the new packaged pump station, and completed construction documents for the new packaged wastewater pump station and new dual relief force main. Integral to the design was planning the phasing of construction, which would allow continued and uninterrupted use of the airport facilities by the tenants during construction. **Fee**: $52,000. **Role**: Senior Environmental Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Matthew J. Neal	**Senior Environmental Scientist**	**25**	**17**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Environmental Science/Geology, Willamette University	

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Hazardous Waste Site Supervisor Training
- Maritime Security Awareness Training (MARSEC)
- Bloodborne Pathogens, First Aid, CPR and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Dredged Material Evaluation for Dredging of the Ala Wai Canal, Honolulu, Oahu, Hawaii	2017	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted a dredged material evaluation of sediments proposed for maintenance dredging from the Ala Wai Canal. The project involved performing the following tasks: 1) preparation of a Work Plan/Sampling and Analysis Plan that was submitted to and approved by U.S. EPA Region 9; 2) collection and analysis of sediment samples from the canal for chemistry and bioassay testing for ocean disposal of sediments; and 3) preparation of a Sampling and Analysis Report that was submitted to and approved by U.S. EPA Region 9. **Fee**: $443,257. **Role**: Senior Environmental Scientist/Health and Safety Manager.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Site Investigation, Former Molokai Electric Company Power Generating Station, Kaunakakai, Molokai, Hawaii	2016-2018	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted a Site Investigation (SI) of the former Molokai Electric Company (MOECO) site in downtown Kaunakakai. The SI included a comprehensive study of residual near and subsurface contamination from previous MOECO activities, primarily from chemicals of concern polychlorinated biphenyls (PCBs) and petroleum and heavy metals. E2 collected over 700 discrete soil samples as well as 88 *MULTI INCREMENT*® soil samples, soil-gas, concrete and groundwater samples. In addition, E2 conducted a synoptic water level study to help determine potential migration of subsurface contaminants. Prior to completion of the field portion of the project, E2 completed two Special Management Area (SMA) permit applications for the County of Maui for the project. The results of the SI will be used to determine the most appropriate remedial action for the site. Responsibilities included Project Management, completion of the SMA permits, field oversight and coordination, drafting of the WP/SAP and a final report. **Fee**: $830,974. **Role**: Project Manager/Senior Environmental Scientist/Health and Safety Manager.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	
Pearl Harbor Naval Shipyard Intermediate Maintenance Facility Storm Drain Remedial Investigation, JBPHH, Oahu, Hawaii	2017	

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 completed a Remedial Investigation (RI) to assess the nature and extent of contamination associated with the storm drain lines identified in the previous Site Inspection (SI). The project required collection of data of sufficient amount and quality to evaluation the nature and extent of contamination associated with each area of concern at the site identified through the SI, and the degree of risk/hazard any releases may potentially pose to human health and the environmental. The fieldwork included soil, groundwater, and soil gas sampling and analysis. A tier 1 human health risk assessment (HHRA), tier 1 ecological risk screening (limited to contaminates of potential concern in groundwater), and tier 2 HHRA were also completed. **Fee**: $670,777. **Role**: Project Manager, Senior Environmental Scientist.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
Arlene H. Campbell, L.G.	**Senior Geologist**	a. TOTAL **34**	a. TOTAL **17**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Graduate Work, Vanderbilt University B.A., Geology, Minor Hydrology, Austin Peay University	Licensed Geologist, Washington - No. 1664

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Hazardous Waste Site Supervisor Training
- Maritime Security Awareness Training (MARSEC)
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Phase I and II Environmental Site Assessments, Environmental Hazard Evaluation, and Environmental Hazard Management Plan, Whitmore Village Property, Wahiawa, Oahu, Hawaii	2015	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 completed a Phase II ESA as part of the due diligence process for a transfer of property ownership. Based on E2's preliminary document review, historic research, interviews with current and former owner employees, and limited site reconnaissance, contaminants of potential concern (COPC) were identified. Conducted *MULTI INCREMENT*® and discrete sampling from shallow and subsurface soil and dry sediment. Prepared an Environmental Hazard Evaluation/Environmental Hazard Management Plan (EHE/EHMP) to address contamination remaining in place at the site. **Fee**: $90,000. **Role**: Project Manager/Senior Geologist.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Environmental Site Assessments, Kapalama Container Terminal Yard Project, Honolulu Harbor, Oahu, Hawaii	2015	Estimated 2024

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Characterized the site to provide consistent and effective management practices and to mitigate potential human health and environmental hazards associated with direct exposure to contaminants of potential concern in soil, groundwater, concrete, sediment, and soil gas during proposed construction/dredging activities required for the redevelopment of the site as a container terminal yard. Identified historic land use, reviewed previous construction and environmental work, project design and planning, environmental sampling, data management and evaluation, and report preparation. **Fee**: $500,000. **Role**: Senior Geologist. ***2023 ACECH ENGINEERING EXCELLENCE AWARD***

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Environmental Conditions of Property, Various Sites, Guam	2022	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Gathered and analyzed data and information to classify the property into several ECP types. Reviewed historical records, identified historic land use associated with hazardous materials and wastes, and reviewed regulatory files, environmental reports, and permits, conducted a visual site inspection, oversaw data management and evaluation, report prepared. **Fee**: $256,062. **Role**: Project Manager/Senior Geologist.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Preparation of Applications for WQC 401 and 404, Kalaeloa Barbers Point Harbor, Oahu, Hawaii	2012	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Prepared the Section 401 WQC application that described the project, existing environment, and potential environmental effects, chemical and biological, from proposed activities and included information regarding the owner, general contractor, project site, and receiving state water. **Fee**: $23,822. **Role**: Project Manager/Senior Geologist.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Steven R. Spengler, Ph.D.	**Senior Hydrogeologist**	**35**	**17**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Ph.D., Hydrogeology, and Mstr., Geology, University of Hawaii at Manoa B.S., Geochemistry, UC Santa Cruz B.S. Chemistry, UC Riverside	

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Hazardous Waste Site Supervisor Training
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Hydrogeologic Study to Detect Impact of MILCON P-184 Reject Water, Diego Garcia, British Indian Ocean Territory	2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 conducted a hydrogeologic study to evaluate the potential impacts to the water supply aquifer in the Cantonment Area on Diego Garcia resulting from the disposal of reject water created by the recently constructed nanofiltration water treatment plant. A temporary injection well was installed roughly 100 feet south of the nanofiltration plant recharge field. A network of 35 nested piezometers was installed in the vicinity of the temporary injection point and a nine-hour duration injection test was conducted using brackish water spiked with a bromide tracer. The monitoring data collected during this injection test along with a pump test conducted on a nearby water supply well was used to calibrate 2D/3D density dependent groundwater models (SEAWAT) that were used to evaluate the potential for the injected concentrate from the nanofiltration plant to impact the water quality in the nearby water supply wells located inland of the recharge field within the Cantonment Area. **Fee**: $476,304. **Role**: Project Manager/Senior Hydrogeologist.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Kanaha Pond Wildlife Sanctuary Hydrogeologic Study, Kahului, Maui, Hawaii	2010	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 conducted a 10-month long hydrogeological investigation to quantify the seasonal relationships between the various inputs and outputs to the ponds in the refuge. Monitoring included installation of nested piezometers, a meteorological station, tidal gauging stations, and automated rainfall gauges, and the collection of sediment cores. **Fee**: $92,000. **Role**: Senior Hydrogeologist.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Proposed Seawater Desalination Facility Project, Kalaeloa, Oahu, Hawaii	2018	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Principal investigator for a large-scale pump test conducted on a 1,600-foot deep basaltic well located in Kalaeloa proposed for use in a desalination project for the Honolulu Board of Water Supply. The deep well was pumped for three consecutive days at pump rates of between 520 to 540 gallons per minute and the pumped water was injected into a nearby injection well that was screened 300 feet into the underlying caprock aquifer. Water quality measurements were made throughout the duration of the pump test for temperature, conductivity, turbidity, pH, oxygen reducing potential, dissolved oxygen, and silt density index. The drawdown and tidal efficiency of the basaltic well was determined by installing a CDT probe in the pumping well while the efficiency of the caprock injection well was determined using a pressure transducer. A total of six water samples were collected during the duration of the pump test and submitted for analysis for all drinking water constituents including those listed in Appendix A of HAR Chapter 11-20 as well as secondary standards defined by the US Environmental Protection Agency. **Role**: Senior Hydrogeologist.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Eric M. Lau, P.E.	**Senior Environmental Engineer**	**19**	**14**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Mstr., Civil/Environmental Engineering, MIT B.S., Civil/Environmental Engineering, MIT B.S., Biology, MIT	• Professional Engineer, Hawaii – Civil No. 12977 • Certified Asbestos Inspector, HIASB-3198 • Certified Lead Risk Assessor/Inspector, PB-0439

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Hazardous Waste Site Supervisor Training
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Non-Domestic Wastewater Management Plan, JBPHH, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 evaluated NAVFAC Hawaii's 8,000+ facilities to identify, characterize, and quantify non-domestic wastewater discharges to the sanitary sewer system tributary to the NAVFAC Hawaii Wastewater Treatment Plant (WWTP). Coordinated site visits to and conducted interviews with facility managers of over 750 facilities. The inventory of non-domestic wastewater sources collected in this study will be used to determine additional non-domestic discharges that should be internally permitted and regulated. The project also includes quarterly wastewater sampling efforts to collect both grab and 24-hour composite samples from WWTP influent locations on the Hickam Field flight line and Pearl Harbor, as well as effluent samples from the WWTP. **Fee**: $1,154,918. **Role**: Assistant Project Manager/Senior Environmental Engineer.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Navy Spill Prevention Control and Countermeasure Plan Update, JBPHH, Oahu, Hawaii	Annually	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed annual SPCC site inspections in accordance with oil pollution prevention guidelines (40 CFR 112) for 170 regulating Above Storage Tanks (ASTs) storing petroleum and oil. Conducted inspections of over 174 ASTs and bulk oil storage areas at NAVFAC Hawaii facilities. Updated the inventory, management, and evaluation of the condition of Navy ASTs. E2 has generated annual SPCC Inspection Reports based on inventory findings in 2013, and 2015-current. **Fee:** $143,381. **Role**: Senior Environmental Engineer.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Waianae Agricultural Park Improvements, Waianae, Oahu, Hawaii	2017	2018

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed the design of miscellaneous improvements to the drainage system at the Waianae Agricultural Park. The improvements included slope stabilization of drainage ways, diversion of runoff into an infiltration basin, design of overflow protection drainage intakes for the infiltration basin, and repairs to existing concrete drainage swales. Responsible for preparation of construction documents (i.e., plans and specifications) and services during bidding and construction. The construction plans were completed on an accelerated schedule to meet the funding requirements for construction. **Fee**: $60,000. **Role**: Senior Environmental Engineer.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Reservoirs 155 and 255 Capacity Study, Kunia, Oahu, Hawaii	2010	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted a study concerning the repair, maintenance, and capacity options for Reservoirs 155 and 225 of the Waiahole Ditch Irrigation System for the Agribusiness Development Corporation. **Fee**: $30,000. **Role**: Senior Environmental Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Bernice M. Balete, P.E.	**Senior Environmental Engineer**	**29**	**13**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Civil Engineering, University of Hawaii at Manoa	• Professional Engineer, Hawaii – Civil No. 10186 • Certified Asbestos Project Designer/Inspector, HIASB-0499 • Certified Lead Risk Assessor/Project Designer, PB-0449

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Maritime Security Awareness Training (MARSEC)
- Hazardous Waste Site Supervisor Training
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
BWS Kawela 228 Reservoir, Kapolei 215 Reservoir, and Wahiawa 1361 Reservoirs No. 1 & 2 Facility Repair and Repainting, Oahu, Hawaii	2017	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted asbestos and lead paint surveys at the Kailua Heights and Waimanalo Booster Pump Stations, prepared letter reports documenting sampling and results, prepared specifications for addressing the handling and disposal of hazardous materials during demolition/construction. E2 also prepared NPDES Permit Applications for the Kapolei and Kawela Reservoirs project sites. **Fee**: $28,570. **Role**: Field Engineer/Project Manager.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Environmental Site Assessments, Kapalama Container Yard, Honolulu Harbor, Oahu, Hawaii	2014	Estimated 2024

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed a Phase II Environmental Site Assessment (ESA) of the proposed Kapalama Container Yard site to determine the environmental history and condition of the proposed project site. Completed document reviews and site assessments and prepared a Work Plan for the Phase II ESA. Soil, sediment, groundwater, concrete, and soil gas sampling was completed. Additional sampling of the University of Hawaii Marine Center buildings for hazardous building materials including asbestos and lead paint was also completed. The results of the sampling are presented in an Environmental Hazard Evaluation (EHE) report. Contamination issues that may affect the construction of the container yard are being addressed in an Environmental Hazard Management Plan (EHMP) that was prepared by E2. All work was coordinated, reviewed, and approved by HDOH. **Fee**: $500,000. **Role**: Senior Environmental Engineer. ***2023 ACECH ENGINEERING EXCELLENCE AWARD***

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Integrated Solid Waste Management Plan, JBPHH, Oahu, Hawaii	2014	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Prepared an Integrated Solid Waste Management Plan (ISWMP) to accomplish the following: define and document the installation's current ISWMP; establish goals for improving solid waste management; identify specific actions required to achieve the plan goals; promote compliance with applicable Federal, DOD, and local solid waste management regulations and policies; and evaluate alternative designs for future solid waste management. Responsibilities included field work (including waste stream assessment), data collection and evaluation, and ISWMP preparation. **Fee**: $557,999. **Role**: Assistant Project Manager/Senior Environmental Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Marvin D. Heskett, III	**Senior Chemist**	**33**	**9**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Biochemistry, California Polytechnic University at San Luis Obispo	• Certified Asbestos Inspector, HIASB-4631 • Certified Lead Risk Assessor/Inspector, PB-1150

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Hazardous Waste Site Supervisor Training
- Sampling for Defensible Environmental Decisions, Basic and Advanced
- Shipley Group NEPA Training
- Advanced Systems QA/QC 40-hour Course
- E3 Data Quality Objective
- Maritime Security Awareness Training (MARSEC)
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Preconstruction Activities for the Applicable Monitoring and Assessment Plan for the Honolulu Rail Transit Project, Waiawa Tributary and Waiawa Stream WQC0789, Pearl City, Oahu, Hawaii	2019	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed preconstruction monitoring in compliance with an AMAP for construction within the U.S. waterway of Waiawa Stream, prior to the construction of a concrete pier within the high-water mark. This is the first of three phases of stream monitoring to ensure construction does not impact stream water quality. **Fee**: $494,104. **Role**: Senior Chemist.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Navy Stormwater National Pollutant Discharge Elimination System, Compliance Sampling, Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed NPDES stormwater sampling for CRNH. E2 created supporting documents including a Quality assurance plan, health and safety plan, stormwater monitoring plan and a stormwater monitoring workbook, collection of surface flow samples during the initial first flush of stormwater during a representative storm event from 32 separate monitoring points throughout U.S. Navy facilities on Oahu, and analysis of the stormwater samples for contaminants. Sample collection is accomplished through setup and use of automated samplers and portable samplers and telemetry. Individual storm event reports are generated as well as an end of year annual monitoring report. E2 conducted a site visit and stormwater collection point measurements, field setup and sampling, creation of stormwater inlet collection systems, including stainless steel fabrications, QA Review of Stormwater Reports, and generation of a yearend annual report. **Fee**: $426,480 (annually). **Role**: Senior Chemist.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Water Quality Monitoring, Rip-Rap Repair and Floating Dock, USCG Station Nawiliwili Small Boat Harbor, Lihue, Kauai, Hawaii	2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed an AMAP to monitor impacts on harbor water quality from a U.S. Coast Guard in-water construction project. E2 created a work plan, established baseline conditions by monitoring water quality parameters before construction, monitored water quality from a vessel in and around the construction project, assessed the final water quality post construction, and generated a final report. **Fee**: $60,000. **Role**: Assistant Project Manager/Senior Chemist.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Candace K. Yamauchi, P.E.	**Senior Environmental Engineer**	**18**	**12**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Earth and Environmental Engineering, Columbia University	• Professional Engineer, Hawaii – Civil No. 16320 • Certified Asbestos Inspector, HIASB-3840 • Certified Lead Risk Assessor/Inspector, PB-1135

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Qualified Stormwater Compliance Manager
- Hazardous Waste Site Supervisor Training
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Illicit Discharge Survey, Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii	2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed an illicit discharge survey for non-stormwater discharges to the CNRH's municipal separate storm sewer system (MS4) and waters of the U.S. in accordance with the NPDES permit issued. Inspected over 1,300 facilities, developed recommendations for possible corrections, and prepared the associated preliminary cost estimates. **Fee**: $393,019. **Role**: Senior Environmental Engineer.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Waianae Agricultural Park Improvements, Waianae, Oahu, Hawaii	2017	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed the design of miscellaneous improvements to the drainage system at the Waianae Agricultural Park. The improvements included slope stabilization of drainage ways, diversion of runoff into an infiltration basin, design of overflow protection drainage intakes for the infiltration basin, and repairs to existing concrete drainage swales. Responsible for preparation of construction documents (i.e., plans and specifications) and services during bidding and construction. The construction plans were completed on an accelerated schedule to meet the funding requirements for construction. **Fee**: $60,000. **Role**: Senior Environmental Engineer.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Waimanalo Wastewater Treatment Plant Effluent Reuse Feasibility Study, Waimanalo, Oahu, Hawaii	2014	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted a study to assess the technical, environmental, and economic feasibility of wastewater effluent reuse from the Waimanalo Wastewater Treatment Plant. Responsible for the identification of potential users and locations, including the reuse demand, and transmission and storage requirements. Tasks included public outreach, data collection, research of prior studies, and evaluation of costs. Prepared a conceptual layout and cost estimate for the preferred WWTP upgrades and transmission and storage requirements for users with strong interest in reuse. **Fee**: $219,345. **Role**: Senior Environmental Engineer.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Storm Water Management Plan, Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii	2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Prepared the Stormwater Management Plan for the Navy in accordance with their NPDES permit. **Fee**: $291,000. **Role**: Senior Environmental Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Lindsay B. Mason, P.E.	**Senior Environmental Engineer**	**21**	**14**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Environmental Engineering, Michigan Technological University	Professional Engineer, MI - No. 6201059411

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- RCRA S30 Certification-Hazardous/Toxic Materials Management
- Hazardous Waste Site Supervisor Training
- DOT HM-181 Hazardous Materials Training
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Master Plan for Marine Corps Base Hawaii Sanitary Landfill, Kaneohe, Oahu, Hawaii	2017	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Prepared the Master Plan for the Marine Corps Base (MCB) Hawaii Landfill to fulfill the requirements of their Solid Waste Management Permit. The Master Plan is comprised of three parts: the Landfill Implementation Plan (LIP), the Operations Plan, and the Closure/Post-Closure Plan. The LIP involves evaluating the Final Grading Plan and making revisions as needed, providing a 20-year fill sequencing plan, and Basis of Design (BOD). The Operations Plan has been written to help facilitate the MCB Hawaii Landfill staff to comply with the Landfill's current permit and to operate efficiently. The Closure/Post-Closure Plans details landfill closure procedures in accordance with State and Federal regulations. **Fee**: $143,975. **Role**: Senior Environmental Engineer.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Landfill Optimization Study for Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii	2017	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 prepared a Landfill Optimization Study (LOS) for the Marine Corps Base (MCB) Hawaii to evaluate their MCB Hawaii Sanitary Landfill. The purpose of the LOS was to: (1) evaluate landfill operations, equipment requirements, and personnel and to make recommendations as to how the overall operations of the landfill can be optimized; (2) conduct a waste evaluation study to evaluate and optimize waste pickups on base and (3) conduct an alternatives assessment that evaluated keeping the landfill open and operating as is, keeping the landfill open and implementing the LOS recommendations, and closure of the landfill. A detailed cost analysis was conducted for each of the alternatives and E2 provided recommendations to the MCB Hawaii based on the findings of the study. **Fee**: $149,025. **Role**: Assistant Project Manager/Senior Environmental Engineer.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Landfill Consulting Services for Two Closed Landfills Island of Hawaii, Hawaii	2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 provided various consulting services at two closed landfills, including performing a geophysical survey, infra-red photography, and mapping to determine landfill boundaries and fire characterization, and preparing a landfill fire management plan. Prepared a landfill alternative plan to evaluate fire control/extinction, waste mining, and other alternatives. Assisted with an U.S. Environmental Protection Agency (EPA)-supported fire control pilot test to evaluate the efficacy of using waste excavation and the application of foam/water as a method to extinguish fire in landfill hot spots. Tasks included quarterly monitoring of landfill gas and subsurface fire conditions, preparation of quarterly and annual monitoring reports, and periodic fire management activities (i.e., carbon dioxide [CO2] injection, landfill cover maintenance, and landfill fire response, etc.). **Fee**: $389,000. **Role**: Senior Environmental Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Angela K. Peltier	**Geologist**	**19**	**17**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Geology and Geophysics, University of Hawaii at Manoa	

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- ASTM E1527 Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process Certification
- First Aid, and CPR Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Phase I Environmental Site Assessment, Mauna Kapu Station, Waianae Mountain Range, Waianae, Oahu, Hawaii	2021	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed a Phase I Environmental Site Assessment (ESA) for the 1.113-acre Mauna Kapu Station located near the southern ridgeline of the Waianae Mountain Range. Performed in general conformance with ASTM E1527-21, Standard Practice for ESAs. Researched the current and historical site uses and completed a visual site inspection to assess if current or historical property uses have impacted the soil or groundwater beneath the property that could pose a threat to human health and/or the environment. Several potential sources of soil and groundwater contamination associated with historical sites were identified. **Fee**: $41,239. **Role**: Geologist.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Phase I Environmental Site Assessment, Waiawa, Oahu, Hawaii	2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed a Phase I ESA as part of due diligence to support the acquisition of easements on non-Department of Defense (DoD) land, required for replacement of the U.S. Navy's Waiawa Water Transmission Main. Reviewed literature and agency records and previous landowners, interviewed individuals who might have knowledge of current or past operations, and conducted a visual site inspection of each property. Identified and researched over 99 subject and adjacent property parcels, generated site drawings on AutoCAD, researched and requested information regarding current and historic land use and ownership, identified and request regulatory files, environmental reports, and permits, interviewed property owners and government agency representatives, data management and evaluation, and report preparation. **Fee**: $105,181. **Role**: Geologist.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Environmental Hazard Evaluation/Environmental Hazard Management Plans, Naval Magazine Lualualei UST Tank NM-34, JBPHH, Oahu, Hawaii	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed an EHE and EHMP to identify and evaluate potential hazards to human health and sensitive ecological receptors posed by subsurface petroleum contamination, impacted groundwater, and soil identified at UST NM-34 site under current and potential future site conditions. The EHE/EHMPs were conducted in general accordance with State of Hawaii Department of Health (HDOH) guidance and included a review of historic land use and environmental investigations conducted at the site; evaluation of the nature, magnitude and, extent of contaminants of potential concern (COPC); evaluation of potential negative impacts on human health and the environment posed by allowing contaminated media to remain in place; and a discussion of impacted media management and disposal of to prevent unmitigated exposure to human and ecological receptors. Identified, requested, and reviewed site specific reports, regulatory files, environmental reports; generated AutoCAD drawings; assisted with identification of COPCs, potential receptors and migration pathways; assisted with the identification of soil and groundwater management practices should exposure to impacted media occur, and prepared report. **Fee**: $49,021. **Role**: Geologist.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Jodie C.A. Tsubone, P.E.	**Civil Engineer**	**11**	**8**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Civil Engineering, University of Hawaii at Manoa	• Professional Engineer, Hawaii – Civil No. 17048 • Certified Asbestos Inspector, HIASB-4629 • Certified Lead Inspector, PB-1151

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Erosion and Sediment Control Plan Coordinator (ESCP)
- Maritime Security Awareness Training (MARSEC)
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Lead in Drinking Water Testing at Priority Areas JBPHH and Naval Computer and Telecommunications Area Master Station Pacific JBPHH and NCTAMS Pacific, Wahiawa, Oahu, Hawaii	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted drinking water testing for lead as a protective measure at several priority areas and various schools and childcare facilities on Navy Installations. Quick turnaround times were required for sampling, laboratory analysis, and notifications. Initial site investigations were conducted to develop a comprehensive two-step sampling plan, in accordance with updated Navy directives and EPA guidance. Field work involved multiple visits to each facility to prepare and sample over 700 drinking water outlets, conducted during evenings and weekends to minimize the impact on facility operations. Upon completion of the two-step sampling process, corrective actions were immediately developed and provided to the Navy. A Project Summary Report documented the work and findings. **Fee:** $99,595. **Role:** Assistant Project Manager/Lead Civil Engineer.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Reconstruction/Replacement of Sewers, Ho'omaluhia Botanical Gardens, Kaneohe, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed planning, design, and preparation of construction documents for the reconstruction/replacement of existing sewer lines. Phase I included the cleaning and inspection of CCTV in accordance with the Pipeline Assessment Certification Program. Phase II assessed the sewer line deficiencies from the CCTV data, developed rehabilitation/replacement alternatives for the system, prepared schematics, and concept drawings for the recommended alternatives, and prepared a cost estimate for the recommended improvements. E2 is preparing construction documents for phase III. **Fee**: $165,350. **Role**: Assistant Project Manager/Civil Engineer.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Ozone-Depleting Substances (ODS) Inventory and Management Plan for Naval Air Facility Atsugi (NAFA), Atsugi, Japan	2017	2018

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 updated the air source inventory to include all ODS containing units regulated or potentially regulated by the Japan Environmental Governing Standard (JEGS) and air emission sources (except ODS) that are regulated by the JEGS. Fieldwork for the project included verification of over 2,400 refrigerant and air emission sources at over 160 facilities. Responsibilities included: preparation of the Work Plan, completion of field inspections, preparation of the updated database inventory, and quality assurance review of the updated Refrigerant Management Plan. **Fee**: $199,000. **Role**: Civil Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12 TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Austin A. Lutey, E.I.T.	**Environmental Engineer**	**15**	**15**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Civil and Environmental Engineering, UCLA	• Certified Asbestos Inspector, HIASB-3199 • Certified Risk Assessor/Lead Inspector, PB-0440

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Hazardous Waste Site Supervisor Training
- Maritime Security Awareness Training (MARSEC)
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Closure Activities and Removal of Under and In-Ground Structure at Former JN Chevrolet Location, Haleiwa, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 previously completed a Limited Phase II ESA as part of a due diligence to detect any environmental issues for property acquisition in 2017. Areas of concern recommended for additional sampling to evaluate the nature and extent of contamination. Field work included discrete soil sampling and groundwater sampling from the UST excavation. Responsibilities for this project included groundwater sampling. **Fee**: $57,1910. **Role**: Environmental Engineer.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Asbestos Survey, Naval Base Guam, Guam	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 completed an asbestos survey of 109 buildings with a total survey area of 1,014,904 square feet at NBG for the NAVFAC Pacific. E2 prepared a Work Plan (WP) and Health and Safety Plan (HSP) prior to field work. A total of 7,134 bulk samples were collected by a team of 4 inspectors, over four mobilizations within a year. E2 prepared Draft and Final survey reports that included a summary table of findings, plans with approximate locations of samples taken, extent of most HAs, a closeup and panoramic photo log of samples, and laboratory reports. Responsibilities included preparation of the WP and HSP, coordination of field work, field work, and preparation the Draft and Final Survey Reports. **Fee**: $1,065,234. **Role**: Environmental Engineer.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Operation and Maintenance and Monitoring for multiple sites, JBPHH, Oahu, Hawaii	2013-2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 completed four years of Operation and Maintenance (O&M) of two oily waste collection and treatment facilities within the Pearl Harbor Navy Shipyard. E2 has managed hazardous and oily wastes recovered from two product recovery systems installed at the Building 8 and Oscar 2 Pier former release sites. The Building 8 system includes three Fuel Oil Skimmer System (FOSS) units while the Oscar 2 Pier consists of five FOSS units. E2 conducted weekly, monthly, and quarterly inspections and maintenance to keep both product recovery systems up and running efficiently. E2 completed system repairs, oily product gauging of over 100 wells, fuel profile sampling, NPDES compliance sampling, disposal of recovered product, and system troubleshooting. **Fee**: $431,080. **Role**: Environmental Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Danny C. Liu	**Chemical Engineer**	**35**	**8**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Chemical Engineering, University of Colorado at Boulder	• Certified Asbestos Inspector, HIASB-4653 • Certified Risk Assessor/Lead Inspector, PB-1136

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- Hazardous Waste Site Supervisor Training
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Construction Engineering and Inspection for Honolulu Rail Transit Project, Honolulu, Oahu, Hawaii	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Liu served as an Environmental Compliance Monitor for the West Sector of the Honolulu Rail Transit project that spans from Kapolei to Aloha Stadium. Responsible for monitoring the Contractor's performance of environmental monitoring of the Construction Contract, which includes National Pollutant Discharge Elimination System (NPDES) permit compliance, 401 water quality certification compliance, noise permit compliance, air pollution compliance, and solid and hazardous waste compliance. He conducted weekly inspections of the construction sites to assess compliance with required BMPs, and mitigation measures required under the Final Environmental Impact Statement (EIS) and the Record of Decision (ROD). **Fee**: $300,000 (annually). **Role**: Environmental Compliance Monitor.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Illicit Discharge Storm Water Inspections for Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completing an illicit discharge survey for non-storm water discharges to CNRH municipal separate storm sewer (MS4) and waters of the U.S. in accordance with the NPDES permit issued. The project scope includes inspections of over 1,800 sites at Naval installations throughout the island of Oahu. The inspections are to identify any existing or potential sources of illicit discharges at each facility. To date, the field inspections are near 90% complete and a draft report summarizing the findings is being prepared. Responsibilities include conducting inspections, identifying corrective actions, updating the database for submittal, and preparation of conceptual designs and cost estimates for corrective actions. **Fee**: $656,175. **Role**: Engineer.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Asbestos Survey, Commander Fleet Activities Yokosuka, Yokosuka, Japan	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted an asbestos survey of over 100 buildings with a total area of 2,139,464 square feet and constructed between 1914 and 1970 at CFAY, Japan for the NAVFAC Pacific. E2 prepared a Work Plan (WP) and Health and Safety Plan (HSP) prior to field work. Responsibilities include sampling for asbestos and lead, thoroughly documenting all field work activities with notes and photographs, and preparing report summary tables and computer-aided design (CAD) figures. **Fee**: $999,976. **Role**: Asbestos Inspector.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Katie L. Kilway	**Environmental Scientist**	**16**	**13**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Environmental Science, University of Notre Dame	• Certified Asbestos Inspector, HIASB-3284

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Hazardous Waste Site Supervisor Training
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Storm Water Monitoring for Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii	2019	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted stormwater monitoring at over 70 permitted industrial sample locations across the Combined Navy Region Hawaii. Monitoring work was conducted to comply with terms of National Pollutant Discharge Elimination System Permit Number HI S000257 for the Navy's municipal separate storm sewer system (MS4). Samples were analyzed for a large array of constituents ranging from nutrients and heavy metals to herbicides, pesticides and volatile organic compounds as determined through a Storm Water Pollution Control Process. Automated and manual sample methods were deployed to collect samples from a wide array of sample locations ranging from sheet flow through grassy swales to combined storm drain inlets. To capture flow from a variety of industrial facilities, E2 designed and had various sheet flow sampling devices fabricated. Stainless-steel v-notched weirs were installed in storm drain inlets to isolate flows from each permitted facility. E2 also designed several sheet flow sampling devices which were fabricated out of stainless-steel ranging from flat pans to portable trench drains. High resolution geographic referenced rain data collected from across CNRH helped the Navy to understand the highly variable nature of rainfall in the region and to better predict stormwater compliance measures. **Fee**: $448,692. **Role**: Environmental Scientist.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Spill Prevention Control and Countermeasure Plan Update, JBPHH, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed annual SPCC site inspections for the Navy in accordance with oil pollution prevention guidelines (40 CFR 112) for 170 regulating Above Storage Tanks (ASTs) storing petroleum and oil. Project entailed conducting inspections of over 174 ASTs and bulk oil storage areas at NAVFAC Hawaii facilities on Oahu. Worked closely with NAVFAC personnel to update the inventory, management, and evaluation of the condition of Navy ASTs. **Fee:** $143,381 annually. **Role**: Environmental Scientist.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Illicit Discharge Storm Water Inspections for Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 is completing an illicit discharge survey for non-storm water discharges to CNRH municipal separate storm sewer (MS4) and waters of the U.S. in accordance with the NPDES permit issued. The project scope includes inspections of over 1,800 sites at Naval installations throughout the island of Oahu. The inspections are to identify any existing or potential sources of illicit discharges at each facility. To date, the field inspections are near 90% complete and a draft report summarizing the findings is being prepared. Responsibilities include conducting inspections, identifying corrective actions, updating the database for submittal, and preparation of conceptual designs and cost estimates for corrective actions. **Fee**: $656,175. **Role**: Environmental Scientist.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Arnold David West	**Staff Environmental Scientist**	**6**	**6**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Applied Physics, Jacksonville University, Florida	• Certified Asbestos Inspector, HIASB-4625 • Certified Lead Risk Assessor/Inspector, MI P-08520

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
County of Maui Construction & Demolition Landfill Waste Profiling, Maui, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Prepared and approved waste profiles Construction & Demolition (C &D) at County of Maui Landfills. **Fee**: $231,260. **Role**: Staff Environmental Scientist.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Asbestos Survey, Naval Base Guam, Guam	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed an asbestos survey of 109 buildings with a total survey area of 1,014,904 square feet at NBG for the NAVFAC Pacific. E2 prepared a Work Plan (WP) and Health and Safety Plan (HSP) prior to field work. A total of 7,134 bulk samples were collected by a team of 4 inspectors, over four mobilizations within a year. E2 prepared Draft and Final survey reports that included a summary table of findings, plans with approximate locations of samples taken, extent of most HAs, a closeup and panoramic photo log of samples, and laboratory reports. Responsibilities included preparation of the WP and HSP, coordination of field work, field work, and preparation the Draft and Final Survey Reports. **Fee**: $1,065,234. **Role**: Staff Environmental Scientist/Inspector.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Asbestos Survey, Commander Fleet Activities Yokosuka, Japan	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted an asbestos survey of over 100 buildings with a total area of 2,139,464 square feet and constructed between 1914 and 1970 at CFAY, Japan for the NAVFAC Pacific. E2 prepared a Work Plan (WP) and Health and Safety Plan (HSP) prior to field work. Responsibilities include sampling for asbestos and lead, thoroughly documenting all field work activities with notes and photographs, and preparing report summary tables and computer-aided design (CAD) figures. **Fee**: $999,976. **Role**: Staff Environmental Scientist/Inspector.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Asbestos Survey, U.S. Naval Hospital, Yokosuka, Japan	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted asbestos surveys of U.S. Navy Hospital Buildings 1400 (the Hospital) and Building 3201 (Management Information) for the NAVFAC Pacific. E2 prepared a draft survey report, which included an ACM inventory, summary tables of findings, floor plans with approximate locations of samples taken, asbestos status, a closeup and panoramic photo log of samples, and laboratory reports. E2 is currently preparing the final survey report. As a benefit to the Navy, E2 is also preparing interactive PDF files that present the ACM inventory when a specific room in the Hospital is selected. **Fee**: $268,039. **Role**: Staff Environmental Scientist/ Inspector.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Daniel W. Amato, Ph.D.	**Environmental Scientist**	**7**	**5**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Ph.D. and M.S., Botany, University of Hawaii at Manoa B.S, Biology, University of Vermont	• Certified Asbestos Inspector, HIASB-4628 • Certified Risk Assessor/Lead Inspector, PB-1148

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Maritime Security Awareness Training (MARSEC)
- Scientific SCUBA diver, rescue diver, master diver, nitrox certified diver
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Storm Water Sampling, City and County of Honolulu, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Subcontractor to Kennedy Jenks, E2 monitors the weather and collects stormwater samples from five sites across Hawaii from NPDES-qualifying rain events according to permit requirements. E2 reports on the summary of data collected monthly and produces annual stormwater reports. **Fee:** $148,328. **Role**: Environmental Scientist.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Asbestos Survey, Commander Fleet Activities Yokosuka, Yokosuka, Japan	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted an asbestos survey of over 100 buildings with a total area of 2,139,464 square feet and constructed between 1914 and 1970 at CFAY, Japan for the NAVFAC Pacific. Sampled for asbestos, thoroughly documenting all field work activities with notes and photographs, and preparing report summary tables and computer-aided design (CAD) figures. **Fee**: $999,976. **Role**: Environmental Scientist/Asbestos Inspector.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Confirmatory Soil Sampling, 84-Acre Portion of Former Voice of America, Maili, Oahu, Hawaii	2019	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted *MULTI INCREMENT*® (MI) sampling to assess the nature and extent of PCBs and metals contamination for the majority of the site. A separate MI sampling approach was used to assess the nature and extent of PCBs, metals, asbestos, and petroleum hydrocarbon contamination in a two-acre portion of the site. Based on the elevated PCB soil sample results and at the request of the EPA, MI sampling of an adjacent concrete building foundation was also completed for analysis of PCBs. **Fee:** $178,200. **Role**: Environmental Scientist.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
State of Hawaii, Department of Transportation, Harbors Division, (1.) Illicit Discharge Detection & Elimination Program. (2.) Industrial & Commercial Discharge Management Program. (3.) Public Education & Outreach Program	2016-2017	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☐ Check if project performed with current firm

Dr. Amato assisted HDOT-Harbors with the inspection of piers. Lead instructor for 5 IDDE training sessions designed for HDOT-Harbors staff & security personnel. 2. Commercial & Industrial sections of > 50 tenants, Oahu Harbors. (3) Provided in-person stormwater BMP Training to >200 tenant & staff. Assisted Harbors with educational outreach during 2016 Protect our Water Conference. **Role**: Environmental Consultant.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Joshua B. Agpaoa, E.I.T.	**Staff Civil Engineer**	**5**	**5**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Civil Engineering, University of Hawaii at Manoa	• Certified Asbestos Inspector, HIASB-4791 • Certified Risk Assessor/Lead Inspector, PB-1137

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Non-Domestic Wastewater Management Plan, JBPHH, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 evaluated NAVFAC Hawaii's 8,000+ facilities to identify, characterize, and quantify non-domestic wastewater discharges to the sanitary sewer system tributary to the NAVFAC Hawaii Wastewater Treatment Plant (WWTP). Coordinated site visits to and conducted interviews with facility managers of over 750 facilities. The inventory of non-domestic wastewater sources collected in this study will be used to determine additional non-domestic discharges that should be internally permitted and regulated. The project also includes quarterly wastewater sampling efforts to collect both grab and 24-hour composite samples from WWTP influent locations on the Hickam Field flight line and Pearl Harbor, as well as effluent samples from the WWTP. **Fee**: $1,154,918. **Role**: Staff Civil Engineer.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Asbestos and Lead Paint Survey for Singapore Area Coordinator, Sembawang, Singapore	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 is conducting an Asbestos Containing Material (ACM) survey, lead-based paint (LBP) inspection including an LBP risk assessment (LRA) and lead content soil samples for unaccompanied housing facilities and lead dust sampling for lodging units in Sembawang, Singapore. Responsibilities include sampling for ACM and LBP, thoroughly documenting all field work activities with notes and photography, and preparing computer aided design (CAD) drawing figures. **Fee**: $1,858,355. **Role**: Staff Engineer/Asbestos Inspector.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Biosolids Handling and Disposal Plan, Pacific Missile Range Facilities, Wastewater Treatment Plant, Kauai	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted a site investigation and sampling at the Pacific Missile Range Facility (PMRF), Kekaha, Kauai, Hawaii. The study included various components of the wastewater treatment systems throughout the Base, with a focus on the existing wastewater treatment plant (WWTP), individual wastewater system (IWS) facilities, sludge drying beds, and the wastewater oxidation pond (WOP). E2 evaluated the current biosolids handling practices and will develop a long-term plan for the proper treatment and disposal of biosolids at PMRF, including IWS septage, WWTP and WOP sludge. **Fee**: $128,895. **Role**: Staff Civil Engineer.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Asbestos Survey, Naval Base Guam, Guam	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed an asbestos survey of 109 buildings with a total survey area of 1,014,904 square feet at NBG for the NAVFAC Pacific. E2 prepared a Work Plan (WP) and Health and Safety Plan (HSP) prior to field work. A total of 7,134 bulk samples were collected by a team of 4 inspectors, over four mobilizations within a year. E2 prepared Draft and Final survey reports that included a summary table of findings, plans with approximate locations of samples taken, extent of most HAs, a closeup and panoramic photo log of samples, and laboratory reports. Responsibilities included preparation of the WP and HSP, coordination of field work, field work, and preparation the Draft and Final Survey Reports. **Fee**: $1,065,234. **Role**: Staff Civil Engineer/Asbestos Inspector.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
James D. Tsubone	**Environmental Scientist**	**7**	**7**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Geology, Mount Royal University Canada	• Certified Asbestos Inspector, HIASB-4118 • Certified Risk Assessor/Lead Inspector, PB-0827

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Maritime Security Awareness Training (MARSEC)
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Radon Diagnostics, Mitigation, and Testing Services for Naval Base Guam Housing, Naval Base Guam, Guam	2022	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted radon testing using E-Perm® detectors in 354 housing units. Radon-resistant new construction (RRNC) was used to mitigate 11 housing units to below the EPA action level of 4 picocuries per liter of air (pCi/L). Post-mitigation testing was also performed in the unit at 4 Flag Circle. A project report and testing report was prepared to document field activities and provide recommended mitigation actions. Provided oversight of subcontractors in the field and assisted with diagnostics and testing field work activities. **Fee:** $397,070. **Role:** Environmental Scientist. ***EXCEPTIONAL EVALUATION***

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Asbestos Survey, Naval Base Guam, Guam	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted Asbestos Surveys of 109 buildings with a total floor area of 987,057 square feet at Naval Base Guam. Prepared a Work Plan/Health and Safety Plan. A total of 7,134 bulk samples were collected from identified homogeneous areas for laboratory analysis by a team of four inspectors, over four one-month-long mobilizations completed within a year. For each building, E2 prepared an Asbestos Survey Report that included a summary data table, floor plans with approximate sample locations and the approximate extent of most identified Homogeneous Areas, a close-up and panoramic sample photograph log, and laboratory reports. **Fee:** $268,039. **Role:** Environmental Scientist.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Environmental Monitoring, Cocos Island, Guam	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Evaluated environmental conditions of former long range navigation station at Cocos Island, Guam for the U.S. Coast Guard. E2 completed a field assessment that consisted of sampling soil, sediment, groundwater, biota, and PCBs for petroleum contamination. After lab results are received, E2 will prepare a report that will include summary of field activities, analysis of findings, and recommendations based on the result of findings. **Fee**: $424,535. **Role**: Field Environmental Scientist.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Annual Land Use Compliance Certification, Naval Air Station Barbers Point Barbers Point, Oahu, Hawaii	2018	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted annual land use compliance certification of the former Southern Trap and Skeet Range at the former Naval Air Station Barbers Point. A non-time-critical response action under CERCLA was undertaken at most of the site to enable unrestricted land use by removing, stabilizing, and disposing of the impacted surface soil at the site. Existing areas that were contaminated were placed under LUCs, specifically the concrete-lined berms, and perimeter fences. E2 conducted site inspection, cleared vegetation, and repaired concrete berm and fence. Prepared Annual Certificate Report. **Fee**: $131,065. **Role**: Environmental Scientist.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
Leslie A. Robinson, E.I.T.	**Project Engineer**	**15**	**2**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Mstr., Civil Engineering, MIT B.S., Civil Engineering, MIT	• Certified Asbestos Inspector – CHC Training, No. 58808275

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- Cross Connection Control and Hydraulic Research Specialist Training, University of Southern California
- How to Conduct a Sanitary Survey of Surface Water and Ground Water System Course, U.S. Environmental Protection Agency
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Storm Water Management Plan Updates for Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 completed storm water inspections and updated the Storm Water Management Plan (SWMP) for Commander Navy Region Hawaii in accordance with their National Pollutant Discharge Elimination System permit. The SWMP contained several program components including public education and outreach, illicit discharge detection and elimination, construction site runoff control, post construction stormwater management, pollution prevention and good housekeeping, stormwater monitoring, and reporting. E2 developed Storm Water Pollution Control Plans for 68 NAVFAC Hawaii industrial facilities. Ms. Robinson's responsibilities include gap analysis of previous and new permit requirements, writing sections of the SWMP, and addressing comments during the review process. **Fee:** $451,956. **Role:** Project Engineer.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Cross-Connection Control Survey, Pacific Missile Range Facility Barking Sands, Kekaha, Kauai, Hawaii	2019	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☐ Check if project performed with current firm

Conducted a cross-connection control survey of high priority facilities at Pacific Missile Range Facility (PMRF) Barking Sands to identify potential cross-connection conditions and evaluate existing backflow prevention (BFP) devices. Created a database to track BFP devices, device deficiencies, cross-connection conditions, and recommended corrective actions. Ms. Robinson's responsibilities included producing the Work Plan, organizing inspection teams, field inspections, developing the database, and preparing the Draft and Final Reports. **Role**: Engineer.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Sanitary Survey for Marine Corps Base Camp Butler and Combined Arms Training Center Fuji, Japan	2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☐ Check if project performed with current firm

Conducted a sanitary survey to evaluate the drinking water system for ten installations at MCB Camp Butler and Combined Arms Training Center (CATC) Fuji. Performed an on-site review of the eight elements: water source; treatment; distribution system; finished water storage; pumps; monitoring, reporting, and data verification; system management and operations; and operator compliance. Ms. Robinson's responsibilities included water sampling, facility personnel interviews, inspection of on-base and off-base water system facilities, review of water quality monitoring records, and preparation of the report of identified deficiencies and recommended system improvements. **Role**: Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. YEARS OF EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Theodore N. Uekawa, E.I.T.	**Staff Civil Engineer**	**2**	**2**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)

Mstr., Civil Engineering, University of Hawaii at Manoa
B.S., Civil Engineering, University of Hawaii at Manoa

16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

- Certified Asbestos Inspector, HIASB-5084
- Certified Lead Inspector, PB-1257

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Asbestos Survey, Commander Fleet Activities Sasebo Japan**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: -

(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE — ☒ Check if project performed with current firm

E2 conducted an Asbestos Survey of 37 buildings with a total area of 493,367 square feet at Commander Fleet Activities Sasebo, Japan for NAVFAC Pacific. E2 prepared a Work Plan and Health and Safety Plan prior to field work. Two one-month field mobilizations were completed. E2 prepared draft Asbestos Survey Reports for each building; each report includes a summary data table, sample and Homogeneous Area location figures, close-up and panoramic sample photograph logs, and laboratory reports. Mr. Uekawa assisted with sampling for asbestos, thoroughly documenting all field work activities with notes and photographs, and preparing report summary tables and floor plans/figures in computer-aided design and drafting software (AutoCAD). **Fee**: $489,996. **Role**: Staff Civil Engineer/Asbestos Inspector.

b.

(1) TITLE AND LOCATION *(City and State)*: **Spill Prevention and Response Plan for Marine Corps Base Camp Butler Okinawa, Japan**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: -

(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE — ☒ Check if project performed with current firm

E2 is completing a Spill Prevention and Response Plan (SPRP) for Marine Corps Base (MCB) Camp Butler located in Okinawa, Japan. E2 prepared a Work Plan and Health and Safety Plan prior to field work. Field work consisted of a team of six personnel for a duration of three weeks to complete tasks in one site visit. E2 conducted site visits of 329 aboveground storage tanks, 26 underground storage tanks, 34 chemical storage tanks, and 747 electrical transformers that have capacities of 105 gallons and larger, at 12 Sites in Okinawa and the nearby Island of Le Shima. Field work included completion of data sheets for and taking photographs of each feature. E2 is currently preparing the SPRP, which will include sections for pollution prevention and spill response. Mr. Uekawa assisted with site inspections and is assisting with drafting the SPRP. **Fee:** $340,216. **Role**: Staff Civil Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*: **Long-Term Monitoring of Groundwater and Soil Vapor at Red Hill Bulk Fuel Storage Facility, JBPHH, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: -

(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE — ☒ Check if project performed with current firm

E2 is conducting groundwater monitoring and soil vapor monitoring. In 2015-2016, E2 conducted quarterly groundwater monitoring/sampling of ten wells located inside and in the vicinity of the Red Hill Bulk Fuel Storage Facility tunnels. E2 worked closely with the Navy to streamline quarterly reporting and he conducted several informational meetings for the Navy regarding interpretation of analytical data. E2 currently conducts monthly soil vapor monitoring of 48 soil vapor probes within the tunnel and has conducted maintenance and upgrades to the system at no additional cost to the Navy. E2 prepares monthly soil vapor reports following each field event. Mr. Uekawa assisted with weekly and monthly LTM inspections at the Site. **Fee**: $2,380,274. **Role**: Staff Civil Engineer. ***EXCEPTIONAL EVALUATION***

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. YEARS OF EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Maya Matsuoka	**Staff Environmental Scientist**	**2**	**2**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.A. Environmental Studies and Economics, University of California, Santa Cruz	• Certified Asbestos Inspector, HIASB-5085 • Certified Lead Inspector, PB-1254

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Asbestos Survey, JBPHH, Oahu, Hawaii	Ongoing	-

(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 conducted asbestos surveys at 38 one- and two-story buildings totaling 578,442 square feet, at Pearl Harbor and Hickam Field, Ford Island, Moanalua, Pearl City Peninsula, and Wahiawa Annex, JBPHH. E2 prepared a Work Plan and Health and Safety Plan prior to field work. Field work has been completed, and E2 is currently preparing Asbestos Survey Reports for each building. Each report will include a summary data table, floor plan figures with approximate sample locations and the extent of most identified Homogeneous Areas, close-up and panoramic sample photograph logs, and laboratory reports. Ms. Matsuoka performed sampling for asbestos, thoroughly documenting all field work activities with notes and photographs, and is currently assisting with preparation of report computer-aided design (CAD) figures and photograph appendices. **Fee**: $475,088. **Role**: Staff Environmental Scientist/Asbestos Inspector.

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Asbestos and Lead Paint Survey for Singapore Area Coordinator, Sembawang, Singapore	Ongoing	-

(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 is conducting an Asbestos Containing Material (ACM) survey, lead-based paint (LBP) inspection including an LBP risk assessment (LRA) and lead content soil samples for unaccompanied housing facilities and lead dust sampling for lodging units in Sembawang, Singapore. Responsibilities include sampling for ACM and LBP, thoroughly documenting all field work activities with notes and photography, and preparing computer aided design (CAD) drawing figures. **Fee**: $1,858,355. **Role**: Staff Environmental Scientist/Inspector.

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Asbestos Survey for Commander Fleet Activities Sasebo Japan	Ongoing	-

(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 conducted an Asbestos Survey of 37 buildings with a total area of 493,367 square feet at Commander Fleet Activities Sasebo, Japan for NAVFAC Pacific. Prepared a Work Plan and Health and Safety Plan prior to field work. Two one-month field mobilizations were completed. E2 prepared draft Asbestos Survey Reports for each building; each report includes a summary data table, sample and Homogeneous Area location figures, close-up and panoramic sample photograph logs, and laboratory reports. Mr. Uekawa assisted with sampling for asbestos, thoroughly documenting all field work activities with notes and photographs, and preparing report summary tables and floor plans/figures in computer-aided design and drafting software (AutoCAD). **Fee**: $489,996. **Role**: Staff Environmental Scientist/Asbestos Inspector.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Asbestos Survey, Commander Fleet Activities Yokosuka, Yokosuka, Japan	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted an asbestos survey of over 100 buildings with a total area of 2,139,464 square feet and constructed between 1914 and 1970 at CFAY, Japan for the NAVFAC Pacific. Prepared a Work Plan and Health and Safety Plan (HSP) prior to field work. Responsibilities include sampling for asbestos and lead, thoroughly documenting all field work activities with notes and photographs, and preparing report summary tables and computer-aided design (CAD) figures. **Fee**: $999,976. **Role**: Staff Environmental Scientist/Asbestos Inspector.

E. RESUMES OF KEY PERSONNEL PROPOSED WHO WILL PROVIDE SERVICES FOR THIS PROJECT CATEGORY

11. NAME	12. TITLE SERVICE PROVIDED	13. TITLE SERVICE PROVIDED	
		a. TOTAL	b. WITH CURRENT FIRM
John A. Ellis	**Field Technician**	**7**	**7**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

15. EDUCATION (DEGREE AND SPECIALIZATION)	16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S. In-progress, Earth Systems, Oregon State University	• Certified Asbestos Inspector, HIASB-4117 • Certified Risk Assessor/Lead Inspector, PB-0828

17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- OSHA Initial HAZWOPER Training, 40-HR
- OSHA Refresher Training, 8-HR
- OSHA Construction Safety and Health Training, 30-HR
- Construction Safety Hazard Awareness Training for Contractors, 40-HR
- Maritime Security Awareness Training (MARSEC)
- Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Operation and Maintenance and Monitoring, Multiple Sites, JBPHH, Oahu, Hawaii	2013-2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Completed the operation and maintenance of two oily waste collection and treatment facilities within the Pearl Harbor Navy Shipyard. E2 has managed hazardous and oily wastes recovered from two product recovery systems installed at the Building 8 and Oscar 2 Pier former release sites. The Building 8 system includes three Fuel Oil Skimmer System (FOSS) units while the Oscar 2 Pier consists of five FOSS units. Conducted weekly, monthly, and quarterly inspections and maintenance to keep both product recovery systems up and running efficiently. Completed system repairs, oily product gauging of over 100 wells, fuel profile sampling, NPDES compliance sampling, disposal of recovered product, and system troubleshooting. **Fee**: $431,080. **Role**: Environmental Technician.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Storm Water Monitoring/Reporting JBPHH, Oahu, Hawaii	2019	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted storm water monitoring within the Pearl Harbor Naval Shipyard (PHNSY) & Intermediate Maintenance Facility (IMF) where two of the three monitoring sites are located within the Controlled Industrial Area (CIA) Dry Dock area at JBPHH. Monitoring was conducted to comply with NPDES Permit. Collected storm water samples, submitted samples to the laboratory for analysis, and provided maintenance of the sampling equipment throughout the project. Prepared a Storm Water Report for each sampling event that included the date, time, duration, and volume of the event, chain of custody records, and laboratory results. **Fee**: $249,572. **Role**: Field Technician.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Asbestos Survey, Naval Base Guam, Guam	2020	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

E2 completed an asbestos survey of 109 buildings with a total survey area of 1,014,904 sf at NBG. 7,134 bulk samples were collected by a team of 4, over four mobilizations within a year. E2 prepared survey reports that included a summary table of findings, plans with approximate locations of samples taken, extent of most HAs, a closeup and panoramic photo log of samples, and laboratory reports. **Fee**: $1,065,234. **Role**: Asbestos Inspector.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Phase I Environmental Site Assessment Waiawa, Oahu, Hawaii	2016	-

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Conducted a site visit, requested information regarding current and historic land use and ownership, identified and request regulatory files, environmental reports, and permits, interviewed property owners and government agency representatives, data management and evaluation, and report preparation. **Fee**: $105,181. **Role**: Field Technician.

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Asbestos Survey for Commander Fleet Activities Okinawa Okinawa, Japan	**2014**	**-**

21. PROJECT OWNER'S INFORMATION

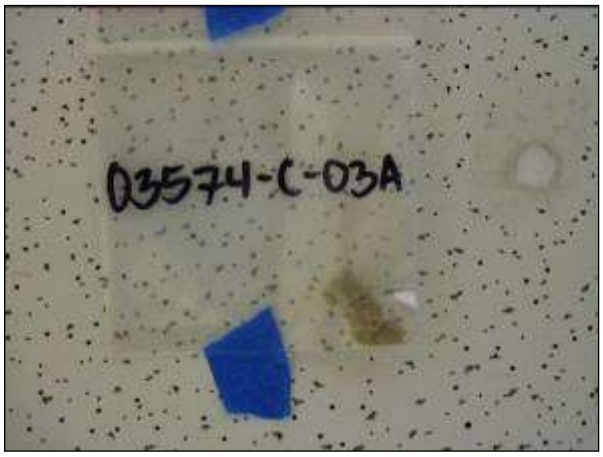
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NO.
NAVFAC Pacific	**Mr. John Sato, P.E.**	**(808) 472-1394**

22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: Element Environmental, LLC (E2) completed an asbestos survey of 319 buildings at Commander Fleet Activities Okinawa (CFAO), including 141 buildings at Okinawa proper, nine buildings at Awase, 59 buildings at Camp Shields, one building at Kin Red Beach, six buildings at Tengan Pier, and 103 buildings at White Beach. The field work included the following primary components:

- identification of homogenous sampling areas (HAs);
- collection of survey information onto data sheets and building floor plans;
- collection of representative building material samples for each HSA identified;
- collection of photographs of sample locations and assumed asbestos-containing materials (ACM); and
- repair of sample locations.

E2's field crew mobilized four times to the project site (each mobilization lasting three weeks) for performance of the fieldwork. The E2 field crew collected over 3,500 bulk samples for laboratory analysis. Sampling data were entered into a Microsoft Access® database (provided by NAVFAC Pacific) with photograph numbers correspondingly logged into the database files for ease of searching and viewing.



Project Highlights:

E2 field crew successfully coordinated with NAVFAC Pacific personnel prior to the fieldwork at CFAO to: identify roles and responsibilities; develop the sample data collection protocols including sample identification, labeling, and handling; and develop sample documentation protocols including field notes, photographs, and database entry.

E2 was able to successfully coordinate the CFAO asbestos field survey with the many building occupants allowing them to continue to operate as normal.

E2 completed the CFAO fieldwork in half the time projected resulting in **a cost savings to NAVFAC Pacific.**

Cost: $384,194.

23. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Element Environmental, LLC**	**Aiea, HI**	**Prime Contractor**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Hazardous Material Surveys for Kamehameha Schools, Honolulu, Oahu, Hawaii	**2015-2017**	-

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Kamehameha Schools, Facilities Development and Support Division	**Mr. Arnulfo Castillo, Ms. Lena Mori, and Mr. Marc Alojepan**	**(808) 534-3986**

22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: Element Environmental, LLC (E2) has provided hazardous materials survey services to Kamehameha Schools since 2015. The following is a list of recent project experience:

Cost: $99,900.00 (Five properties at 650, 710, and 740 Kohou Street; 1101 North King Street; and 1222 Kaumualii Street); $34,169.74 (Konia); $21,236.70 (Hale Koa); $2,220.88 (Kekuhaupio Gym); and $1,658.85 (Princess Ke'elikolani Performing Arts Complex).

- In 2017, E2 conducted demolition-level hazardous materials surveys for seven 1 or 2-story commercial buildings on five properties in Honolulu. Suspect asbestos, lead paint, and arsenic-containing canec panels were sampled from interiors, exteriors, and safely accessible roofs, and the samples were submitted for analysis. The work also included visual inventories of fluorescent light fixtures and suspect polychlorinated biphenyl (PCB)-containing ballasts. E2 prepared a survey report for each of the seven buildings.
- For the Konia Renovation Project on the Kapalama Campus in 2016, E2 conducted a hazardous materials survey of the interior of all classrooms and offices on both floors, with the exception of Room 106, restrooms, and above drop ceilings. E2 prepared a survey report and specifications for the bid package and provided subcontracted monitoring services during abatement.
- For the Hale Koa Renovation Project on the Kapalama Campus in 2016, E2 conducted hazardous materials survey of the interior of the 1-story building. E2 prepared a survey report and specifications for the bid package and provided subcontracted monitoring services during abatement.
- For the Ceiling Fans Installation Project at Kekuhaupio Gym on the Kapalama Campus, E2 conducted lead paint sampling and submitted the samples for analysis in 2015. E2 assisted with the preparation of a lead paint control measures specification for the required work
- For the Smoke Vents Replacement Project at the Princess Ke'elikolani Performing Arts Complex on the Kapalama Campus, E2 conducted asbestos sampling and submitted the samples for analysis in 2015.

Hale Koa

Konia

Princess Ke'elikolani Performing Arts Comple

23. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Element Environmental, LLC**	**Aiea, HI**	**Prime Contractor**
b.	**EnviroQuest, Inc**	**Aiea, HI**	**Subcontractor, Project Monitor for Konia & Hale Koa**
c.	**Kauai Environmental, Inc.**	**Kilauea, HI**	**Subcontractor, Certified Industrial Hygienist for Konia & Hale Koa**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I and II Environmental Site Assessments, Kapalama Container Terminal Yard, Honolulu Harbor, Oahu, Hawaii	**2015**	**2018**

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
State of Hawaii, Department of Transportation, Harbors Division	**Mr. Carter Luke, P.E.**	**(808) 587-1860**

22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: The proposed Kapalama Container Terminal Yard (KCTY) is a 94-acre site located within the Kapalama Development Area (KDA); land that was set aside by Governor's Executive Orders for harbor use to accommodate a future modern containerized cargo terminal.

The State of Hawaii, Department of Transportation (HDOT), Harbors Division proposed action is required to facilitate redevelopment of the former Kapalama Military Reservation (KMR) and adjacent lands as a full-scale modern containerized cargo terminal.

The KCTY site is comprised of five main areas, including a major portion of the former KMR, the University of Hawaii Marine Center (UHMC), Island Movers, Inc. leased land, Pacific Shipyards International (PSI) leased land, and the 11.3-acre parcel of ceded land managed by the HDOT, Airports Division. HDOT, Harbors and HDOT, Airports lease the land to various harbor-related businesses.

To facilitate the planning, design, and construction phases of the KCTY development, E2 conducted Phase I and Phase II ESAs for the entire 94-acre site. The Phase I ESA was conducted in accordance with American Society for Testing and Materials (ASTM) Designation E1527-13 and identified recognized environmental concerns (REC) associated with historic and current use of the site. The Phase II ESA was conducted in general accordance with the Work Plan, prepared by E2, and the Technical Guidance Manual (TGM) for the Implementation of the Hawaii State Contingency Plan Interim Final (HDOH 2009), and **characterized impacted soil, groundwater, soil vapor, concrete, and harbor sediment,** at the site. E2 designed a sampling strategy to address surface and subsurface soil, groundwater, soil vapor, concrete, and harbor sediment contamination resulting from historic use of the site as a landfill, shipyard/construction base yard, and was formerly used as a defense site; and the current use of the site as a shipyard, marine research center, hazardous waste storage and transfer facilities, and for various other commercial/industrial uses by tenants.

An additional site investigation was conducted to evaluate the nature and extent of contamination identified at the Island Movers portion of the KCTY site during the Phase II ESA. The **additional investigation included soil, soil vapor, and groundwater sampling and analysis.** E2 used the data obtained from historic environmental reports and the data generated during the Phase II ESA and the additional site investigation to **prepare an Environmental Hazard Evaluation (EHE)/Environmental Hazard Management Plan (EHMP)** for contamination present at the KCTY site. The EHE/EHMP provides consistent and effective management practices to mitigate potential human health and environmental hazards associated with direct exposure to contaminants of potential concern in soil, groundwater,

Project Highlights:

- The Phase I and II ESAs identified the presence of contamination, including heavy metals, polychlorinated biphenyls (PCBs), and petroleum-related contaminants in soil, groundwater, concrete, and/or harbor sediment that needed to be addressed during development activities.
- The Phase I ESA also identified areas of concern regarding the presence of underground storage tanks, underground fuel piping, buried debris, and impacted fill that required consideration in design and construction plans.
- E2 performed all tasks on an accelerated schedule to accommodate planning deadlines.
- No contract modifications were requested for this project.

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I and II Environmental Site Assessments, Kapalama Container Terminal Yard, Honolulu Harbor, Oahu, Hawaii	**2015**	**2018**

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
State of Hawaii, Department of Transportation, Harbors Division	**Mr. Carter Luke, P.E.**	**(808) 587-1860**

concrete, soil gas, and harbor sediment at the site; and in impacted soil, groundwater, and/or harbor sediment brought to the surface during construction/dredging activities at the site.

2023 ACEC HAWAII ENGINEERING EXCELLENCE AWARD

E2 also completed **hazardous materials surveys** for five UHMC buildings to be demolished, prepared reports, and assisted in the preparation of plans and specifications for the management of these materials during construction.

Project Challenges and How They Were Overcome:

- Detailed research into the historical uses at the site was critical in identifying potential environmental concerns at the site.
- E2 was required to differentiate environmental conditions attributable to previous and current tenants.
- E2 completed the Phase I and II ESAs and the EHE/EHMP on an accelerated schedule to accommodate the HDOT-Harbors design and planning timeline.

How Successes or Lessons Learned Can Apply to This Contract:

- The project included consultation with several government agencies and design consultants.
- The Work Plan and EHE/EHMP were reviewed and approved by the HDOH, who had regulatory oversight of the project.
- In addition, detailed research into the historical uses was critical in identifying potential environmental concerns at the site.

Cost: $568,200.

23. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Element Environmental, LLC**	**Aiea, HI**	**Contractor**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Asbestos Survey, Commander Fleet Activities Yokosuka, Japan, Yokosuka, Japan	**Ongoing**	**-**

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NAVFAC Pacific	**Mr. Lance Zhai, P.E.**	**(808) 587-0230**

22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: E2 is conducting an asbestos survey of 100 buildings with a total area of 2,139,464 sf at Commander Fleet Activities Yokosuka (CFAY). The work is being completed in general accordance with applicable federal, Japan, and Navy laws, rules, regulations, orders, instructions, and industry standard practices. E2 prepared a Work Plan and Health and Safety Plan prior to conducting any field work. The field survey includes the following primary components:

- Identification of Homogenous Areas (HAs);
- Collection of survey information onto data sheets and building floor plans;
- Collection of representative building material samples for each HA identified;
- Collection of closeup and panoramic photographs of sample locations and assumed asbestos containing material (ACM);
- Recording all data collected; and
- Repair of sample locations.

A total of 6,645 bulk samples were collected to date for laboratory analysis. Upon completion of the survey, E2 did a survey of the data which included the following;

- All data collected inputted into a spreadsheet for each location;
- All floor plans of sample locations identified on AutoCAD files; and
- Conducted Quality Assurance/Quality Control of survey results.

For each building surveyed, E2 will prepare a Draft and Final Survey Report, which will include a summary tables of findings, floor plans with approximate locations of samples taken, extent of most HAs, a closeup and panoramic photo log of samples, chain of custody forms and laboratory reports.

Project Highlights:
E2 field crew successfully coordinated with NAVFAC Pacific personnel prior to the field work at CFAY to identify roles and responsibilities, develop the sample data collection protocols including sample identification, labeling, and handling, and develop sample documentation protocols including field notes, photographs, and database entry.

E2 was able to successfully coordinate the CFAY asbestos field survey with the many building occupants allowing them to continue to operate normally.

Cost: $999,976.

23. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Element Environmental, LLC**	**Aiea, HI**	**Prime Contractor**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Remedial Action at Scrap Metal Dump, Former LORAN Station Kure Atoll, Northwest Hawaiian Islands, Hawaii	**2017**	-

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
U.S. Army Corps of Engineers	**Mr. Robert Glasscott**	**(907) 753-5771**

22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: Element Environmental, LLC (E2) prepared an Engineering Evaluation/Cost Analysis (EE/CA) that evaluated treatment and disposal alternatives to address the approximately 400 cubic yards of sand in the former Scrap Metal Dump (SMD) on Kure Atoll that contains PCB contamination. The purpose of the EE/CA was to recommend a site-specific non-time-critical removal action for the SMD. The primary objective of the removal actions evaluated in the EE/CA was to reduce and/or eliminate potential exposure to PCB contaminant levels identified as posing an unacceptable risk to ecological receptors. The selected removal action was designed to lower the PCB concentrations at the site to levels that are below State of Hawaii Department of Health (HDOH) Environmental Action Levels (EALs), which are protective of the biota (including threatened and endangered species) that nest, breed and reside on Kure Atoll. The following seven removal action alternatives were screened as potential approaches to remediating the PCB-contaminated soil at the former dump area on Kure: 1) No Action; 2) Natural Attenuation; 3) Surface Capping (Encapsulation); 4) Excavation and Off-site Disposal of Soil at a CERCLA-approved Facility; 5) Ex-Situ Treatment of Excavated Soil: Mycoremediation; 6) Ex-Situ Treatment of Excavated Soil: Thermal Desorption; and 7) Ex-Situ Treatment of Excavated Soil: Soil Washing. These potential remedial alternatives were evaluated using the nine criteria of short- and long-term effectiveness, implementability, and cost as specified in CERCLA (40 Code of Federal Regulations [CFR] §300.430) and the National Oil and Hazardous Substances Pollution Contingency Plan.

Project Highlights:
E2 led numerous stakeholder meetings in determining the appropriate remedy for the site, subsequently leading to agreement between the U.S. Coast Guard, HDOH, and U.S. Army Corps of Engineers on the chosen alternative.

E2 coordinated the field effort with Federal and State resource agencies to ensure that the sensitive habitats were not impacted.

E2 was able to successfully mobilize heavy equipment and supplies to the remote atoll.

Cost: $1,498,580.

Based on the EE/CA and consultation with HDOH, an ex-situ treatment and encapsulation removal action was selected. E2, in conjunction with the University of Maryland, first completed a treatability study to identify a bio-amendment that enhances the in-situ degradation of PCBs. E2 then successfully excavated over 400 cubic yards of PCB-contaminated soil from the SMD and relocated it at a new landfill that was constructed in the middle of the island. PCB-contaminated soil was treated with the bio-amendment and encapsulated in activated carbon-containing geosynthetic material prior to being capped with clean fill.

E2 collected confirmation soil samples from the SMD and analyzed them in the field lab using immunoassay field test kits to ensure all of the PCB contaminated soil was removed. Six piezometers were installed around the perimeter of the new landfill and groundwater samples were collected to determine if PCBs were leaching into the groundwater. Sediment and biota samples were also collected near the SMD to establish baseline of PCB concentrations in the sediment and fish.

23. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Element Environmental, LLC**	**Aiea, HI**	**Prime Contractor**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Asbestos Survey, Naval Base Guam, Guam	**2020**	-

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NAVFAC Pacific	**Mr. Lance Zhai, P.E.**	**(808) 472-1423**

22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: E2 completed an asbestos survey of 109 buildings with a total floor area of 987,057 square feet at Naval Base Guam (NBG). The work was completed in accordance with applicable Federal, Guam, and Navy laws, rules, regulations, orders, instructions, and industry standard practices.

E2 prepared a Work Plan and Health and Safety Plan prior to conducting the fieldwork. Four one-month field mobilizations were completed. The primary tasks completed during the field work included verifying and update building floor plans, identify accessible Homogeneous Areas (HAs) of suspect asbestos-containing materials (ACM), with the exception of roofing materials, record survey information onto data sheets and building floor plans, collected representative building material samples for each accessible HA identified that could be sampled, photographed sample locations and assumed ACM, where permitted; and repaired sample locations.

A total of 7,134 bulk samples were collected for laboratory analysis. Data was managed, tracked, and checked, as follows. All field and laboratory data was inputted into a master spreadsheet for each building, most HAs and all sample locations were identified on floor plans prepared using AutoCAD for each building, and a three-level Quality Assurance/Quality Control review was completed on the data and figures. Field team members first reviewed the electronic data entered for accuracy and completeness and checked the figures to ensure HAs and sample locations were properly drawn. The second review was completed by a Senior Engineer who reviewed the data, figures, and laboratory results. A final review was completed by the Project Manager for completeness.

For each building surveyed, E2 prepared an individual Draft and Final Survey Report. Each report included a summary of previous survey reports where available, summary data table, floor plans with approximate locations of each sample taken and the approximate extent of identified HAs, a close-up and panoramic photograph log of the samples taken, and the laboratory reports with chain-of-custody forms. Navy comments received on the Draft Survey Reports were incorporated into the Final versions.

Project Highlights:

E2 successfully coordinated and completed asbestos surveys, including sample collection, laboratory analysis, and reporting of over 7,100 bulk samples, in over 100 buildings.

E2 successfully coordinated the field sampling with the Contracting Officer's Representative and the NBG Asbestos Program Manager with minimal interruption to facility operations. E2 was able to accommodate critical facility operations at certain buildings by sampling at night, on the weekends, or within limited time windows.

E2 created hatch patterns to display the extents of the HAs on the floor plans, which will allow building managers to easily see the extents of the HAs and the positive asbestos results.

E2 provided preliminary results and reports for buildings that were scheduled for renovation or demolition prior to project completion.

Cost: $1,065,234.

23. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Element Environmental, LLC**	**Aiea, HI**	**Prime Contractor**
b.	**EnviroQuest, Inc.**	**Aiea, HI**	**Inspector**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I and II Environmental Site Assessments, Honouliuli Wastewater Treatment Plant, Ewa Beach, Oahu, Hawaii	**2016/2017**	**Ongoing**

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NO.
City and County of Honolulu Department of Design and Construction	**Ms. Lisa Kimura, P.E.**	**(808) 768-3486**

22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: Element Environmental, LLC (E2) was retained by R.M. Towill Corporation (RMTC) to conduct Phase I and II Environmental Site Assessments (ESAs) on one parcel of undeveloped land located at Fort Weaver Road and Geiger Road, Ewa Beach, Oahu, Hawaii. The City and County of Honolulu (CCH), owner and operator of the Honouliuli Wastewater Treatment Plant (WWTP), acquired the 48-acre parcel of land to expand their secondary treatment operations. In preparation for the proposed construction, E2 completed a Phase I ESA in 2016 to identify potential environmental issues which may impede construction activities on the newly acquired parcel.

The Phase II ESA scope of work was performed to evaluate the presence/absence and nature of contamination on the site based on relevant findings of the Phase I ESA. Phase II ESA activities were also conducted in the vicinity of an abandoned Navy fuel line located on the adjacent Honouliuli WWTP site, parallel to Geiger Road, where portions of the abandoned fuel line will be removed during the construction of a drainage basin. Phase II activities included surface and subsurface soil sampling and evaluation of stockpiled soil/debris and a historical landfilled area. The subject property was historically used for railroad, plantation, and military purposes. An abandoned Navy fuel pipeline is present on and/or adjacent to the southeast portion of the subject property. A second fuel line runs along the old railroad tracks, parallel to the north boundary of the subject property.

Contaminants of potential concern were identified for the subject and adjacent WWTP property based on historical property use and included the following.

- Former sugar cane cultivation – organochlorine (OCl) pesticides and arsenic.
- Former railroad and plantation employee housing, former military use, and other former and current structures – chlordane and lead.
- Petroleum pipelines on/adjacent to the site – petroleum-related constituents and metals.
- Landfilling and soil/debris stockpiles – volatile and semi-volatile constituents, pesticides, metals, polychlorinated biphenyls (PCBs), and asbestos.
- Miscellaneous industrial use – volatile and semi-volatile constituents, metals, and PCBs.

Project Highlights:
E2 utilized incremental sampling methodology to characterize surface soil at the site.

E2 evaluated the nature and extent of waste materials discovered in the shallow dump site using an excavator.

Cost: $331,100

Soil sample results were compared to State of Hawaii Department of Health (HDOH) Tier 1 Residential and Commercial/Industrial environmental action levels (EALs). Based on the Phase II ESA sample results and observations made during the investigation, E2 concluded the following.

Subject Property:

Lead and arsenic were detected in the surface (lead) in the decision unit (DU-9) (dump site) and near-surface (arsenic) soils at boring B9 on the subject property at concentrations exceeding HDOH Tier 1 EALs. The dump site (DU-9) appears to occupy a large shallow sinkhole.

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY		
19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I and II Environmental Site Assessments, Honouliuli Wastewater Treatment Plant, Ewa Beach, Oahu, Hawaii	**2016/2017**	**Ongoing**

21. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NO.
City and County of Honolulu Department of Design and Construction	**Ms. Lisa Kimura, P.E.**	**(808) 768-3486**

- Debris was observed mixed with the soil, and included glass and porcelain shards, bottles, basalt rocks, pots and other household cooking implements, pieces of rusted metal, and wood.
- Petroleum-related analytes were not detected in subsurface soil samples collected from the capillary fringe in the soil borings located in the vicinity of the petroleum pipeline that runs adjacent to the north boundary of the subject property.
- None of the tested analytes were detected in soil samples collected from the three soil stockpiles located in the north-central area of the subject property. This soil can be reused on-site as "clean" fill material.

Adjacent Honouliuli WWTP Site:

- None of the tested analytes were detected in soil samples collected from the soil borings located in the vicinity of the abandoned Navy fuel pipeline that runs along the south side of the Honouliuli WWTP, parallel to Geiger Road.
- Petroleum-impacted material is not anticipated to be encountered within the excavation required for the proposed drainage basin construction.

23. FIRMS INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Element Environmental, LLC**	**Aiea, HI**	**Subcontractor**
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
	R.M. Towill Corporation	**Honolulu, HI**	**Prime Contractor**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I and II Environmental Site Assessments, Former Voice of America Site, Maili, Oahu, Hawaii	**Ongoing**	

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
United States Coast Guard	**Mr. Dennis Mead**	**(808) 535-3464**

22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: Element Environmental, LLC (E2) conducted a Phase I Environmental Due Diligence Audit (EDDA) and Phase II Confirmatory Sampling (CS) for an 84-acre portion of the Former Voice of America site located in Maili, Oahu. The Phase I EDDA and Phase II CS were completed in accordance with the Civilian Federal Agency Task Force's (CFATF) *Guide on Evaluating Environmental Liability for Property Transfers* (August 1998) in support of a transfer of the property to the State of Hawaii.

In support of the Phase I EDDA, E2 conducted a site visit, performed research on the site history, searched regulatory databases, interviewed site managers, and contracted an archeological firm to perform a cultural inventory survey. In support of the Phase II CS, E2 prepared a Project Work Plan and conducted field sampling to investigate potential polychlorinated biphenyls (PCBs), metals, asbestos, and petroleum hydrocarbon contamination related to the historic use of the site.

The field sampling effort consisted of various sampling techniques for multiple sample media. A multi-increment® (MI) sampling approach was utilized to assess the nature and extent of PCBs and metals contamination for the majority of the 84-acre project site.

A separate MI sampling approach was utilized to assess the nature and extent of PCBs, metals, asbestos, and petroleum hydrocarbon contamination in a two-acre portion of the facility. Six groundwater wells were also installed surrounding this area, and groundwater samples were collected and analyzed for PCBs; metals; petroleum hydrocarbons; benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl tert-butyl ether (MTBE); polynuclear aromatic hydrocarbons (PAHs); and halogenated volatile organic compounds (HVOCs).

In addition, over 100 discrete soil samples were collected to evaluate the lateral and vertical extent of known PCB contamination at two previously identified locations. E2 operated a field laboratory to reduce the number of off-site PCB analyses and to reduce the turn-around time for analytical results. Ten percent of the PCB samples were analyzed by an off-site laboratory to verify the results of E2's field laboratory. Based on the elevated PCB soil sample results and at the request of the USEPA Region 9, MI sampling of an adjacent concrete building foundation was also completed for PCBs.

Project Highlights:

-Conducted a Phase I EDDA.

-Conducted a Phase II CS.

- MI soil sampling for PCBs and metals throughout 82 acres of the site.
- MI soil sampling for PCBs, metals, asbestos, and petroleum hydrocarbons throughout 2 acres of the site.
- Installation of six groundwater monitoring wells and collection of groundwater samples for PCBs, metals, petroleum hydrocarbons, BTEX, MTBE, PAHs, and HVOCs.
- Discrete surface and subsurface soil sampling for PCBs at two previously identified locations of PCB contamination MI sampling of concrete building foundation for PCBs
- Operation of a field laboratory to reduce the number of off-site PCB analysis and time to obtain analytical results.

-Prepared a Groundwater Monitoring Plan for the site.

Cost: $ 289,550.

23. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Element Environmental, LLC**	**Aiea, HI**	**Contractor**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Hazardous Materials Survey, Demolition of Two Structures on TMK 1-3-7-02:018 and 077, 5839 and 5841 Kalanianaole Highway, Kalauhaehae Fishpond, Kuliouou, Oahu, Hawaii	**2016**	**2017**

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
State of Hawaii, Department of Land and Natural Resources	**Mr. Carty Chang, P.E.**	**(808) 587-0230**

22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Background: E2 completed a demolition-level hazardous materials survey of two two-story residences and attached garages as a subcontractor of R.M. Towill Corporation (RMTC). The survey included the identification of homogenous sampling areas (HSAs), collection of survey information onto data sheets and building floor plans, collection of representative building material bulk samples for each HSA identified for analysis of asbestos, collection of representative paint chip samples for analysis of total lead, analysis of a subset of the bulk samples for total arsenic, collection of photographs of sample locations, repair of sample locations, and a visual survey of lighting fixtures (suspected of containing PCBs or mercury). A survey report and pertinent specification sections were prepared for inclusion with the construction documents. A rough abatement cost estimate was also provided.

Project Highlights:
E2 completed field sampling within two days and provided DLNR a final report within a month after their approval of additional asbestos analyses.

E2 also quickly completed specification sections and a rough abatement cost estimate and returned contractor submittal reviews on a timely basis.

How Successes or Lessons Learned Can Apply to This Contract:
E2 was able to successfully characterize the hazardous materials at the site, which allowed DLNR to properly allocate the required funds toward hazardous materials abatement prior to demolition.

Cost: $9,060.

23. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Element Environmental, LLC**	**Aiea, HI**	**Prime Contractor**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Preliminary Environmental Assessment and Site Inspection, USGC Air Station Barbers Point, Kapolei, Oahu, Hawaii	**2022-Ongoing**	-

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
United States Coast Guard	**Mr. Mark Marini**	**(843) 819-1964**

22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: Element Environmental (E2) conducted an Environmental Assessment of the Air Station Barbers Point (ASBP) located in Kapolei, Hawaii.

E2 conducted a Preliminary Assessment (PA) and a Site Investigation (SI) across the entire United States Coast Guard (USCG) Air Station Barbers Point (ASBP) Installation. The primary purpose of this project was to gather data for environmental media (soil and groundwater) to determine residual environmental impact of current and former activities at the installation.

E2 conducted a preliminary assessment/records search of the site, including meeting with the on-site contacts, and review of previous environmental investigations, to determine the potential areas of contamination at the site based on historical and current site use to determine if there is a remaining source of PCBs and/or pesticides and other contaminants including those listed below, at the site through investigation (soil and groundwater sample analysis). RCRA 8 metals and Copper by EPA Method 6010B & 7470A, PAHs by 8270C SIM, DDT, and other legacy chlorinated pesticides by 8081, PCB by 8082, PFAS by 1631, Dioxins by 8290, and Hexavalent Chromium.

Project Highlights:
E2 has expertise/direct experience in performing a PFAS investigation at Air Station Barbers Point, and knowledge of handling PFAS chemicals to avoid cross-contamination in the result of findings.

Cost: $194,057.

The PA identified several concerns from former and ongoing site use. ASBP is a USCG air station that is located on the site of a former U.S. Navy Base. The U.S. Navy had multiple sites that may have left legacy contamination issues for the base. There is a Base Realignment and Closure (BRAC) closure report on environmental liabilities associated with former Navy activities and a recent preconstruction environmental survey that discovered low levels of PCBs near the site for construction. A significant concern from the BRAC report is the existence of a former airfield Firefighting Training Pit (FFTP) located on the current base.

Aqueous Film Forming Foam (AFFF) containing Poly- and Per- Fluoroalkyl Substances (PFAS) was used in firefighting training exercises at the pit. PFAS are very stable emerging contaminants with conservative United States Environmental Protection Agency (USEPA) Health Advisory Levels (HALs) set in the part per trillion level. Knowledge and data continue to evolve our understanding of the environmental and health impacts associated with the release of PFAS. Certain PFAS, most notably some of the perfluoroalkyl acids (PFAAs), such as perfluorooctanoate (PFOA) and perfluorooctane sulfonate (PFOS), are mobile, persistent, and bioaccumulative, and are not known to degrade in the environment.

A drum storage area was located near the FFTP where waste oils were stored for use in igniting objects for firefighting training purposes. A sump was used to collect fluids that were drained from the FFTP. An injection well near the taxiway was impacted by a former fuel spill on the site. The Coast Guard HC-130 aircraft stationed at ASBP are coated with paint which contains cadmium and chromium. The installation includes a hangar where aircraft paint maintenance is performed.

Fieldwork was conducted in accordance with a work plan that was based on the findings from the PA. Surface soil samples were collected from sixteen Decision Units (DUs) representing the entire unpaved surface of the base. DUs were established based on past and present site use and related potential impacts. A building was erected over the area where a surface soil sample contained slightly elevated levels of PCBs in the 2012 Phase II investigation. An adjacent DU was sampled in this investigation.

Groundwater monitoring wells were located down gradient from areas of concern that were identified during

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY		
19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Preliminary Environmental Assessment and Site Inspection, USGC Air Station Barbers Point, Kapolei, Oahu, Hawaii	**2022-Ongoing**	-

21. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
United States Coast Guard	**Mr. Mark Marini**	**(843) 819-1964**

the PA. Opportunistic subsurface soil samples were collected from the borings used to install the groundwater monitoring wells. Existing site injection wells were also sampled for groundwater. Surface water was collected from a sump associated with the FFTP.

Sample results identified significant impacts from the FFTP. Results from several samples exceeded HALs and Hawaii Department of Health (HDOH) Environmental Action Levels (EALs) for PFAS. High levels of several PFAS compounds were identified in the sediments that remain within the FFTP, in the decision unit located around the FFTP, and from three decision units adjacent to the FFTP. Groundwater samples collected from a monitoring well located just down gradient from the FFTP contained significant levels of PFAS. The sump which received liquids that drained from the FFTP contained very high levels of PFAS as well. The large DUs located around DU-1, adjacent to the FFTP have significantly elevated levels of PFAS. It is likely that most of the contamination is associated with the area close to the FFTP and most of the area on the western side of the base has significantly lower levels than currently reported. Further delineation of this part of the base is warranted to resolve this. Low levels of PFAS which exceed the unrestricted EAL but were below the commercial/industrial limits were identified in all surface soil samples. No other COPCs were identified at concentrations of concern. All fieldwork was conducted with an approach to ensure the health and safety of the sampling team, base personnel, and the environment. Prior to the start of work, a comprehensive Health and Safety Plan was developed and followed throughout all work steps.

The thirteen PFAS compounds (PFOS, PFOA, 6:2 FTS, PFDA, PFDoA, PFHps, PFHpA, PFHxS, PFNA, PFOSA, PFPeA, PFTrDA, PFUnA) detected their respective maximum contamination level in surface soils collected in Parcel A likely represent different legacy formulations of AFFF used over several decades.

23. FIRMS INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Element Environmental, LLC**	**Aiea, HI**	**Subconsultant**
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
	Mountain Methods, Inc.	**Tuolumne, CA**	**Prime Consultant**

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

24. NAMES OF KEY PERSONNEL (From Section E, Block 11)	25. ROLE IN EXAMPLE PROJECT	26. EXAMPLE PROJECTS LISTED IN SECTION F (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Ryan S.W. Yamauchi	Senior Engineer	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
Roger C. Aoki	Senior Environmental Engineer	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐
Matthew J. Neal	Senior Environmental Scientist	☐	☐	☒	☐	☒	☐	☐	☒	☐	☒
Arlene H. Campbell	Senior Geologist	☐	☐	☒	☐	☐	☐	☒	☒	☐	☐
Eric M. Lau	Senior Environmental Engineer	☒	☐	☐	☒	☐	☒	☐	☐	☐	☐
Bernice M. Balete	Senior Environmental Engineer	☒	☒	☒	☒	☐	☒	☒	☒	☒	☐
Marvin D. Heskett, III	Senior Chemist	☐	☐	☒	☐	☒	☐	☐	☒	☐	☒
Candace K. Yamauchi	Senior Environmental Engineer	☐	☐	☒	☐	☐	☐	☒	☒	☐	☐
Lindsay B. Mason	Senior Environmental Engineer	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐
Angela K. Peltier	Senior Geologist	☐	☐	☒	☐	☐	☐	☒	☒	☐	☐
Jodie C.A. Tsubone	Civil Engineer	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐

27. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Asbestos Survey for Commander Fleet Activities Okinawa, Okinawa, Japan	6	Asbestos Survey, Naval Base Guam, Guam
2	Hazardous Material Surveys for Kamehameha Schools, Honolulu, Oahu, Hawaii	7	Phase I and II Environmental Site Assessments, Honouliuli Wastewater Treatment Plant, Ewa Beach, Oahu, Hawaii
3	Phase I and II Environmental Site Assessments, Kapalama Container Terminal Yard, Honolulu Harbor, Oahu, Hawaii	8	Phase I and II Environmental Site Assessments, Former Voice of America Site, Maili, Oahu, Hawaii
4	Asbestos Survey, Commander Fleet Activities Yokosuka, Japan, Yokosuka, Japan	9	Hazardous Materials Survey, Demolition of Two Structures on TMK 1-3-7-02:018 and 077, 5839 and 5841 Kalanianaole Highway, Kalauhaehae Fishpond, Kuliouou, Oahu, Hawaii
5	Remedial Action at Scrap Metal Dump, Former LORAN Station Kure Atoll, Northwest Hawaiian Islands, Hawaii	10	Preliminary Environmental Assessment and Site Inspection, USGC Air Station Barbers Point, Kapolei, Oahu, Hawaii

H. ADDITIONAL INFORMATION

28. PROVIDE ANY ADDITIONAL INFORMATION AT YOUR DISCRETION. ATTACH ADDITIONAL SHEETS AS NEEDED

Element Environmental, LLC (E2) has been in business since October 2005. E2 offers a wide range of environmental consulting, environmental engineering design, and water resource evaluation. E2 offers a small business personal attention and flexible decision-making capabilities while providing a large firm's breadth of expertise and experience. E2 personnel work closely with a wide range of clients. E2 provides innovative, cost-effective solutions using the latest technology to obtain client objectives while complying with pertinent environmental regulations. E2 has a history of successfully completing projects throughout the State of Hawaii and the Pacific Rim for both the private sector and government clients.

ELMENT ENVIRONMENTAL, LLC

- **Established in 2005**
- **Operating for 18 years**
- **Small Business**
- **39 Personnel (Professional Engineers, Scientists, Chemists, Hydrologists, and Technical Staff)**

DISCIPLINES

- **Environmental Engineering**
- **Civil Engineering**
- **Hydrology/Water Resources**

NAME OF PRINCIPAL, FIRM, AND PRINCIPAL PLACE OF BUSINESS

Ryan Yamauchi, P.E.
Principal-In-Charge
Email: ryamauchi@e2hi.com
Office Phone: (808) 488-1200, Mobile: (808) 864-3952
Website: www.e2hi.com

Element Environmental, LLC
98-030 Hekaha Street, Unit 9, Aiea, Hawaii 96701 (Oahu)

EDUCATION, TRAINING & QUALIFICATIONS OF KEY MEMBERS

E2's technical staff of 39 total professionals (28 full-time, 11 part-time) with over 500 years of combined professional experience in environmental and engineering services with seven (7) licensed professional engineers and one (1) licensed geologist are either life-long residents of the State of Hawaii or have resided in the state for over 17 years. As a result, the staff of E2 is intimately familiar with the local environment, regulations, and community concerns. E2 personnel is comprised of engineers, hydrologists, geologists, environmental scientists, and chemists. Most individuals hold bachelor's degrees with four (4) master's degrees, and two (2) doctorate degrees received from prestigious universities including the Berkeley-University of California, Columbia University, Jacksonville University, Massachusetts Institute of Technology, Michigan Technical University, Mount Royal University, New Paltz State University of New York, Purdue University, The California Polytechnical University at San Luis Obispo, The University of Vermont, University of California at Los Angeles, UC Santa Cruz, University of Colorado at Boulder, University of Hawaii at Manoa, University of Notre Dame, Vanderbilt University, and Willamette University

AT-A-GLANCE PERSONNEL

- **7 Licensed P.E. (6 Hawaii-Civil)**
- **1 Licensed Geologist**
- **1 Ph.D. Hydrology, 1 Ph.D. Botany**

BREAKDOWN (39 PERSONNEL)

- **4 Civil Engineers**
- **8 Environmental Engineers**
- **3 Geologists**
- **1 Hydrogeologist**
- **8 Environmental Scientists**
- **1 Chemist**
- **1 Chemical Engineer**
- **9 Technicians**
- **4 Administrative Staff**

E2 is registered with the State of Hawaii, Department of Health (DOH) as an Asbestos Entity (A-0120) pursuant to Hawaii Administrative Rules, Chapter 11-504, and is also a certified Lead-Based Paint Activities Firm (PBF-0032) pursuant to Hawaii Administrative Rules, Chapter 11-41. Attachment 3 provides E2's staff licenses and asbestos and lead certifications. E2 has an asbestos project designer and inspectors, as well as a lead project designer, risk assessors, and inspectors.

STATE OF HAWAII DOH CERTIFIED

- **20 Asbestos Inspectors**
- **1 Asbestos Project Designer**
- **12 Lead Risk Assessors**
- **20 Lead Inspectors**
- **1 Lead Project Designer**

E2 has demonstrated its ability to manage and execute complex, multi-disciplinary, and concurrent task orders for various clients. E2's principals and Senior Project Managers each have over 25 years of experience in contracting, fee proposal preparation, project management, and subcontractor management. E2's key senior personnel assignments include Program Manager, Ryan Yamauchi, P.E., Technical Director/Quality Assurance Manager, Roger Aoki, P.E., and Health and Safety Manager, Matthew Neal.

Program Manager, Mr. Ryan Yamauchi, P.E., will be responsible for contractual matters, fee proposal preparation and negotiations for task orders, invoicing, and ensuring adequate resources are provided for each task order. Mr. Yamauchi will be the primary point of contact with the Contracting Officer.

Technical Director/Quality Assurance Manager, Mr. Roger Aoki, P.E., will be responsible for assigning the project managers and technical resources for each task order and tracking and ensuring compliance with project schedules and the technical aspects of the contract. Mr. Yamauchi and Mr. Aoki will have the authority to assign additional resources, stop work, and institute changes to ensure projects are completed safely, on time, and in compliance with the contract requirements. Mr. Aoki will also oversee the Quality Assurance (QA) of data and technical review of project deliverables. He will oversee the project chemists assigned to each task order to ensure laboratory data quality objectives are met and laboratory data are properly validated.

Health and Safety Manager, Mr. Neal, will manage and execute the Health and Safety Program for the contract. Mr. Neal will oversee site-specific Health and Safety Plan preparation, assign Site Health and Safety Officers for each task order, conduct health and safety audits, verify personnel has the appropriate health and safety training for the duties that they are assigned, and ensure subcontractor compliance with the contract's health and safety requirements and E2's Health and Safety Program. Mr. Neal will have the authority to immediately stop work for safety reasons and institute changes to the work procedures.

Depending on the nature of the task orders, Mr. Yamauchi, Mr. Aoki, and Mr. Neal may also serve as Project Managers on select task orders. Senior Project Managers, Ms. Arlene Campbell, L.G., Mr. Eric Lau, P.E., Mr. Marvin Heskett, Ms. Bernie Balete, P.E., Ms. Lindsay Mason, P.E., Ms. Candace Yamauchi, P.E., and Ms. Angela Peltier may also be responsible for managing the technical staff assigned to the task order, managing, and coordinating team subconsultants working on the task order, and coordination and execution of all project tasks.

PROGRAM MANAGER
Mr. Ryan Yamauchi, P.E.
- Contractual Matters
- Fee Proposals
- Negotiations
- Invoicing
- Ensure the project has adequate resources
- Project Manager

TECHNICAL DIRECTOR
Mr. Roger Aoki, P.E.
- Assign Technical Staff
- Assure Project has Technical Resources
- Contract Compliance
- Quality Assurance
- Project Manager

HEALTH & SAFETY
Mr. Matthew Neal
- Execute Safety for Staff and Subcontractors
- Health and Safety Plans for Project
- Authority to Stop Work
- Project Manager

PROJECT MANAGERS
Ms. Arlene Campbell, L.G.
Mr. Eric Lau, P.E.
Mr. Marvin Heskett, III
Ms. Bernice Balete, P.E.
Ms. Lindsay Mason, P.E.
Ms. Candace Yamauchi, P.E.
Ms. Angela Peltier

Please refer to the following for additional information.
Attachment 1 – Organization Chart
Attachment 2 – Qualifications of Key Personnel - education, years of experience, certifications, and training
Attachment 3 – Professional Licenses and Certifications

Attachment 4 – State of Hawaii Procurement Office, Certificate of Vendor Compliance/Certificate of Good Standing
Attachment 5 – Proof of Insurance

CLIENT REFERENCES

E2 provides the following client references.

Mr. Glenn Okamoto, P.E.
Project Manager
State of Hawaii
Department of Agriculture
1428 South King Street
Honolulu, Hawaii 96814
Phone Number: (808) 973-9436
Email: glenn.m.okamoto@hawaii.gov

Mr. John E. Sato, P.E.
Project Manager
Naval Facilities Engineering Systems Command
(NAVFAC) Pacific
258 Makalapa Drive, Suite 100
Honolulu, Hawaii 96860
Phone Number: (808) 472-1394
Email: john.e.sato.civ@us.navy.mil

Ms. Lureen Komoda, P.E.
Project Manager
City and County of Honolulu
Department of Design and Construction
650 South King Street, 14th Floor
Honolulu, Hawaii 96813
Phone Number: (808) 768-8758
Email: lkomoda@honolulu.gov

Mr. Carty Chang, P.E.
Chief Engineer
Department of Land and Natural Resources
Engineering Division
1151 Punchbowl Street, Room 221
Honolulu, Hawaii 96813
Phone Number: (808) 587-0230
Email: carty.s.chang@hawaii.gov

Mr. Steve Joseph
General Manager
PVT Land Company Ltd.
87-2020 Farrington Highway
Waianae, Hawaii 96792
Phone Number: (808) 668-4561
Email: steve@pvtland.com

Professional Services

E2 has a history of successfully completing projects throughout the State of Hawaii and Pacific Rim for both private and government clients for a variety of environmental, engineering, and water resources services. Over the last eighteen years, E2 has provided services to government agencies and private clients including the State of Hawaii, County of Hawaii, County of Kauai, County of Maui, and the City and County of Honolulu, NAVFAC Pacific, the U.S. Army Corps of Engineers; the U.S. Army Garrison Hawaii; the U.S. Coast Guard, Kamehameha Schools Bishop Estate, the Shell Oil Company, Getty Oil, Ball Corporation, and the Samsung Corporation. The large majority of E2's ongoing projects have been awarded by repeat clients who were satisfied with E2's abilities to control costs, provide high-quality work, and maintain and meet schedules. The following is a list of the professional services that E2 provides.

Environmental Services

- Environmental Compliance Audits and Pollution Prevention Planning
- Phase I, II, and III Environmental Site Assessments (ESAs)
- Environmental Site Investigations (SIs), Remedial Investigations (RIs), Remedial Designs (CERCLA and Resource Conservation Recovery Act [RCRA])
- Hazardous Materials Surveys including Asbestos and Lead-Based Paint (LBP)
- Hazardous Waste Management and Corrective Action Studies

- Soil and Groundwater Remediation
- Landfill/Solid Waste: Permitting; Gas and Groundwater Monitoring, Reporting, and SIs; Fire Management; and Global Positioning System (GPS) Services
- Integrated Solid Waste Management Planning
- Underground Storage Tank (UST) Closures and Remedial Investigations
- Dredged Material Testing and Evaluation
- Water Quality Studies (including National Pollutant Discharge Elimination System [NPDES] Permitting and Monitoring)
- Storm Water and Non-Point Source Pollutant Discharges
- Environmental Assessments (EAs) and Environmental Impact Statements (EISs)
- Environmental Permitting
- Environmental Baseline Surveys (EBSs)
- Risk Assessments
- Biosolids Treatment and Composting
- Phytoremediation and Mycoremediation
- Geographic Information System (GIS)-based Mapping and Databases for Environmental Data

Utilities Services

- Design of Water Distribution, Transmission, and Treatment Systems
- Design of Wastewater Collection, Treatment, and Disposal Systems
- Design of Storm Drainage Collection and Disposal Systems

Water Resources Services

- Water Resource Planning
- Well Site Selection
- Hydrologic and Hydrogeologic Studies
- Well Design and Permitting
- Well Installation, Cleaning, Testing, Inspection, and Closure
- Groundwater Monitoring
- Groundwater Modeling

COUNTY OF HAWAII - PROJECT EXAMPLES

Below is a summary table of professional services provided to the County of Hawaii.

Project	Year Completed	Contract Amount	Description
Wastewater Treatment Plants			
Kealakehe Wastewater Treatment Plant Feasibility Study, Kona	Ongoing	$394,800	E2 is currently preparing a Feasibility Study for the Kealakehe Wastewater Treatment Plant to support the United States Bureau of Reclamation Title XVI Program funding.
Kealakehe Wastewater Treatment Plant Headworks Upgrade, Kona	2022	$20,391	E2 collected 30 bulk samples for asbestos and 15 paint chip samples for lead, conducted a field investigation, and reviewed as-built plans and other available previous survey reports. Prepared report.
Pua Pump Station at Hilo Wastewater Treatment Plant Hazardous Materials	2022	$19,420	E2 conducted historical research, reviewed records, and conducted a site inspection of the Kealakehe Wastewater Treatment Plan. E2 also prepared a

Project	Year Completed	Contract Amount	Description
			Summary Letter and a Limited Asbestos and Lead Paint Survey Report summarizing field sampling. E2 will prepare construction plans, specifications, and construction cost estimates to address closure of the UST and existing fuel lines if needed.
Landfills			
Closed Kona Landfill Fire Monitoring	2016	$389,000	E2 provided various consulting services at two closed landfills, including performing a geophysical survey, infra-red photography, and mapping to determine landfill boundaries and fire characterization, and preparing a landfill fire management plan. Prepared a landfill alternatives plan to evaluate fire control/extinction, waste mining, and other alternatives. Assisted with an U.S. Environmental Protection Agency (EPA)-supported fire control pilot test to evaluate the efficacy of using waste excavation and the application of foam/water as a method to extinguish fire in landfill hot spots. Tasks included quarterly monitoring of landfill gas and subsurface fire conditions, preparation of quarterly and annual monitoring reports, and periodic fire management activities (e.g., carbon dioxide [CO2] injection, landfill cover maintenance, and landfill fire response, etc.).
Closed Waimea Landfill Fire Monitoring			
Closed Kona Landfill Subsurface Landfill Fire Monitoring and Maintenance	2015	$260,000	E2 provided fire monitoring and control services for the closed Kona/Waimea/Waimea Landfills. The services included: landfill cover maintenance; bi-annual inspections/quarterly monitoring, which includes landfill gas sampling and reporting; semi-annual vegetation control; installation of new gas sampling probes; and fire control and response activities.
Closed Waimea Landfill Subsurface Landfill Fire Monitoring	2015	$440,000	E2 conducted quarterly or semiannual monitoring of all functioning probes at the Waimea Landfill. Monitoring activities was conducted in general accordance with the Landfill Management Plan and at the interval specified in the previous monitoring report. Monitoring included collecting temperature and gas-composition data from the gas probes, sinkholes, cracks, and other designated areas at the landfill, evaluation of the landfill surface and soil cover maintenance, and evaluation of storm water runoff. Conducted an Infrared Survey and the results of the survey were included in the monitoring report. E2 will prepare monitoring reports with an annual summary included in the

Project	Year Completed	Contract Amount	Description
			fourth quarter report. Summarized all monitoring activities at the site.
Closed Waimea and Closed Kailua-Kona Landfills Fire Management	2015	$300,000	E2 reviewed historical documents and project files for the Kona Landfill available from the County of Hawaii and the State regulatory agencies to help identify potential measures that could be taken to control and minimize burning/smoldering areas at the landfill. E2 prepared a written summary of historical and environmental activities and provided a basis for recommendations for fire management options. E2 conducted an annual Infrared Survey to compare with landfill gas monitoring data to evaluate the subsurface condition at the landfills. E2 conducted bi-monthly site visits to inspect the Kona landfill surface for new depressions, fissures, sinkholes, odor, smoke, and dead vegetation; and to document the overall conditions at the landfill. E2 conducted quarterly landfill cover maintenance at the landfills, which includes providing suitable cover material and backfilling sinkholes and/or cracks observed in the landfill. E2 conducted quarterly monitoring at the landfills, which includes collecting temperature and gas-composition data from the gas probes, sinkholes, cracks, and other designated areas at the landfill; evaluation of the landfill surface and soil cover maintenance; and evaluation of storm water runoff. Gas data and probe locations are entered into the Surfer® contouring and 3D surface mapping program to illustrate gas concentrations. Problematic areas are delineated based on the resultant gas contours and carbon dioxide is injected into the probes in and around those areas in order to suffocate the fire. E2 prepared quarterly monitoring reports to submit to the County summarizing landfill maintenance and monitoring activities. E2 facilitated the closure of portions of the landfill's dilapidated landfill gas extraction system in 2014 in hopes of reducing the amount of oxygen available to smoldering areas in the landfill.

E2 staff can provide the County of Hawaii with the knowledge and technical expertise related to environmental engineering as below.

Hazardous Materials, Asbestos, Lead Paint Surveys

- **Asbestos and Lead-Based Paint Survey, Singapore Area Coordinator, Sembawang, Singapore.** E2 is conducting Asbestos and Lead Based Paint Surveys of Family Housing (FH), Unaccompanied Housing (UH), and Navy Gateway Inns and Suites (NGIS). Lead dust wipe samples were collected from 80 NGIS units. Asbestos and lead paint sampling were conducted at 12 UH units. Asbestos and lead risk assessment/paint sampling or X-ray fluorescence (XRF) testing will be conducted for 188 wall panels in 61 FH units. Asbestos and lead risk assessment/paint sampling or XRF testing will be conducted at 113 FH units (76 buildings). Asbestos bulk and lead paint sampling or XRF testing, and a lead risk assessment will be conducted at 80 NGIS units. E2 prepared a Work Plan and Health and Safety Plan for the work, and has completed a portion of the field work. Detailed survey reports will be submitted upon completion of field work and laboratory analysis.

- **Asbestos Survey, Naval Base Guam, Guam.** E2 completed an asbestos survey of 109 buildings with a total area of 1,014,904 square feet at Naval Base Guam. The work was completed in general accordance with applicable federal, Guam, and Navy laws, rules, regulations, orders, instructions, and industry-standard practice. E2 prepared a Work Plan and Health and Safety Plan prior to conducting field work. The field survey included the identification of Homogeneous Area (HAs), collection of survey information onto data sheets and building floor plans, collection of representative building material samples for each HA identified; collection of closeup and panoramic photographs of sample locations and assumed asbestos-containing material; and repair of sample locations. A total of 7,134 bulk samples were collected for laboratory analysis. For each building surveyed, E2 prepared a Draft and Final Survey Report, which included the findings in a summary data table, floor plans with approximate locations of samples taken, the extent of most HAs, a closeup and panoramic photo log of samples, and laboratory reports.

- **Hazardous Materials Survey, Former Sears Store Unit, Windward Mall, Kaneohe, Oahu, Hawaii.** E2 conducted a comprehensive demolition-level hazardous materials survey for the former Sears store unit. Suspect asbestos-containing material, lead paint, and arsenic-containing canec panels were sampled and submitted for laboratory analysis. The survey also included visual inventories of fluorescent light fixtures for PCB-containing ballasts, mercury-containing lamps, thermostats, and light switches. E2 prepared a report, including a review of as-built drawings, summary data tables, sample location figures, and sample photographs.

- **Hazardous Materials Surveys, Honouliuli Wastewater Treatment Plant Secondary Treatment Project, Ewa, Oahu, Hawaii.** E2 completed a hazardous material survey of over 30 buildings/structures that will undergo whole or partial demolition or renovation. Suspect asbestos-containing material, lead paint, and arsenic-containing canec panels were sampled and submitted for laboratory analysis. The survey also included visual inventories of fluorescent light fixtures for PCB-containing ballasts and mercury-containing lamps. E2 prepared a survey report, including summary data tables, sample location figures, and sample photographs. E2 also prepared hazardous materials specifications and construction cost estimates for the bid package, responded to requests for information, and reviewed pertinent contractor submittals.

Hazardous Materials/Substances Site Investigations and Testing

- **Phase I and II Environmental Site Assessments for Kaunakakai Harbor, Molokai, Hawaii.** E2 completed a Phase I Environmental Site Assessment (ESA) of the State of Hawaii, Department of Transportation, Harbors Division owned portion of Kaunakakai Harbor to identify Recognized Environmental Conditions (RECS) based on historic and current land uses. A Phase II ESA was also completed to investigate the RECs. The Phase II ESA consisted of the collection of surface and subsurface *MULTI INCREMENT*® soil samples from four decision units across the pier area, and installation of eight groundwater monitoring wells and the collection of groundwater samples. The soil and groundwater samples were analyzed for petroleum-related contaminants, heavy metals, polychlorinated biphenyls (PCBs), and pesticides. A Phase II ESA report was prepared to summarize the sampling results. Prepared an Environmental Hazard Evaluation and Environmental Hazardous Management Plan to manage potential risks posed by contaminated soil to human health and the environment.

- **Site Investigation at Former Molokai Electric Company and Galierher-Ono Parcels, Kaunakakai, Molokai, Hawaii.** E2 conducted a site investigation (SI) of the former Molokai Electric Company (MOECO) site in downtown Kaunakakai. The SI included a comprehensive study of residual near and subsurface contamination from previous MOECO activities, primarily from chemicals of concern polychlorinated biphenyls (PCBs), and petroleum and heavy metals. E2 collected over 700 discrete soil samples as well as 88 *MULTI INCREMENT*® soil samples, soil-gas, concrete, and groundwater samples. In addition, E2 conducted a synoptic water level study in order to help determine the potential migration of subsurface contaminants. Prior to the completion of the field portion of the project, E2 completed two Special Management Area permit applications for the County of Maui for the project. The results of the SI will be used to determine the most appropriate remedial action for the site.

- **Puna Agricultural Park Phase I Environmental Site Assessment, Puna, Island of Hawaii, Hawaii.** E2 completed a Phase I Environmental Site Assessment (ESA) for Puna Agriculture Park located in Puna, Hawaii Island, Hawaii for the DOA. The Phase I ESA was to identify environmental issues as part of a Puna Agricultural Park Feasibility Study of undeveloped land. E2 also drafted a Feasibility Study to determine the suitability of proposed parcels for agricultural use. E2 provided additional data collection from three parcels totaling 5,845 acres to support this Feasibility Study. E2 reviewed the existing conditions and conducted a market survey to determine public interest in developing the agricultural park.

- **Navy Environmental Hazard Evaluation/Environmental Hazard Management Plans for Ford Island Fuel Farm and UST NS-29, Oahu, Hawaii.** E2 completed an Environmental Hazard Evaluation (EHE)/Environmental Hazard Management Plan (EHMP) to identify and evaluate potential hazards to human health and sensitive ecological receptors posed by residual gasoline-impacted groundwater and/or soil identified at the Ford Island Fuel Farm and Underground Storage Tank (UST) NS-29 sites under current and potential future site conditions. The EHE/EHMPs were conducted in general accordance with the State of Hawaii Department of Health guidance and included a review of historic land use and environmental investigations conducted at the site, evaluation of the nature, magnitude, and extent of contaminants of potential concern, evaluation of potential negative impacts on human health and the environment posed by allowing contaminated media to remain in place, and a discussion of impacted media management and disposal of to prevent unmitigated exposure to human and ecological receptors. Based on the EHEs, a "No Further Action with Restrictions" status was recommended for both sites.

Landfill Related Projects

- **Ford Island Landfill Maintenance and Monitoring, Honolulu, Oahu, Hawaii.** E2 conducted annual groundwater and Surface Water Sampling at the Ford Island Landfill site. E2 performed landfill inspection and maintenance events during each groundwater monitoring event. E2 provided recommendations for corrective actions that may be required. E2 completed the annual Land Use Control (LUC) inspection form for the Ford Island Landfill during the inspection events. E2 performed work to remove excess vegetation, sediment and debris at the drainage trench outfalls. E2 cleaned all bolt holes and replaced missing, rusted, or unusable bolts for all monitoring well covers.

- **Kakaako Waterfront Park Ash Landfill Assessment, Honolulu, Oahu, Hawaii.** E2 reviewed the history of the site; reviewed previous environmental studies; conducted two site visits to evaluate the current landfill features, CH4 vent system, and cover condition; conducted landfill gas monitoring and provided the results of the findings. E2 also provided recommendations for ash landfill materials management and disposal options. E2 also provided guidance on environmental permits required to complete the proposed project and recommendations regarding the redevelopment of the site.

- **Groundwater Study and Groundwater Monitoring Plan for Apra Harbor Landfill, NAVFAC Marianas, Guam.** E2 conducted a Groundwater Study and prepared a Groundwater Monitoring Plan for the Navy Landfill located at the Apra Harbor Naval Base in Guam. The purpose of the groundwater study was to assess the current groundwater monitoring and protection program at the Navy Landfill, including assessing the groundwater quality, identifying potential groundwater contamination sources, and providing a strategy to bring the landfill out of corrective action and return the landfill to detection monitoring. The Groundwater Monitoring Plan was prepared to meet the requirements of Federal and GEPA regulations.

- **Landfill Implementation Plan for Marine Corps Base Hawaii, Oahu, Hawaii**. E2 has provided groundwater monitoring, gas monitoring and land surveying/grade-setting for the Marine Corps Base Hawaii Landfill since 2016 to current (2021). Groundwater data has been statistically analyzed and reported to the State of Hawaii Department of Health (HDOH) on a semiannual basis in a Semiannual Detection Water Quality Report. An annual report is submitted at the end of each calendar year summarizing yearlong groundwater monitoring results. Landfill gas monitoring is conducted quarterly and reported to the HDOH in an Explosive Gas Monitoring Report. Reports provided to HDOH summarize and report monitoring data and make recommendations for future landfill monitoring. Grade setting is conducted quarterly to implement the fill sequencing plan for the landfill.

Hydrographic Surveys/Dredged Material Evaluations

- **Hydrographic Survey and Dredged Material Evaluation for Maintenance Dredging at the Inner Apra Harbor Entrance Channel, Alpha-Bravo Turning Basin, Finger Piers, And Lima, Mike, and November Wharves, Apra Harbor, Guam.** E2 conducted a characterization of dredge-sediment at three Confined Disposal Facilities (CDFs); Orote Point, Field 5, and the Ship Repair Facility, to determine the suitability of the sediment for reuse/disposal. About 30 acres of vegetation were cleared or transects cut and surveyed. Over 30 *MULTI INCREMENT*® soil samples were collected from about 280,000 cubic yards of sediment material in the three CDF units. Unexploded ordinance clearance was required at each of the sites during all field operations. E2 managed multiple crews of both subcontractors and E2 personnel simultaneously. A Dredge Material Management Plan was completed detailing the results with possible reuse alternatives for the sediment.

- **Apra Harbor Sediment Sampling and Hydrographic Survey Naval Base Guam, Apra Harbor, Guam.** E2 completed a dredge material evaluation of the Northern Inner Apra Harbor area at Naval Base Guam. Four composite samples were collected from four project sub-areas; Alpha/Bravo Wharves, Entrance Channel, and Turning Basin area; Finger Piers; Lima/Mike Wharves; and November Wharf. A total of 20

locations were sampled to comprise the four composite samples. The composite samples were subjected to chemical and biological testing to determine if the sediment was suitable for ocean disposal at the designated Guam Deep Ocean Disposal site.

Solid Waste Planning and Management

- **Hazardous Waste Management Plan, Commander Fleet Activities Yokosuka, Japan.** E2 developed a Hazardous Waste Management Plan (HWMP) in accordance with all the applicable regulations and requirements and conducted a Closure Plan for the HWSA and PCB Storage area for Commander Fleet Activities Yokosuka. Field work associated with a detailed review of existing Hazardous Waste Documents; (i.e., HWMP, Polychlorinated Biphenyl (PCB) Management Plan, Spill Prevention and Response Plan, and existing pertinent documentation, and any other Hazardous Waste plans/reports/assessments (i.e., Hazardous Waste profile sheets [HWPSs], Hazardous Waste shipment logs, Hazardous Waste Accumulation Points [HWAPs] summary sheets, etc.). Field work associated with a detailed survey of all Hazardous Waste generation points, HWAPs, and HWSAs; and field work associated with an on-site review of existing Hazardous Waste procedures for characterization and verification testing.

- **Hazardous Waste Management Plan, Marine Corps Base Camp Butler, Okinawa, Japan.** E2 prepared a Hazardous Waste Management Plan (HWMP), Waste Analysis Plan (WAP), and Hazardous Waste Storage Area Closure Plan. The HWMP and WAP provide guidance on implementing a comprehensive plan for managing hazardous waste generated at Marine Corps Base Camp (MCB) Butler for each of the camps, tenants, and contractors in the Camp Butler area of responsibility. The plan assigns responsibility and provides guidance on waste management procedures to ensure proper management of Hazardous Waste and conformance with applicable hazardous waste regulations. The HWMP also establishes hazardous waste management procedures applicable to all military, civilian, and contractor employees at MCB Camp Butler. E2 toured each major tenant command to evaluate hazardous waste generating activities and hazardous waste accumulation points to assess proper management and characterization of waste streams. The plan provides recommendations on pollution prevention and hazardous waste minimization as well as recommendations to improve the overall Hazardous Waste Management program.

- **Integrated Solid Waste Management Plan for U.S. Fleet Activities Sasebo, Japan.** E2 developed an Integrated Solid Waste Management Plan (ISWMP) for Commander Fleet Activities (CFA) Sasebo. The CFA Sasebo existing ISWMP was updated including solid waste management programs (including source reduction, recycling, and composting) by optimizing their design and operation through an integrated analysis of all comprehensive, cost-effective alternatives. The ISWMP will aid CFA Sasebo in maximizing its non-hazardous solid waste diversion. Documenting, quantifying, and providing options for diverting food waste (food service (galley), restaurants, food courts, and commissary), wood, organics, and other recyclable material and maximizing the amount for revenue generated from the installation of Qualified Recycling Program (QRP). The plan will include estimated costs and timeframes for the implementation of installation-approved recommendations. The plan also provided ship off-load guidance criteria to control waste offloaded from homeport and to also provide a feasibility study of the QRP recyclables. The plan incorporated current Final Governing Standards, local, Department of Defense, Navy, and Federal laws, regulations, instructions, orders, and directives as well as innovative information about recycling, waste diversion, waste reduction awareness, composting, and affirmative procurement.

- **Integrated Solid Waste Management Plan for Hawaii Army National Guard, Oahu, Molokai, Maui, Hawaii.** E2 updated the existing Integrated Solid Waste Management Plan (ISWMP) dated October 2012 for Hawaii Army National Guard (HIARNG). E2 completed the Work Plan and Health and Safety Plans before conducting site visits. E2 conducted site visits to HIARNG Sites on Oahu, Molokai, Hawaii, and Maui. E2 updated the ISWMP with a contemporary and systematic approach to solid waste management at all HIARNG sites. IWSMP identified how to reduce, reuse, recycle, and manage waste that is protective of human health and the environment in local conditions.

- **Integrated Solid Waste Management Plan Marine Corps Air Station Iwakuni, Japan.** E2 prepared an Integrated Solid Waste Management Plan (ISWMP) that defined and documented the installation's current

ISWMP, established goals for improving solid waste management, identified specific actions required to achieve the plan goals, promoted compliance with applicable Federal, Department of Defense, Marine Corps, and local solid waste management regulations and policies, and evaluated alternative designs for future solid waste management. Conducted field work that included a waste stream assessment, data collection, and evaluation to prepare the final ISWMP.

- **Integrated Solid Waste Management Plan, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii.** E2 prepared an Integrated Solid Waste Management Plan (ISWMP) to define and document the installation's current ISWMP, establish goals for improving solid waste management, identify specific actions required to achieve the plan goals, promote compliance with applicable Federal, Department of Defense, and local solid waste management regulations and policies, and evaluate alternative designs for future solid waste management. The ISWMP will aid Joint Base Pearl Harbor-Hickam in maximizing its non-hazardous solid waste diversion. E2 prepared a Work Plan and a Health and Safety Plan prior to the field work. The field work included waste stream assessment, data collection, and evaluation used to prepare the final ISWMP.

Environmental Permitting and Environmental Compliance

- **National Pollutant Discharge Elimination System Stormwater Permitting and Compliance, Various Locations, Statewide, Hawaii.** E2 processed National Pollutant Discharge Elimination System (NPDES) permits for industrial facilities in Campbell Industrial Park, PVT Construction and Demolition Landfill on Oahu, and Princeville Landfill on Kauai. E2 has also processed NPDES permits for a private land owner in Kahala for the discharge of water and wastewater from decorative ponds and water features and for hydrotesting reservoir systems for the Honolulu Board of Water Supply. E2 also completed an industrial discharge connection permit to the City and County of Honolulu's municipal separate storm sewer system (MS4) for an industrial complex in Kalihi.

- **401 and 404 Water Quality Certifications (WQCs) for improvements and embankment repairs to the Barbers Point Kalaeloa Harbor, Oahu, Hawaii.** State of Hawaii Department of Transportation Harbors Division. E2 has experience with environmental permitting and certifications for compliance with Clean Water Act Sections 401 and 404. E2 has processed The 401 WQC was completed in coordination with the USACE Nationwide Permit 13 (NWP-13).

- **401 Water Quality Applicable Monitoring and Assessment Plan for Nuuanu Reservoir, Honolulu, Oahu, Hawaii.** The Honolulu Board of Water Supply repaired the Nuuanu Reservoir No. 4. The reservoir is in Nuuanu Valley adjacent to the Pali Highway, State Route 61, approximately 4 miles northeast of downtown Honolulu. The Nuuanu Reservoir repair project consisted of four primary tasks which required water quality monitoring, reservoir dredging, repairs to the intake tower and gangway, an outlet pipe extension, and roadway and embankment repairs. The Water Quality Applicable Monitoring and Assessment Plan (AMAP) was designed to address monitoring for pollutants in the adjacent stream environment during construction activities and to ensure Best Management Practices are working to minimize potential impacts.

Spill Prevention and Countermeasures Plans

- **Spill Prevention, Control and Countermeasure Plan, Pier 2 Cruise Terminal, Honolulu, Oahu, Hawaii.** E2 completed a Spill Prevention, Control and Countermeasure Plan (SPCC) for Pier 2 Cruise Terminal for the State of Hawaii, Department of Transportation, Harbors Division. E2 conducted a site visit for the location, prepared a site plan figure, and prepared the SPCC plan update.

- **Spill Prevention and Response Plan for 12 Sites in Okinawa, Japan.** E2 completed a Spill Prevention and Response Plan for Marine Corps Base Camp Butler, Okinawa, Japan. E2 inspected 324 aboveground storage tanks (ASTs), 29 underground storage tanks, 23 Chemical Storage Tanks, and 681 Electrical Transformers at 12 sites in Okinawa. E2 is currently preparing the reports.

- **Annual Spill Prevention Control and Countermeasures Plan Inspections of NAVFAC Hawaii Aboveground Storage Tanks and Oil Drum Storage Areas, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii (2013, 2015-Ongoing).** E2 completed the inspection of 170 ASTs and oil drum facilities annually since 2015 and has prepared a report which included locations, conditions, and recommendations for each tank.

- **Spill Prevention, Control and Countermeasure Plans for three Honolulu Board of Water Supply Sites, Kalihi Corporation Yard, Halawa Shaft, and Kunia Wells 1, Oahu, Hawaii.** E2 conducted site visits and documented the capacity, type, contents, and condition of each ASTs/drums at three City and County of Honolulu Board of Water Supply sites; Kalihi Corporation Yard, Halwa Shaft, and Kunia Wells I. E2 prepared a separate SPCC plan for each of the three sites meeting the requirements of Federal Clean Water Act and Oil Pollution Act.

- **Spill Prevention, Control and Countermeasure Plan Update, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii.** E2 completed a five-year update of the Navy SPCC plan for ASTs at all Navy facilities on Oahu, including Joint Base Pearl Harbor-Hickam (JBPHH)-Hickam Field and NAVFAC Hawaii facilities. A total of 456 ASTs were inspected and assessed by E2. An updated SPCC plan was developed for use by the Naval Supply Systems Command Fleet Logistics Center Pearl Harbor (NAVSUP FLCPH), NAVFAC Hawaii, JBPHH-Hickam Field, JBPHH-Naval Station, JBPHH-Wahiawa Annex, JBPHH-Lualualei Annex, Radio Transmitter Facility (RTF) Lualualei Annex, West Loch Annex, Beckoning Point, Kalaeloa, Pearl City Peninsula (PCP), and Manana Fire Station. E2 inspected and assessed 40 additional ASTs and integrated several more rounds of historical data into the SPCC Plan Update document that were not included in the Scope of Work, all at no additional cost to the Navy. E2 worked closely with NAVFAC Hawaii personnel to tailor the SPCC plan to specific Navy operations and to ensure the document could be easily used as a guide for Navy technical personnel and aid in spill prevention/response planning and management.

Water Quality Studies/Storm Water Monitoring and Planning

E2 has completed storm water monitoring for Total Maximum Daily Load (TMDL) compliance and for industrial site runoff compliance in accordance with Navy Region Hawaii's municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permit annually since 2015. E2 has also completed or is completing several storm water investigations, assessments, and management projects for NAVFAC Hawaii as follows.

- **Storm Water Management Plan for Commander Navy Region Hawaii, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii.** E2 prepared a Storm Water Management Plan (SWMP) for Commander Navy Region Hawaii in accordance with their National Pollutant Discharge Elimination System (NPDES) permit. The SWMP contained several program components including public education and outreach, illicit discharge detection and elimination, construction site runoff control, post construction storm water management, P2 and good housekeeping, storm water monitoring, and reporting. Storm Water Pollution Control Plans were developed for over 100 industrial facilities as part of the SWMP.

- **Storm Water Management Plan for Marine Corps Base Hawaii Kaneohe Bay, Oahu, Hawaii.** E2 prepared a Storm Water Management Plan (SWMP) for Marine Corps Base Hawaii Kaneohe Bay in accordance with their National Pollutant Discharge Elimination System (NPDES) permit. The SWMP contained several program components including, public education and outreach, illicit discharge detection and elimination, construction site runoff control, post construction storm water management, P2 and good housekeeping, storm water monitoring, and reporting. Storm Water Pollution Control Plans were developed for 25 industrial facilities as part of the SWMP.

- **Illicit Discharge Survey for Commander Navy Region Hawaii, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii.** E2 completed an illicit discharge survey for non-storm water discharges to the Commander Navy Region Hawaii (CNRH) municipal separate storm sewer system (MS4) and waters of the United States of America. The survey was completed in accordance with the National Pollutant Discharge Elimination System (NPDES) permit issued to CNRH. The scope included the inspection of over 1,300 facilities located

throughout Joint Base Pearl Harbor-Hickam. The inspections included an assessment of facility operations and work practices that may result in illicit discharges as well as inspections of the storm drain system during dry weather to determine if illicit connections are present. E2 completed the inspections and developed recommended corrective actions and associated preliminary cost estimates based on the survey findings.

- **Hickam Field Industrial Facility Inspections for Storm Water Compliance, Oahu, Hawaii.** E2 completed annual inspections of 38 industrial facilities located within 54 buildings at Hickam Field to determine if facility operations were in compliance with NPDES permit requirements. Facility managers were interviewed and facility inspections were completed in order to identify good housekeeping and best management practices (BMPs), the availability of spill response procedures and spill kits, existing erosion control measures, hazardous materials and hazardous wastes stored on site, material inventory, condition and types of storage lockers and containers for hazardous materials and hazardous wastes, current industrial work activities and work practices, evidence of spills and/or leaks, evidence of dry weather flows and illicit connections, and condition of existing storm drain inlets. Deficiencies were noted and recommended corrective actions including additional BMPs were identified.

- **Total Maximum Daily Load Study Wahiawa Annex, Oahu, Hawaii.** E2 served as the principal investigator for a Total Maximum Daily Load (TMDL) study for Joint Base Pearl Harbor-Hickam (JBPHH)-Wahiawa Annex. This monitoring work was conducted to comply with the terms of National Pollutant Discharge Elimination System (NPDES) Permit for the Navy's municipal separate storm sewer system (MS4). Cutthroat flumes were installed at three areas where runoff exits the facility and flows towards Kaukonahua Stream to allow quantification of the volume of flow exiting the installation. Water quality monitoring of the runoff has been conducted for 2.5 years for Total Nitrogen and its components (ammonia, Kjeldahl nitrogen, and Nitrate/Nitrite as N), turbidity and Total Suspended Solids (TSS)). A predictive analytical model was developed for JBPHH-Wahiawa Annex that allows calculation of the daily nitrogen & turbidity loads exiting the facility towards Kaukonahua Stream using continuous rainfall data collected at the installation. This model will save the Navy money complying with the terms of their NPDES permit.

Potable Water Source, Treatment, and Distribution Assessments

- **Lead in Drinking Water Testing at Priority Areas Joint Base Pearl Harbor-Hickam and Naval Computer and Telecommunications Area Master Station Pacific JBPHH and NCTAMS Pacific, Wahiawa, Oahu, Hawaii.** E2 conducted drinking water testing for lead as a protective measure at several priority areas and various schools and childcare facilities on Navy Installations. Quick turnaround times were required for sampling, laboratory analysis, and notifications. Initial site investigations were conducted to develop a comprehensive two-step sampling plan, in accordance with updated Navy directives and Environmental Protection Agency guidance. Field work involved multiple visits to each facility to prepare and sample over 700 drinking water outlets, conducted during evenings and weekends to minimize the impact on facility operations. Upon completion of the two-step sampling process, corrective actions were immediately developed and provided to the Navy. A Project Summary Report documented the work and findings.

- **Potable Water Master Plan for Commander Fleet Activities Okinawa for NAVFAC Pacific, Okinawa, Japan**. The Potable Water Master Plan (PWMP) consisted of an engineering evaluation of the condition, reliability, and quality of the installation's utility system, and the system's capability to meet present and future requirements. The Commander Fleet Activities Okinawa areas evaluated under this study included Camp Shields, White Beach, Awase Transmitter Site, and Tengan Pier. Field investigations were conducted at the facilities to verify water system components, review drawings, obtain water meter readings, and interview facility personnel. Pressure recorders were installed on select fire hydrants in the distribution system and fire hydrant flow tests were completed to obtain pressures at various locations in the distribution system to aid with the calibration of a computer model.

- **Water Efficiency Survey for the United States Army Corps of Engineers Honolulu Engineer District, Oahu, Hawaii.** The Water Efficiency Survey assessed 29 facilities within Fort Shafter and Fort Shafter Flats with the purpose of identifying water uses and potential water conservation options to meet the U.S. Army Garrison (USAG) Hawaii's sustainability goals. The surveyed facilities included office and industrial buildings, various community and activity centers, barracks, housing, the Hale 'Ikena restaurant, and the golf course. In addition to indoor fixtures, the scope of work included a landscape survey at Palm Circle and the golf course. The collected data were used to identify potential water savings, and repair and capital improvement projects that merit further consideration and exploration by USAG Hawaii. If implemented, the repair and capital improvement projects identified during the survey would result in water savings of approximately 9% annually or 16 million gallons per year with a resultant payback period of one year.

Sewage/Wastewater and Industrial Waste Collection Treatment, and Disposal Systems Investigations and Assessments

- **Slug Prevention Plan for Commander Fleet Activities Sasebo, Japan.** E2 evaluated facilities and activities with the potential to discharge or spill pollutants that could cause a slug load, which would impact the operation, maintenance, or management of domestic wastewater treatment systems.
- **Non-Domestic Wastewater Management Plan for NAVFAC Hawaii, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii**. E2 initially screened over 8,000 facilities to determine if the facility discharges or could potentially discharge non-domestic wastewater to the collection system. After the initial screening, E2 inspected approximately 800 facilities to determine if non-domestic discharges were occurring and whether proper pretreatment is being completed. Site inspections and interviews with facility managers were completed for those facilities that were confirmed to have non-domestic discharges. The management plan included a list of the inspection findings along with design recommendations to eliminate, divert, and/or pretreat the discharges. Cost estimates to implement the recommendations were provided.

  E2 determined the maximum allowable headworks loading (MAHL) for the NAVFAC Hawaii Wastewater Treatment Plant (WWTP). E2 performed an assessment of the impacts of the non-domestic discharges on the NAVFAC Hawaii WWTP, the fate of non-domestic waste streams, sludge impacts (including disposal and potential reuse considerations), whole effluent toxicity impacts and WWTP removal efficiencies. Considering these assessments as well as outfall dilution, water quality standards in the Hawaii Water Quality Standards, and pertinent regulations specified in the National Pollutant Discharge Elimination System (NPDES) Permit, E2 will develop the MAHLs for chemical and biological pollutants of concern and provide recommended revisions to indirect discharge limitations.
- **Waimanalo Wastewater Treatment Plant R-1 Reuse Feasibility Study, Waimanalo, Oahu, Hawaii.** A Feasibility Study (FS) was completed for the United States of America Army Corps of Engineers and City and County of Honolulu to assess the technical, environmental, and economic feasibility of producing R-1 water at the Waimanalo Wastewater Treatment Plant for reuse in the Waimanalo community. The first component of the FS was a market survey that was completed to identify potential users in the community. The survey identified available potable and irrigation water sources; gauged interest from the potential users; gathered user concerns with R-1 water use; and identified potential R-1 water demands. The results of the market survey indicated strong interest in R-1 water reuse from the Olomana Golf Links, Waimanalo District Park, Waimanalo Beach Park, Honolulu Polo Club, and Waimanalo Wastewater Treatment Plant (WWTP). A conceptual design for the first phase of improvements was completed and identified the WWTP improvements, the distribution system improvements, and the end user improvements.

- **Large Capacity Cesspool Closure, Hickam Field, Oahu, Hawaii.** E2 completed the closure design for five Large Capacity Cesspools (LCCs) located within the former Hickam AFB portion of JBPHH. These active LCCs are located at Buildings 2115, 3510, 3220, 3004, and 3435. The design services included determining the closure requirements for the LCC, determining the alternative disposal method (i.e., replacement with septic tank/leach field, or connection to existing wastewater collection system, development of construction drawings, specifications, and detailed cost estimates for the closure of the LCCs as well as completion of draft LCC closure applications for the State of Hawaii Department of Health. The project

included historical document review, topographic surveys, geotechnical investigations, and engineering services.

E2 interviewed building tenants regarding their operations to determine the average and peak design flows for the new wastewater facilities. Percolation tests were completed at the three LCC sites that were determined to require leach fields. One of the challenges for the project is the shallow groundwater table that is present at several of the sites located near the shoreline. The shallow groundwater requires the use of packaged pump stations to pump effluent from the septic tank to an elevated leach field. The relatively low flows (about 15 gallons per minute [gpm]) also required the design of packaged low flow progressive cavity pump stations. Waianae Agricultural Park Drainage Improvements. E2 completed the design of miscellaneous improvements to the drainage system at the Waianae Agricultural Park. The improvements included slope stabilization of drainage ways, diversion of runoff into an infiltration basin, design of overflow protection drainage intakes for the infiltration basin, and repairs to existing concrete drainage swales. During large rain events, debris being carried by stormwater has caused the primary drainageway intake to clog and flows to overtop the drainage system causing washout of the access road and drainageway slopes. To mitigate the blockage of the drainage intake, E2 designed diversion structures that will route stormwater into an infiltration basin. The diversion structures will allow for stormwater to enter the infiltration basin even with heavy debris build-up. An elevated backup drainage intake was also designed in the infiltration basin that will collect stormwater overflow and prevent overtopping of the drainageway. Other improvements included riprap stabilization of drainageway slopes.

Air Quality and Monitoring Studies

- **Ozone-Depleting Substances Inventory and Management Plan for Naval Air Facility Atsugi, Japan.** E2 updated the air source inventory to include all Ozone-Depleting Substances (ODS) containing units regulated or potentially regulated by the Japan Environmental Governing Standard (JEGS) and air emission sources (except ODS) that are regulated by the JEGS. Field work for the project was completed in 2017 and included verification of over 2,400 refrigerant and air emission sources at almost 230 facilities (70 additional facilities from the initial scope of work). Based on the results of the field work, E2 and HDR prepared an updated air source inventory database and maps of survey results, which were included in a Field work Summary Report. The field work findings were then used to update the ODS Management Plan (title changed to "Refrigerant Management Plan (RMP)") to reflect revisions to applicable regulations. Responsibilities included preparation of the Work Plan, completion of field inspections, preparation of the updated air source inventory database and maps, Field work Summary Report, and quality assurance review of the RMP.

- **Long-Term Groundwater and Soil Vapor Monitoring Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii.** E2 completed groundwater monitoring and soil vapor monitoring at the Red Hill Bulk Fuel Storage Facility. E2 conducted quarterly LTM groundwater monitoring and sampling of ten wells located inside and in the vicinity of the Red Hill Bulk Fuel Storage Facility tunnels. E2 worked closely with the Navy to streamline the quarterly reports and conducted several informational meetings for the Navy regarding the interpretation of analytical data. E2 is currently conducting monthly soil vapor monitoring of 48 soil vapor probes within the tunnel and has conducted maintenance and upgrades to the system at no additional cost to the Navy. Quarterly groundwater monitoring reports were completed during the groundwater long term monitoring and monthly soil vapor reports are completed following each field event.

E2's civil engineering design experience includes the Design of Water Distribution, Transmission, and Treatment Systems, Design of Wastewater Collection, Treatment, and Disposal Systems, Design of Storm Drainage Collection and Disposal Systems. Example projects include the following.

- **Construction of the Pier 29 Container Yard, Honolulu, Oahu, Hawaii.** Construction improvements which included a new pavement structure were completed at Pier 29 to accommodate a new container yard. As a subconsultant to RMTC, E2 prepared design specifications for the handling of contaminated soil and groundwater to be encountered during the construction. Historic releases of petroleum products have led to contamination in both the soil and groundwater including the presence of free-floating products on the groundwater surface. E2 also prepared design specifications to address air monitoring during construction and the removal of abandoned fuel pipelines that may be encountered. E2 participated in coordination meetings with the Harbors Division and the IDPP. The project design team received a commendation letter from HDOT Harbors after the construction was completed.
  COMMENDATION LETTER - EXCELLENT PERFORMANCE

- **Reconstruction/Replacement of Sewers, Ho'omaluhia Botanical Gardens, Kaneohe, Oahu, Hawaii.** Completed planning, design, and preparation of construction documents for the reconstruction/replacement of existing sewer lines. Phase I included the cleaning and inspection of CCTV in accordance with the Pipeline Assessment Certification Program. Phase II assessed the sewer line deficiencies from the CCTV data, developed rehabilitation/replacement alternatives for the system, prepared schematic, and concept drawings for the recommended alternatives, and prepared a cost estimate for the recommended improvements. Phase III, E2 is preparing construction documents.

- **Sand Island Wastewater Treatment Plant Site Assessment and Remedial Design, City and County of Honolulu.** E2 conducted a site investigation and Toxic Substances Control Act (TSCA) cleanup of contaminated soil. Responsibilities included overall project management, coordination of subconsultants, development of the technical approach for all environmental investigations and the remedial design and negotiating with the USEPA Region 9 and the State Department of Health (DOH) for all investigative and remedial activities. Supervised the preparation of the Phase I Environmental Site Assessment (ESA). Conducted and prepared the Phase II ESA, the Human Health Risk Assessment, the TSCA Notification Remediation Report, and the Soil Management Plan. Prepared construction plans and specifications and a construction cost estimate for the TSCA remediation. Performed services during construction including oversight and review of the TSCA cleanup. Coordinated the investigation and cleanup work for the two ongoing construction projects. Negotiated with the USEPA Region 9 and the State DOH throughout the duration of the project to allow construction to proceed concurrently with the investigation and cleanup. A follow- on remedial design including the completion of construction documents for the reuse of remaining low level PCB contaminated soil was completed for 76,000 cubic yards of stockpiled soil. Mr. Yamauchi served as the senior design engineer and designed a geofabric retaining wall system to contain the contaminated soil, which allowed for immediate future use of the site as a construction staging area.

- **Waianae Agriculture Park Drainage Improvements, Waianae, Oahu, Hawaii.** E2 completed the design of miscellaneous improvements to the drainage system at the Waianae Agricultural Park. The improvements included slope stabilization of drainage ways, diversion of runoff into an infiltration basin, design of overflow protection drainage intakes for the infiltration basin, and repairs to existing concrete drainage swales. Responsible for preparation of construction documents (i.e., plans and specifications) and services during bidding and construction. The construction plans were completed on an accelerated schedule to meet the funding requirements for construction.

-

E2 has conducted hydrogeological studies involving groundwater availability assessments for potable water systems and contaminant fate and transport within groundwater aquifers over the past years. Some of these projects are listed below.

- **Hydrogeological Study to Determine Impact of MILCON P-184 Reject Water, Diego Garcia, British Ocean Territory.** E2 conducted a hydrogeologic study to evaluate the potentially harmful impact to the water supply aquifer in the Cantonment Area on Diego Garcia resulting from the disposal of reject water created by the recently constructed nanofiltration plant.

- **Makua Valley Numerical Modeling Study, Makua, Oahu, Hawaii.** A surface water and groundwater modeling study was performed for the live firing range at Makua Valley. The simulation results were used to estimate future environmental impacts resulting from releases of munitions-related chemicals during live fire training exercises conducted by the Army within the range. Streamflow and groundwater data collected from wells and monitoring devices were used to calibrate the numerical groundwater (MODFLOW/MT3D/SEAWAT) and watershed runoff (GSSHA/WMS) models used. The simulation results were integrated into an EIS prepared for the firing range.

- **Numerical Modeling Study for Proposed Field Optimization Phase Injections**. E2 conducted a series of modeling simulations to evaluate the effects resulting from the injection of an oxidant (sodium persulfate) into a contaminated, shallow unconfined aquifer. The oxidant was being injected in order to induce the chemical breakdown of the dissolved phase contamination (predominately benzene) present at a former industrial property. The 2-D, finite difference BIOPLUME III model was used to simulate the degradation of benzene resulting from the injection of the oxidant compound into four injection wells screened in the shallow aquifer on the property over a one-week treatment period. The model was used to simulate the change in benzene concentration in the shallow aquifer over a six-month period after the oxidant was injected. The numerical simulation results were used to allay the concerns of surrounding property owners about the effect of the proposed remediation approach on the groundwater quality on adjacent properties.

- **Hoakalei Lagoon Groundwater Modeling Project, Ewa Plain, Oahu, Hawaii**. E2 conducted a hydrologic study to estimate the flux of groundwater entering a recently constructed lagoon located in the Ewa Plain of the island of Oahu. A density-dependent, numerical groundwater model (SEAWAT) was created for the area to estimate the groundwater influx rate into the lagoon. The model was calibrated using average water levels and recent vertical chloride concentration profile data measured in monitoring wells located in the vicinity of the lagoon. The model-derived groundwater flux data was combined with groundwater nutrient data to develop a maintenance program to limit the spread of an algal species, Chara spp. (muskgrass), within the lagoon while maintaining sufficient biomass of algae to maintain the good clarity and low overall nutrient levels present in the lagoon water.

- Additional scientific projects related to hydrology that E2 has previously conducted related to the movement, distribution, and management of water including the water cycle, water resources, and drainage basin sustainability are described below.

- **Investigation of Central Maui Landfill, Maui, Hawaii.** The purpose of the project involved analyzing the existing groundwater monitoring well network at the County of Maui Landfill (CML) and designing an improved monitoring network that is approved by the regulators at the State of Hawaii Department of Health (DOH). To accurately locate additional compliance monitoring wells at the facility, a two-month duration synoptic water level study was conducted on the existing network of monitoring wells as well as at the new water supply well. The tops of the existing compliance monitoring wells were resurveyed to allow delineation of the subtle gradient of the deep basal groundwater aquifer (~300 feet to water from the landfill surface) that underlies the CML. The overall direction and magnitude of the groundwater system underlying the landfill determined during the synoptic study were then used to design a compliance well

network for CML that effectively monitors potential landfill impact on the basal groundwater aquifer beneath the CML.

- **Hydrogeologic and Condition Assessment for Kokee and Kekaha Ditch Systems, Waimea, Kauai, Hawaii.** E2 collected physical inventory information and stream flow measurements for both ditch systems to assist the Commission on Water Resource Management (CWRM). Assisted the CWRM in the matter of the Complaint for Dispute Resolution and Complaint for Declaratory Order Against Waste in the Waimea River and its Tributaries filed by Earthjustice on behalf of Poai Wai Ola and the West Kauai Water shed alliance. E2 investigated and conducted fact-gathering work that included meetings with the parties pertaining to the complaint, conducting an inventory and assessment of the existing infrastructure of the Kokee and Kekaha Ditch Irrigation Systems, measuring and monitoring streamflow throughout both systems, assessing the existing uses of water from both systems and preparation of a comprehensive report describing the findings from these assessments to the Commission.

- **Waimanalo Wastewater Treatment Plant R-1 Reuse Feasibility Study, Waimanalo, Oahu, Hawaii.** A Feasibility Study was completed for the US Army Corps of Engineers and City and County of Honolulu to assess the technical, environmental, and economic feasibility of producing R-1 water at the Waimanalo WWTP for reuse in the Waimanalo community. The first component of the FS was a market survey that was completed to identify potential users in the community. The survey identified available potable and irrigation water sources; gauged interest from the potential users; gathered user concerns with R-1 water use; and identified potential R-1 water demands. The results of the market survey indicated strong interest in R-1 water reuse from the Olomana Golf Links, Waimanalo District Park, Waimanalo Beach Park, Honolulu Polo Club, and Waimanalo WWTP. A conceptual design for the first phase of improvements was completed and identified the WWTP improvements, the distribution system improvements, and the end user improvements.

- **Water Supply and Numerical Analysis of the Mahukona Aquifer System in Kohala, Hawaii.** A potable water source assessment was completed for the Mahukona aquifer system. A detailed, GIS-based water budget recharge analysis was performed for this aquifer system, located in an area undergoing rapid development. A 3-D, density-dependent numerical flow model (SEAWAT) was used to predict the increase in salinity within the aquifer that will result from the projected future increases in groundwater withdrawal from the aquifer system.

- **Groundwater Availability Assessment, Kawailoa, Oahu, Hawaii**. A potable water source assessment was completed for the 40.75-square mile Kawailoa property owned by Kamehameha Schools on the North Shore of Oahu. The groundwater availability for the area was determined by creating a GIS-based model that accounted for spatial variation in rainfall, evapotranspiration, irrigation, crop, and soil type, as well as the temporal variation in rainfall and evapotranspiration across the property.

E2 provides comprehensive services for planning studies and master plans. E2 has prepared environmental documents under NEPA, compliance with federal and state environmental laws and regulations, and has an understanding of Section 7 of the Endangered Species Act and Section 106 of the National Historic Preservation Act, Air Quality, Water Quality/Water Quality Permits, Benthic Communities, Biological Assessments, Essential Fish Habitat, Land Use and Infrastructure.

E2 has direct significant experience in successfully completing NEPA documentation and process for Federal and State interests in Hawaii. E2 engineers and environmental professionals, along with specialty team members, provide substantial expertise in supporting natural and cultural resources assessments and consultations, with a successful completion of agency/stakeholder interactions and detailed technical investigations, documentation and formal clearance. The E2 team can also provide expertise in water resources planning and application of a systems approach, with the representative project experience in Hawaii, Japan, and the United States.

- **Site Investigation at Former Molokai Electric Company and Galierher-Ono Parcels, Kaunakakai, Molokai, Hawaii.** E2 conducted a Site Investigation (SI) of the former Molokai Electric Company (MOECO) site in downtown Kaunakakai. The SI included a comprehensive study of residual near and subsurface contamination from previous MOECO activities, primarily from chemicals of concern polychlorinated biphenyls (PCBs) and petroleum and heavy metals. E2 collected over 700 discrete soil samples as well as 88 *MULTI INCREMENT*® (MI) soil samples, soil-gas, concrete and groundwater samples. In addition, E2 conducted a synoptic water level study in order to help determine potential migration of subsurface contaminants. Prior to completion of the field portion of the project, E2 completed two Special Management Area (SMA) permit applications for the County of Maui for the project. The results of the SI will be used to determine the most appropriate remedial action for the site. Responsibilities included Project Management, completion of the SMA permits, field oversight and coordination, drafting of the WP/SAP and a final report.

- **Puna Agricultural Park Feasibility Study and Phase I Environmental Site Assessment, Puna, Island of Hawaii, Hawaii.** E2 completed an Environmental Site Assessment (ESA) and prepared a Feasibility Study (FS) for the development of an agricultural park in Puna, Island of Hawaii. The three parcels at the site encompass a total land area of 5,845 acres. E2 reviewed the existing conditions and conducted a market survey to determine public interest in developing the agricultural park.

- **Remedial Investigation/Feasibility Study for Quarry Pit Landfill, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii.** This project involved landfill and soil cover characterization using geophysical survey and intrusive verification methods; soil, groundwater, soil gas, and sediment investigation and sampling; and site assessment and characterization using discrete and *MULTI INCREMENT*® sampling as part of the Remedial Investigation/Feasibility Study process to evaluate future remedial alternatives. Identified historic land use, reviewed previous construction and environmental work, project design and planning, data management and evaluation, and prepared report

Ability to Meet Schedules

Not all E2 personnel are currently being utilized full-time. E2 is actively pursuing new work and has the capacity to provide Environmental Engineering consulting services to the County of Hawaii. In addition, E2 has extensive partnering experience with several independent consultants (engineers, geologists, and field technicians) and subcontractors whom we can rely on to assist as needed with periodic work overloads, producing high-quality deliverables while under E2 management. E2 has an excellent history of meeting schedules within the allotted project constraints by submitting deliverables on time or in advance of client deadlines.

DISCIPLINE	NAME OF FIRM
Civil Engineering and Surveying	R.M. Towill Corporation
Surveying	ControlPoint Surveying, Inc.
Drilling Services	GeoTek Hawaii, Inc.
Civil Engineering	HDR
Environmental Planning	HHF Planners
Waste Management, Environmental Construction	Pacific Commercial Services
Analytical Services	Eurofins, Torrent Laboratory, Inc.
Asbestos and Lead Paint Analytical Services	SGS Forensic Laboratories
Data Valuation	Laboratory Data Consultants, Inc.

Cost Control

E2 is conscious of our role as stewards of our client's funds and is committed as partners to meeting the challenge of "doing the best with less". We control project costs through realistic cost estimating, competitive procurement of materials and services, developing and implementing innovative methods and design, and using cost accounting tools. Every project is approached in the following manner.

Cost Estimating. E2 cost estimating is done by senior staff with years of relevant experience. An accurate and realistic project cost estimate is a key component to controlling project budgets.

Competitive Procurement. E2 seeks competitive bids for procuring goods and services for subcontracted work. Whenever possible preferential consideration is given to small, small disadvantaged or women-owned small businesses.

Cost Accounting Tools. E2 is committed to a disciplined approach to controlling project costs and schedules using our fully automated, interactive, Intaact Project Management Information System (PMIS). PMIS integrates planning, scheduling, cost control, budgeting, and cost accounting.

Value Engineering. E2 approaches each project as a value engineering project, whether the value engineering is done informally with our in-house staff or formally utilizing the third-party process. Clients are assured that when alternatives are recommended, the recommendation is based on the collective wisdom of a team of experienced professionals.

Quality of Work

E2 is committed to providing clients with quality service and work products. This is achieved through the implementation of a Quality Assurance/Quality Control (QA/QC) system by the Senior Management of the firm. E2's project planning process calls for the development of detailed project schedules that identify task and milestone completion dates and strict adherence to quality and cost control programs. Schedules are discussed and agreed upon by all parties involved with the project. Once schedules are in place, monitoring becomes the key responsibility of the project manager. Deviations from the schedule are assessed by the project manager and brought immediately to the client's attention.

The repeat work received from clients of E2 is the best indicator of success at controlling the quality of our projects. E2's QA/QC program consists of a series of reviews for every project within the firm. Mr. Aoki is responsible for overseeing this program and ensuring that the independent review is unbiased and utilizes Value Engineering techniques. These independent reviews are conducted at every submittal stage from concept to final design.

The following is a checklist utilized by our QA/QC managers:

Compliance: Assuring the design is in accordance with all applicable design standards, codes, environmental regulations, etc.

Feasibility: Assuring the investigation/design is feasible in accordance with the client's budget.

Errors and Omissions: Assuring the elimination of errors and omissions that could result in change orders and possible liability.

Correctness and Clarity: Assuring that plans and reports are clear and correct.

Appearance: Assuring that the plans and GIS maps are prepared in accordance with the drafting standards of the client and comply with their profession's standards.

Comments generated through our QA/QC program are discussed with the design team and incorporated into the plans and specifications and/or reports prior to submission to the client.

E2 has also established a QA/QC Manual for its contracts. The QA/QC Manual establishes the quality systems to be used on contracts. It also establishes the positions and personnel responsible for the implementation of the quality systems. The QA/QC Manual defines the lines of authority and the QA/QC personnel responsibilities. The QA/QC Manual outlines the QA/QC tasks to be implemented, provides QA/QC checklists and forms to be completed, and provides procedures for the implementation of corrective actions. The QA/QC Manual includes the following sections that identify the quality systems to be used: 1.) Introduction; 2.) Organization and Responsibilities; 3.) Quality Control Program Scope; 4.) Personnel Training and Qualifications; 5.) Procurement Control and Supplier-Subcontractor Evaluation; 6.) Procedures, Instructions, Drawings and Technical Documents; 7.) Document Control; 8.) Chemical Sampling and Analysis Controls; 9.) Waste Management; 10.) Identification, Control, and Correction of Nonconforming Conditions; 11.) Records Management; 12.) Quality Audits and Surveillances

Examples of quality systems that will be implemented include:

- Fee Proposal Preparation – As mentioned in the key personnel section, fee proposals will be prepared by the Program Manager with assistance from the Technical Director, Senior Scientist, and other key Senior Project Managers who have the requisite project experience and technical knowledge to understand the various project complexities and develop a technical approach that will meet the project objectives and contract requirements. All fee proposals will be reviewed by the Technical Director or a Senior Project Manager who was not involved in the initial proposal preparation to provide an objective review. The Program Manager will then complete a second back-check prior to submittal.
- Planning Documents and Reports – All planning documents and report submittals will go through a three-phase review process. The first review will be by a Technical Editor. The second review will be by a Senior Project Manager not involved in the document preparation to provide an objective review. The third review will be by the Project Manager.
- Field Audits – Field audits may include Health and Safety audits by the Health and Safety Manager, and audits of field sampling procedures and field notes documentation by the Project Chemist, Senior Scientist, or QA Manager.
- Laboratory Analytical Data – E2 will utilize third–party data validation of laboratory analytical data when appropriate.
- Communications – Regular staff meetings will be conducted to discuss and improve the project procedures and communicate new procedures to be implemented and changes to contract requirements and regulations.

The QA Manager will be responsible for ensuring that the quality systems and procedures provided in the QA/QC Manual are followed. The Program Manager will assist the QA Manager by providing the necessary resources and staff to implement the QA/QC Program and providing the project staff with the resources and training required to accomplish their assigned duties.

Innovative Technologies

E2 personnel have applied a wide array of innovative technologies and characterization tools to facilitate the cost-effective characterization and remediation of sites containing hazardous materials. E2 personnel used portable XRFs to delineate areas of elevated heavy metals contamination in a cost-effective manner in backyards of homes in agricultural areas on Kauai, in public parks and preschools on the Big Island, at a former military site in leeward Oahu, and at a high school in Central Oahu. E2 chemists have used immunoassay techniques to test soils and surfaces for PCB content at contaminated sites on the island of Oahu and in remote locations, including landfill sites on Kure Atoll and the island of Guam. The use of XRFs and immunoassay methods saved significant amounts of time and money during characterization and remediation work at multiple contaminated sites since the determination of the extent of contaminated soils can be determined instantaneously (in the case of metals contamination (XRF)) or within one day (in the case of PCB or pesticide contamination (immunoassay methods)). This rapid turn-around time in receiving information on the contamination levels at the site expedited the remediation work conducted at these sites. At Kure Atoll, E2 personnel developed a novel remediation approach for landfill soils that involved the introduction of native saprophytic fungi capable of degrading PCBs in soils. This technology was later used to in-situ remediate the interior of decommissioned military vessels that are currently mothballed in West Loch on the island of Oahu. E2 has also used a combination of abiotic and biological amendments to degrade PCBs in situ at landfill sites. At project sites contaminated with petroleum products, E2 has experience using bio-stimulation agents (RegenOx and PersulfOx™) to accelerate the degradation of fuel-related contamination in site soils and groundwater.

Most recently at Cocos Island in Guam, E2 is using Clean Sediment Technology with ecoSPEARS (Sorbent Polymer Extraction and Remediation System) technology. This is a transformative in-situ green cleanup system for polychlorinated biphenyls (PCBs), dioxins, PAHs, DDT, and other persistent toxins from contaminated sediment. ecoSPEARS is a truly sustainable approach using less water, energy, and emissions than traditional cleanup methods. ecoSPEARS is a plastic mat technology that is filled with their solvent and then inserted into a scalable geosynthetic mat liner. The mat liners are then deployed down into the contaminated sediment where they act like a "sponge", passively absorbing PCBs from the sediment around it.

E2 personnel have worked with the State of Hawaii Department of Health (HDOH) Office of Hazard Evaluation and Emergency Response (HEER) to augment a new laboratory soil sub-sampling strategy (*MULTI INCREMENT*® sub-sampling) and have worked with HEER staff in the effort to utilize field instruments to obtain real-time defensible data. As a result of this collaboration, E2 personnel authored multiple papers (often with co-authors from the Hawaii Department of Health) on the use of increment sampling to characterize contaminated properties, to comply with 401/404 permitting requirements in offshore harbor waters, and for Applicable Monitoring and Assessment Plan (AMAP) monitoring of streams and waterbodies impacted by construction activities.

E2 personnel also pioneered innovative incremental sampling methodology techniques for the characterization of contamination in sediments present in streams and harbors. E2 recently hosted a webinar on contaminated sediment characterization for personnel from the EPA Office of Research and Development's Office of Science Policy and for consultants from around the nation.

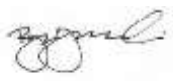
E2 completed a study of the Wahiawa Irrigation System for the State of Hawaii Agribusiness Development Corporation (ADC). E2 was able to successfully coordinate with multiple government agencies and private stakeholders involved in the use of Lake Wilson and the irrigation system to investigate and identify the financial, legal, and environmental liabilities and responsibilities should ADC take ownership of the system. The study was completed within nine months and in time for ADC's board to evaluate their options before the next meeting of the State Legislature in 2008. A comprehensive presentation of the study was completed by E2 to the ADC board members. The presentation was covered by three of the four major local television stations. **A few hours after the presentation, E2 received an acknowledgment email from Mr. Alfredo Lee, Executive Director of ADC. The email stated "The board members really liked your presentation. Thanks for the good work."**

Two other projects that exemplify E2's excellent past performance was the Integrated Solid Waste Management Plan and Pollution Prevention Plan developed for the Commander Fleet Activities Sasebo (CFAS) through NAVFAC Pacific. Review comments received from the CFAS Project Lead, Mr. Frank Floros, on the two plans included: **"The plan (Integrated Solid Waste Management Plan) is excellent, concise and provides great attainable recommendations to improve the CFAS SW and Recycling Programs. CFAS appreciates your effort."**

Another example project that demonstrates E2's ability to deliver a quality work product on-time and within budget is the design of the Pier 29 Container Yard for the HDOT Harbors, Harbors Division. As a subconsultant to RMTC, E2 prepared design specifications for the handling of contaminated soil and groundwater to be encountered during the construction of the new container yard. Historic releases of petroleum product have led to contamination in both the soil and groundwater at the site including the presence of free-floating product on the groundwater surface. In addition, E2 prepared specifications to address the removal of abandoned fuel pipelines and air monitoring during construction. E2 participated in coordination meetings with HDOT Harbors and the Iwilei District Participating Partners (IDPP), a stakeholder for the soil and groundwater contamination, to ensure effective communication and project acceptance by all parties involved. E2 also addressed comments by HDOH who reviewed the construction documents. The project team was able to meet the one year accelerated design schedule required to receive stimulus funds from the Federal government. The design team received a commendation letter from HDOT Harbors Division for "excellent performance" on the project including **"going beyond the contract with extensive coordination that was done for the handling of petroleum contaminated soils at the project site with the IDPP."**

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

29. SIGNATURE	30. DATE
	**June 30, 2023**

31. NAME AND TITLE

Ryan S.W. Yamauchi, P.E., President

PROFESSIONAL SERVICE PROVIDER QUALIFICATIONS	1. PROJECT CATEGORY OF INTEREST **PR.3) Industrial Hygiene (Hazardous Materials Survey, Assessment & Planning)**

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME			3. YEAR ESTABLISHED	4. UNIQUE ENTITY CODE
Element Environmental, LLC			**2005**	**CGL8P3GH6JW3**
2b. STREET **98-030 Hekaha Street, Unit 9**			5. OWNERSHIP a. TYPE **Limited Liability Company**	
2c. CITY **Aiea**	2d. STATE **Hawaii**	2e. ZIP CODE **96701**	b. SMALL BUSINESS STATUS **Small Business**	
6a. POINT OF CONTACT NAME AND TITLE **Ryan S.W. Yamauchi, P.E., President**			7. NAME OF FIRM *(If block 2a is a branch office)*	
6b. TELEPHONE NUMBER **(808) 488-1200**	6c. E-MAIL ADDRESS **ryamauchi@e2hi.com**			
8a. FORMER FIRM NAME(S) *(If any)*			8b. YR. ESTABLISHED	

9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
		(1) Firm	(2) Branch			
12	Civil Engineer	4		C15	Construction Management	3
23	Environmental Engineer	8		D04	Design Build-Preparation of Requests and Proposals	1
24	Environmental Scientist	9		E09	Environmental Impact Studies, Assessments or Statements	2
30	Geologist	3		E11	Environmental Planning	2
34	Hydrogeologist	1		E12	Environmental Remediation	3
11	Chemist	1		E13	Environmental Testing and Analysis	6
10	Chemical Engineer	1		G04	GIS Services	1
02	Administrative	4		S04	Sewage Collection Treatment and Disposal	2
58	Technician/Analyst	8		S07	Solid Wastes; Incineration; Landfill	3
				S13	Storm Water Handling and Facilities	4
				W02	Water Resources, Hydrology, Groundwater	3
	Total	39		W03	Water Supply, Treatment, and Distribution	2

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS *(Insert revenue index number shown at right)*	
a. State of Hawaii Work	3
b. Non-State of HI Work	7
c. Total Work	7

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE	b. DATE
c. NAME AND TITLE: **Ryan S.W. Yamauchi, President**	**June 30, 2023**

ATTACHMENT 1

ELEMENT ENVIRONMENTAL, LLC
ORGANIZATIONAL CHART

element environmental llc
environmental · engineering · water resources

Element Environmental, LLC
Organizational Chart

RYAN S.W. YAMAUCHI, P.E.

Principal-In-Charge/President
Program Manager
Senior Civil/Environmental Engineer

Years of Experience: 31
Years with Firm: 18

ROGER C. AOKI, P.E.

Technical Program Manager
Quality Assurance Manager
Senior Environmental Engineer

Years of Experience: 27
Years with Firm: 17

MATTHEW J. NEAL

Environmental Investigation Manager
Health and Safety Manager
Senior Environmental Scientist

Years of Experience: 25
Years with Firm: 17

ARLENE H. CAMPBELL, L.G.

Environmental Compliance Manager
Senior Geologist

Years of Experience: 34
Years with Firm: 17

TECHNICAL STAFF

ERIC M. LAU, P.E.
Senior Environmental Engineer
Years of Experience: 19
Years with Firm: 14

BERNICE M. BALETE, P.E.
Senior Environmental Engineer
Years of Experience: 29
Years with Firm: 13

MARVIN D. HESKETT, III
Senior Chemist
Years of Experience: 33
Years with Firm: 9

CANDACE K. YAMAUCHI, P.E.
Senior Environmental Engineer
Years of Experience: 18
Years with Firm: 12

LINDSAY B. MASON, P.E.
Senior Environmental Engineer
Years of Experience: 21
Years with Firm: 14

ANGELA K. PELTIER
Senior Geologist
Years of Experience: 19
Years with Firm: 17

STEVEN R. SPENGLER, PH.D.
Senior Hydrogeologist
Years of Experience: 35
Years with Firm: 17

DANNY C. LIU
Senior Chemical Engineer
Years of Experience: 35
Years with Firm: 8

DEREK Y. YASAKA
Senior Environmental Specialist
Years of Experience: 33
Years with Firm: 1

JODIE C.A. TSUBONE, P.E.
Senior Civil Engineer
Years of Experience: 11
Years with Firm: 8

STANLEY C.T. NG
Senior Environmental Specialist
Years of Experience: 45
Years with Firm: 3

AUSTIN A. LUTEY
Environmental Engineer
Years of Experience: 15
Years with Firm: 15

DANIEL W. AMATO, PH.D.
Environmental Scientist
Years of Experience: 7
Years with Firm: 5

JAMES D. TSUBONE
Environmental Scientist
Years of Experience: 7
Years with Firm: 7

JOHN A. ELLIS
Environmental Technician
Years of Experience: 7
Years with Firm: 7

KATIE L. KILWAY
Environmental Scientist
Years of Experience: 16
Years with Firm: 13

LESLIE ROBINSON
Project Engineer
Years of Experience: 16
Years with Firm: 2

JOSHUA B. AGPAOA, E.I.T
Staff Civil Engineer
Years of Experience: 5
Years with Firm: 5

THEODORE N. UEKAWA, E.I.T.
Staff Civil Engineer
Years of Experience: 2
Years with Firm: 2

MAYA MATSUOKA
Staff Environmental Scientist
Years of Experience: 2
Years with Firm: 2

ARNOLD DAVID WEST
Staff Environmental Scientist
Years of Experience: 6
Years with Firm: 6

ERICA E. ADAMCZYK
Staff Geologist
Years of Experience: 16
Years with Firm: 0.1

LOGAN N. YAMAMOTO
Staff Environmental Scientist
Years of Experience: 0.1
Years with Firm: 0.1

ATTACHMENT 2

ELEMENT ENVIRONMENTAL, LLC
QUALIFICATIONS OF KEY PERSONNEL

KEY PERSONNEL	QUALIFICATIONS	
RYAN S.W. YAMAUCHI, P.E.	**Professional Title:** Program Manager Principal Engineer	**Years of Experience: 31** **Years with Current Firm: 18**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 9566 **Certified Asbestos Inspector, Hawaii No. HIASB-2905** **Certified Lead Risk Assessor/Inspector, Hawaii No. PB-0117** **Education:** • Mstr. Civil and Environmental Engineering, UC Berkeley • B.S. Civil Engineering, University of Hawaii at Manoa **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA Construction Safety and Health Training, 30-HR • Construction Safety and Health Training, 40-HR • Hazardous Waste Site Supervisor Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
ROGER C. AOKI, P.E.	**Professional Title:** Senior Environmental Engineer	**Years of Experience: 27** **Years with Current Firm: 17**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 10019 **Certified Asbestos Inspector, Hawaii No. HISAB-2902** **Certified Lead Inspector, Hawaii No. PB-0118** **Education:** • Mstr. Civil and Environmental Engineering, Purdue University • B.S. Civil Engineering, University of Hawaii at Manoa **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA Construction Safety and Health Training, 30-HR • Construction Safety and Health Training, 40-HR • Hazardous Waste Site Supervisor Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
MATTHEW J. NEAL	**Professional Title:** Senior Environmental Scientist	**Years of Experience: 25** **Years with Current Firm: 17**
	Education: • B.S. Environmental Science and Geology, Willamette University **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • Construction Safety and Health Training, 40-HR • Hazardous Waste Site Supervisor Training • Maritime Security (MARSEC) • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
ARLENE H. CAMPBELL, L.G.	**Professional Title:** Senior Geologist	**Years of Experience: 34** **Years with Current Firm: 17**
	LICENSED GEOLOGIST, WASHINGTON No. 1664 **Education:** • Graduate Work, Geology, Vanderbilt University • B.A. Geology, Minor Hydrology, Austin Peay University **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA Construction Safety and Health Training, 30-HR • Construction Safety and Health Training, 40-HR • Hazardous Waste Site Supervisor Training • Maritime Security (MARSEC) • Bloodborne Pathogens, First Aid, CPR, and AED Training	
STEVEN R. SPENGLER, PH.D.	**Professional Title:** Senior Hydrogeologist	**Years of Experience: 35** **Years with Current Firm: 17**
	Education: • Ph.D. Hydrogeology, University of Hawaii at Manoa • Mstr., Geology, University of Hawaii at Manoa • B.S. Geochemistry, University of California, Santa Cruz • B.S. Chemistry, University of California, Riverside **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • Construction Safety and Health Training, 40-HR • Hazardous Waste Site Supervisor Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
ERIC M. LAU, P.E.	**Professional Title:** Senior Environmental Engineer	**Years of Experience: 19** **Years with Current Firm: 14**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 12977 **Certified Asbestos Inspector, Hawaii No. HISAB-3198** **Certified Lead Risk Assessor/Inspector, Hawaii No. PB-0439** **Education:** • Mstr. Civil and Environmental Engineering, Massachusetts Institute of Technology (MIT) • B.S. Civil and Environmental Engineering, MIT • B.S. Biology, MIT **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • Construction Safety and Health Training, 40-HR • Hazardous Waste Site Supervisor Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
BERNICE M. BALETE, P.E.	**Professional Title:** Senior Environmental Engineer	**Years of Experience: 29** **Years with Current Firm: 13**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 10186 **Certified Asbestos Project Designer/Inspector, Hawaii No. HISAB-0449** **Certified Lead Project Designer/Risk Assessor/Inspector, Hawaii No. PB-0449** **Education:** • B.S. Civil Engineering, University of Hawaii at Manoa **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • Construction Safety and Health Training, 40-HR • Hazardous Waste Site Supervisor Training • Maritime Security (MARSEC) • Bloodborne Pathogens, First Aid, CPR, and AED Training	
MARVIN D. HESKETT	**Professional Title:** Senior Chemist	**Years of Experience: 33** **Years with Current Firm: 09**
	Certified Asbestos Inspector, Hawaii No. HISAB-34631 **Certified Lead Risk Assessor/Inspector, Hawaii No. PB-1150** **Education:** • B.S. Biochemistry, California Polytechnic University at San Luis Obispo **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • Construction Safety and Health Training, 40-HR • Hazardous Waste Site Supervisor Training • Sampling for Defensible Environmental Decisions, QE3C • E3 Data Quality Objectives • Shipley Group NEPA Training • Advanced Systems QA/QC Course, 40-HR • Maritime Security (MARSEC) • Bloodborne Pathogens, First Aid, CPR, and AED Training	
CANDACE K. YAMAUCHI, P.E.	**Professional Title:** Senior Environmental Engineer	**Years of Experience: 18** **Years with Current Firm: 12**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 16320 **Certified Asbestos Inspector, Hawaii No. HISAB-3840** **Certified Lead Risk Assessor/Inspector, Hawaii No. PB-1135** **Education:** • B.S. Earth and Environmental Engineering, Columbia University **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • 40-HR Construction Safety and Health Training • Hazardous Waste Site Supervisor Training • Qualified Stormwater Compliance Manager • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
LINDSAY B. MASON, P.E.	**Professional Title:** Senior Environmental Engineer	**Years of Experience: 21** **Years with Current Firm: 14**
	REGISTERED PROFESSIONAL ENGINEER, MICHIGAN CIVIL No. 6201059411 **Education:** • B.S. Environmental Engineering, Michigan Technological University **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • DOT HM-181 Hazardous Materials Training RCRA S30 Certification • RCRA S30 Certification Hazardous/Toxic Materials Management • Hazardous Waste Site Supervisor Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
ANGELA K. PELTIER	**Professional Title:** Senior Geologist	**Years of Experience: 19** **Years with Current Firm: 17**
	Education: • B.S. Geology and Geophysics, University of Hawaii at Manoa **Training:** • ASTM E1527 Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process Certification • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
JODIE C. TSUBONE, P.E.	**Professional Title:** Civil Engineer	**Years of Experience: 11** **Years with Current Firm: 08**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 17048 **Certified Asbestos Inspector, Hawaii No. HISAB-4629** **Certified Lead Inspector, Hawaii No. PB-1151** **Education:** • B.S. Civil Engineering, University of Hawaii at Manoa **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • Construction Safety and Health Training, 40-HR • Maritime Security (MARSEC) • Erosion and Sediment Control Plan Coordinator (ESCP), Department of Planning & Permitting (CCH) • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
AUSTIN A. LUTEY, E.I.T.	**Professional Title:** Environmental Engineer	**Years of Experience: 15** **Years with Current Firm: 15**
	Certified Asbestos Inspector, Hawaii No. HISAB-3199 **Certified Lead Risk Assessor/Inspector No. PB-0440** **Education:** • B.S. Civil Engineering, University of California Los Angeles (UCLA) **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • Construction Safety and Health Training, 40-HR • Hazardous Waste Site Supervisor Training • Maritime Security (MARSEC) • Bloodborne Pathogens, First Aid, CPR, and AED Training	
DANNY C. LIU	**Professional Title:** Chemical Engineer	**Years of Experience: 35** **Years with Current Firm: 08**
	Certified Asbestos Inspector, Hawaii No. HISAB-4653 **Certified Risk Assessor/Inspector No. PB-1136** **Education:** • B.S. Chemical Engineering, University of Colorado at Boulder **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • Hazardous Waste Site Supervisor Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
KATIE L. KILWAY	**Professional Title:** Environmental Scientist	**Years of Experience: 16** **Years with Current Firm: 13**
	Certified Asbestos Inspector, Hawaii No. HISAB-3284 **Education:** • B.S. Environmental Science, University of Notre Dame **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety Hazard Awareness Training • Construction Safety and Health Training, 40-HR • Maritime Security (MARSEC) • Bloodborne Pathogens, First Aid, CPR, and AED Training	
ARNOLD DAVID WEST	**Professional Title:** Staff Environmental Scientist	**Years of Experience: 06** **Years with Current Firm: 06**
	Certified Asbestos Inspector, Hawaii No. HISAB-4625 **Certified Lead Risk Assessor/Inspector, Michigan No. P-08520** **Education:** • B.S. Applied Physics, Jacksonville University of Florida **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
DANIEL W. AMATO, PH.D.	**Professional Title:** Environmental Scientist	**Years of Experience: 07** **Years with Current Firm: 05**
	Certified Asbestos Inspector, Hawaii No. HISAB-4628 **Certified Lead Risk Assessor/Inspector, Hawaii No. PB-1148** **Education:** • Ph.D. and Mstr. Botany, University of Hawaii at Manoa • B.S. Biology, University of Vermont **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • Construction Safety and Health Training, 40-HR • Maritime Security (MARSEC) • Scientific SCUBA Diver, Rescue Diver, Master Diver, Nitrox Certified Diver • Bloodborne Pathogens, First Aid, CPR, and AED Training	
JOSHUA B. AGPAOA, E.I.T.	**Professional Title:** Staff Civil Engineer	**Years of Experience: 05** **Years with Current Firm: 05**
	Certified Asbestos Inspector, Hawaii No. HISAB-4791 **Certified Lead Risk Assessor/Inspector, Hawaii No. PB-1137** **Education:** • B.S. Civil Engineering, University of Hawaii at Manoa **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
JAMES D. TSUBONE	**Professional Title:** Environmental Scientist	**Years of Experience: 07** **Years with Current Firm: 07**
	Certified Asbestos Inspector, Hawaii No. HISAB-4118 **Certified Lead Risk Assessor/Inspector, Hawaii No. PB-0827** **Education:** • B.S. Geology, Mount Royal University Canada **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • Construction Safety Hazardous Awareness Training for Contractors, 40-HR • OSHA 30-HR Construction Safety and Health Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	

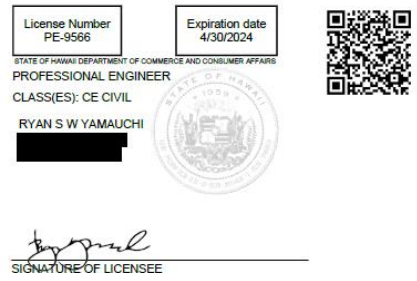
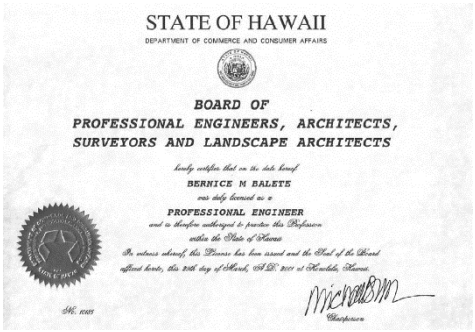
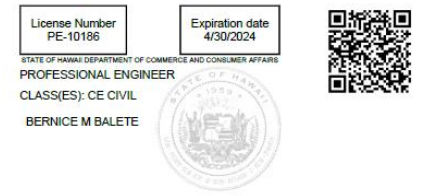
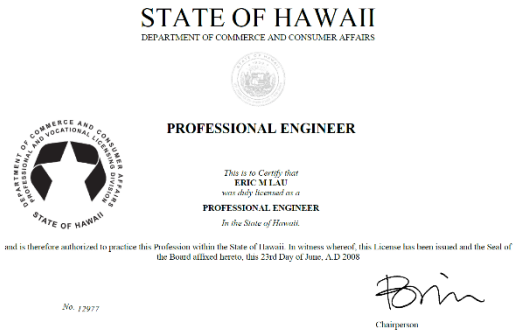
KEY PERSONNEL	QUALIFICATIONS	
LESLIE A. ROBINSON, E.I.T.	**Professional Title:** Staff Civil Engineer	**Years of Experience: 15** **Years with Current Firm: 02**
	Certified Asbestos Inspector, CHC Training, No. 58808275 **Education:** • Mstr. Civil Engineering, MIT • B.S. Civil Engineering, MIT **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • Cross Connection Control and Hydraulic Research Specialist Training, University of Southern California • How to Conduct a Sanitary Survey of Surface Water and Ground Water System Course, U.S. Environmental Protection Agency • Bloodborne Pathogens, First Aid, CPR, and AED Training	
THEODORE N. UEKAWA, E.I.T.	**Professional Title:** Staff Civil Engineer	**Years of Experience: 02** **Years with Current Firm: 02**
	Certified Asbestos Inspector, Hawaii No. HISAB-5084 **Certified Lead Inspector, Hawaii No. PB-1257** **Education:** • Mstr. Civil Engineering, University of Hawaii at Manoa • B.S. Civil Engineering, University of Hawaii at Manoa **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
MAYA MATSUOKA	**Professional Title:** Staff Environmental Scientist	**Years of Experience: 02** **Years with Current Firm: 02**
	Certified Asbestos Inspector, Hawaii No. HISAB-5085 **Certified Lead Inspector, Hawaii No. PB-1254** **Education:** • B.A. Environmental Studies and Economics, University of California at Santa Cruz **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
JOHN A. ELLIS	**Professional Title:** Field Technician	**Years of Experience:** 06 **Years with Current Firm:** 06
	Certified Asbestos Inspector, Hawaii No. HISAB-4117 **Certified Lead Risk Assessor/Inspector, Hawaii No. PB-0828** **Education:** • B.S., In progress, Natural Science Courses, Oregon State University **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • Construction Safety and Health Training, 40-HR • Hazardous Waste Site Supervisor Training • Maritime Security (MARSEC) • Bloodborne Pathogens, First Aid, CPR, and AED Training	

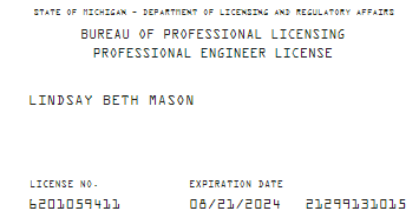
ATTACHMENT 3

ELEMENT ENVIRONMENTAL, LLC
PROFESSIONAL LICENSES AND CERTIFICATIONS

Element Environmental, LLC
Personnel Registered Professional Licenses

NAME	LICENSE NUMBER	EXPIRATION DATE
RYAN S.W. YAMAUCHI	**P.E.** - No. 9566, HAWAII  STATE OF HAWAII DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS hereby certifies that on the date hereof RYAN S W YAMAUCHI was duly licensed as a PROFESSIONAL ENGINEER and is therefore authorized to practice this Profession within the State of Hawaii. In witness whereof, this License has been issued and the Seal of the Board affixed hereto, this 21st of October, A.D 1998 at Honolulu, Hawaii. No. 9566 Chairperson	Expires: 4/30/2024  License Number PE-9566 Expiration date 4/30/2024 STATE OF HAWAII DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS PROFESSIONAL ENGINEER CLASS(ES): CE CIVIL RYAN S W YAMAUCHI [redacted] SIGNATURE OF LICENSEE
ROGER C. AOKI	**P.E.** - No. 10019, HAWAII  STATE OF HAWAII DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS hereby certifies that on the date hereof ROGER C AOKI was duly licensed as a PROFESSIONAL ENGINEER and is therefore authorized to practice this Profession within the State of Hawaii In witness whereof, this License has been issued and the Seal of the Board affixed hereto, this 8th day of July, A.D. 2008 at Honolulu, Hawaii. No. 10019 Chairperson	Expires: 4/30/2024  License Number PE-10019 Expiration date 4/30/2024 STATE OF HAWAII DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS PROFESSIONAL ENGINEER CLASS(ES): CE CIVIL ROGER C AOKI [redacted] SIGNATURE OF LICENSEE
BERNICE M. BALETE	**P.E.** - No. 10186, HAWAII  STATE OF HAWAII DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS hereby certifies that on the date hereof BERNICE M BALETE was duly licensed as a PROFESSIONAL ENGINEER and is therefore authorized to practice this Profession within the State of Hawaii In witness whereof, this License has been issued and the Seal of the Board affixed hereto, this 20th day of March, A.D. 2009 at Honolulu, Hawaii. No. 10186 Chairperson	Expires: 4/30/2024  License Number PE-10186 Expiration date 4/30/2024 STATE OF HAWAII DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS PROFESSIONAL ENGINEER CLASS(ES): CE CIVIL BERNICE M BALETE SIGNATURE OF LICENSEE
ERIC M. LAU	**P.E.** - No. 12977, HAWAII  STATE OF HAWAII DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS PROFESSIONAL ENGINEER This is to Certify that ERIC M LAU was duly licensed as a PROFESSIONAL ENGINEER In the State of Hawaii. and is therefore authorized to practice this Profession within the State of Hawaii. In witness whereof, this License has been issued and the Seal of the Board affixed hereto, this 23rd Day of June, A.D 2008 No. 12977 Chairperson	Expires: 4/30/2024  License Number PE-12977 Expiration date 4/30/2024 STATE OF HAWAII DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS PROFESSIONAL ENGINEER CLASS(ES): CE CIVIL ERIC M LAU 98-030 HEKAHA STREET UNIT 9 AIEA, HI 96701 SIGNATURE OF LICENSEE

Element Environmental, LLC
Personnel Registered Professional Licenses

NAME	LICENSE NUMBER	EXPIRATION DATE
CANDACE K. K. H. BORGES YAMAUCHI	**P.E.** - No. 16320, HAWAII 	Expires: 4/30/2024 
JODIE C. TSUBONE	**P.E.** - No. 17048, HAWAII 	Expires: 4/30/2024 
LINDSAY BETH MASON	**P.E.** - No. 6201059411, MICHIGAN	Expires: 8/21/2024 
ARLENE HELEN CAMPBELL	**L.G.** - No. 1664, WASHINGTON 	Expires: 3/10/2023 

Element Environmental, LLC
Asbestos Certifications

State of Hawai'i
Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	04/19/24	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Adamczyk
Erica E.
Element Environmental, LLC
HIASB-5331
State Exp. Date 05/10/2024

State of Hawai'i
Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	08/15/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Agpaoa
Joshua B.
HIASB-4791
State Exp. Date 09/27/2023

State of Hawai'i
Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	08/15/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Amato
Daniel W.
Element Environmental LLC
HIASB-4628
State Exp. Date 09/13/2023

State of Hawai'i
Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	12/27/22	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Aoki
Roger C.
Element Environmental, LLC
HIASB-2902
State Exp. Date 12/15/2022

State of Hawai'i
Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	09/09/23
INS	09/19/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Balete
Bernice M.
Element Environmental, LLC
HIASB-0449
State Exp. Date 05/04/2024

State of Hawai'i
Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	01/31/24	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Ellis
John A.
Element Environmental, LLC
HIASB-4117
State Exp. Date 04/28/2024

State of Hawai'i
Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	08/15/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Heskett
Marvin D.
Element Environmental, LLC
HIASB-4631
State Exp. Date 09/17/2023

State of Hawai'i
Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	07/25/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Hunter
Lauren K.
Element Environmental, LLC
HIASB-4292
State Exp. Date 05/31/2023

Element Environmental, LLC
Asbestos Certifications

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	01/18/24	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Ito
Garrett M.
Element Environmental, LLC
HIASB-5159
State Exp. Date 01/24/2024

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	01/31/24	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Kilway
Katie L.
Element Environmental, LLC
HIASB-3284
State Exp. Date 10/05/2023

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	09/23/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Lau
Eric M.
Element Environmental, LLC
HIASB-3198
State Exp. Date 10/11/2023

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	10/17/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Liu
Danny C.
Element Environmental, LLC
HIASB-4653
State Exp. Date 12/10/2023

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	12/14/22	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Lutey
Austin A.
Element Environmental, LLC
HIASB-3199
State Exp. Date 05/24/2023

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	05/11/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Matsuda
Robin
Element Environmental LLC
HIASB-5211
State Exp. Date 05/16/2023

CHC Training
Environmental Compliance Certification Experts

CERTIFICATE OF ACHIEVEMENT

This certificate is awarded to:

LESLIE A. ROBINSON

In recognition of satisfactory completion of the EPA-approved annual asbestos refresher training provided in accordance with the Model Accreditation Plan (MAP) (40 CFR Part 763, Subpart E, Appendix C) and AHERA of the Toxic Substances Control Act (TSCA) entitled:

BUILDING INSPECTOR

COURSE COMPLETION:	SEPTEMBER 21, 2022
EXAMINATION DATE:	SEPTEMBER 21, 2022
EXPIRATION DATE:	SEPTEMBER 21, 2023
COURSE HOURS:	40

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	06/17/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Matsuoka
Maya
Element Environmental
HIASB-5085
State Exp. Date 07/02/2023

Element Environmental, LLC
Asbestos Certifications

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	02/06/24	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Tsubone
James D.
Element Environmental, LLC
HIASB-4118
State Exp. Date 04/29/2024

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	08/15/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Tsubone
Jodie C.
Element Environmental, LLC
HIASB-4629
State Exp. Date 09/14/2023

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	06/17/23	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Uekawa
Theodore N.
Element Environmental, LLC
HIASB-5084
State Exp. Date 07/02/2023

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	12/07/22	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

West
Arnold D.
Element Environmental, LLC
HIASB-4625
State Exp. Date 12/15/2022

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	01/31/24	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Yamauchi
Candace K.K.H.
Element Environmental, LLC
HIASB-3840
State Exp. Date 05/15/2024

State of Hawai'i
Asbestos Certification
Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	01/31/24	PM	n/a

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Yamauchi
Ryan S.W.
Element Environmental, LLC
HIASB-2905
State Exp. Date 04/23/2024

Element Environmental, LLC
Lead Based Paint Activities Certifications

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 05/10/2026
Supervisor- n/a
Risk Assessor- n/a
Project Designer- n/a
Worker- n/a

Adamczyk
Erica E.
Certification # PB-1359

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- n/a
Supervisor- n/a
Risk Assessor- 12/24/2025
Project Designer- n/a
Worker- n/a

Agpaoa
Joshua B.
Certification # PB-1137

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- n/a
Supervisor- n/a
Risk Assessor- 12/24/2025
Project Designer- n/a
Worker- n/a

Amato
Daniel
Certification # PB-1148

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 03/21/2022
Supervisor- n/a
Risk Assessor- n/a
Project Designer- n/a
Worker- n/a

Aoki
Roger
Certification # PB-0118

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- n/a
Supervisor- n/a
Risk Assessor- 07/21/2025
Project Designer- 10/29/2024
Worker- n/a

Balete
Bernice
Certification # PB-0449

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- n/a
Supervisor- n/a
Risk Assessor- 01/10/2026
Project Designer- n/a
Worker- n/a

Ellis
John A.
Certification # PB-0828

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- n/a
Supervisor- n/a
Risk Assessor- 12/30/2025
Project Designer- n/a
Worker- n/a

Heskett
Marvin
Certification # PB-1150

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 03/20/2023
Supervisor- n/a
Risk Assessor- n/a
Project Designer- n/a
Worker- n/a

Hunter
Lauren
Certification # PB-0923

Element Environmental, LLC
Lead Based Paint Activities Certifications

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 01/24/2025
Supervisor- N/A
Risk Assessor- n/a
Project Designer- n/a
Worker- n/a

Ito
Garrett M.
Certification # PB-1272

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 05/24/2022
Supervisor- n/a
Risk Assessor- 10/01/2025
Project Designer- n/a
Worker- n/a

Lau
Eric
Certification # PB-0439

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 10/14/2022
Supervisor- n/a
Risk Assessor- 12/24/2022
Project Designer- n/a
Worker- n/a

Liu
Danny C.
Certification # PB-1136

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- n/a
Supervisor- n/a
Risk Assessor- 12/18/2025
Project Designer- n/a
Worker- n/a

Lutey
Austin
Certification # PB-0440

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 06/06/2025
Supervisor- n/a
Risk Assessor- n/a
Project Designer- n/a
Worker- n/a

Matsuda
Robin Ken
Certification # PB-1291

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 07/01/2024
Supervisor- n/a
Risk Assessor- n/a
Project Designer- n/a
Worker- n/a

Matsuoka
Maya
Certification # PB-1254

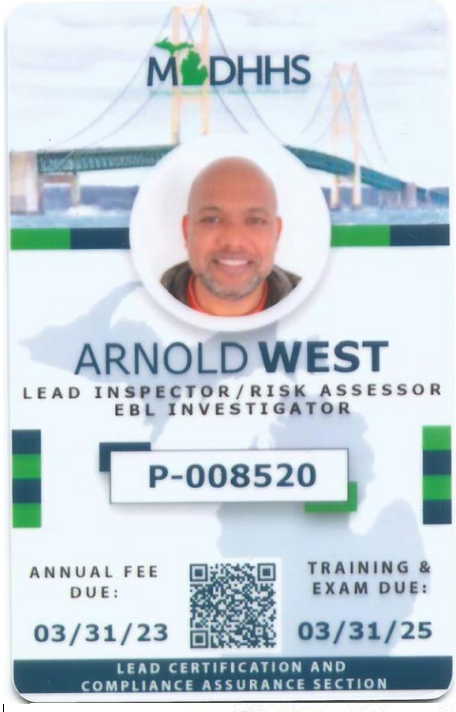
State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 03/13/2023
Supervisor- n/a
Risk Assessor- n/a
Project Designer- n/a
Worker- n/a

Miguel
Mark
Certification # PB-0919

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- n/a
Supervisor- n/a
Risk Assessor- 12/17/2025
Project Designer- n/a
Worker- n/a

Tsubone
James
Certification # PB-0827

Element Environmental, LLC
Lead Based Paint Activities Certifications



ATTACHMENT 4

ELEMENT ENVIRONMENTAL, LLC
CERTIFICATE OF VENDOR COMPLIANCE
CERTIFICATE OF GOOD STANDING

STATE OF HAWAII
STATE PROCUREMENT OFFICE

CERTIFICATE OF VENDOR COMPLIANCE

This document presents the compliance status of the vendor identified below on the issue date with respect to certificates required from the Hawaii Department of Taxation (DOTAX), the Internal Revenue Service, the Hawaii Department of Labor and Industrial Relations (DLIR), and the Hawaii Department of Commerce and Consumer Affairs (DCCA).

Vendor Name: **ELEMENT ENVIRONMENTAL, LLC**

DBA/Trade Name: **ELEMENT ENVIRONMENTAL, LLC**

Issue Date: **06/22/2023**

Status: **Compliant**

Hawaii Tax#:	27137955-01
New Hawaii Tax#:	GE-1660416000-01
FEIN/SSN#:	XX-XXX4479
UI#:	No record
DCCA FILE#:	40203

Status of Compliance for this Vendor on issue date:

Form	Department(s)	Status	
A-6	Hawaii Department of Taxation	Compliant	
8821	Internal Revenue Service	Compliant	
COGS	Hawaii Department of Commerce & Consumer Affairs	Compliant	
LIR27	Hawaii Department of Labor & Industrial Relations	Compliant	

Status Legend:

Status	Description
Exempt	The entity is exempt from this requirement
Compliant	The entity is compliant with this requirement or the entity is in agreement with agency and actively working towards compliance
Pending	A status determination has not yet been made
Submitted	The entity has applied for the certificate but it is awaiting approval
Not Compliant	The entity is not in compliance with the requirement and should contact the issuing agency for more information

Department of Commerce and Consumer Affairs

CERTIFICATE OF GOOD STANDING

I, the undersigned Director of Commerce and Consumer Affairs of the State of Hawaii, do hereby certify that according to the records of this Department,

ELEMENT ENVIRONMENTAL, LLC

was organized under the laws of the State of Hawaii on 10/10/2005 ; that it is an existing limited liability company in good standing and is duly authorized to transact business.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Department of Commerce and Consumer Affairs, at Honolulu, Hawaii.

Dated: April 11, 2023

Director of Commerce and Consumer Affairs

ATTACHMENT 5

ELEMENT ENVIRONMENTAL, LLC
CERTIFICATE OF LIABILITY INSURANCE

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 04/26/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Jim McAluney	
JHC Services Inc dba John Connors Insurance 500 Ala Moana Blvd. Ste. 2-303 Honolulu HI 96813	PHONE (A/C, No, Ext): (808) 521-3663	FAX (A/C, No): (808) 521-5995
	E-MAIL ADDRESS:	

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
Element Environmental, LLC. 98-030 Hekaha St., Unit 9 Aiea HI 96701	INSURER A : Admiral Insurance Company	
	INSURER B : First Insurance Company of Hawaii	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** CL2211405739 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR [X] Prof E&O Liability [X] Contractors Pollution GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:			*FEIECC10978-10	11/05/2022	11/05/2023	EACH OCCURRENCE	$ 2,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 250,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 2,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
B	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] OWNED AUTOS ONLY [X] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			CBA1000219406	11/05/2022	11/05/2023	COMBINED SINGLE LIMIT (Ea accident)	$
							BODILY INJURY (Per person)	$ 1,000,000
							BODILY INJURY (Per accident)	$ 1,000,000
							PROPERTY DAMAGE (Per accident)	$ 1,000,000
								$
	[ ] UMBRELLA LIAB [ ] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $						EACH OCCURRENCE	$
							AGGREGATE	$
								$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					[ ] PER STATUTE [ ] OTH-ER	
							E.L. EACH ACCIDENT	$
							E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

The certificate holder is named additional insured but only to the extent set forth in the general liability & Auto liability policy provisions per written agreement.

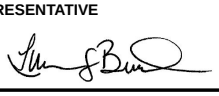
CERTIFICATE HOLDER

PROOF OF INSURANCE COVERAGE

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 03/24/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Atlas Insurance Agency, Inc. 201 Merchant Street Suite 1100 Honolulu HI 96813	**CONTACT NAME:** Scott LaRue **PHONE (A/C, No, Ext):** (808) 533-3222 **FAX (A/C, No):** (808) 533-8777 **E-MAIL ADDRESS:**
INSURED ProService Advantage Inc PEO for Element Environmental, LLC 6600 Kalanianaole Hwy Ste 200 Honolulu HI 96825	**INSURER(S) AFFORDING COVERAGE** / **NAIC #** **INSURER A :** Hawaii Employers' Mutual Ins Co Inc. 10781 **INSURER B :** **INSURER C :** **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 23-24 CCG31 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☐ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PRO-JECT ☐ LOC ☐ OTHER:						EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ $ $ $ $ $ $
	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ $ $ $ $
	☐ **UMBRELLA LIAB** ☐ OCCUR ☐ **EXCESS LIAB** ☐ CLAIMS-MADE ☐ DED ☐ RETENTION $						EACH OCCURRENCE AGGREGATE 	$ $ $
A	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? **Y / N** ☐ **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WC0057022	01/29/2023	01/01/2024	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $1,000,000 $ $1,000,000 $ $1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Proof of insurance certificate provided for coverages indicated.

CERTIFICATE HOLDER

Element Environmental, LLC
98-030 Hekaha Street
Unit 9
Aiea HI 96701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE