STATEMENT OF QUALIFICATIONS

COUNTY OF HAWAII

HOUSING AND COMMUNITY DEVELOPMENT

NOTICE TO PROVIDERS OF PROFESSIONAL SERVICES

FISCAL YEAR 2024—2025

(July 1, 2024 - June 30, 2025)

OH.2) COMMUNITY PLANNING (ENVIRONMENTAL ASSESSMENT)

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

"This proposal includes confidential material that shall not be disclosed outside of the Government and shall not be duplicated, used, or disclosed – in whole or in part – for any purpose other than to evaluate this proposal."

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June 28, 2024

Ms. Susan Kunz, Administrator
Housing and Community Development
County of Hawaii
1990 Kino'ole Street, Suite 102
Hilo, Hawaii 96720
Email: ohcdprofserv@hawaiicounty.gov

Subject: **Element Environmental, LLC's Statement of Qualifications in Response to the Housing and Community Development, County of Hawaii's Notice to Providers of Professional Services, Fiscal Year 2024-25**

Dear Ms. Kunz,

Element Environmental, LLC (E2) is pleased to submit our Statement of Qualifications (SOQ) to the County of Hawaii, Housing and Community Development per the "*Notice to Providers of Professional Services"* solicitation notice for the fiscal year 2024 to 2025.

This serves as our **expression of interest** in providing services for **OH.2) Community Planning (Environmental Assessment).** 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, 2024	**OH.2) Community Planning (Environmental Assessment)**

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** **OH.2) Community Planning (Environmental Assessment)**
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. YEARS OF EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Ryan S.W. Yamauchi, P.E.	**Principal Engineer**	**32**	**19**

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)
M.S., Civil/Environmental Engineering, UC Berkeley	**Registered Professional Engineer, HI - Civil No. 9566**
B.S., Civil Engineering, University of Hawaii at Manoa	Certified Asbestos Inspector, HIASB-2905
	Certified Lead Risk Assessor, PB-0117

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

OSHA 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
OSHA 30-hour Construction Safety and Health Training
Maritime Security Awareness Training (MARSEC)
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): **Kaneohe Bay No. 2 Wastewater Pump Station Force Main Improvements, Kaneohe, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2017 — CONSTRUCTION: N/A

(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): **Reconstruction/Replacement of Sewers, Ho'omaluhia Botanical Gardens, Kaneohe, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Estimated 2024 — CONSTRUCTION): Estimated 2024

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

E2 completed planning, design, and preparation of construction documents for the reconstruction/replacement of existing sewer lines. Phase I included the cleaning and CCTV inspections 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 will prepare construction documents for Phase III. **Fee:** $840,000. **Role:** Program Manager/Principal Engineer.

c.

(1) TITLE AND LOCATION (City and State): **Sewer Condition Analysis Dieldrin Study, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing — CONSTRUCTION: N/A

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

E2 is conducting sewer condition evaluations, developing wastewater, surface water, solids and soil sampling and testing plans, collecting and analyzing samples, performing analysis of data, and reporting on the results. E2 is developing recommendations for sewer improvements, identifying priority sewers for reduction of infiltration and inflow, developing reports to address State and Federal permit requirements, and assisting with the scoping of wastewater capital improvement projects. **Fee:** $339,517. **Role:** Program/Manager/Principal Engineer.

d.

(1) TITLE AND LOCATION (City and State): **Surveying Small-Scale Waste to Energy Conversion Opportunity Considering Strategic DoD Locations in Hawaii, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2023 — CONSTRUCTION (If applicable): N/A

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

E2 gathered non-hazardous solid waste data from various installations and evaluated the waste composition to determine the amount of feedstock that could be used in a Small-Scale WTE unit. Costs were compared to the projected cost avoidance of landfill tipping fees due to solid waste reduction. Recommendations made for further evaluation of DoD facilities that generate enough waste to support small-scale WTE technologies and where costs were close to or under the estimated cost avoidance. **Fee:** $102K. **Role**: Principal Engineer.

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

11. NAME	12. ROLE IN THIS CONTRACT	13. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Roger C. Aoki, P.E.	**Senior Environmental Engineer**	**28**	**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)
M.S., Civil/Environmental Engineering, Purdue University B.S., Civil Engineering, University of Hawaii at Manoa	**Registered Professional Engineer, HI - Civil No. 10019**

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

OSHA 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
OSHA 30-hour Construction Safety and Health Training
Confined Space Training
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)*: **Site Investigation for Abandoned AVGAS/MOGAS Pipeline, Pearl City Peninsula, Joint Base Pearl Harbor-Hickam (JBPHH), Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2016; CONSTRUCTION N/A

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

E2 conducted a Site Investigation (SI) 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. The objectives of the project were to delineate and characterize the nature and extent of contamination in the soil, groundwater, and soil gas caused by historic releases of AVGAS/MOGAS; to conduct 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)*: **Stormwater Drainage System Survey, JBPHH, and Outlying Areas, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2016; CONSTRUCTION N/A

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

E2 created an integrated, scaled, and detailed stormwater drainage map and database for all areas of JBPHH. The maps and results of the survey was used to determine areas in need of repairs or cleaning. The project included a survey and condition assessment of all stormwater drain features; and in specified situations, sediment sampling and analysis, to create a detailed base-wide stormwater drainage map and database. **Fee:** $1,799,119. **Role:** Project Manager.

c.

(1) TITLE AND LOCATION *(City and State)*: **Feasibility Study, Proposed Plan, and Record of Decision for the Open Area Near Building 992, Pearl City Peninsula, JBPHH, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2016; CONSTRUCTION N/A

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

E2 conducted a Feasibility Study (FS), Proposed Plan (PP) and Record of Decision (ROD) that would lead to long-term management of the site to control the exposure of contaminants. While scoping the FS, E2 was able to facilitate discussions between the Navy and the regulators, the U.S. Environmental Protection Agency (EPA) Region IX and the State of Hawaii, Department of Health (DOH) Hazard Evaluation and Emergency Response (HEER) Office; to obtain Site closure with No Further Action (NFA). E2 developed the PP and ROD decision documents, as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), to close the Open Area Near Building 992. The project also included procuring the venue, running announcements in the newspaper, and preparing the presentation for the public meeting presenting the PP to the public. **Fee**: $174,256. **Role**: Project Manager/Senior Environmental Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*: **Kalewa Wastewater Pump Station Improvements Design Honolulu, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2018; CONSTRUCTION N/A

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

E2 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, sized and selected 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. ROLE IN THIS CONTRACT	13. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Matthew J. Neal	**Senior Environmental Scientist**	**26**	**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)
B.S., Environmental Science/Geology, Willamette University	N/A

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

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

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Site Investigation of Former Underground Storage Tank (UST) No. 10 Site, Pearl Harbor Naval Shipyard (PHNSY), JBPHH, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION: N/A

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

E2 conducted an environmental investigation of a former UST site (Site No. 10) to determine the extent of petroleum contamination in subsurface soil and groundwater. The project involved collection of subsurface soil samples, installation of four groundwater monitoring wells, and collection of groundwater samples for laboratory analysis. It also includes semi-annual groundwater monitoring for three seasonal events. Responsibilities included project management, oversight of field activities, and report preparation. **Fee**: $226,117. **Role**: Project Manager/Health and Safety Manager.

b.

(1) TITLE AND LOCATION *(City and State)*: **Site Investigation, Former Molokai Electric Company Power Generating Station, Kaunakakai, Molokai, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2016-2018; CONSTRUCTION: N/A

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

E2 completed a comprehensive study of residual near and subsurface contamination from previous MOECO activities, primarily from polychlorinated biphenyls (PCBs) petroleum and heavy metals. E2 collected over 700 discrete soil samples and 88 *Multi Increment*® (MI) soil, soil-gas, concrete and groundwater samples. 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. Results of the SI were used to determine the most appropriate remedial action for the site. **Fee**: $830,974. **Role**: Project Manager/Senior Environmental Scientist/Health and Safety Manager.

c.

(1) TITLE AND LOCATION *(City and State)*: **Remedial Action of Former LORAN Station Kure Atoll, Green Island, Kure Atoll, Northwest Hawaiian Islands, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2017; CONSTRUCTION: N/A

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

E2 excavated and constructed a new landfill on Green Island, excavated over 400 cubic yards of PCB-contaminated soil from the dump and relocated to the new landfill. PCB-contaminated soil was treated with a bio-amendment and encapsulated in activated carbon-containing geosynthetic material prior to being capped with clean fill. Facilitated a pilot-scale study of the bio-amendment with the University of Maryland/Baltimore County prior to field effort to determine the potential effectiveness. **Fee:** $1.6M. **Role:** Project Manager/Senior Environmental Scientist.

d.

(1) TITLE AND LOCATION (City and State): **Dredged Material Evaluation for Dredging of the Ala Wai Canal, Honolulu, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2017; CONSTRUCTION: N/A

(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.

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
Arlene H. Campbell, L.G.	**Senior Geologist**	**35**	**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)
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 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
OSHA 30-hour Construction Safety and Health Training
Maritime Security Awareness Training (MARSEC)
Confined Space Training
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)

Environmental Assessments, Technical Studies, SMA Use Permit Kawailoa Transfer Station, Hawaii & EA/TS for Leeward Baseyard and Convenience Center Improvements, Hawaii

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION
2020	N/A

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

E2 provided planning and permitting services to obtain government permission for the development of multiple properties located across Oahu, Hawaii. The development of the sites required permits and approvals from the City and County of Honolulu (CCH), Department of Planning and Permitting, including Environmental Assessments for two project sites and the preparation of a Special Management Area use permit application for the CCH Department of Environmental Services, Refuse Division. In addition, E2 prepared a Hydrogeological Survey for the Leeward Baseyard and Convenience Center Improvements. **Fee**: $825,893. **Role**: Senior Geologist.

b.

(1) TITLE AND LOCATION (City and State)

Environmental Site Assessments, Kapalama Container Terminal Yard Project, Honolulu Harbor, Oahu, Hawaii

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION
2015	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)

Environmental Conditions of Property, Various Sites, Guam

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION
2022	N/A

(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)

Preparation of Applications for WQC 401 and 404, Kalaeloa Barbers Point Harbor, Oahu, Hawaii

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION
2012	N/A

(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 Hydrologist/Hydrogeologist**	**36**	**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)
Ph.D., Hydrogeology, University of Hawaii at Manoa M.S., 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 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
OSHA 30-hour Construction Safety and Health Training
Confined Space Training
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): **Hydrogeologic Study to Detect Impact of MILCON P-184 Reject Water, Diego Garcia, British Indian Ocean Territory**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2016; CONSTRUCTION N/A

(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): **Density Dependent Modeling, Monitoring, Hydrogeologic Modeling, and Capture Zone Modeling of Ewa Shaft, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2020; CONSTRUCTION N/A

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

E2 provided modeling study to delineate the capture zones over different periods associated with future proposed usage of Ewa Shaft. Services included Density Dependent Modeling, Monitoring, Capture Zone Modeling, and Hydrogeological Modeling. Provided a "Water Quality Monitoring and Capture Zone Analysis for the Ewa Shaft" Report that included a Water Quality Study, Seepage Run Results, a Pump Test Numerical Model, and a Regional Numerical Model. **Fee**: $109K. **Role:** Senior Hydrogeologist.

c.

(1) TITLE AND LOCATION (City and State): **Sewer Condition Analysis Dieldrin Study, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES Ongoing; CONSTRUCTION N/A

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

E2 is conducting sewer condition evaluations, developing wastewater, surface water, solids and soil sampling and testing plans, collecting and analyzing samples, performing analysis of data, and reporting on the results. E2 is developing recommendations for sewer improvements, identify priority sewers for reduction of infiltration and inflow, developing reports to address State and Federal permit requirements, and assisting with the scoping of wastewater capital improvement projects. Fee: $539,517. Role: Senior Hydrologist.

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**	**20**	**15**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
M.S., Civil / Environmental Engineering, MIT B.S., Civil and Environmental Engineering, MIT B.S., Biology, MIT	**Registered Professional Engineer, HI - Civil No. 12977** Certified Asbestos Inspector, HIASB-3198 Certified Lead Risk Assessor, PB-0439

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

OSHA 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
OSHA 30-hour Construction Safety and Health Training
Confined Space Training
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
Non-Domestic Wastewater Management Plan, JBPHH, Oahu, Hawaii	Ongoing	N/A

(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
Navy Spill Prevention Control and Countermeasure Plan Update, JBPHH, Oahu, Hawaii	2023	N/A

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

E2 completed an update of the Navy SPCC Plan in accordance with 40 CFR 112 regulating ASTs storing petroleum and cooking oil products. E2 inspected 521 ASTs and bulk oil storage areas at all Naval installations on Oahu. Worked closely with NAVFAC personnel to update the inventory, condition, and management of Navy ASTs and subsequently generated an updated SPCC Plan. Developed AST inspection forms and maintained a database of AST inspection data collected. **Fee:** $487,580. **Role:** Senior Environmental Engineer.

c.

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

(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	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Bernice M. Balete, P.E.	**Senior Environmental Engineer**	**30**	**14**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC (Aiea, Hawaii)

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Civil Engineering, University of Hawaii at Manoa	**Registered Professional Engineer, HI - Civil No. 10186** Certified Asbestos Project Designer/Inspector, HIASB-0449 Certified Lead Project Designer/Risk Assessor, PB-0449

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

OSHA 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
OSHA 30-hour Construction Safety and Health Training
Maritime Security Awareness Training (MARSEC)
Confined Space Training
40-hour Construction Safety Hazard Awareness Training for Contractors
Hazardous Waste Site Supervisor Training
DOT Hazardous Materials 49 CFR 172 Subpart H
Bloodborne Pathogens, First Aid, CPR, and AED Training

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Hazardous Material Survey/Environmental Permitting for Rehabilitation of Numana Road Bridge 129, Honolulu, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2017; CONSTRUCTION N/A

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

E2 performed site inspections to evaluate the existing conditions of the site at the time during rehabilitation work for the City and County of Honolulu, Numana Road Bridge No. 129 project. E2 preliminary design phase documents included recommendations of findings of Hazardous Materials and determined environmental permits required to complete the project. **Role**: Project Manager/Senior Environmental Engineer.

b.

(1) TITLE AND LOCATION *(City and State)*: **Hazardous Materials Building Survey, Beretania Engineering Building for HVAC Replacement, Honolulu, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2020; CONSTRUCTION N/A

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

E2 conducted a hazardous material survey for asbestos-containing materials and lead paint for the BWS. E2 also included summary data tables, sample location figures, sample photographs, and analytical laboratory reports. **Role**: Project Manager/Senior Environmental Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*: **Hazardous Materials Building Survey, Old Scale House Structure at Kapaa Transfer Station, Kailua, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2020; CONSTRUCTION N/A

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

E2 conducted a Hazardous Materials survey for CCH at an old scale house located at Kapaa Transfer Station, Kailua, Oahu, Hawaii. An asbestos survey, lead survey, arsenic survey, and a visual site inspection were conducted. E2-certified inspectors collected bulk samples which were analyzed by an accredited laboratory. E2 provided a technical letter report with the purpose of the project, building materials, sampling methodology, sample results with data tables, locations of samples taken, a close-up and panoramic time-stamped photograph of each sample, and quantities of findings for the surveys. **Role:** Project Manager/Senior Environmental Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*: **Kawela 228 Reservoir, Kapolei 215 Reservoir, and Wahiawa 1361 Reservoirs No. 1 & 2 Facility Repair and Repainting, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2017; CONSTRUCTION N/A

(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**: Project Manager/Senior Environmental Engineer.

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

11. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Marvin D. Heskett, III	**Senior Chemist**	**35**	**10**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC (Aiea, Hawaii)

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
B.S., Biochemistry, California Polytechnic University	Certified Asbestos Inspector, HIASB-4631 Certified Lead Risk Assessor, PB-1150

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

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

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **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**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2019; CONSTRUCTION: N/A

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

E2 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. E2 conducted three phases of stream monitoring to ensure construction did not impact stream water quality. **Fee**: $70,000 (per year). **Role**: Senior Chemist.

b.

(1) TITLE AND LOCATION *(City and State)*: **Sewer Condition Analysis Dieldrin Study, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION: N/A

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

E2 is conducting sewer condition evaluations, developing wastewater, surface water, solids and soil sampling and testing plans, collecting and analyzing samples, performing analysis of data, and reporting on the results. E2 is developing recommendations for sewer improvements, identify priority sewers for reduction of infiltration and inflow, developing reports to address State and Federal permit requirements, and assisting with the scoping of wastewater capital improvement projects. **Fee**: $539,517. **Role:** Senior Chemist.

c.

(1) TITLE AND LOCATION *(City and State)*: **Water Quality Monitoring, Rip-Rap Repair and Floating Dock, USCG Station, Nawiliwili Small Boat Harbor, Lihue, Kauai, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2016; CONSTRUCTION: N/A

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

E2 completed an Applicable Monitoring and Assessment Plan (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. The project lasted a total of five weeks and ended with a comprehensive letter report and recommendations. **Fee**: $60,000. **Role**: Assistant Project Manager/Senior Chemist.

d.

(1) TITLE AND LOCATION *(City and State)*: **Storm Water Management Plan Update for Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION: N/A

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

E2 completed inspections and updated the SWMP for CNRH under their NPDES 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. Developed Storm Water Pollution Control Plans for 68 Navy industrial facilities. Provided gap analysis of previous/new permit requirements. **Fee:** $452K. **Role:** 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**	**19**	**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., Earth and Environmental Engineering, Columbia University	**Registered Professional Engineer, HI - Civil No. 16320** Certified Asbestos Inspector, HIASB-3840 Certified Lead Risk Assessor, PB-1135

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

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

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State): **Illicit Discharge Survey, Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2016 — CONSTRUCTION: N/A

(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): **Waianae Agricultural Park Improvements, Waianae, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2017 — CONSTRUCTION: N/A

(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): **Waimanalo Wastewater Treatment Plant Effluent Reuse Feasibility Study, Waimanalo, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2014 — CONSTRUCTION: N/A

(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): **Navy Region Hawaii Stormwater Management Plan, JBPHH, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2016 — CONSTRUCTION: N/A

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

2 prepared a SWMP for Navy Region Hawaii in accordance with their NPDES 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; P2 and good housekeeping; stormwater monitoring; and reporting. Developed Stormwater Pollution Control Plans (SWPCPs) for 25 industrial facilities. Responsibilities included conducting facility inspections and interviews, coordination with client and facility managers, and preparing the document for submittal. Fee: $291,000. 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
Lindsay B. Mason, P.E.	**Senior Environmental Engineer**	**22**	**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., 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
40-hour Construction Safety Hazard Awareness Training for Contractors
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): **Master Plan for Marine Corps Base Hawaii Sanitary Landfill, Kaneohe, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2017; CONSTRUCTION N/A

(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): **Landfill Optimization Study for Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2017; CONSTRUCTION N/A

(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): **Landfill Consulting Services for Two Closed Landfills Island of Hawaii, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2016; CONSTRUCTION N/A

(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	**Senior Geologist**	**20**	**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)
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
40-hour Construction Safety Hazard Awareness Training for Contractors
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): **Phase I Environmental Site Assessment, Mauna Kapu Station, Waianae Mountain Range, Waianae, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2021; CONSTRUCTION N/A

(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): **Phase I Environmental Site Assessment, Waiawa, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2016; CONSTRUCTION N/A

(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): **Environmental Assessments, Technical Studies, Permitting, Two Sites on Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2020; CONSTRUCTION N/A

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

Site 1: Environmental Assessment and Technical Studies, Leeward Base Yard and Convenience Center Improvements, James Campbell Industrial Park, Kapolei, Hawaii

Site 2: Environmental Assessment, Technical Studies, SMA Use Permit, Kawailoa Transfer Station, Oahu, Hawaii

E2 provided planning and permitting services as a subcontractor to G70 to obtain government permission for development of multiple properties located across Oahu, Hawaii. The development of the sites required permits and approvals from the City and County of Honolulu (CCH), Department of Planning and Permitting, including Environmental Assessments for two project sites and the preparation of a Special Management Area use permit application for the CCH Department of Environmental Services, Refuse Division. In addition, E2 prepared a Hydrogeological Survey for Site 1. Fee: $825,894. Role: 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
Jodie C.A. Tsubone, P.E.	**Civil Engineer**	**12**	**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., Civil Engineering, University of Hawaii at Manoa	**Registered Professional Engineer, HI - Civil No. 17048** Certified Asbestos Inspector, HIASB-4629 Certified Lead Risk Assessor, PB-1151

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

OSHA 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
OSHA 30-hour Construction Safety and Health Training
Maritime Security Awareness Training (MARSEC)
Erosion and Sediment Control Plan Coordinator (ESCP)
40-hour Construction Safety Hazard Awareness Training for Contractors
Hazardous Waste Site Supervisor Training
Confined Space Training
Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Lead in Drinking Water Testing at Priority Areas JBPHH/NCTAMS, Wahiawa, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2020 — CONSTRUCTION: N/A

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

E2 conducted drinking water testing for Lead in Priority Areas as part of protective measures in place for children at various schools/childcare facilities on Navy Installations. Conducted 2-step sampling, developed under directives from Navy and EPA guidelines, submitted the samples for laboratory analysis, and prepared notifications. Conducted multiple site visits to each facility to prepare and then to sample over 700 drinking water outlets. **Fee:** $99,595. **Role:** Senior Civil Engineer.

b.

(1) TITLE AND LOCATION *(City and State)*: **CCH: Reconstruction/Replacement of Sewers, Hoʻomaluhia Botanical Gardens, Kaneohe, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing — CONSTRUCTION: Est. 2024

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

E2 completed planning, design, and preparation of construction documents for the reconstruction/replacement of existing sewer lines. Phase I included the cleaning and CCTV inspections 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 will prepare construction documents for Phase III. **Fee:** $840,000. **Role**: Assistant Project Manager/ Senior Civil Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*: **Ozone-Depleting Substances (ODS) Inventory and Management Plan for Naval Air Facility Atsugi (NAFA), Atsugi, Japan**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing — CONSTRUCTION: N/A

(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 Ozone-Depleting Substances (ODS) containing units regulated by the Japan Environmental Governing Standard (JEGS) and air emission sources (except ODS) that are regulated by the JEGS. E2 verified over 2,400 refrigerant and air emission sources at almost 230 facilities (70 facilities were added to the initial scope of work) at the site. E2 prepared an updated air source inventory database and maps of survey results, which were included in a Fieldwork Summary Report. The fieldwork findings were then used to update the ODS Management Plan (title changed to "Refrigerant Management Plan [RMP]") to reflect revisions to applicable regulations. **Fee**: $198,814. **Role:** Senior Civil Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*: **Pacific Missile Range Facility Biosolids Handling and Disposal Plan Kekaha, Kauai, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2023 — CONSTRUCTION: N/A

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

E2 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**: Senior 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**	**16**	**16**

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	**Engineering-in-Training (E.I.T.)** Certified Asbestos Inspector, HIASB-3199 Certified Lead Risk Assessor, PB-0440

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

OSHA 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
OSHA 30-hour Construction Safety and Health Training
Maritime Security Awareness Training (MARSEC)
Confined Space Training
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)*: **Closure Activities and Removal of Under, and In-Ground Structure at Former JN Chevrolet Location, Haleiwa, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2021 — CONSTRUCTION: N/A

(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 the due diligence process to detect any environmental issues for property acquisition in 2017. Areas of concern were recommended for additional sampling to evaluate the nature and extent of contamination. Fieldwork 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)*: **Asbestos and Lead Paint Survey for Singapore Area Coordinator, Sembawang, Singapore**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2024 — CONSTRUCTION: N/A

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

E2 conducted an asbestos-containing material (ACM) survey and lead-based paint (LBP) inspection including an LBP risk assessment (LRA) of deteriorated paint and bare soil at unaccompanied housing facilities and lead dust at lodging units in Sembawang, Singapore. Responsibilities included sampling for ACM and LBP, thoroughly documenting all fieldwork activities with notes and photography, and preparing computer aided design (CAD) drawings. **Fee**: $1,858,355. **Role**: Environmental Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*: **Asbestos Survey, Naval Base Guam**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2020 — CONSTRUCTION: N/A

(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 and Health and Safety Plan prior to fieldwork. 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 homogeneous areas (HAs), a closeup and panoramic photo log of samples, and laboratory reports. Responsibilities included preparation of the WP and HSP, fieldwork coordination, fieldwork, and preparation of the Draft and Final Survey Reports. **Fee**: $1,065,234. **Role**: Environmental Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*: **Operation and Maintenance and Monitoring for Multiple Sites, JBPHH, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2013-2017 — CONSTRUCTION: N/A

(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 PHNSY. 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 in order 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 trouble-shooting. **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**	**36**	**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., 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)*: **Construction Engineering and Inspection for Honolulu Rail Transit Project, Honolulu, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2015-2019; CONSTRUCTION: N/A

(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 Best Management Practices (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)*: **Asbestos and Lead Paint Survey for Singapore Area Coordinator, Sembawang, Singapore**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2024; CONSTRUCTION: N/A

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

E2 conducted an asbestos-containing material (ACM) survey and lead-based paint (LBP) inspection including an LBP risk assessment (LRA) of deteriorated paint and bare soil at unaccompanied housing facilities and lead dust at lodging units in Sembawang, Singapore. Responsibilities included sampling for ACM and LBP, thoroughly documenting all fieldwork activities with notes and photography, and preparing computer aided design (CAD) drawings. **Fee**: $1,858,355. **Role**: Inspector.

c.

(1) TITLE AND LOCATION *(City and State)*: **Asbestos Survey, Naval Base Guam, Guam**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2020; CONSTRUCTION: N/A

(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 fieldwork. 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 homogeneous areas (HAs), a closeup and panoramic photo log of samples, and laboratory reports. Responsibilities included preparation of the WP and HSP, fieldwork coordination, fieldwork, and preparation the Draft and Final Survey Reports. **Fee**: $1,065,234. **Role**: Inspector.

d.

(1) TITLE AND LOCATION *(City and State)*: **Illicit Discharge Storm Water Inspections for Commander Navy Region Hawaii, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2024; CONSTRUCTION: N/A

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

E2 completed 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. E2 completed field inspections and prepared a report summarizing the findings. Responsibilities included: conducting inspections, identifying corrective actions, updating the database for submittal, and preparation of conceptual designs and cost estimates for corrective actions. **Fee**: $365,424. **Role**: 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	**Project 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	

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
Storm Water Monitoring for Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii	2019	N/A

(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
Spill Prevention Control and Countermeasure Plan Update, JBPHH, Oahu, Hawaii	Ongoing	N/A

(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
Illicit Discharge Storm Water Inspections for Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii	Ongoing	N/A

(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**	**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., 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 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
40-HR Construction Safety Hazardous Awareness Training for Contractors
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
County of Maui Construction & Demolition Landfill Waste Profiling, Maui, Hawaii	Ongoing	N/A

(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
Asbestos and Lead Paint Survey for Singapore Area Coordinator, Sembawang, Singapore	2024	N/A

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

E2 conducted an asbestos-containing material (ACM) survey and lead-based paint (LBP) inspection including an LBP risk assessment (LRA) of deteriorated paint and bare soil at unaccompanied housing facilities and lead dust at lodging units in Sembawang, Singapore. Responsibilities included sampling for ACM and LBP, thoroughly documenting all fieldwork activities with notes and photography, and preparing computer aided design (CAD) drawings. **Fee**: $1,858,355. **Role**: Inspector.

c.

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

(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
Asbestos Survey, U.S. Naval Hospital, Yokosuka, Japan	2020	N/A

(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**	**8**	**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)
Ph.D. and M.S., Botany, University of Hawaii at Manoa	Certified Asbestos Inspector, HIASB-4628
B.S., Biology, University of Vermont	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): **Storm Water Sampling, City and County of Honolulu, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION: N/A

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

E2 is responsible for monitoring weather and collecting stormwater samples from five sites across Hawaii during its National Pollutant Discharge Elimination System (NPDES) qualifying rain events according to permit requirements. On a monthly basis, E2 reports on summary of data collected and will produce an annual stormwater report. E2 is performing storm water sampling as a subconsultant to Kennedy Jenks. **Fee:** $148,328. **Role**: Environmental Scientist.

b.

(1) TITLE AND LOCATION (City and State): **Navy Stormwater National Pollutant Discharge Elimination System (NPDES), Compliance Sampling, JBPHH, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION: N/A

(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 NPDES 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. E2's responsibilities include: gap analysis of previous and new permit requirements, writing sections of the SWMP, and addressing comments during the review process. Fee: $452K. Role: Environmental Scientist.

c.

(1) TITLE AND LOCATION (City and State): **Confirmatory Soil Sampling, 84-Acre Portion of Former Voice of America, Maili, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2019; CONSTRUCTION: N/A

(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): **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**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2016-2017; CONSTRUCTION: N/A

(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**	**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., Civil Engineering, University of Hawaii at Manoa	**Engineer-in-Training, HI (E.I.T.)** Certified Asbestos Inspector, HIASB-4791 Certified Risk Assessor/Lead Inspector, PB-1137

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

OSHA 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
40-HR Construction Safety Hazardous Awareness Training for Contractors
Bloodborne Pathogens, First Aid, CPR and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Navy Spill Prevention Control and Countermeasure Plan Update, JBPHH, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2023 — CONSTRUCTION: N/A

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

E2 completed an update of the Navy SPCC Plan in accordance with 40 CFR 112 regulating ASTs storing petroleum and cooking oil products. E2 inspected 521 ASTs and bulk oil storage areas at all Naval installations on Oahu. Worked closely with NAVFAC personnel to update the inventory, condition, and management of Navy ASTs and subsequently generated an updated SPCC Plan. Developed AST inspection forms and maintained a database of AST inspection data collected. **Fee**: $487,580. **Role**: Staff Civil Engineer.

b.

(1) TITLE AND LOCATION *(City and State)*: **Biosolids Handling and Disposal Plan, Pacific Missile Range Facilities, Wastewater Treatment Plant, Kauai**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing — CONSTRUCTION: N/A

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

c.

(1) TITLE AND LOCATION *(City and State)*: **Illicit Discharge Storm Water Inspections for Commander Navy Region Hawaii, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2024 — CONSTRUCTION: N/A

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

E2 completed 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. E2 completed field inspections and prepared a report summarizing the findings. Responsibilities included: conducting inspections, identifying corrective actions, updating the database for submittal, and preparation of conceptual designs and cost estimates for corrective actions. **Fee**: $365,424. **Role**: Staff Civil Engineer.

d.

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

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2023 — CONSTRUCTION: N/A

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

E2 completed a Spill Prevention and Response Plan (SPRP) for Marine Corps Base (MCB) Camp Butler located in Okinawa, Japan. Mobilized a team of six personnel for the duration of three weeks in order to complete fieldwork tasks in one visit. Inspected 329 ASTs, 26 USTs, 34 chemical storage tanks, and 747 electrical transformers with capacities of 105 gallons and/or larger at 12 Sites in Okinawa and the nearby Island of Le Shima. E2 completed data sheets/photographs of each feature. **Fee**: $340K. **Role**: Staff Civil Engineer.

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

11. NAME	123. ROLE IN THIS CONTRACT	13. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
James D. Tsubone	**Environmental Scientist**	**8**	**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., Geology, Mount Royal University, Canada	Radon Measurement Professional, NRPP ID 114350-RMP Certified Asbestos Inspector, HIASB-4118 Certified Lead Risk Assessor, PB-0827

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

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

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Radon Diagnostics, Mitigation, and Testing Services for Naval Base Guam Housing, Naval Base Guam, Guam**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2022; CONSTRUCTION N/A

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

E2 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. Reviewed report documenting field activities and recommended mitigation actions. Provided oversight of subcontractors in the field and assisted with diagnostics and testing fieldwork activities. **Fee:** $397,070. **Role:** Environmental Scientist.

b.

(1) TITLE AND LOCATION *(City and State)*: **Phase I Environmental Due Diligence Audit and Phase II Confirmatory Sampling, 84-Acre Portion of Former Voice of America, Maili, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2019; CONSTRUCTION N/A

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

E2 conducted a site visit, performed research, searched regulatory databases, interviewed site managers, and contracted an archeological firm to perform a cultural inventory survey. Prepared a Work Plan and conducted field sampling to investigate potential polychlorinated biphenyls (PCBs), metals, asbestos, and petroleum hydrocarbon contamination. Conducted *Multi Increment*® (MI) sampling to assess the nature and extent of PCBs and metals contamination. 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.

c.

(1) TITLE AND LOCATION *(City and State)*: **Remedial Investigation/Feasibility Study for Facilities Department Salvage Yard at Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2018; CONSTRUCTION N/A

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

Conducted a series of investigations to evaluate soil, surface water, and groundwater contamination and associated potential threats to human health and the environment posed by historic releases of polychlorinated biphenyls (PCBs). Results of previous sampling found elevated levels of PCBs in soils. Analysis of the samples collected allowed for the evaluation of both the human and ecological risks posed by contamination at the site and the delineation of areas within the site that contained the highest levels of PCBs. **Size:** 12 Acres. **Fee:** $2,2 M. **Role:** Environmental Scientist.

d.

(1) TITLE AND LOCATION *(City and State)*: **Environmental Monitoring of Cocos Island for U.S. Coast Guard former long-range navigation station (LORAN), Cocos Island, Guam**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2024; CONSTRUCTION N/A

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

E2 evaluated conditions at the site. E2 completed a field assessment that consisted of sampling soil, sediment, groundwater, biota and PCBs for petroleum contamination. E2 will prepared report with a summary of field activities, analysis of findings, and recommendations based on result of findings. **Fee:** $424,535. **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**	**17**	**3**

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, Aiea, Hawaii

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
M.S., B.S., Civil Engineering, Massachusetts Institute of Technology	**Engineer-in-Training (E.I.T.)** Radon Measurement Professional – NRPP 114210-RMP Certified Asbestos Inspector, CHC Training-83343433

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
Confined Space Training
How to Conduct a Sanitary Survey of Surface Water and Ground Water System Course, U.S. Environmental Protection Agency
40-HR Construction Safety Hazard Awareness Training for Contractors
Bloodborne Pathogens, First Aid, CPR, and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State): **Non-Domestic Wastewater Management Plan, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2023; CONSTRUCTION N/A

(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. 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/regulated. **Fee:** $1,1 M. **Role:** Project Civil Engineer.

b.

(1) TITLE AND LOCATION (City and State): **Cross-Connection Control Survey, Pacific Missile Range Facility Barking Sands, Kekaha, Kauai, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2019; CONSTRUCTION N/A

(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): **Sanitary Survey for Marine Corps Base Camp Butler and Combined Arms Training Center Fuji, Japan**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2016; CONSTRUCTION N/A

(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.

(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 2023; CONSTRUCTION N/A

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

E2 completed a Spill Prevention and Response Plan (SPRP) for Marine Corps Base (MCB) Camp Butler located in Okinawa, Japan. Mobilized a team of six personnel for the duration of three weeks in order to complete fieldwork tasks in one visit. Inspected 329 ASTs, 26 USTs, 34 chemical storage tanks, and 747 electrical transformers with capacities of 105 gallons and/or larger at 12 Sites in Okinawa and the nearby Island of Le Shima. E2 completed data sheets/photographs of each feature. **Fee:** $340K. **Role:** Project Civil 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**	**3**	**3**

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)
M.S., Civil Engineering, University of Hawaii at Manoa B.S., Civil Engineering, University of Hawaii at Manoa	**Engineer-in-Training, HI (E.I.T.)** Radon Measurement Professional – NRPP 114230-RMP Certified Asbestos Inspector, HIASB-5084 Certified Lead Risk Assessor, PB-1257

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

OSHA 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
OSHA 30-hour Construction Safety and Health Training
Confined Space Training
40-hour Construction Safety Hazard Awareness Training for Contractors
First Aid, CPR and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Wetlands Sediment Sampling, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2023; CONSTRUCTION N/A

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

E2 completed a comprehensive environmental contaminants sediment sampling and testing on a restricted access military installation for future dredging/rehabilitation of various wetlands in Kaneohe. E2 determined detection levels of certain parameters for dredge material disposal. Coordinated with the State of Hawaii and the Environmental Protection Agency (EPA) on meeting the minimum standards necessary for dredge material disposal. **Size**: 23 Acres. **Fee:** $246K. **Role:** Staff Engineer.

b.

(1) TITLE AND LOCATION *(City and State)*: **Surveying Small-Scale Waste to Energy Conversion Opportunity Considering Strategic DoD Locations in Hawaii, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2023; CONSTRUCTION N/A

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

Gathered non-hazardous solid waste data from various installations and evaluated the waste composition to determine the amount of feedstock that could be used in a Small-Scale WTE unit. Costs were compared to the projected cost avoidance of landfill tipping fees due to solid waste reduction. Recommendations made for further evaluation of DoD facilities that generate enough waste to support small-scale WTE technologies and where costs were close to or under the estimated cost avoidance. **Fee:** $102K. **Role:** Staff Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*: **Pacific Missile Range Facility Biosolids Handling and Disposal Plan Kekaha, Kauai, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2024; CONSTRUCTION N/A

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

E2 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). Evaluated current biosolids handling practices, and developed a long-term plan for the proper treatment and disposal of biosolids at PMRF, including IWS septage, and WWTP and WOP sludge. **Fee:** $128,895. **Role:** Staff Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*: **Non-Domestic Wastewater Management Plan, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2023; CONSTRUCTION N/A

(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 were used to determine additional non-domestic discharges that should be internally permitted and regulated. The project also included 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 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
Maya Matsuoka	**Staff Environmental Scientist**	**3**	**3**

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 40-hour HAZWOPER Training
OSHA 8-hour HAZWOPER Refresher Training
Confined Space Training
40-HR Construction Safety Hazardous Awareness Training for Contractors
Bloodborne Pathogens, First Aid, CPR and AED Training

18. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Asbestos Survey, JBPHH, Oahu, Hawaii**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION: N/A

(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)*: **Asbestos and Lead Paint Survey for Singapore Area Coordinator, Sembawang, Singapore**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION: N/A

(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)*: **Asbestos Survey for Commander Fleet Activities Sasebo Japan**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION: N/A

(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): **Asbestos Survey, Commander Fleet Activities Yokosuka Japan**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2020; CONSTRUCTION: N/A

(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.

F. EXAMPLE PROJECTS THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS SERVICE CATEGORY (1)

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I and Phase II Environmental Site Assessments, and Removal Action – Remediation of 5 Acres, Former Voice of America Site, Maili, Oahu, Hawaii	**2019**	**N/A**

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
State of Hawaii and U.S. Coast Guard	**Dr. 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 analysis 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

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.

Conducted remediation of 5 acres

ESA Cost: $289,550, **and RA Cost:** $206,121

F. EXAMPLE PROJECTS THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS SERVICE CATEGORY (1)		
19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I and Phase II Environmental Site Assessments, and Removal Action – Remediation of 5 Acres, Former Voice of America Site, Maili, Oahu, Hawaii	**2019**	**N/A**

was also completed for PCBs.

E2 conducted a Removal Action (RA) to remove PCB, lead, and arsenic-contaminated soil and concrete in order to prevent exposure to an unacceptable human health risk of current surrounding residents and future potential users of the property. Excavated and removed soil and concrete containing contaminants greater than current HDOH EALs (1.2 mg/kg PCBs, 200 mg/kg lead and 24 mg/kg arsenic) from the approximate five-acre former VOA transmitter building area and transported the soil and concrete to the appropriate disposal facilities on and off-island.

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 THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS PROJECT CATEGORY (2)

19 TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
National Environmental Policy Act Compliance for Construction of a new Helipad at Kaena Point Satellite Tracking Station, Oahu, Hawaii	**2021**	

21. PROJECT OWNER'S INFORMATION

b. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
U.S. Army Corps of Engineers Honolulu District	**Mr. Michael Desilets**	**(808) 835-4039**

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

Project Scope: The contract for completing an Environmental Assessment (EA) for the proposed construction and operation of a new helipad at Keana Point Space Force Station, formerly Kaena Point Satellite Tracking Station (KPSFS) was awarded to Element Environmental, LLC (E2). The new helipad was intended to replace an outdated existing helipad designed for visual flight rules and to support medical evacuations, various utility helicopters, and other operations in emergencies or construction, adhering to Uniform Fire Code and Federal Aviation Administration design criteria.

Located on Oahu's remote northwest tip, the station required a permanent, limited-use helipad for medium utility helicopters like the UH-60 Black Hawk. The proposed 50 by 50 feet concrete pad will include a windsock and be marked with an "H" for aerial visibility, connecting to a nearby road for access.

The chosen site, known as the "stump yard," offers unobstructed helicopter access and ideal positioning for station operations. Construction will involve clearing vegetation, soil compaction, and paving that will impact around 34,900 square feet. It will utilize various heavy machinery and tools, with staging areas on adjacent land.

KPSFS's mission is to support satellites through the Air Force Satellite Control Network, with facilities along Kuaokala Ridge. The station has been operational since 1958 and has historically supported various DoD programs.

The helipad site, within the State Conservation District, aligns with the City and County of Honolulu zoning for preservation. The EA evaluated environmental impacts, including a "No Action" alternative. Consultations with agencies and stakeholders, including under the National Historic Preservation Act and Endangered Species Act, were part of the assessment process.

Despite the Final Draft EA completion, the project was paused on May 27, 2021. The EA addressed potential environmental impacts, including cultural and natural resources, noise, traffic, air quality, and regulatory compliance.

Project Highlights:

Coordinated project with U.S. Army Corps of Engineers - Honolulu District to ensure NEPA Compliance for environmental impacts

National Historic Preservation Act and Endangered Species Act

Ensured Regulatory Compliance was followed

Cultural and Natural Resources, Noise, Traffic, Air Quality

Cost: $204,945.

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.	**Kleinfelder, Inc.**	**Honolulu, HI**	**Archaeology**

F. EXAMPLE PROJECTS THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS SERVICE CATEGORY (3)

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I and Phase II Environmental Site Assessments Mauna Kupu Station, Waianae Mountain Range, Waianae, Oahu, Hawaii	**2021 and 2022**	**N/A**

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NO.
City and County of Honolulu	**Ms. Kimberly Ribellia-Collins**	**(808) 524-4200**

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

Project Scope: **(2021)** Element Environmental, LLC (E2) conducted a Phase I Environmental Site Assessment (ESA) for the 1.113-acre Pacific Missile Range Facility Mauna Kapu Station located near the southern ridgeline of the Waianae Mountain Range on Oahu and designated as Tax Map Key (TMKs): (1) 9-2-049:013 (portion); that consists of Lot 340, Parcel 1, and Easement 110 hereinafter "the Subject Property". The Subject Property was owned by Gill Ewa Lands, LLC at the time of the assessment (City and County of Honolulu [CCH] Department of Planning and Permitting [DPP] 2020a). The Department of the Navy (DoN) leased the Subject Property since 1963 (Naval Facilities Engineering Systems Command [NAVFAC] Pacific 2020).

The Phase I ESA was conducted in general conformance with ASTM International (ASTM) Practice E 1527-13, Standard Practice for Environmental Site Assessments and All Appropriate Inquiries (AAI), which includes 40 Code of Federal Regulations (CFR) Part 312, Section (§) 312.21 and §312.31. The purpose of the Phase I ESA was to identify any potential and existing environmental contamination liabilities.

(2022) E2 conducted a Phase II ESA for the same site. The Phase II ESA was conducted in general conformance with the State of Hawaii Department of Health (DOH) Hazard Evaluation and Emergency Response (HEER) Office *Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan (TGM) (DOH HEER Office, 2008 and updates*). The purpose was to evaluate the presence/absence and nature of contamination in surface and shallow subsurface soils based on relevant findings of a previous Phase I Environmental Site Assessment conducted in 2021. The Phase II ESA activities included the collection of surface and shallow subsurface soil samples in identified areas of concern and the completion of a camera survey to verify the existence/location of a cesspool and to evaluate a potential contaminant source associated with a floor drain in a former generator room.

Project Highlights:

E2 conducted a Phase I ESA and identified RECs for the site. E2 recommended to further characterize the site.

E2 conducted a Phase II ESA for the Navy to end its long-term lease and return the property to its owner.

Conducted a site investigation for contaminants of potential concern in surface and shallow subsurface soil samples.

Verified the existence and location of a cesspool, and evaluated a potential contaminant source from a floor drain in a former generator room.

Cost: $41,239. and $78,010.

It was found that contaminants of potential concern (COPCs) concentrations exceeded the DOH Tier 1 (Residential land use) Environmental Action Levels (EALs) for four of the five soil environmental hazards: direct exposure, vapor emissions to indoor air, gross contamination, and leaching to groundwater. Arsenic exceeded the commercial/industrial land use (C/I) and Construction/Trench Worker scenario action levels for direct exposure in the Wooden Antenna Tower.

E2 identified several potential contaminant sources. Some sources were resultant from historical activities that no longer occur and can be addressed: weed control using banned pesticides; fueling, operation, and maintenance of diesel-powered generators; operation and maintenance of antennas, antenna equipment, and transformers; construction, maintenance, and alterations to the wooden antenna tower and Former Water Tank; lead in soil from Lead Based Paint (LBP) used on the Former Water Tank and released to soil during demolition. Others are associated with existing site conditions that may continue to negatively impact the Subject Property if they are not addressed first: releases of wood treatment chemicals applied to the wooden antenna tower and cadmium-coated hardware used in its construction; and lead from LBP used on the exterior of Building 204. Five COPCs were found present in

F. EXAMPLE PROJECTS THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS SERVICE CATEGORY (3)		
19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I and Phase II Environmental Site Assessments Mauna Kupu Station, Waianae Mountain Range, Waianae, Oahu, Hawaii	**2021 and 2022**	**N/A**

surface and shallow subsurface soils at concentrations that exceed DOH Tier 1 and C/I EALs for one or more of the following: TPH-DRO, TPH-RRO, arsenic, cadmium and lead. COPC concentrations also exceed DOH Tier 1 action levels for potential environmental hazards for direct exposure, gross contamination, vapor emissions to indoor air, and leaching to groundwater, and may pose a risk to human health and the environment. The nature and extent of contamination at the Subject Property have not been fully characterized or delineated.

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 THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS PROJECT CATEGORY (4)

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Assessment of the Wahiawa Irrigation System, Wahiawa to Waialua, Oahu, Hawaii	**Ongoing**	**N/A**

21. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
State of Hawaii, Agribusiness Development Corporation	**Mr. Mark Takemoto**	**(808) 586-0186**

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

Project Background: The Wahiawa Dam was constructed in 1905 to create a great reservoir basin to capture waters in the Kaukonahua Stream from the Koolau Mountains for a massive irrigation system for Central Oahu farming that continues to this day. The system generated hydroelectric energy and has received R2 wastewater from the nearby City and County of Honolulu Wahiawa Wastewater Treatment Plant (WWTP). Since 1957, through a cooperative agreement with Castle & Cooke, Inc., the State of Hawaii Department of Land and Natural Resources (DLNR) has managed a public fishing area on the Wahiawa reservoir and has constructed and manages a boat ramp at the 66-acre Wahiawa State Freshwater Park. The Wahiawa Irrigation System (WIS) includes Lake Wilson and has a critical role in the economy of Hawaii by providing an essential input for agricultural production in the Wahiawa-Waialua-Haleiwa area. The State of Hawaii Agribusiness Development Corporation (ADC) is responsible for conducting a due diligence assessment to determine the feasibility of purchasing, upgrading, operating, and maintaining the WIS. The ADC has retained Element Environmental, LLC (E2) to evaluate the WIS, to conduct a Phase I Environmental Site Assessment (ESA), and a Phase II ESA.

Project Highlights:
E2 conducted a comprehensive inventory and condition assessment of the irrigation system including the development of detailed GIS-based system maps. Cost estimates for major system repairs and annual operation and maintenance were prepared.

E2 conducted a Phase I ESA to identify recognized environmental concerns for possible transfer of ownership.

E2 is conducting a Phase II ESA, preparing a sampling and analysis plan for soil, water and sediment sampling and analysis for environmental contaminants.

Cost: $665,939.

Project Scope: **Wahiawa Irrigation System Assessment:** E2 conducted an Assessment of the WIS which included various comprehensive tasks. E2 examined legal rights, obligations, responsibilities, and liabilities pertaining to the WIS. This included the review of public tax maps, and ownership records, analysis of watershed maps, the review of state laws and documentation, and an examination of existing agreements and permits governing the discharge of treated effluent into the water system by U.S. Army's Schofield WWTP and City and County of Honolulu's Wahiawa WWTP.

E2 personnel also visually inspected the Wahiawa Reservoir and the irrigation ditch system. The WIS consists predominantly of open, unlined ditch with various forms of lining, pipes, flumes, and tunnels in locations where the terrain requires (i.e., in areas of steep slopes, the ditch is often lined to mitigate slumping or caving-in of the ditch walls). The system components were inventoried and georeferenced, and the condition of each component was assessed and photographed. The study provided tables, maps, and photographs describing the major components and their condition and location. The study also provided a map of the parcels serviced by the system and was classified by the type of agricultural crop.

E2 identified system components in immediate need of repairs, provided budgetary estimates of repairs and improvements for the entire WIS considered for acquisition, and provided a comprehensive overview of the financial requirements for repairing, upgrading, and optimizing the WIS infrastructure, thereby supporting informed decision-making and effective resource allocation.

The Assessment focused on evaluating various aspects, including Agriculture Activities (i.e., gathered insights into the types of agricultural activities undertaken by water users within the system, such as crop cultivation or other agribusiness ventures); Irrigation Methods (i.e., irrigation techniques employed by water users, ranging from traditional flood irrigation to more modern drip or sprinkler systems); the type of Crops Grown (i.e. identified the specific crops cultivated by water users within the system, including staple crops, specialty crops, or cash crops); Use of Controlled Environments (i.e., assessed the use of controlled environments such as shade structures or greenhouses

F. EXAMPLE PROJECTS THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS PROJECT CATEGORY (4)

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Assessment of the Wahiawa Irrigation System, Wahiawa to Waialua, Oahu, Hawaii	**Ongoing**	**N/A**

by water users to optimize growing conditions and crop yields. By conducting these interviews and analyzing the gathered data, E2 provided valuable insights into how potential changes in water delivery methods could impact agricultural productivity within the WIS, thereby informing decision-making processes related to system management and optimization. E2 provided the draft WIS report on May 24, 2024, to the ADC and is currently awaiting comments to finalize the study.

Phase I Environmental Site Assessment (ESA): E2 conducted a Phase I ESA for seven parcels of land associated with the WIS and identified by the State of Hawaii for acquisition by the Agribusiness Development Corporation. The purpose of the Phase I ESA was to identify environmental issues as part of due diligence prior to the transfer of ownership. The seven parcels totaling 120.9826 acres of land associated within the WIS included Tax Map Key (TMK) (1) 7-1-012:007, Wilikina Drive owned by Sustainable Hawaii, Inc. (SHI), TMK (1) 7-1-012:004 at 71-129 Wilikina Drive owned by SHI, TMK (1) 7-3-013:003 Wilkina Drive owned by Wahiawa Water Company, Inc.; TMK (1) 7-1-012:003 Kamehameha Highway owned by SHI, TMK (1) 7-3-005:005 Pakauwili Loop owned by Dole Food Company, Inc. leased by Wahiawa Water Company, Inc., TMK (1) 7-1-001:017 at 71-400 Kamehameha Highway, and TMK (1) 7-1-001:013 Kamehameha Highway owned by SHI. The Phase I ESA report was completed on April 10, 2024.

Land Survey: E2 is collaborating with R.M. Towill Corporation, who will provide a boundary plat for the parcels for this land survey. E2 will provide an encroachment assessment report and survey map to the ADC upon completion of this task.

Phase II Environmental Site Assessment (ESA): E2 is also completing a Phase II ESA in order to evaluate areas of concern identified within the site for contaminants of potential concern (COPCs). E2 is preparing a sampling and analysis plan that will document the procedural and analytical requirements to conduct the fieldwork scheduled this summer, 2024. E2 will be collecting samples from various environmental media (i.e., surface soil, subsurface soil, water, and sediment) based on a *MULTI INCREMENT*® sampling methodology. The number of samples, target depths, and decision units will be determined based on the environmental media and Phase I ESA findings. Replicate samples will be collected for quality assurance [QA] purposes. A list of the analytes of concern at each location will be determined and reasons for the specific chemical or group of chemicals were chosen (i.e., heavy metals, pesticides, etc.). The samples will be packed in a cooler with gel ice and shipped overnight via FedEx to an accredited laboratory for analysis. E2 will follow quality control procedures for handling and shipping samples, maintain a chain of custody record, document and maintain comprehensive field notes, and provide the detailed results in the Phase II ESA report which will identify any COPCs exceeding environmental action levels.

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.	**R.M. Towill Corporation**	**Honolulu, HI**	**Boundary Survey Plat**

F. EXAMPLE PROJECTS THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS SERVICE CATEGORY (5)

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Limited Hazardous Materials Survey, Building 1756, 91-1071 Yorktown Street, Kalaeloa, Oahu, Hawaii	**2024**	**N/A**

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NO.
State of Hawaii, Department of Hawaiian Home Lands	**Ms. Malia Cox**	**(808) 620-9485**

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

Project Scope: Element Environmental, LLC (E2) conducted a limited hazardous materials survey of a two-story building (total area of 8,200 square feet) in Kalaeloa, Oahu, Hawaii. The DHHL is proposing to rehabilitate the former military personnel quarters for use as temporary transitional housing for homeless native Hawaiian beneficiaries who are on the DHHL's applicant wait lists. The building is constructed with concrete floors, concrete masonry unit (CMU) walls, concrete ceilings, and gypsum wallboard systems, and ceramic wall and floor tiles in the bathrooms.

E2 reviewed pertinent documents and available previous survey reports provided by the DHHL and provided a summary of pertinent findings in the report. The limited hazardous materials survey included: 1) sampling and testing of suspect asbestos-containing materials (ACM), arsenic in suspect canec panels, and lead in the paint not already sampled in previous surveys; and 2) a visual inventory for polychlorinated biphenyls (PCBs) and mercury in fluorescent light fixtures. The Limited Hazardous Material Survey fieldwork was completed in April and July 2023 and the report was completed in September 2023. The report included a summary of findings, data tables of sample results, AutoCAD figures showing approximate sample locations and hatched positive asbestos Homogeneous Area results, sample photographs, laboratory reports and chain-of-custody records.

E2 1) prepared bid documents for debris removal and hazardous materials abatement of the building; 2) conducted a pre-bid site visit for contractors; 3) evaluated bids and selected the abatement contractor; 4) held a pre-construction meeting; 5) reviewed contractor submittals; 6) obtained a subconsultant to provide project monitoring services during the abatement and disposal of asbestos-containing materials, moldy gypsum walls and ceilings, and loose and flaky lead paint, and the removal and disposal of assumed PCB ballasts and mercury tubes/bulbs; and 7) conducted random site visits to monitor abatement progress. The work also included the removal and disposal of a propane gas aboveground storage tank and underground piping extending to the building.

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 THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS SERVICE CATEGORY [6]

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I Environmental Site Assessment **360 California Avenue, Wahiawa, Oahu, Hawaii**	**2023**	**N/A**

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NO.
City and County of Honolulu	**Ms. Kimberly Ribellia-Collins**	**(808) 524-4200**

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

Project Scope: The City and County of Honolulu (CCH), Community Based Development Division, Department of Community Services retained Element Environmental, LLC (E2) to conduct a Phase I Environmental Site Assessment (ESA) for one 0.2066-acre parcel of residential land located at 360 California Avenue in Wahiawa, Oahu, Hawaii, and designated as Tax Map Key (TMK): (1) 7-3-004: Parcel 020; hereinafter referred to as "the site, the subject property, and/or the property." The property at the time of assessment was owned by the Frederick A. Trust and Harris T. Zane Trust (CCH 2023a).

This Phase I ESA was conducted in general conformance with ASTM International (ASTM) Practice E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process pursuant to Regulation 24 CFR Part 51 Subpart C. The purpose of the Phase I ESA was to identify Recognized Environmental Condition (RECs) (if any) as part of due diligence before purchasing the property. ASTM guidance defines RECs as the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment, the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment, or the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

Project Highlights:

Completed a Phase I ESA (acquisition of property)

E2 conducted document review, historic research, a site reconnaissance, and identified areas of concern at the site.

Cost: $8,900.

E2 conducted the subject property's visual site inspection (VSI) on March 1, 2023. At the time of the VSI, the subject property was occupied by a three-story residential development constructed in 2010. The lower level of the building was being used for parking and was paved. The building was developed as a Boarding House/Dormitory with 24 individual studios, each with a wet bar and individual toilets. A main kitchen shared by the units is located on the second floor. The surrounding area was mainly pea gravel with bushes and trees in pots against the fence line. The subject property was surrounded by mixed residential and community businesses, including Jack in the Box and the Wahiawa Medical Office.

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 THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS PROJECT CATEGORY (7)

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Environmental Services for Kekaha Residential Lots, Unit 4 Subdivision	**2019**	**N/A**

21. PROJECT OWNER'S INFORMATION

d. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
State of Hawaii, Department of Hawaiian Home Lands	**Mr. Stewart Matsunagta**	**(808) 620-9283**

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

Project Scope: In 2019, Prime Contractor E2 completed site characterization activities at the Kekaha Residential Lots (KRL) site to further evaluate the environmental condition of surface and subsurface soil and fruit, vegetables, and herbs at the Kekaha Residential Lots, Unit 4 Subdivision site located in Kekaha, Kauai, Hawaii. The site investigation scope of work was based on information provided by the Department of Hawaiian Home Lands (DHHL), interviews with the KRL residents, and the findings of the previous environmental work completed at the property.

Project Highlights:
E2 worked closely with DHHL and HDOH to develop the sampling methodology, and present the results, findings, and the way forward in a way that the residents could easily understand.

E2 participated in public meetings and met with and interviewed the residents, discussed proposed project activities and findings, and addressed questions and concerns.

Site characterization activities included public meetings and interviews with affected residents, site visits, *MULTI INCREMENT®* *(MI)* surface soil screening/sampling for all 50 lots for metals, subsurface soil screening/sampling for Lots 3 and 39 for metals and petroleum-related contamination, evaluation of heavy metals in vegetables grown onsite, and interfacing with community and regulatory agencies and residents. The environmental work was conducted in general accordance with guidance provided in the State of Hawaii Department of Health (HDOH) Hazard Evaluation and Emergency Response (HEER) Office Technical Guidance Manual (TGM). DHHL and E2 worked with the HDOH HEER Office to design and implement a community outreach and site investigation process to further evaluate the presence/absence and magnitude of heavy metals and debris contamination at the site in a transparent, informational manner so that residents would understand and trust the process and results. Soil sampling was conducted using *MI* sampling methodology. Each sample was thoroughly mixed in a resealable bag and screened on location for heavy metals (arsenic, cadmium, chromium, lead, selenium, and silver) using an X-ray Fluorescent (XRF) detector. The XRF screening process was demonstrated, and findings were discussed with available residents at the time each lot was sampled. Based on observations made in the field during the investigation and the soil sample results, the following findings were determined.

- Heavy metals were not detected in the surface soil in any of the lots (except for Lot 3) at concentrations that exceed HDOH Tier 1 EALs.
- Heavy metals were not detected in Lot 3 subsurface soils at concentrations that exceed HDOH Tier 1 EALs with the exception of arsenic. The Lot 3 sample was additionally analyzed for bioaccessible arsenic. Arsenic and bioaccessible arsenic concentrations indicate that the soil is a Category B Soil, which is minimally impacted.
- Surface and subsurface soil within the boat maintenance area of Lot 39 have been negatively impacted by engine maintenance activities. Concentrations of diesel-related hydrocarbons are present at concentrations that exceed maximum allowable levels for residential and commercial/industrial use areas.
- Metals were not present in produce grown in residents' yards at levels of concern.
- Debris, including glass, metal, coal-like material, char, fabric, and ceramic, is present in surface and subsurface soil throughout the subject property and poses a physical hazard to the residents.

E2 prepared Fact Sheets for each individual lot owner to provide a summary of the sample results, a summary report, and a soil management plan to provide long-term management guidance for debris and tar remaining in surface and subsurface soil.

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 THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS SERVICE CATEGORY (8)

19. TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phase I Environmental Site Assessment, 230 Mahiai Street, Hilo, Hawaii Island, Hawaii	**2015**	**N/A**

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NO.
State of Hawaii, Department of Hawaiian Home Lands	**Mr. Roy Takemoto**	**(808) 620-9590**

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

Project Scope: In 2015, Element Environmental, LLC completed a Phase I Environmental Site Assessment (ESA) for one parcel of developed land located at 230 Mahiai Street in Hilo, Hawaii Island, Hawaii. The site is owned by the State of Hawaii Department of Hawaiian Home Lands (DHHL) and was leased by Frederick H. K. Baker Jr. The purpose of this assessment was to evaluate the environmental condition of the property and identify recognized environmental conditions (RECs). This Phase I ESA was performed under the conditions of, and in general accordance with the ASTM Standard Practice for Environmental Site Assessments: *Phase I Environmental Site Assessment Process (ASTM Designation E 1527-13)*. Adherence to the ASTM standard is intended to limit the liability of property owners from inherited environmental contamination. The Phase I ESA included a review of regulatory records, site history, and physical characteristics (e.g., geology, hydrogeology, climate, etc.), site reconnaissance, interviews, data evaluation, and report preparation.

At the time of the site reconnaissance, the property was occupied by one residential structure, an electrical utility shed, one small kennel on the north side of the dwelling, and a large kennel to the southeast of the dwelling. The property was bounded on the north by grubbed and graded gardens and orchards, to the east and west by residential lots, and to the south by undeveloped land. A large portion of the property was covered by thick grassy vegetation, limiting assessment of the site due to restricted access and/or visibility. A review of the historical use of the property and adjacent properties indicates that the property and adjacent properties are located within an area formerly occupied by sugar cane fields from c. 1870s until c. 1966. The property was turned over to DHHL c. 1982 and the residential dwelling was constructed in the mid-1980s. Historical information regarding the property from 1907 to 1910, 1915 to 1930, 1933 to 1953, 1957 to 1962, and 1966 to 1974 was limited.

The assessment revealed the following evidence of RECs associated with the site:

- *Fill material*: The property and surrounding properties were graded and filled with soil from an unknown source. This is considered to be a REC because the nature and source of fill brought onto the site are unknown. It is possible that fill material was obtained from former agricultural lands and may be negatively impacted by historical use of pesticides (conditions indicative of a release to the environment).
- *Potential illegal discharge to the ground*: The large kennel, located on the southeast side of the dwelling, has a narrow concrete drainage channel at the back of the structure, with what appears to be a polyvinyl chloride drainage pipe. It is likely that the pipe discharged animal waste to the ground resulting from kennel cleaning operations. The ground in the vicinity of the drainage pipe appears to have subsided and the depression is covered by a piece of plywood. This is considered to be a REC because discharge of wastewater directly to the ground without a discharge permit is not authorized by state and/or local agencies (conditions indicative of a release to the environment).

The following, while not RECs, is considered to be a potential environmental concern:

- There was a small area of stressed vegetation in the vicinity of the small kennel located on the north side of the residence. There may be something buried beneath a "wood cover" (covered with vegetation) observed on the ground in front of the kennel. The cause of the stressed vegetation is unknown and is considered to be a potential environmental concern.

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 THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS PROJECT CATEGORY (9)

19 TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Preliminary Environmental Assessment and Site Inspection, USCG 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 in performing a PFAS investigation at Air Station Barbers Point.

E2 has personnel with direct experience working with PFAS chemicals at Air Station Barbers Point in Hawaii.

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 US Navy Base. The US 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

F. EXAMPLE PROJECTS THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS PROJECT CATEGORY (9)

19 TITLE AND LOCATION *(City and State)*	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Preliminary Environmental Assessment and Site Inspection, USCG 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**

investigation. An adjacent DU was sampled in this investigation.

Groundwater monitoring wells were located down gradient from areas of concern that were identified during 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 of the western side of the base have 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**
a.	**Mountain Methods, Inc.**	**Tuolumne, CA**	**Prime Consultant**

F. EXAMPLE PROJECTS THAT BEST ILLUSTRATE E2'S QUALIFICATIONS FOR THIS PROJECT CATEGORY (10)

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.

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.

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.

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.

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.	**R.M. Towill Corporation**	**Honolulu, HI**	**Prime Contractor**

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	☒	☒	☒	☒	☐	☒	☒	☒	☐	☒
Steven R. Spengler	Senior Hydrogeologist	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
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	Phase I and Phase II Environmental Site Assessments, and Removal Action – Remediation of 5 Acres, Former Voice of America Site, Maili, Oahu, Hawaii	6	Phase I Environmental Site Assessment 360 California Avenue, Wahiawa, Oahu, Hawaii
2	National Environmental Policy Act Compliance for Construction of a new Helipad at Kaena Point Satellite Tracking Station, Oahu, Hawaii	7	Environmental Services for Kekaha Residential Lots, Unit 4 Subdivision
3	Phase I and Phase II Environmental Site Assessments Mauna Kupu Station, Waianae Mountain Range, Waianae, Oahu, Hawaii	8	Phase I Environmental Site Assessment, 230 Mahiai Street, Hilo, Hawaii Island, Hawaii
4	Assessment of the Wahiawa Irrigation System, Wahiawa to Waialua, Oahu, Hawaii	9	Preliminary Environmental Assessment and Site Inspection, USCG Air Station Barbers Point, Kapolei, Oahu, Hawaii
5	Limited Hazardous Materials Survey, Building 1756, 91-1071 Yorktown Street, Kalaeloa, Oahu, Hawaii	10	Phase I and II Environmental Site Assessments, Honouliuli Wastewater Treatment Plant, Ewa Beach, Oahu, Hawaii

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

Element Environmental, LLC (E2) 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 services.

E2 offers the personal attention and flexible decision-making capabilities of a small business while providing the breadth of expertise and experience of a large firm. 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 completed projects throughout the State of Hawaii and the Pacific Rim for both the private sector and government clients.

ELEMENT ENVIRONMENTAL, LLC
- Established in 2005
- Operating for 19 years
- Small Business
- 39 Personnel (Professional Engineers, Scientists, Chemists, Hydrologists, and Technical Staff)

PROFESSIONAL SERVICES
OH.2) COMMUNITY PLANNING (ENVIRONMENTAL ASSESSMENT)

Name of Principal, Firm, and Principal Place of Business

Ryan Yamauchi, P.E., Principal-In-Charge
Element Environmental, LLC
98-030 Hekaha Street, Unit 9, Aiea, Hawaii 96701 (Oahu)
Office Phone: (808) 488-1200, Mobile: (808) 864-3952
Email: ryamauchi@e2hi.com
Website: www.e2hi.com

Education, Training & Qualifications of Key Personnel

E2's personnel of thirty-nine (39) professionals have over 500 years of combined professional experience in environmental and engineering services with seven (7) licensed professional engineers and one (1) licensed geologist. They are either life-long residents of the State of Hawaii or have resided in the state for over 26 years. As a result, the staff is intimately familiar with the local environment, regulations, and community concerns. E2 personnel is comprised of engineers, hydrologists, geologists, environmental scientists, and chemists. Most all individuals are college graduates with 21% earning advanced degrees, five (5) master's degrees, and two (2) doctorate degrees received from prestigious universities including Berkeley, Columbia University, Jacksonville University, Massachusetts Institute of Technology, Michigan Technical University, Mount Royal University, 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 Notre Dame, Vanderbilt University, Willamette University, and the University of Hawaii at Manoa.

AT-A-GLANCE PERSONNEL
- 7 Licensed P.E. (6 Hawaii-Civil)
- 1 Licensed Geologist
- 2 Ph.D.

BREAKDOWN (39 PERSONNEL)
- 5 Civil Engineers
- 7 Environmental Engineers
- 3 Geologists
- 1 Hydrogeologist/Hydrologist
- 8 Environmental Scientists
- 1 Chemist
- 1 Chemical Engineer
- 9 Technicians
- 4 Administrative Staff

STATE OF HAWAII DOH CERTIFIED
- 22 Asbestos Inspectors
- 1 Asbestos Project Designer
- 16 Lead Risk Assessors
- 5 Lead Inspectors
- 1 Lead Project Designer

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.

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 26 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., Health and Safety Manager, Matthew Neal and Eric Lau, P.E., Technical Manager (GIS/CAD).

PROGRAM MANAGER
Mr. Ryan Yamauchi, P.E.
- Contractual Matters
- 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 MANAGER
Mr. Matthew Neal
- Execute Safety for Staff and Subcontractors
- Health and Safety Plans
- Authority to Stop Work
- Project Manager

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

Program Manager, Mr. Ryan Yamauchi, P.E., Principal-in-charge 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. Matthew 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. Bernice Balete, 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.

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 and Good Standing
Attachment 5 – Certificate of Liability Insurance

CLIENT REFERENCES

E2 provides the following client references.

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Waianae, Hawaii 96792
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Professional Services

E2 has a history of 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

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

Project	Year Completed	Contract Amount	Description
County of Hawaii – Solid Waste Division			
Solid Waste Operational Analysis Study of the County of Hawaii Department of Environmental Management, Solid Waste Division	Ongoing	$499,782	E2 is currently gathering data, conducting interviews, developing recommendations, collaborating with stakeholders, and preparing a Feasibility Study report for the County of Hawaii Solid Waste Division. Future options to be considered: • *Curbside Recyclable Collection* • *Municipal Solid Waste (MSW) Landfill for west (beside expanding WHSL) and east sides* • *Construction and Demolition (C&D) Landfill for Big Island* • *WTE, all forms and technologies* • *Barging MSW To H-POWER, or elsewhere. Residual ash back to Big Island if H-POWER* • *Materials Recovery Facility (MRF), both clean and dirty options* • *Expand WHSL* • *Separate Recycling Division to include Abandoned Vehicle*

Project	Year Completed	Contract Amount	Description
County of Hawaii - 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 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.

Project	Year Completed	Contract Amount	Description
County of Hawaii - 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 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 engineering as below.

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.

- **Pier 21 WWPS, Honolulu Harbor, Oahu, Hawaii.** E2 prepared construction documents for the replacement of the existing packaged pump system at the Pier 21 WWPS with a new aboveground pumping system. The Pier 21 WWPS provides wastewater service to industrial facilities located along Pier 21 in Honolulu Harbor. The design included installation of new pumps and related appurtenances while allowing continued use of the existing influent wet well manhole present at the site. The design also included the replacement of the existing force main from the WWPS to the wye connection, which connects the force main to another existing force main. The total length of the designed replacement was approximately 500 feet.

- **Kalewa Street WWPS, Oahu, Hawaii**. E2 designed a new packaged WWPS and new dual relief force main for the Kalewa Street WWPS. E2 was responsible for evaluating present and future wastewater flows from the tributary, sizing and selecting the new packaged pump station, and completing construction documents for the new packaged WWPS and new dual relief force main (1,300 feet). Integral to the design was planning the phasing of construction, which would allow continued and uninterrupted use of the airport facilities by the tenants while the new WWPS and new dual relief force main is constructed.

- **Lihue WWTP, Lihue, Maui, Hawaii.** E2 compiled and analyzed data to quantify the amount of Inflow and Infiltration that is associated with rainfall events at the site. Predictive equations based on rainfall and flow-monitoring data were developed using multiple linear regression methods. The analysis was used to evaluate whether the sewer system had the necessary capacity for potential future development. The objective of this project was to determine if reserve or additional capacity still exists within Lihue's Wastewater Collection System for future developments within the Hanamaulu Triangle development. SewerCAD was used to model the Lihue wastewater collection system.

- **Honouliuli WWTP Phase IC – R3 Water Reuse Pump Station Design, Ewa Beach, Oahu, Hawaii.** E2 evaluated the R3 water system demands provided by the client and select an appropriate pumping system to meet demands. The design will include the selection and sizing of pumps; section of process control equipment, and pump station configuration. E2 will provide design calculations and text for the Basis of Design. E2 will also assist with construction cost estimates for the pump station.

- **He'eia WWPS Improvements, Kaneohe, Oahu, Hawaii.** E2 assisted in providing edits to the section for "Closure of Underground Storage Tanks" for required demolition work. E2 also provided a rough abatement cost estimate. E2 be provided services during bidding and construction

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.

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.

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.

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.

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.

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.

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 completing NEPA documentation and processes 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 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 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, Inc.
Environmental Planning	HHF Planners
Waste Management, Environmental Construction	Pacific Commercial Services
Analytical Services	Eurofins, TestAmerica Laboratories, APPL, Inc., Torrent Laboratory, Inc., Enthalpy Analytical
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 28, 2024**

31. NAME AND TITLE
Ryan S.W. Yamauchi, P.E., President

PROFESSIONAL SERVICE PROVIDER QUALIFICATIONS	1. PROJECT CATEGORY OF INTEREST **OH.2) Community Planning (Environmental Assessment)**

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

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) Firm	c. No. of Employees (2) Branch
12	Civil Engineer	4	
23	Environmental Engineer	8	
24	Environmental Scientist	9	
30	Geologist	3	
34	Hydrogeologist	1	
11	Chemist	1	
10	Chemical Engineer	1	
02	Administrative	4	
58	Technician/Analyst	8	
	Total	39	

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C15	Construction Management	3
D04	Design Build-Preparation of Requests and Proposals	1
E09	Environmental Impact Studies, Assessments or Statements	2
E11	Environmental Planning	2
E12	Environmental Remediation	3
E13	Environmental Testing and Analysis	6
G04	GIS Services	1
S04	Sewage Collection Treatment and Disposal	2
S07	Solid Wastes; Incineration; Landfill	3
S13	Storm Water Handling and Facilities	4
W02	Water Resources, Hydrology, Groundwater	3
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. County Work	3
b. Non-County Work	7
c. Total Work	7

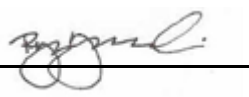
PROFESSIONAL SERVICES REVENUE INDEX NUMBER

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 28, 2024**



ATTACHMENT 1

ELEMENT ENVIRONMENTAL, LLC
ORGANIZATIONAL CHART

element environmental llc
environmental · engineering · water resources

KEY PERSONNEL

PRINCIPAL-IN-CHARGE

Ryan S.W. Yamauchi, P.E.

President
Program Manager

Principal Civil/Environmental Engineer

Years of Experience:	32
Years with Firm:	19

ASSOCIATE

Roger C. Aoki, P.E.

Technical Program Manager
Quality Assurance Manager

Senior Environmental Engineer

Years of Experience:	28
Years with Firm:	18

ASSOCIATE

Matthew J. Neal

Environmental Investigation Manager
Health and Safety Officer

Senior Environmental Scientist

Years of Experience:	26
Years with Firm:	18

ASSOCIATE

Arlene H. Campbell, L.G.

Environmental Compliance Manager
Project Manager

Senior Geologist

Years of Experience:	35
Years with Firm:	18

SENIOR VICE PRESIDENT

Eric M. Lau, P.E.

Technical Manager
Project Manager

Senior Environmental Engineer

Years of Experience:	20
Years with Firm:	15

KEY PERSONNEL - TECHNICAL

Bernice M. Balete, P.E.
Senior Environmental Engineer
30 Years of Experience
14 Years with Firm

Angela K. Peltier
Senior Geologist
20 Years of Experience
18 Years with Firm

Danny C. Liu
Senior Chemical Engineer
36 Years of Experience
9 Years with Firm

Joshua B. Agpaoa, E.I.T.
Staff Civil Engineer
6 Years of Experience
6 Years with Firm

Maya Matsuoka
Staff Environmental Scientist
3 Years of Experience
3 Years with Firm

Steven R. Spenger, Ph.D.
Senior Hydrogeologist/Hydrologist
36 Years of Experience
18 Years with Firm

Lindsay B. Mason, P.E.
Senior Environmental Engineer
22 Years of Experience
15 Years with Firm

Katie L. Kilway
Environmental Scientist
17 Years of Experience
14 Years with Firm

Leslie Robinson, E.I.T.
Project Civil Engineer
17 Years of Experience
3 Years with Firm

John A. Ellis
Field Technician
9 Years of Experience
9 Years with Firm

Marvin D. Heskett, III
Senior Chemist
35 Years of Experience
10 Years with Firm

Jodie C.A. Tsubone, P.E.
Senior Civil Engineer
12 Years of Experience
9 Years with Firm

Daniel W. Amato, Ph.D.
Environmental Scientist
8 Years of Experience
6 Years with Firm

James D. Tsubone
Environmental Scientist
8 Years of Experience
8 Years with Firm

Candace K. Yamauchi, P.E.
Senior Environmental Engineer
19 Years of Experience
13 Years with Firm

Austin A. Lutey, E.I.T.
Environmental Engineer
16 Years of Experience
16 Years with Firm

Arnold David West
Staff Environmental Scientist
7 Years of Experience
7 Years with Firm

Theodore N. Uekawa, E.I.T.
Staff Civil Engineer
3 Years of Experience
3 Years with Firm

SUPPORT STAFF

Noa R. Nobrega
Staff Engineer

Logan N. Yamamoto
Staff Environmental Scientist

Erica E. Adamczyk
Staff Geologist

Johnathan P. Valencia
Staff Environmental Technician
IT Technician

Brandon Dela Cruz
Staff Environmental Technician

Brenton Sasaoka
Staff Civil Engineer

Garrett M. Ito
Environmental Technician
2 Years of Experience
2 Years with Firm

Robin K. Matsuda
Environmental Technician
2 Years of Experience
2 Years with Firm

Shane Mizukami
Field Technician
8 Years of Experience
8 Years with Firm

Kelton Y. Otsuka
Field Technician
5 Years of Experience
5 Years with Firm

Mark A. Miguel
Field Technician
8 Years of Experience
8 Years with Firm

Lauren G. Hunter
Field Technician
8 Years of Experience
8 Years with Firm

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: 32** **Years with Current Firm: 19**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 9566 **Certified Asbestos Inspector, Hawaii No. HIASB-2905** **Certified Lead Risk Assessor, Hawaii No. PB-0117** **Education:** • M.S., Civil/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 30-HR Construction Safety and Health Training • 40-HR Construction Safety Hazard Awareness Training for Contractors • Hazardous Waste Site Supervisor Training • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
ROGER C. AOKI, P.E.	**Professional Title:** Senior Environmental Engineer	**Years of Experience: 28** **Years with Current Firm: 18**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 10019 **Education:** • M.S., 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 30-HR Construction Safety and Health Training • 40-HR Construction Safety Hazard Awareness Training for Contractors • Hazardous Waste Site Supervisor Training • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
MATTHEW J. NEAL	**Professional Title:** Senior Environmental Scientist	**Years of Experience: 26** **Years with Current Firm: 18**
	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 • 40-HR Construction Safety Hazard Awareness Training for Contractors • Hazardous Waste Site Supervisor Training • Maritime Security (MARSEC) • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
ARLENE H. CAMPBELL, L.G.	**Professional Title:** Senior Geologist	**Years of Experience: 35** **Years with Current Firm: 18**
	LICENSED GEOLOGIST, WASHINGTON No. 1664 **Education:** • Graduate Work, Geology, Vanderbilt University • B.A., Geology, Minor Hydrogeology, Austin Peay 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 Hazard Awareness Training for Contractors • Hazardous Waste Site Supervisor Training • Maritime Security (MARSEC) • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
ERIC M. LAU, P.E.	**Professional Title:** Senior Environmental Engineer	**Years of Experience: 20** **Years with Current Firm: 15**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 12977 **Certified Asbestos Inspector, Hawaii No. HISAB-3198** **Certified Lead Risk Assessor, Hawaii No. PB-0439** **Education:** • M.S., 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 • 40-HR Construction Safety Hazard Awareness Training for Contractors • Hazardous Waste Site Supervisor Training • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
BERNICE M. BALETE, P.E.	**Professional Title:** Senior Environmental Engineer	**Years of Experience: 30** **Years with Current Firm: 14**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 10186 **Certified Asbestos Project Designer/Inspector, Hawaii No. HISAB-0449** **Certified Lead Project Designer/Risk Assessor, 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 • 40-HR Construction Safety Hazard Awareness Training for Contractors • DOT Hazardous Materials 49CFR 172 Subpart H • Maritime Security Awareness Training (MARSEC) • Hazardous Waste Site Supervisor Training • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
STEVEN R. SPENGLER. PH.D.	**Professional Title:** Senior Hydrologist/Hydrogeologist	**Years of Experience: 36** **Years with Current Firm: 18**
	Education: • Ph.D., Hydrology, University of Hawaii at Manoa • M.S., Geology, University of Hawaii at Manoa • B.S., Geochemistry, UC Santa Cruz • B.S., Chemistry, UC Riverside **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • 40-HR Construction Safety Hazard Awareness Training for Contractors • Hazardous Waste Site Supervisor Training • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
MARVIN D. HESKETT	**Professional Title:** Senior Chemist	**Years of Experience: 35** **Years with Current Firm: 10**
	Certified Asbestos Inspector, Hawaii No. HISAB-34631 **Certified Lead Risk Assessor, 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 • 40-HR Construction Safety Hazard Awareness Training for Contractors • Hazardous Waste Site Supervisor Training • Sampling for Defensible Environmental Decisions, QE3C • Data Quality Objectives, Shipley Group NEPA Training • 40-HR QA/QC Course • Maritime Security (MARSEC) • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
CANDACE K. YAMAUCHI, P.E.	**Professional Title:** Senior Environmental Engineer	**Years of Experience: 19** **Years with Current Firm: 13**
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 16320 **Certified Asbestos Inspector, Hawaii No. HISAB-3840** **Certified Lead Risk Assessor, 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 Hazard Awareness Training for Contractors • Hazardous Waste Site Supervisor Training • Qualified Stormwater Compliance Manager • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
ANGELA K. PELTIER	**Professional Title:** Senior Geologist	**Years of Experience:** 20 **Years with Current Firm:** 18
	Education: • B.S., Geology and Geophysics, University of Hawaii at Manoa **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • 40-HR Construction Safety Hazard Awareness Training for Contractors • ASTM E1527 Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process Certification, • First Aid and CPR Training	
LINDSAY B. MASON, P.E.	**Professional Title:** Senior Environmental Engineer	**Years of Experience:** 22 **Years with Current Firm:** 15
	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 • Hazardous/Toxic Materials Management • Hazardous Waste Site Supervisor Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
JODIE C.A. TSUBONE, P.E.	**Professional Title:** Senior Civil Engineer	**Years of Experience:** 12 **Years with Current Firm:** 09
	REGISTERED PROFESSIONAL ENGINEER, HAWAII CIVIL No. 17048 **Certified Asbestos Inspector, Hawaii No. HISAB-4629** **Certified Risk Assessor, 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 • Erosion and Sediment Control Plan Coordinator (ESCP), Department of Planning & Permitting (CCH) • 40-HR Construction Safety Hazard Awareness Training for Contractors • Maritime Security (MARSEC) • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
AUSTIN A. LUTEY, E.I.T.	**Professional Title:** Environmental Engineer	**Years of Experience: 16** **Years with Current Firm: 16**
	Engineer-in-Training (E.I.T.) **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 • 40-HR Construction Safety Hazard Awareness Training for Contractors • Hazardous Waste Site Supervisor Training • Maritime Security (MARSEC) • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
DANNY C. LIU	**Professional Title:** Senior Chemical Engineer	**Years of Experience: 36** **Years with Current Firm: 09**
	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	
DANIEL W. AMATO, PH.D.	**Professional Title:** Environmental Scientist	**Years of Experience: 08** **Years with Current Firm: 06**
	Certified Asbestos Inspector, Hawaii No. HISAB-4628 **Certified Lead Risk Assessor, Hawaii No. PB-1148** **Education:** • Ph.D., and M.S., Botany, University of Hawaii at Manoa • B.S., Biology, University of Vermont **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • 40-HR Construction Safety Hazard Awareness Training for Contractors • Maritime Security (MARSEC) • Scientific SCUBA Diver, Rescue Diver, Master Diver, Nitrox Certified Diver • Bloodborne Pathogens, First Aid, CPR, and AED Training	

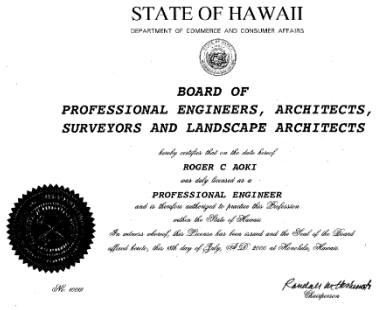
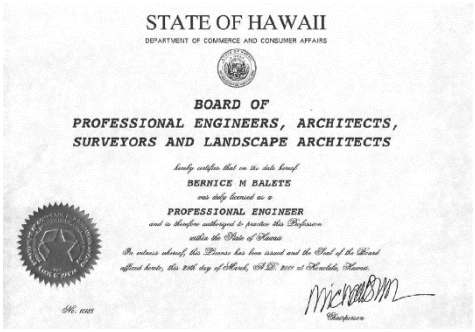
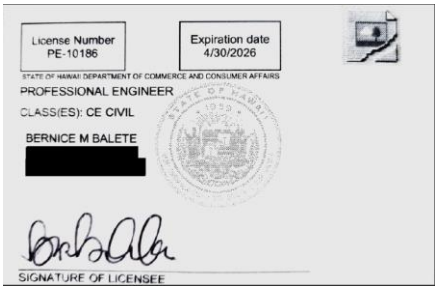
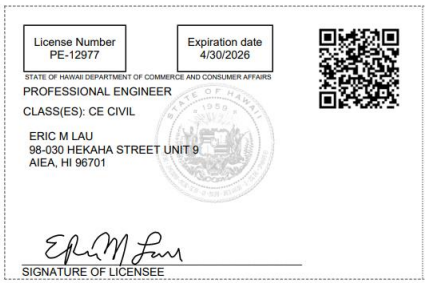
KEY PERSONNEL	QUALIFICATIONS	
ARNOLD DAVID WEST	**Professional Title:** Staff Environmental Scientist	**Years of Experience: 07** **Years with Current Firm: 07**
	Certified Asbestos Inspector, Hawaii No. HISAB-4625 **Certified Lead Risk Assessor/Inspector, Michigan No. P-08520** **Education:** • B.S., Applied Physics, Jacksonville University of Florida **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • 40-hour Construction Safety Hazard Awareness Training for Contractors • Bloodborne Pathogens, First Aid, CPR, and AED Training	
JOSHUA B. AGPAOA, E.I.T.	**Professional Title:** Staff Civil Engineer	**Years of Experience: 06** **Years with Current Firm: 06**
	Certified Asbestos Inspector, Hawaii No. HISAB-4791 **Certified Lead Risk Assessor, 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 • 40-HR Construction Safety Hazard Awareness Training for Contractors • Bloodborne Pathogens, First Aid, CPR, and AED Training	
LESLIE A. ROBINSON, E.I.T.	**Professional Title:** Project Civil Engineer	**Years of Experience: 17** **Years with Current Firm: 03**
	Engineer-in-Training (E.I.T.) **Radon Measurement Professional -NRPP 114210-RMP** **Certified Asbestos Inspector, CHC Training, No. 58808275** **Education:** • M.S., Civil Engineering, Massachusetts Institute of Technology (MIT) • B.S., Civil Engineering, MIT **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • 40-HR Construction Safety Hazard Awareness Training for Contractors • 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 • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	

KEY PERSONNEL	QUALIFICATIONS	
JAMES D. TSUBONE	**Professional Title:** Environmental Scientist	**Years of Experience: 08** **Years with Current Firm: 08**
	Radon Measurement Professional, NRPP ID 114350-RMP **Certified Asbestos Inspector, Hawaii No. HISAB-4118** **Certified Lead Risk Assessor, Hawaii No. PB-0827** **Education:** • B.S., Geology, Mount Royal University Canada **Training:** • OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training • OSHA 30-HR Construction Safety and Health Training • 40-HR Construction Safety Hazardous Awareness Training for Contractors • Maritime Security Awareness Training (MARSEC) • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
THEODORE N. UEKAWA, E.I.T.	**Professional Title:** Staff Civil Engineer	**Years of Experience: 03** **Years with Current Firm: 03**
	Engineer-in-Training (E.I.T.) **Radon Measurement Professional – NRPP 114230-RMP** **Certified Asbestos Inspector, Hawaii No. HISAB-5084** **Certified Lead Risk Assessor/Inspector, Hawaii No. PB-1257** **Education:** • M.S., 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 • 40-HR Construction Safety Hazardous Awareness Training for Contractors • OSHA 30-hour Construction Safety and Health Training • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	
MAYA MATSUOKA	**Professional Title:** Staff Environmental Scientist	**Years of Experience: 03** **Years with Current Firm: 03**
	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 • 40-HR Construction Safety Hazardous Awareness Training for Contractors • Confined Space Training • Bloodborne Pathogens, First Aid, CPR, and AED Training	

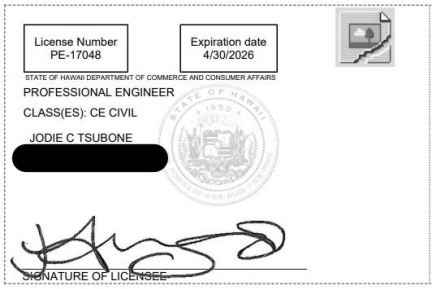
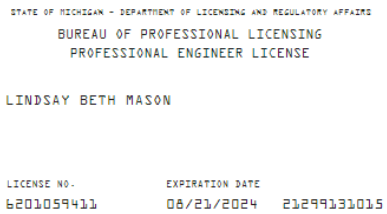
ATTACHMENT 3

ELEMENT ENVIRONMENTAL, LLC
PROFESSIONAL LICENSES AND CERTIFICATIONS

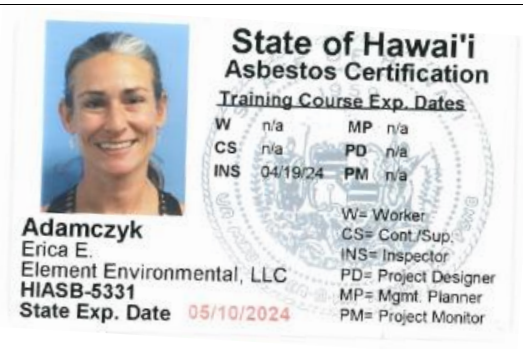
Element Environmental, LLC
Personnel Registered Professional Licenses

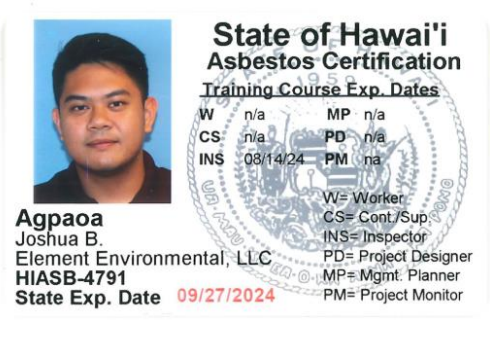
NAME	LICENSE NUMBER	EXPIRATION DATE
RYAN S.W. YAMAUCHI	**P.E.** - No. 9566, HAWAII  STATE OF HAWAII DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS hereby certifies that on the date hereof RYAN S W YAMAUCHI was duly licensed 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: 4/30/2026  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 ROGER C AOKI PROFESSIONAL ENGINEER	Expires: 4/30/2026  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 BERNICE M BALETE PROFESSIONAL ENGINEER	Expires: 4/30/2026  License Number PE-10186 Expiration date 4/30/2026 STATE OF HAWAII DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS PROFESSIONAL ENGINEER CLASS(ES): CE CIVIL BERNICE M BALETE [redacted] 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: 4/30/2026  License Number PE-12977 Expiration date 4/30/2026 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

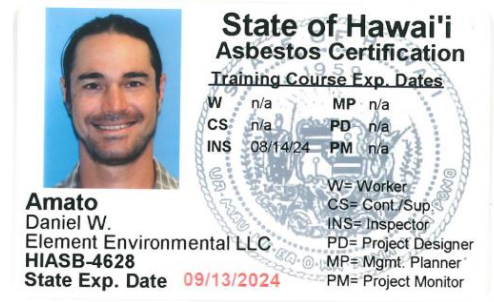
Element Environmental, LLC
Personnel Registered Professional Licenses

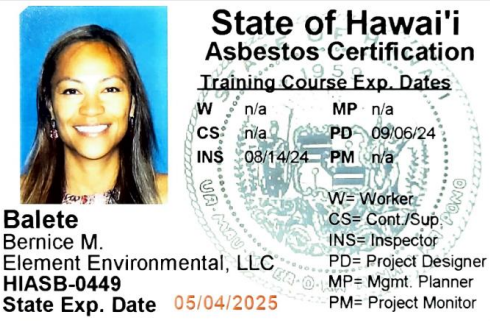
NAME	LICENSE NUMBER	EXPIRATION DATE
CANDACE K. K. H. BORGES YAMAUCHI	**P.E.** - No. 16320, HAWAII 	Expires: 4/30/2026 
JODIE C. TSUBONE	**P.E.** - No. 17048, HAWAII 	Expires: 4/30/2026 
LINDSAY BETH MASON	**P.E.** - No. 6201059411, MICHIGAN	Expires: 8/21/2024 
ARLENE HELEN CAMPBELL	**L.G.** - No. 1664, WASHINGTON 	Expires: 3/10/2025

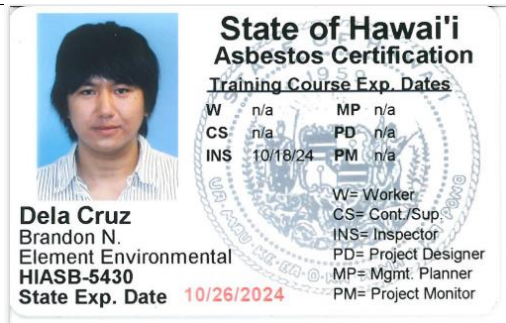
Element Environmental, LLC
Asbestos Certifications

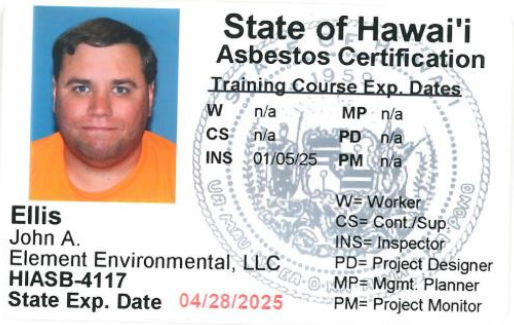


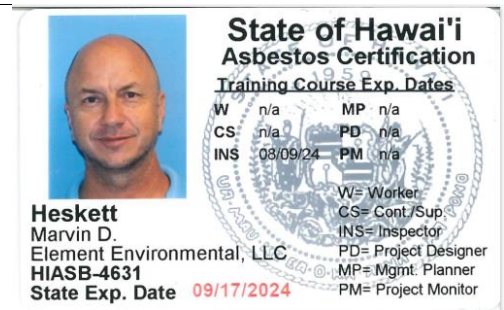


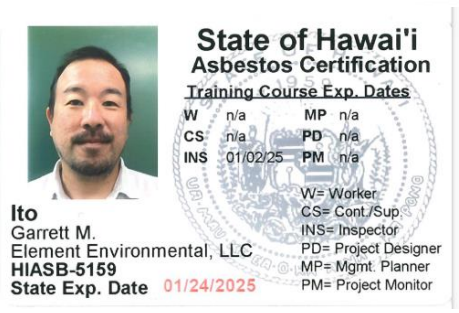


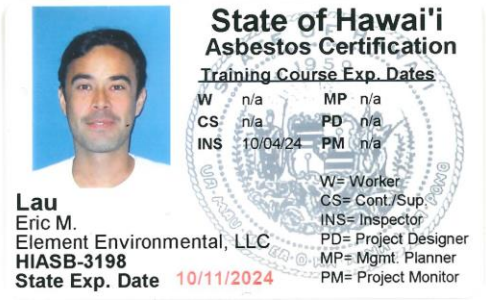


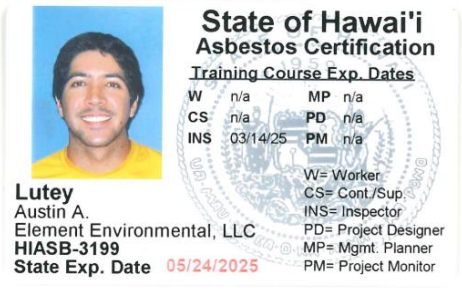




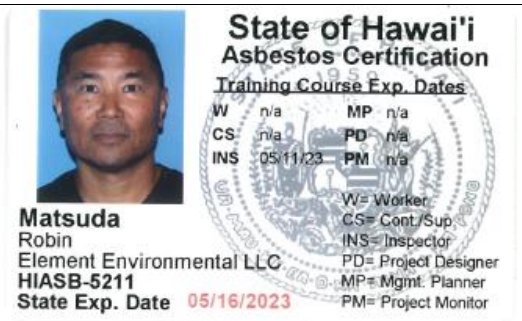


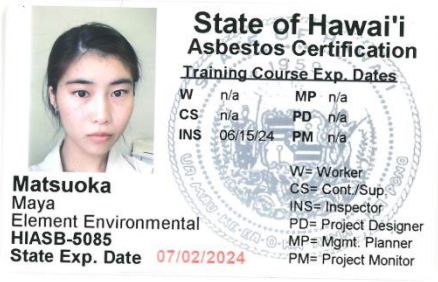


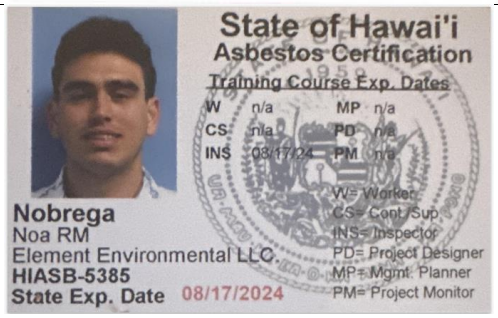


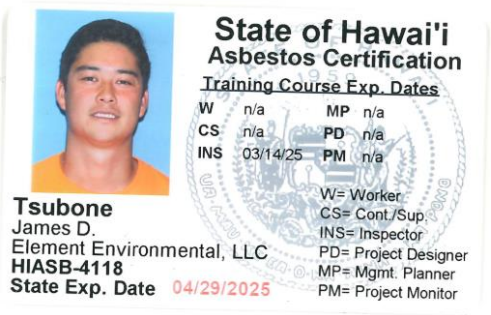


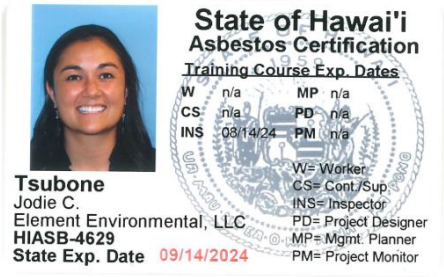
Element Environmental, LLC
Asbestos Certifications

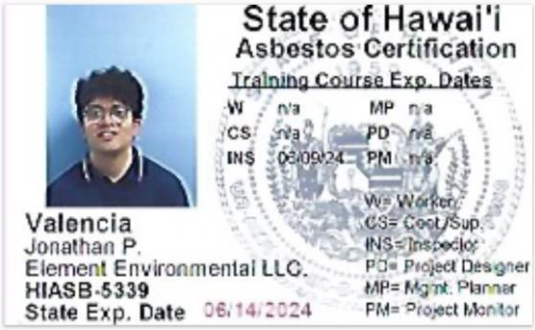


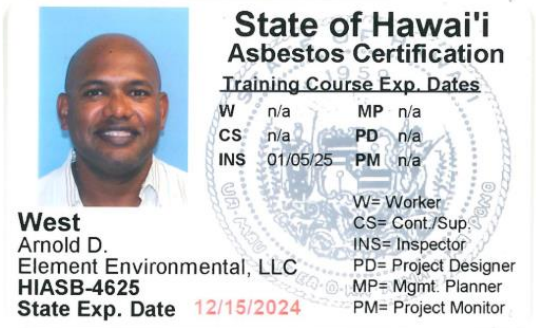


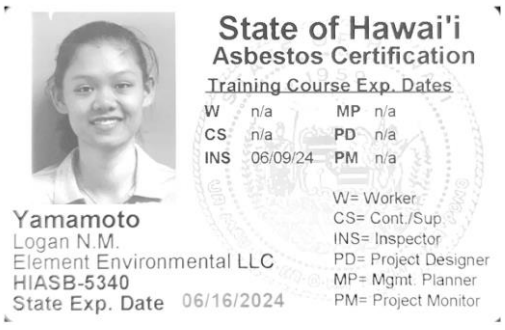




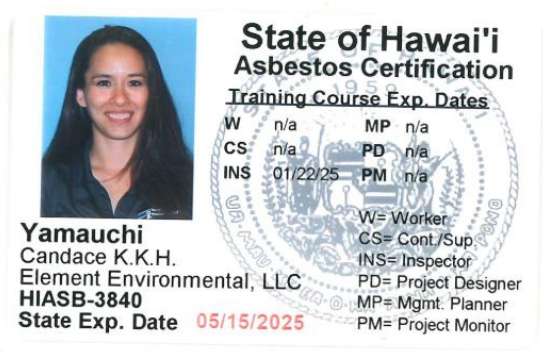


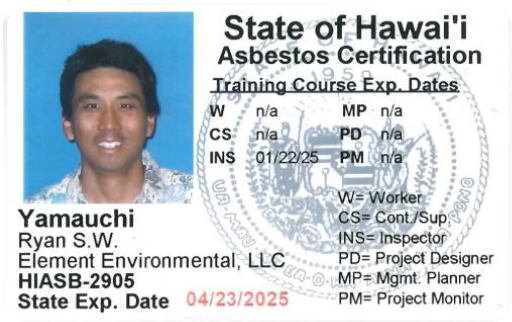






Element Environmental, LLC
Asbestos Certifications





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- 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- 11/20/2026
Project Designer- n/a
Worker- n/a

Dela Cruz
Brandon N.
Certification # PB-1413

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- 01/24/2025
Supervisor- N/A
Risk Assessor- n/a
Project Designer- n/a
Worker- n/a

Ito
Garrett M.
Certification # PB-1272

Element Environmental, LLC
Lead Based Paint Activities Certifications

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- 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- n/a
Supervisor- n/a
Risk Assessor- 08/02/2
Project Designer- n/a
Worker- n/a

Nobrega
Noa RM
Certification # PB-1385

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

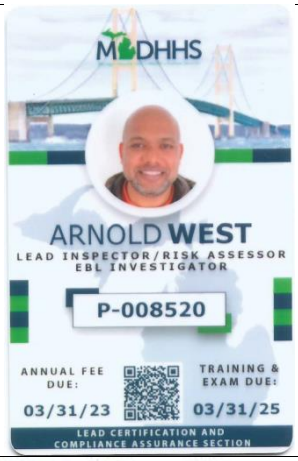
State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 01/07/2023
Supervisor- n/a
Risk Assessor- 07/15/2026
Project Designer- n/a
Worker- n/a

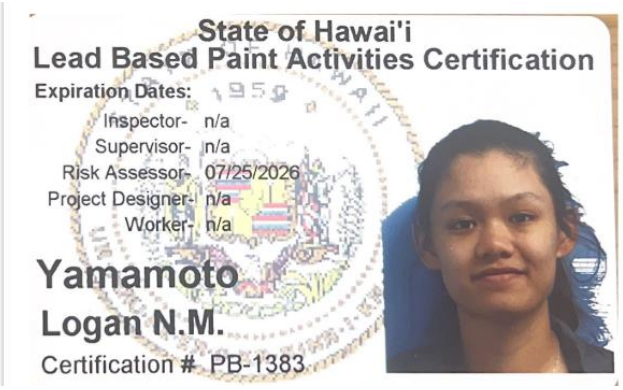
Tsubone
Jodie C.
Certification # PB-1151

State of Hawai'i
Lead Based Paint Activities Certification
Expiration Dates:
Inspector- 07/19/2024
Supervisor- n/a
Risk Assessor- 06/21/2026
Project Designer- n/a
Worker- n/a

Uekawa
Theodore "Teddy"
Certification # PB-1257

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: **06/04/2024**

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 16, 2024

Director of Commerce and Consumer Affairs

ATTACHMENT 5

ELEMENT ENVIRONMENTAL, LLC
CERTIFICATE OF LIABILITY INSURANCE

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 11/03/2023

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:** CL2311308223 **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:			*FEIECC10978-12	11/05/2023	11/05/2024	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	11/05/2023	11/05/2024	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? [ ] N / A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						[ ] 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)

Proof of ins for vehicles:
2014 ford f150 PU vin ending with 70720
2014 ford E 350 van vin ending with 91123
2012 Toyota Tacoma vin ending with 132378,
2012 Toyota Tacoma vin ending with 134373,
2012 Toyota Tacoma vin ending with 099646
comp & collision deductibles are $500 per clai

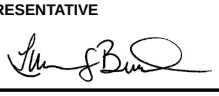
CERTIFICATE HOLDER

proof of insurance

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): 12/27/2023

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:** 24-25 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 [blank]	$ $ $ $ $ $ $
	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) [blank]	$ $ $ $ $
	☐ **UMBRELLA LIAB** ☐ OCCUR ☐ **EXCESS LIAB** ☐ CLAIMS-MADE ☐ DED ☐ RETENTION $						EACH OCCURRENCE AGGREGATE [blank]	$ $ $
A	**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		WC0057022	01/01/2024	01/01/2025	☒ 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