

STATEMENT OF QUALIFICATIONS



COUNTY OF HAWAII DEPARTMENT OF PARKS AND RECREATION

NOTICE TO PROVIDERS OF PROFESSIONAL SERVICES

FISCAL YEAR 2025—2026

(July 1, 2025 - June 30, 2026)

PR.2) INDUSTRIAL HYGIENE (HAZARDOUS MATERIALS SURVEY, ASSESSMENT & PLANNING)



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

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

www.e2hi.com



element environmental llc
environmental • engineering • water resources

"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 30, 2025

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

Subject: **Element Environmental, LLC's Statement of Qualifications in Response to the Department of Parks and Recreation, County of Hawaii's Notice to Providers of Professional Services, Fiscal Year 2025-26**

Dear Mr. Honma,

Element Environmental, LLC (E2) is pleased to submit our Statement of Qualifications (SOQ) to the County of Hawaii, Department of Parks and Recreation per the "*Notice to Providers of Professional Services*" solicitation notice for the fiscal year 2025 to 2026.

This serves as our **expression of interest** in providing services for **PR.2) Industrial Hygiene (Hazardous Materials Survey, Assessment & Planning)**. In accordance with the notice, we have enclosed our completed Federal Form 330 (SFR330) which includes the following:

- (1) The name of our firm, contact information, and principal place of business;
- (2) The age of our firm and its average number of employees over the past five years;
- (3) The education, training, and qualifications of our key employees;
- (4) A list of recent projects and the names of five clients who may be contacted, including two for whom services were rendered during the preceding year; and
- (5) Promotional/descriptive literature.

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

Sincerely,

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

PROFESSIONAL SERVICES QUALIFICATIONS

PART I - SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. PUBLIC NOTICE DATE June 1, 2025	2. PROJECT CATEGORY PR.2) Industrial Hygiene (Hazardous Materials Survey, Assessment & Planning)
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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 (808) 488-1200	6. FAX NUMBER (808) 488-1300	7. E-MAIL ADDRESS ryamauchi@e2hi.com

C. PROPOSED TEAM

(THIS SECTION MUST BE COMPLETED FOR PROJECT CATEGORIES)

	(Check)			8. FIRM NAME	9. ADDRESS	10. ROLE IN THIS CONTRACT
	PRIME	J-V PARTNER	SUBCON-TRACTOR			
a.	☒	☐	☐	Element Environmental, LLC ☐ CHECK IF BRANCH OFFICE	98-030 Hekaha Street Unit 9, Aiea, Hawaii 96701	Prime Contractor PR.2) Industrial Hygiene (Hazardous Materials Survey, Assessment & Planning)
b.	☐	☐	☐	 ☐ CHECK IF BRANCH OFFICE		
c.	☐	☐	☐	 ☐ CHECK IF BRANCH OFFICE		
d.	☐	☐	☐	 ☐ CHECK IF BRANCH OFFICE		

☒ D. ORGANIZATIONAL CHART OF PROPOSED TEAM

☒ (Attachment 1)

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

11. NAME Ryan S.W. Yamauchi, P.E.		12. TITLE SERVICE PROVIDED Principal Engineer		13. TITLE SERVICE PROVIDED	
				a. TOTAL 33	b. WITH CURRENT FIRM 20
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) M.S., Civil/Environmental Engineering, UC Berkeley B.S., Civil Engineering, University of Hawaii at Manoa			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Registered Professional Engineer, HI - Civil No. 9566 Certified Asbestos Inspector, HIASB-2905 Certified Lead Risk Assessor/Inspector, PB-0117		
17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)					
OSHA 40-hour HAZWOPER Training OSHA 8-hour HAZWOPER Refresher Training OSHA 30-hour Construction Safety and Health Training Confined Space Training Maritime Security Awareness Training (MARSEC)			40-HR 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 (If applicable) 2018	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Completed a design alternatives analysis (DAR) 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 DAR, completed design calculations for the pumps and force main design, prepared design drawings and specifications, and other necessary permit documents. Fee: \$520,000. Role: Program 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 2025	CONSTRUCTION (If applicable) 2025	
	(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 prepared construction documents for Phase III. Fee: \$840,000. Role: Program Manager/Principal Engineer.				
c.	(1) TITLE AND LOCATION (City and State) Large Capacity Cesspool Closures Hickam Field, Joint Base Pearl Harbor-Hickam (JBPHH), Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) 2017	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm E2 completed an engineering design for active cesspools at five facilities. Three of the cesspool facilities were replaced with a septic tank, pump station, and raised leach field. Two of the cesspools were replaced with pump stations that pump wastewater to the existing wastewater collection system. Evaluated present and future wastewater flows, sizing and selecting new septic tanks, pump stations, and leach fields, and completed construction documents. Fee: \$362,372. Role: Program Manager/Principal Engineer.				
d.	(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 (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm E2 conducted a study to assess the technical, environmental, and economic feasibility of wastewater effluent reuse from the Waimanalo Wastewater Treatment Plant. Identified potential users and locations, including the reuse demand, and transmission and storage requirements. Conducted public outreach, collected data, researched prior studies, and evaluated costs. Prepared a conceptual layout and cost estimate for the preferred WWTP upgrades and transmission and storage requirements for users with a strong interest in reuse. Fee: \$219,345. Role: Program Manager/Principal Engineer.				

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

11. NAME Roger C. Aoki, P.E.		12. TITLE SERVICE PROVIDED Senior Environmental Engineer		13. TITLE SERVICE PROVIDED	
				a. TOTAL 29	b. WITH CURRENT FIRM 19
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) M.S., Civil/Environmental Engineering, Purdue University B.S., Civil Engineering, University of Hawaii at Manoa			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) 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, Abandoned AVGAS/MOGAS Pipeline, Pearl City Peninsula, JBPHH, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Conducted a Site Investigation for the abandoned aviation gasoline (AVGAS) and motor gasoline (MOGAS) pipeline running from the former Pearl City Fuel Annex to the waterfront fueling and cargo wharves on Pearl City Peninsula within JBPHH. Delineated and characterized the nature and extent of contamination in the soil, groundwater, and soil gas caused by historic releases of AVGAS/MOGAS, conducted an environmental hazard evaluation, and provided 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 (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Created an integrated, scaled, and detailed storm drainage map and database. The maps and results of the survey were used to determine areas in need of repair or cleaning. Conducted a survey and condition assessment of all storm drain features, and in specified situations, sediment sampling and analysis, to create a detailed base-wide storm drainage map and database. Fee: \$1,799,119. Role: Project Manager/Senior Environmental Engineer.				
c.	(1) TITLE AND LOCATION (City and State) Pier 29 Container Yard Improvements, Honolulu Harbor, Honolulu, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2012	CONSTRUCTION (If applicable) 2012	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Prepared design specifications for handling contaminated soil and groundwater encountered during construction. The improvements include a new pavement structure to accommodate a new container yard. E2 prepared design specifications to address air monitoring during construction and the removal of abandoned fuel pipelines encountered. E2 participated in coordination meetings with the Harbors Division and the IDPP. E2 also addressed comments by HDOH who reviewed the construction documents. Fee: \$30,340. Role: Senior Environmental Engineer. *COMMENDATION LETTER - EXCELLENT PERFORMANCE*				
e.	(1) TITLE AND LOCATION (City and State) Kalewa Wastewater Pump Station Improvements Design Honolulu, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2018	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Completed an engineering design of a new packaged wastewater pump station and new dual relief force main for the Kalewa Street wastewater pump station. Evaluated present and future wastewater flows from the tributary, sizing and selecting the new packaged pump station, and completed construction documents for the new packaged wastewater pump station and new dual relief force main. Integral to the design was planning the phasing of construction, which would allow continued and uninterrupted use of the airport facilities by the tenants during construction. Fee: \$52,000. Role: Senior Environmental Engineer.				

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

11. NAME Matthew J. Neal	12. TITLE SERVICE PROVIDED Senior Environmental Scientist	13. TITLE SERVICE PROVIDED	
		a. TOTAL 27	b. WITH CURRENT FIRM 19

14. FIRM NAME AND LOCATION (City and State)

Element Environmental, LLC, (Aiea, Hawaii)

15. EDUCATION (DEGREE AND SPECIALIZATION)

B.S., Environmental Science/Geology, Willamette University

16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

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

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

18. RELEVANT PROJECTS

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
a. Site Investigation of Former UST No. 10 Site, Pearl Harbor Naval Shipyard, JBPHH, Oahu, Hawaii (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Conducted an environmental investigation of a former Underground Storage Tank (UST) Site No. 10 to determine the extent of petroleum contamination in subsurface soil and groundwater. Collected subsurface soil samples, installed four groundwater monitoring wells, and collected groundwater samples. Conducting semi-annual groundwater monitoring for seasonal events. Fee: \$226,117. Role: Project Manager/Senior Environmental Scientist/Health and Safety Manager.	2019	-
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
b. Site Investigation, Former Molokai Electric Company Power Generating Station, Kaunakakai, Molokai, Hawaii (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Conducted a Site Investigation (SI) of the former Molokai Electric Company (MOECO) site in downtown Kaunakakai. The SI included a comprehensive study of residual near and subsurface contamination from previous MOECO activities, primarily from chemicals of concern polychlorinated biphenyls (PCBs) and petroleum and heavy metals. E2 collected over 700 discrete soil samples as well as 88 multi-incremental® soil samples, soil-gas, concrete and groundwater samples. In addition, E2 conducted a synoptic water level study to help determine potential migration of subsurface contaminants. Prior to completion of the field portion of the project, E2 completed two Special Management Area (SMA) permit applications for the County of Maui for the project. The results of the SI will be used to determine the most appropriate remedial action for the site. Responsibilities included Project Management, completion of the SMA permits, field oversight and coordination, drafting of the WP/SAP and a final report. Fee: \$830,974. Role: Project Manager/Senior Environmental Scientist/Health and Safety Manager.	2016-2018	-
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
c. Pearl Harbor Naval Shipyard Intermediate Maintenance Facility Storm Drain Remedial Investigation, JBPHH, Oahu, Hawaii (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Completed a Remedial Investigation (RI) to assess the nature and extent of contamination associated with the storm drain lines identified in the previous Site Inspection (SI). The project required collection of data of sufficient amount and quality to evaluate the nature and extent of contamination associated with each area of concern at the site identified through the SI, and the degree of risk/hazard any releases may potentially pose to human health and the environment. The fieldwork included soil, groundwater, and soil gas sampling and analysis. A tier 1 human health risk assessment (HHRA), tier 1 ecological risk screening (limited to contaminants of potential concern in groundwater), and tier 2 HHRA were also completed. Fee: \$670,777. Role: Project Manager, Senior Environmental Scientist/Health and Safety Manager.	2017	-

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

11. NAME Arlene H. Campbell, L.G.		12. TITLE SERVICE PROVIDED Senior Geologist		13. TITLE SERVICE PROVIDED	
				a. TOTAL 36	a. TOTAL 19
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) Graduate Work, Vanderbilt University B.A., Geology, Minor Hydrology, Austin Peay University			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Licensed Geologist, WA - 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					
	(1) TITLE AND LOCATION (City and State) Closed Kailua-Kona and Waimea Landfills Fire Monitoring and Control Services, Kailua-Kona, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) -	
a.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Provided fire monitoring and control services which 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. Fee: \$260,000. Role: Project Manager/Senior Geologist.				
	(1) TITLE AND LOCATION (City and State) Environmental Site Assessments, Kapalama Container Terminal Yard Project, Honolulu Harbor, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Estimated 2025	
b.	(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*				
	(1) TITLE AND LOCATION (City and State) Environmental Conditions of Property, Various Sites, Guam		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2022	CONSTRUCTION (If applicable) -	
c.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Performed Environmental Conditions of Property (ECPs) in conformance with ASTM D6008-96 Standard Practice for Conducting Environmental Baseline Surveys and D5746-98 Standard Classification of ECP Area Types for Defense Base Closure and Realignment Facilities. 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.				
	(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 2012	CONSTRUCTION (If applicable) -	
d.	(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 Eric M. Lau, P.E.		12. TITLE SERVICE PROVIDED Senior Environmental Engineer		13. TITLE SERVICE PROVIDED	
				a. TOTAL 21	b. WITH CURRENT FIRM 16
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) M.S., Civil/Environmental Engineering, MIT B.S., Civil/Environmental Engineering, MIT B.S., Biology, MIT			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Registered Professional Engineer, HI - Civil No. 12977 Certified Asbestos Inspector, HIASB-3198 Certified Lead Risk Assessor/Inspector, PB-0439		
17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) OSHA 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) Non-Domestic Wastewater Management Plan, JBPHH, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2024	CONSTRUCTION (If applicable) -	
	(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) Navy Spill Prevention Control and Countermeasure Plan Update, JBPHH, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2023	CONSTRUCTION (If applicable) -	
	(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) Spill Prevention and Response Plan for Marine Corps Base Butler, Okinawa, Japan		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2023	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Updated the Spill Prevention and Response Plan (SPRP) for Marine Corps Base Butler in Okinawa. The area is comprised of 12 sites including Shima Island. Inspected and documented 324 above storage tanks (ASTs), 29 underground storage tanks (USTs), 23 chemical storage tanks, and 681 electrical transformers. Safely completed the field effort in one visit with a variety of personnel over a four-week period during the height of COVID-19. Documented each tank with an inspection checklist, photo, conditions of tanks, BMPs, and recommendations to mitigate unsatisfactory conditions. E2 is preparing the final SPRP report of site assessments in accordance with federal and local regulations and guidelines. Fee: \$340,216. Role: Senior Environmental Engineer.				

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

11. NAME Bernice M. Balete, P.E.		12. TITLE SERVICE PROVIDED Senior Civil Engineer		13. TITLE SERVICE PROVIDED	
				a. TOTAL 31	b. WITH CURRENT FIRM 15
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Civil Engineering, University of Hawaii at Manoa			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Engineer, Hawaii – Civil No. 10186 Certified Asbestos Project Designer/Inspector, HIASB-0499 Certified Lead Risk Assessor/Project Designer, PB-0449		
17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) OSHA 40-hour HAZWOPER Training 40-hour Construction Safety Hazard Awareness Training OSHA 8-hour HAZWOPER Refresher Training for Contractors OSHA 30-hour Construction Safety and Health Training Hazardous Waste Site Supervisor Training Maritime Security Awareness Training (MARSEC) DOT Hazardous Materials 49 CFR 172 Subpart H Confined Space Training Bloodborne Pathogens, First Aid, CPR, and AED Training					
18. RELEVANT PROJECTS					
	(1) TITLE AND LOCATION (City and State) BWS 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 (If applicable) -	
a.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 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 National Pollutant Discharge Elimination System (NPDES) Permit Applications for the Kapolei and Kawela Reservoirs project sites. Fee: \$28,570. Role: Project Manager/Senior Civil Engineer.		☒ Check if project performed with current firm		
	(1) TITLE AND LOCATION (City and State) Environmental Site Assessments, Kapalama Container Yard, Honolulu Harbor, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2014	CONSTRUCTION (If applicable) Estimated 2025	
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Completed document reviews and site assessments and prepared a Work Plan for the Phase II ESA. Soil, sediment, groundwater, concrete, and soil gas sampling were completed. Additional sampling of the University of Hawaii Marine Center buildings for hazardous building materials including asbestos and lead paint. E2 prepared an Environmental Hazard Evaluation Management Plan that included contamination issues that may affect the construction of the container yard. All work was coordinated, reviewed, and approved by HDOH. Fee: \$500,000. Role: Senior Civil Engineer.		☒ Check if project performed with current firm		
	(1) TITLE AND LOCATION (City and State) Hazardous Materials Contract C20005301 for the Honolulu City and County Board of Water Supply		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2024	CONSTRUCTION (If applicable) -	
c.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE E2 completed fourteen Work Orders for various projects for BWS. (e.g., repainting/renovation of reservoirs, office building renovations, pump station renovations/repairs, etc.). E2 performed Hazardous Materials Surveys for Asbestos/Lead Paint. E2 managed subcontractors who provided Environmental Monitoring during construction. E2 provided Services during bidding and construction. Fee: \$79,570. Role: Project Manager/Senior Civil Engineer.		☒ Check if project performed with current firm		
	(1) TITLE AND LOCATION (City and State) Integrated Solid Waste Management Plan, JBPHH, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2014	CONSTRUCTION (If applicable) -	
d.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Prepared an Integrated Solid Waste Management Plan (ISWMP) to accomplish the following: define and document the installation's current ISWMP; establish goals for improving solid waste management; identify specific actions required to achieve the plan goals; promote compliance with applicable Federal, DOD, and local solid waste management regulations and policies; and evaluate alternative designs for future solid waste management. Responsibilities included fieldwork (including waste stream assessment), data collection and evaluation, and ISWMP preparation. Fee: \$557,999. Role: Assistant Project Manager/Senior Civil Engineer.		☒ Check if project performed with current firm		

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

11. NAME Marvin D. Heskett, III		12. ROLE IN THIS CONTRACT Senior Chemist		13. YEARS EXPERIENCE	
				a. TOTAL 36	b. WITH CURRENT FIRM 11
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Biochemistry, California Polytechnic University			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Certified Asbestos Inspector, HIASB-4631 Certified Lead Risk Assessor, PB-1150		
17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)					
OSHA 40-hour HAZWOPER Training OSHA 8-hour HAZWOPER Refresher Training Shipley Group NEPA Training Advanced Systems QA/QC 40-hour Course E3 Data Quality Objective			Sampling for Defensible Environmental Decisions, Basic and Advanced Confined Space Training Hazardous Waste Site Supervisor Training Maritime Security Awareness Training (MARSEC) Bloodborne Pathogens, First Aid, CPR, and AED Training		
18. RELEVANT PROJECTS					
a.	(1) TITLE AND LOCATION (City and State) 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: \$1M. Role: Senior Chemist.					
b.	(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					
Conducted drinking water testing for LIPA as part of the protective measures at schools/childcare facilities on Navy Installations. Initial site investigations were conducted to develop a comprehensive two-step sampling plan, under updated Navy directives and Environmental Protection Agency guidance. Fieldwork involved multiple visits to each facility to prepare and sample over 700 drinking water outlets. Fee: \$100K. 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 2024	CONSTRUCTION N/A
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm					
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.					

11. NAME Angela K. Peltier	12. TITLE SERVICE PROVIDED Senior Geologist	13. TITLE SERVICE PROVIDED	
		a. TOTAL 21	b. WITH CURRENT FIRM 19
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)			
15. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Geology and Geophysics, University of Hawaii at Manoa		16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) ASTM E1527 Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process Certification	
17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			
OSHA 40-hour HAZWOPER Training		40-hour Construction Safety Hazard Awareness Training for	
OSHA 8-hour HAZWOPER Refresher Training		Contractors	
		First Aid and CPR Training	

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	Phase I Environmental Site Assessment, Mauna Kapu Station, Waianae Mountain Range, Waianae, Oahu, Hawaii	PROFESSIONAL SERVICES 2021	CONSTRUCTION (If applicable) -
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: Senior Geologist.		
	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	Phase I Environmental Site Assessment, Waiawa, Oahu, Hawaii	PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) -
b.	(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: Senior Geologist.		
	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	Environmental Hazard Evaluation/Environmental Hazard Management Plans, Naval Magazine Lualualei UST Tank NM-34, JBPHH, Oahu, Hawaii	PROFESSIONAL SERVICES 2020	CONSTRUCTION (If applicable) -
c.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Completed an EHE and EHMP to identify and evaluate potential hazards to human health and sensitive ecological receptors posed by subsurface petroleum contamination, impacted groundwater, and soil identified at UST NM-34 site under current and potential future site conditions. The EHE/EHMPs were conducted in general accordance with State of Hawaii Department of Health (HDOH) guidance and included a review of historic land use and environmental investigations conducted at the site; evaluation of the nature, magnitude and, extent of contaminants of potential concern (COPC); evaluation of potential negative impacts on human health and the environment posed by allowing contaminated media to remain in place; and a discussion of impacted media management and disposal of to prevent unmitigated exposure to human and ecological receptors. Identified, requested, and reviewed site specific reports, regulatory files, environmental reports; generated AutoCAD drawings; assisted with identification of COPCs, potential receptors and migration pathways; assisted with the identification of soil and groundwater management practices should exposure to impacted media occur, and prepared report. Fee: \$49,021. Role: Senior Geologist.		

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

11. NAME Steven R. Spengler, Ph.D.		12. TITLE SERVICE PROVIDED Senior Hydrogeologist/Hydrologist		13. TITLE SERVICE PROVIDED	
				a. TOTAL 37	b. WITH CURRENT FIRM 19
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) Ph.D., Hydrogeology, and Mstr., Geology, University of Hawaii at Manoa B.S., Geochemistry, UC Santa Cruz B.S. Chemistry, UC Riverside				16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)	
17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) OSHA 40-hour HAZWOPER Training 40-hour Construction Safety Hazard Awareness Training OSHA 8-hour HAZWOPER Refresher Training for Contractors OSHA 30-hour Construction Safety and Health Training 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) Hydrogeologic Study to Detect Impact of MILCON P-184 Reject Water, Diego Garcia, British Indian Ocean Territory		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) -	
	(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 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/Hydrologist.				
b.	(1) TITLE AND LOCATION (City and State) Kanaha Pond Wildlife Sanctuary Hydrogeologic Study, Kahului, Maui, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2010	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm E2 conducted a 10-month long hydrogeological investigation to quantify the seasonal relationships between the various inputs and outputs to the ponds in the refuge. Monitoring included installation of nested piezometers, a meteorological station, tidal gauging stations, and automated rainfall gauges, and the collection of sediment cores. Fee: \$92,000. Role: Senior Hydrogeologist/Hydrologist.				
c.	(1) TITLE AND LOCATION (City and State) Proposed Seawater Desalination Facility Project, Kalaeloa, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2018	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Principal investigator for a large-scale pump test conducted on a 1,600-foot deep basaltic well located in Kalaeloa proposed for use in a desalination project for the Honolulu Board of Water Supply. The deep well was pumped for three consecutive days at pump rates of between 520 to 540 gallons per minute and the pumped water was injected into a nearby injection well that was screened 300 feet into the underlying caprock aquifer. Water quality measurements were made throughout the duration of the pump test for temperature, conductivity, turbidity, pH, oxygen reducing potential, dissolved oxygen, and silt density index. The drawdown and tidal efficiency of the basaltic well was determined by installing a CDT probe in the pumping well while the efficiency of the caprock injection well was determined using a pressure transducer. A total of six water samples were collected during the duration of the pump test and submitted for analysis for all drinking water constituents including those listed in Appendix A of HAR Chapter 11-20 as well as secondary standards defined by the US Environmental Protection Agency. Role: Senior Hydrogeologist/Hydrologist.				

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

11. NAME Jodie C.A. Tsubone, P.E.		12. TITLE SERVICE PROVIDED Senior Civil Engineer		13. TITLE SERVICE PROVIDED	
				a. TOTAL 13	b. WITH CURRENT FIRM 10
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Civil Engineering, University of Hawaii at Manoa			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) 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					
	(1) TITLE AND LOCATION (City and State)		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)	
a.	Lead in Drinking Water Testing at Priority Areas JBPHH and Naval Computer and Telecommunications Area Master Station Pacific JBPHH and NCTAMS Pacific, Wahiawa, Oahu, Hawaii		2020	-	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Conducted drinking water testing for lead as a protective measure at several priority areas and various schools and childcare facilities on Navy Installations. Quick turnaround times were required for sampling, laboratory analysis, and notifications. Initial site investigations were conducted to develop a comprehensive two-step sampling plan, in accordance with updated Navy directives and EPA guidance. Fieldwork 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 all work and findings. Fee: \$99,595. Role: Project Manager/Senior Civil Engineer.				
	(1) TITLE AND LOCATION (City and State)		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)	
b.	Reconstruction/Replacement of Sewers, Ho'omaluhia Botanical Gardens, Kaneohe, Oahu, Hawaii		2025	2025	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm E2 completed the planning and preliminary design for the reconstruction/replacement of existing sewer lines at the Ho'omaluhia Botanical Gardens. The first phase was completed and included cleaning and CCTV inspection of the entire 2-mile gravity sewer system in accordance with the Pipeline Assessment Certification Program. 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 prepared construction documents for Phase III. Size: 2 miles. Fee: \$165,000. Role: Senior Civil Engineer.				
	(1) TITLE AND LOCATION (City and State)		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)	
c.	Ozone-Depleting Substances (ODS) Inventory and Management Plan for Naval Air Facility Atsugi (NAFA), Atsugi, Japan		2017	-	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm E2 updated the air source inventory to include all ODS containing units regulated or potentially regulated by the Japan Environmental Governing Standard (JEGS) and air emission sources (except ODS) that are regulated by the JEGS. Fieldwork for the project included verification of over 2,400 refrigerant and air emission sources at over 160 facilities. Responsibilities included: preparation of the Work Plan, completion of field inspections, preparation of the updated database inventory, and quality assurance review of the updated Refrigerant Management Plan. Fee: \$199,000. Role: Senior Civil Engineer.				

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

11. NAME Candace K. Yamauchi, P.E.		12. TITLE SERVICE PROVIDED Senior Environmental Engineer		13. TITLE SERVICE PROVIDED	
				a. TOTAL 20	b. WITH CURRENT FIRM 14
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Earth and Environmental Engineering, Columbia University			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) 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 (If applicable) -	
	(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 corrections, and prepared the associated preliminary cost estimates. Fee: \$393,019. Role: Senior Environmental Engineer.				
b.	(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 (If applicable) 2018	
	(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: 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 (If applicable) -	
	(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) Storm Water Management Plan, Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm E2 prepared a SWMP for the 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: Senior Environmental Engineer.				

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

11. NAME Danny C. Liu	12. TITLE SERVICE PROVIDED Senior Chemical Engineer	13. TITLE SERVICE PROVIDED a. TOTAL 38 b. WITH CURRENT FIRM 10	
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)			
15. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Chemical Engineering, University of Colorado at Boulder		16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) 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 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 CONSTRUCTION (If applicable)	
		2020	-
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Mr. Liu served as an Environmental Compliance Monitor for the West Sector of the Honolulu Rail Transit project that spans from Kapolei to Aloha Stadium. Responsible for monitoring the Contractor's performance of environmental monitoring of the Construction Contract, which includes National Pollutant Discharge Elimination System (NPDES) permit compliance, 401 water quality certification compliance, noise permit compliance, air pollution compliance, and solid and hazardous waste compliance. He conducted weekly inspections of the construction sites to assess compliance with required BMPs, and mitigation measures required under the Final Environmental Impact Statement (EIS) and the Record of Decision (ROD). Fee: \$300,000 (annually). Role: Senior Chemical Engineer.		
b.	(1) TITLE AND LOCATION (City and State) Illicit Discharge Storm Water Inspections for Commander Navy Region Hawaii, JBPHH, Oahu, Hawaii	(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (If applicable)	
		Ongoing	-
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Completing an illicit discharge survey for non-storm water discharges to CNRH municipal separate storm sewer (MS4) and waters of the U.S. in accordance with the NPDES permit issued. The project scope includes inspections of over 1,800 sites at Naval installations throughout the island of Oahu. The inspections are to identify any existing or potential sources of illicit discharges at each facility. To date, the field inspections are near 90% complete and a draft report summarizing the findings is being prepared. Responsibilities include: conducting inspections, identifying corrective actions, updating the database for submittal, and preparation of conceptual designs and cost estimates for corrective actions. Fee: \$656,175. Role: Senior Chemical Engineer.		
c.	(1) TITLE AND LOCATION (City and State) Asbestos Survey, Commander Fleet Activities Yokosuka, Yokosuka, Japan	(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (If applicable)	
		2020	-
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Conducted an asbestos survey of over 100 buildings with a total area of 2,139,464 square feet and constructed between 1914 and 1970 at CFAY, Japan for the NAVFAC Pacific. E2 prepared a Work Plan (WP) and Health and Safety Plan (HSP) prior to field work. Responsibilities include sampling for asbestos and lead, thoroughly documenting all fieldwork activities with notes and photographs, and preparing report summary tables and computer-aided design (CAD) figures. Fee: \$999,976. Role: Senior Chemical Engineer.		

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

11. NAME Austin A. Lutey, E.I.T.		12. TITLE SERVICE PROVIDED Project Environmental Engineer		13. TITLE SERVICE PROVIDED	
				a. TOTAL 18	b. WITH CURRENT FIRM 18
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Civil and Environmental Engineering, UCLA			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Engineer-in-Training (E.I.T.) Certified Asbestos Inspector, HIASB-3199 Certified Risk Assessor/Lead Inspector, 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			Manager of Landfill Operations Certificate, SWANA ID#2031001 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 (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm E2 previously completed a Limited Phase II ESA as part of a due diligence to detect any environmental issues for property acquisition in 2017. Areas of concern recommended for additional sampling to evaluate the nature and extent of contamination. Fieldwork included discrete soil sampling and groundwater sampling from the UST excavation. Responsibilities for this project included groundwater sampling. Fee: \$57,1910. Role: Project Environmental Engineer.				
b.	(1) TITLE AND LOCATION (City and State) Asbestos Survey, Naval Base Guam, Guam		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2020	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm E2 completed an asbestos survey of 109 buildings with a total survey area of 1,014,904 square feet at NBG for the NAVFAC Pacific. E2 prepared a Work Plan (WP) and Health and Safety Plan (HSP) prior to field work. A total of 7,134 bulk samples were collected by a team of 4 inspectors, over four mobilizations within a year. E2 prepared Draft and Final survey reports that included a summary tables of findings, plans with approximate locations of samples taken, extent of most HAs, a closeup and panoramic photo log of samples, and laboratory reports. Responsibilities included preparation of the WP and HSP, coordination of fieldwork, fieldwork, and preparation of the Draft and Final Survey Reports. Fee: \$1,065,234. Role: Project Environmental Engineer.				
c.	(1) TITLE AND LOCATION (City and State) Operation and Maintenance and Monitoring (O&M) for multiple sites, JBPHH, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2013-2024	CONSTRUCTION (If applicable) -	
	(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: Project Environmental Engineer.				

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

11. NAME John A. Ellis		12. ROLE IN THIS CONTRACT Project Environmental Scientist		13. YEARS EXPERIENCE	
				a. TOTAL 10	b. WITH CURRENT FIRM 10
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) Undergraduate Work, Natural Sciences, Oregon State University			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Certified Asbestos Inspector, HIASB-4117 Certified Lead Risk Assessor, PB-0828 Radon Measurement Professional NRPP ID 115201-RMP		
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					
	(1) TITLE AND LOCATION (City and State) Phase I Environmental Site Assessment, Waiawa, Oahu, Hawaii			(2) YEAR COMPLETED	
				PROFESSIONAL SERVICES 2016	CONSTRUCTION N/A
a.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE E2 completed a Phase I ESA to evaluate potential environmental issues as part of due diligence to support the acquisition of easements on non-Department of Defense (DoD) land, required for the replacement of the U.S. Navy's Waiawa Water Transmission Main. Responsibilities included integration of over 99 subjects and adjacent property parcel boundaries on engineering drawings and aerial photos in preparation for the visual site inspection (VSI); coordination and interviews with property owners and occupants; conducted the VSI and subsequent follow-up spot inspections and assisted with data management and evaluation and report preparation. Fee: \$105K. Role: Project Environmental Scientist.			☒ Check if project performed with current firm	
	(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
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 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: Project Environmental Scientist.			☒ Check if project performed with current firm	
	(1) TITLE AND LOCATION (City and State) Operation and Maintenance and Monitoring for Multiple Sites, JBPHH, Oahu, Hawaii			(2) YEAR COMPLETED	
				PROFESSIONAL SERVICES 2013-2024	CONSTRUCTION N/A
c.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE E2 completed four years of Operation & Maintenance/Monitoring of oily waste collection and treatment facilities within the Pearl Harbor Naval Shipyard. E2 managed hazardous and oily waste recovered from two product recovery systems installed at the Building 8 and Oscar 2 Pier former release sites. The Building 8 system included three Fuel Oil Skimmer System (FOSS) units, while the Oscar 2 Pier consisted of five FOSS units. E2 conducted weekly, monthly, and quarterly inspections and maintenance in order to keep both product recovery systems operating efficiently. Mr. Ellis' responsibilities included system troubleshooting and repairs, oily product gauging of over 100 wells, fuel profile sampling, National Pollutant Discharge Elimination System permit compliance sampling, disposal of recovered product, and draft report preparation. Fee: \$431K. Role: Project Environmental Scientist.			☒ Check if project performed with current firm	
	(1) TITLE AND LOCATION (City and State) Storm Water Monitoring & Reporting for Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility, Oahu, Hawaii			(2) YEAR COMPLETED	
				PROFESSIONAL SERVICES 2019	CONSTRUCTION N/A
d.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE E2 conducted stormwater monitoring within the Pearl Harbor Naval Shipyard & Intermediate Maintenance Facility within the Controlled Industrial Area Dry Dock area for NPDES compliance. Collected stormwater samples, submitted samples to the laboratory for analysis, and provided maintenance of the sampling equipment throughout the project. Prepared report for each sampling event that included the date, time, duration, and volume of the event; chain of custody; and laboratory results. Fee: \$249K. Role: Project Environmental Scientist.			☒ Check if project performed with current firm	

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

11. NAME James D. Tsubone		12. TITLE SERVICE PROVIDED Project Geologist		13. TITLE SERVICE PROVIDED	
				a. TOTAL 9	b. WITH CURRENT FIRM 9
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Geology, Mount Royal University, Canada			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Certified Asbestos Inspector, HIASB-4118 Certified Lead Risk Assessor/Lead Inspector, PB-0827 Radon Measurement Professional, NRPP ID 114350-RMP		
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 (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Conducted radon testing using E-Perm® detectors in 354 housing units. Radon-resistant new construction (RRNC) was used to mitigate 11 housing units to below the EPA action level of 4 picocuries per liter of air (pCi/L). Post-mitigation testing was also performed in the unit at 4 Flag Circle. A project report and testing report were prepared to document field activities and provide recommended mitigation actions. Provided oversight of subcontractors in the field and assisted with diagnostics and testing fieldwork activities. Fee: \$397,070. Role: Project Geologist. *EXCEPTIONAL EVALUATION*				
b.	(1) TITLE AND LOCATION (City and State) Asbestos Survey, Naval Base Guam, Guam		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2020	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Conducted Asbestos Surveys of 109 buildings with a total floor area of 987,057 square feet at Naval Base Guam. Prepared a Work Plan/Health and Safety Plan. A total of 7,134 bulk samples were collected from identified homogeneous areas for laboratory analysis by a team of four inspectors, over four one-month-long mobilizations completed within a year. For each building, E2 prepared an Asbestos Survey Report that included a summary data table, floor plans with approximate sample locations and the approximate extent of most identified Homogeneous Areas, a close-up and panoramic sample photograph log, and laboratory reports. Fee: \$268,039. Role: Project Geologist.				
c.	(1) TITLE AND LOCATION (City and State) Environmental Monitoring, Cocos Island, Guam		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2024	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Evaluated environmental conditions of former long range navigation station at Cocos Island, Guam for the U.S. Coast Guard. E2 completed a field assessment that consisted of sampling soil, sediment, groundwater, biota, and PCBs for petroleum contamination. After lab results are received, E2 will prepare a report that will include a summary of field activities, analysis of findings, and recommendations based on the result of findings. Fee: \$424,535. Role: Project Geologist.				
d.	(1) TITLE AND LOCATION (City and State) Annual Land Use Compliance Certification, Naval Air Station Barbers Point Barbers Point, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2018	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Conducted annual land use compliance certification of the former Southern Trap and Skeet Range at the former Naval Air Station Barbers Point. A non-time-critical response action under CERCLA was undertaken at most of the site to enable unrestricted land use by removing, stabilizing, and disposing of the impacted surface soil at the site. Existing areas that were contaminated were placed under LUCs, specifically the concrete-lined berms, and perimeter fences. E2 conducted site inspection, cleared vegetation, and repaired concrete berm and fence. Prepared Annual Certificate Report. Fee: \$131,065. Role: Project Geologist.				

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

11. NAME Daniel W. Amato, Ph.D.		12. TITLE SERVICE PROVIDED Project Environmental Scientist		13. TITLE SERVICE PROVIDED	
				a. TOTAL 9	b. WITH CURRENT FIRM 8
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) Ph.D. and M.S., Botany, University of Hawaii at Manoa B.S. Biology, University of Vermont			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Certified Asbestos Inspector, HIASB-4628 Certified Lead Risk Assessor, PB-1148 Certified SP001 Inspector, AST-7378		
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 Bloodborne Pathogens, First Aid, CPR, and AED Training Scientific SCUBA diver, rescue diver, master diver, nitrox certified diver					
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 (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Subcontractor to Kennedy Jenks, E2 monitors the weather and collects stormwater samples from five sites across Hawaii from NPDES-qualifying rain events according to permit requirements. E2 reports on the summary of data collected monthly and produces annual stormwater reports. Fee: \$148,328. Role: Project Environmental Scientist.				
b.	(1) TITLE AND LOCATION (City and State) Navy Spill Prevention Control and Countermeasure Plan Update, JBPHH, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2024	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 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: Project Environmental Scientist.				
c.	(1) TITLE AND LOCATION (City and State) Storm Water Management Plan Update for Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES Ongoing	CONSTRUCTION (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE E2 updated the existing Marine Corps Base Hawaii Storm Water Management Plan (SWMP) to ensure compliance with its new National Pollutant Discharge Elimination System permit requirements. 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. Storm Water Pollution Control Plans (SWPCPs) were developed for 21 industrial facilities listed in the Permit. Fee: \$299,412. Role: Project 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 (If applicable) -	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 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: Project Environmental Scientist.				

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

11. NAME Arnold David West		12. TITLE SERVICE PROVIDED Project Environmental Scientist		13. TITLE SERVICE PROVIDED	
				a. TOTAL 8	b. WITH CURRENT FIRM 8
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC, (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Applied Physics, Jacksonville University, Florida			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Certified Asbestos Inspector, HIASB-4625 Certified Lead Risk Assessor, P-008520		
17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) OSHA 40-hour HAZWOPER Training OSHA 8-hour HAZWOPER Refresher Training 40-hour 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) County of Maui Construction & Demolition Landfill Waste Profiling, Maui, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES Ongoing	CONSTRUCTION (If applicable) -	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Prepared and approved waste profiles for Construction & Demolition (C&D) at County of Maui Landfills. Fee: \$231,260. Role: Project Environmental Scientist.					
b.	(1) TITLE AND LOCATION (City and State) Asbestos Survey, Naval Base Guam, Guam		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2020	CONSTRUCTION (If applicable) -	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm Completed an asbestos survey of 109 buildings with a total survey area of 1,014,904 square feet at NBG for the NAVFAC Pacific. E2 prepared a Work Plan (WP) and Health and Safety Plan (HSP) prior to field work. A total of 7,134 bulk samples were collected by a team of 4 inspectors, over four mobilizations within a year. E2 prepared Draft and Final survey reports that included a summary tables of findings, plans with approximate locations of samples taken, extent of most HAs, a closeup and panoramic photo log of samples, and laboratory reports. Responsibilities included preparation of the WP and HSP, coordination of fieldwork, fieldwork, and preparation the Draft and Final Survey Reports. Fee: \$1,065,234. Role: Project Environmental Scientist/Inspector.					
c.	(1) TITLE AND LOCATION (City and State) Asbestos Survey, Commander Fleet Activities Yokosuka, Japan		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2020	CONSTRUCTION (If applicable) -	
(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 fieldwork activities with notes and photographs, and preparing report summary tables and computer-aided design (CAD) figures. Fee: \$999,976. Role: Project Environmental Scientist/Inspector.					
d.	(1) TITLE AND LOCATION (City and State) Asbestos Survey, U.S. Naval Hospital, Yokosuka, Japan		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2020	CONSTRUCTION (If applicable) -	
(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 presents the ACM inventory when a specific room in the Hospital is selected. Fee: \$268,039. Role: Project Environmental Scientist/Inspector.					

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

11. NAME Joshua B. Agpaoa, E.I.T.		12. ROLE IN THIS CONTRACT Project Civil Engineer		13. YEARS EXPERIENCE	
				a. TOTAL 7	b. WITH CURRENT FIRM 7
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Civil Engineering, University of Hawaii at Manoa			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Engineer-in-Training, HI (E.I.T.) Certified Asbestos Inspector, HIASB-4791 Certified Lead Risk Assessor, PB-1137 Certified SP001 Inspector, AST-7376		
17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)					
OSHA 40-hour HAZWOPER Training OSHA 8-hour HAZWOPER Refresher Training			40-hour Construction Safety Hazard Awareness Training for Contractors Bloodborne Pathogens, First Aid, CPR and AED Training		
18. RELEVANT PROJECTS					
	(1) TITLE AND LOCATION (City and State) Non-Domestic Wastewater Management Plan, JBPHH, Oahu, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2024	CONSTRUCTION N/A	
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: Project Civil Engineer.				
	(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 2024	CONSTRUCTION N/A	
b.	(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: Project Civil Engineer.				
	(1) TITLE AND LOCATION (City and State) Facilities Assessment Study East Kauai Irrigation System, Kapaa, Kauai, Hawaii		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2024	CONSTRUCTION N/A	
d.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm E2 completed a facilities assessment of the East Kauai Irrigation System for the Department of Agriculture. E2 assessed source waters, ownership, legal rights, and liabilities. E2 completed an inventory and physical condition assessment of the irrigation system. E2 conducted site visits to map systems and points of concern. E2 prepared repair and maintenance cost estimates. All inventory data collected during this project was assembled into various GIS layers and will facilitate dissemination of the collected data to the State client. Fee: \$537,505. Role: Project Civil Engineer.				
	(1) TITLE AND LOCATION (City and State) Spill Prevention and Response Plan for Marine Corps Base Butler Okinawa, Japan		(2) YEAR COMPLETED		
			PROFESSIONAL SERVICES 2024	CONSTRUCTION N/A	
e.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with the current firm E2 completed a SPRP for Marine Corps Base Butler in Okinawa, comprised of 12 sites including Ie Shima Island. E2 inspected and documented 324 above storage tanks (ASTs), 29 underground storage tanks (USTs), 23 chemical storage tanks, and 681 electrical transformers. E2 safely completed the field effort in one visit with a variety of personnel over a four-week period during the height of COVID-19. E2 documented each tank with inspection checklist, photo, conditions of tanks, BMPs, and recommendations to mitigate unsatisfactory conditions. Fee: \$340,216. Role: Project Civil Engineer.				

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

11. NAME Theodore N. Uekawa, E.I.T.		12. ROLE IN THIS CONTRACT Project Environmental Engineer		13. YEARS EXPERIENCE	
				a. TOTAL 4	b. WITH CURRENT FIRM 4
14. FIRM NAME AND LOCATION (City and State) Element Environmental, LLC (Aiea, Hawaii)					
15. EDUCATION (DEGREE AND SPECIALIZATION) M.S., Civil Engineering, University of Hawaii at Manoa B.S., Civil Engineering, University of Hawaii at Manoa			16. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Engineer-in-Training, HI (E.I.T.) Certified Asbestos Inspector, HIASB-5084 Certified Lead Risk Assessor, PB-1257 Radon Measurement Professional – NRPP 114230-RMP		
17. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)					
OSHA 40-hour HAZWOPER Training			40-hour Construction Safety Hazard Awareness		
OSHA 8-hour HAZWOPER Refresher Training			Training for Contractors		
OSHA 30-hour Construction Safety and Health Training			First Aid, CPR and AED Training		
Confined Space Training					
18. RELEVANT PROJECTS					
	(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
a.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Completed a comprehensive environmental contaminants sediment sampling and testing on a restricted access military installation for future dredging/rehabilitation of various wetlands in Kaneohe. 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: Project Environmental Engineer.			☒ Check if project performed with current firm	
	(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
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 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: Project Environmental Engineer.			☒ Check if project performed with current firm	
	(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
c.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE The study included various components of the wastewater treatment systems throughout the Base with a focus on existing wastewater treatment plant (WWTP), individual wastewater system (IWS) facilities, sludge drying beds, and 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, WWTP and WOP sludge. Fee: \$129K. Role: Project Environmental Engineer.			☒ Check if project performed with current firm	
	(1) TITLE AND LOCATION (City and State) Non-Domestic Wastewater Management Plan, JBPHH, Oahu, Hawaii			(2) YEAR COMPLETED	
				PROFESSIONAL SERVICES 2023	CONSTRUCTION N/A
d.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 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 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: \$1,1 M. Role: Project Environmental Engineer.			☒ Check if project performed with current firm	

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

19. TITLE AND LOCATION (<i>City and State</i>)	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>If applicable</i>)
Large Capacity Cesspool Statewide Audit for the State of Hawaii - Oahu, Maui, Molokai, Kauai, Hawaii Island, Hawaii	2023-Ongoing	N/A

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER State of Hawaii, Department of Land and Natural Resources	b. POINT OF CONTACT NAME Mr. Steve H. Ozoa	c. POINT OF CONTACT TELEPHONE NUMBER (808) 587-0256
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22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (*Include scope, size, and cost*)

Project Background: The State of Hawaii Department of Land and Natural Resources (DLNR) and the U.S. Environmental Protection Agency (EPA) have entered into a Consent Agreement and Final Order (CA/FO) to develop a list of Target and Non-Target Properties that may contain Large Capacity Cesspools (LCC) and then to further investigate whether LCC are present. Element Environmental, LLC (E2) is acting as the independent third-party auditor tasked with developing a list of Target and Non-Target Properties that may contain LCCs, perform site visits to determine whether LCC are present on those Target Properties, and to provide recommendation on wastewater alternatives, including schematic wastewater system designs and cost estimates.

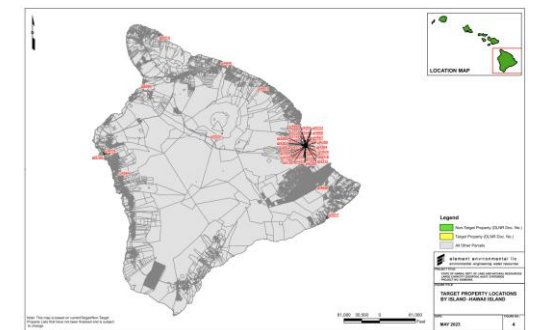
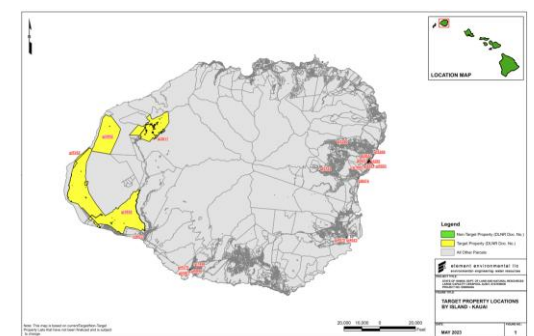
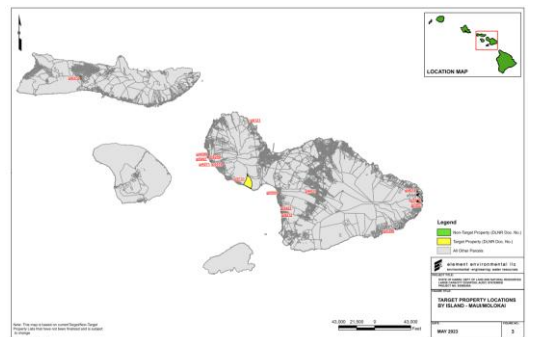
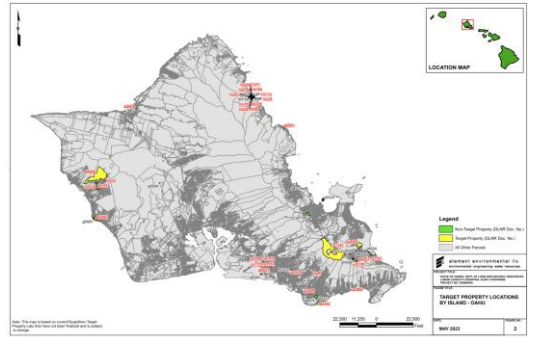
Project Scope: E2 is conducting the audit in three phases by island(s): Phase I – Oahu; Phase II – Kauai/Maui/Molokai; and Phase III - Hawaii Island. In preparation for conducting the statewide audit, E2 prepared two planning documents; 1.) *Target/Non-Target Property Work Plan*, and 2.) *Inspection Work Plan*.

The *Target/Non-Target Property Work Plan* included the site list for LCC investigation, detailed procedures, and records for review. E2 validated the non-target list provided by the DLNR in accordance with 43.b.iii & iv, in accordance with the documentation required to comply with 44a. of the CA/FO, and developed a schedule for completion of the list.

The *Inspection Work Plan* detailed the inspection procedures for all Target Properties, as outlined on the approved EPA Target list, to determine the presence, or absence, and location of an LCC. E2 developed maps of Target Property locations, outlined the list of historical resources/databases to be investigated, developed checklists for historical review and on-site inspections, and developed a project and inspection schedule, and summary of deliverables for completion of the inspections of the Target Properties.

E2 is conducting the statewide audit according to the work plan, and is preparing inspection completion reports as follows.

- **Phase I - Island of Oahu:** "EPA Docket No. UIC-09-2022-006 Inspection Completion Report – Phase I (Oahu)" was submitted in December 2023. Thirty-four (34) subject leases were evaluated, some of which were comprised of multiple Tax Map Keys (TMKs). Of those leases surveyed, four (4) were found to have LCCs. For three (3) of those properties with LCCs, the construction and installation of an Individual Wastewater System (IWS) was recommended. For one (1) property, the recommendation was to connect to the nearby existing sewer system. A general schedule for corrective actions was presented along with individual site reports for properties with an LCC, each of which included



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

19. TITLE AND LOCATION <i>(City and State)</i>	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
Large Capacity Cesspool Statewide Audit for the State of Hawaii - Oahu, Maui, Molokai, Kauai, Hawaii Island, Hawaii	2023-Ongoing	N/A

detailed recommended corrective actions, cost estimates for those actions, and a schedule of completion that complies with the CA/FO. Finally, individual site reports that document the absence of an LCC for the remaining thirty (30) subject leases were included.

- **Phase II – Islands of Kauai, Maui, and Molokai:** “EPA Docket No. UIC-09-2022 -006 Inspection Completion Report – Phase II (Kauai/Maui/Molokai)” dated February 2024 was submitted to the EPA. Thirty (30) subject leases were evaluated, some of which were comprised of multiple TMKs. Twenty (20) of the leases were on Kauai and ten (10) were on Maui. Three (3) of the Maui properties were located in the August 8-9, 2023 fire-impacted Lahaina area and, per EPA “Approval of Extension to Complete Phase II) dated October 13, 2023, submittal of inspection reports for these properties will be submitted by the extension deadline April 19, 2024. Therefore, of the thirty (30) subject leases evaluated, twenty-seven (27) leases are evaluated in the February 2024 report. Of those leases surveyed, three (3) were found to have LCCs. For two (2) of those properties with LCCs, the construction and installation of an Individual Wastewater System (IWS) was recommended. For one (1) property, the recommendation was to connect to the nearby existing sewer system. A general schedule for corrective actions was presented. Individual site reports for properties with an LCC were included, each of which provided details on recommended corrective actions, cost estimates for those actions, and a schedule of completion that complies with the CA/FO. Finally, individual site reports that document the absence of an LCC for the remaining twenty-three (23) subject leases were included.
- **Phase IIa – Lahaina, Maui:** “EPA Docket No. UIC-09-2022-006 Inspection Completion Report – Phase IIa (Lahaina, Maui)” was completed in April 2024. Three (3) subject leases were evaluated in Lahaina, Maui. These properties are located in the fire-impacted Lahaina area and, per EPA “Approval of Extension to Complete Phase II” dated October 13, 2023, submittal of inspection reports for these properties are being submitted in Phase IIa by the extension deadline of April 19, 2024. This report detailed the findings from those three (3) properties. Of those leases surveyed, two (2) were found to have LCCs. For the two (2) properties with LCCs, the construction and installation of an Individual Wastewater System (IWS) was recommended. A general schedule for corrective actions was presented. Individual site reports for properties with an LCC were included, each of which included details on recommended corrective actions, cost estimates for those actions, and a schedule of completion that complies with the CA/FO. Finally, individual site reports that documented the absence of an LCC for the remaining one (1) subject lease was included.
- **Phase III – Hawaii Island:** E2 has completed the inspection validation fieldwork for 58 sites on Hawaii Island and is currently drafting the finalized Inspection Completion Report. The final report is expected to be submitted in 2025 to the DLNR and EPA.

E2 will prepare closure reports for the LCCs that are closed by the tenants and DLNR. The closure reports will document that the LCCs were properly closed in accordance with EPA and DOH requirements. E2 will certify and sign each independent LCC closure report incorporating DOH permits to operate an IWS or approval to connect to a sewer, and copies of the EPA LCC Backfilling Final Completion Report or approved copy of the DOH UIC abandonment application.

Cost: \$1M.

23. FIRMS INVOLVED WITH THIS PROJECT			
a.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
	Element Environmental, LLC	Aiea, HI	Prime Contractor

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

19. TITLE AND LOCATION <i>(City and State)</i> Preliminary Environmental Assessment and Site Inspection, USCG Air Station Barbers Point, Kapolei, Oahu, Hawaii	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2023	CONSTRUCTION <i>(If applicable)</i> -

21. PROJECT OWNER'S INFORMATION

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

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



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.

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

19. TITLE AND LOCATION <i>(City and State)</i>		20. YEAR COMPLETED	
Preliminary Environmental Assessment and Site Inspection, USCG Air Station Barbers Point, Kapolei, Oahu, Hawaii		PROFESSIONAL SERVICES 2023	CONSTRUCTION <i>(If applicable)</i> -
21. PROJECT OWNER'S INFORMATION			
a. PROJECT OWNER United States Coast Guard	b. POINT OF CONTACT NAME Mr. Mark Marini	c. POINT OF CONTACT TELEPHONE NUMBER (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			
a.	(1) FIRM NAME Element Environmental, LLC	(2) FIRM LOCATION <i>(City and State)</i> Aiea, HI	(3) ROLE Subconsultant
a.	(1) FIRM NAME Mountain Methods, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Tuolumne, CA	(3) ROLE Prime Consultant

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

19. TITLE AND LOCATION <i>(City and State)</i>	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
Remedial Investigation/Feasibility Study and Remedial Action Work Plan, Remedial Action Completion Report, and Well Decommissioning, Quarry Pit Landfill, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii	2014	N/A

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER NAVFAC Hawaii	b. POINT OF CONTACT NAME Ms. Kelly Morishige, P.E.	c. POINT OF CONTACT TELEPHONE NUMBER (808) 471-4616
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22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: Element Environmental, LLC (E2) completed a Remedial Investigation/Feasibility Study (RI/FS) and prepared site closure documents for the Quarry Pit Landfill and the adjacent 3rd Marine Motor Pool Wetland on Marine Corps Base (MCB) Hawaii. The Quarry Pit Landfill site, with an approximate area of 18 acres, was active from the 1940s to 1976 as both a quarry and landfill for solid wastes. The Quarry Pit Landfill was the main on-base landfill from 1972 to 1976 and accepted most solid wastes, excluding refuse from residential areas. Previous reports indicated that wastes, including petroleum, oil, lubricants, solvents, paints, thinners, batteries, mercury, transformer oils, pentachlorophenol, and glass beads from paint stripping operations, were historically disposed of at this landfill, as well as general refuse, including cans, paper, plastic, wood, and unidentified organic debris. A focused Site Inspection (SI) was completed in 2007 which confirmed the presence of buried debris, which could potentially impact the landfill soil, soil gas, and groundwater in the vicinity of the project site and possibly the surface sediment and surface water in the adjacent wetland. The objectives of the RI/FS were to determine the nature and extent of the buried debris in the landfill, determine the extent and thickness of the soil cap, determine the nature and extent of contamination in the landfill soil, soil gas, and groundwater, to determine if the adjacent wetland surface sediment and surface water have been impacted by contamination from the landfill, and assess human health and ecological risks posed by the contamination in order to develop appropriate response alternatives. These project objectives were met as follows.

- Data collected from previous environmental reports, aerial photographs, historic topographic maps, geophysical and topographic surveys, 20 trench excavations, and 210 soil borings confirmed the areal extent of the landfill debris to be just over 12 acres with a volume of approximately 90,400 cubic yards. A 3-dimensional model of the landfill debris and soil cap was created to determine the volume of debris and the thickness of the soil cap across the site.
- The nature and extent of contamination in various media were assessed using data from *MULTI INCREMENT®* (MI) soil samples collected from 20 trenches and 210 soil borings from five decision units (DUs) established within the landfill; 2) soil gas and groundwater samples collected within and surrounding the delineated landfill; and 3) surface sediment MI samples and surface water samples collected from two DUs within the adjacent wetland.



Project Highlights:

The connection between groundwater beneath the landfill and surface water in the adjacent wetland was evaluated by conducting hydrological monitoring that consisted of a one-week duration synoptic water level survey. Transducers were placed in groundwater monitoring wells, the adjacent wetland, and wetlands located south of the site to determine the overall direction of shallow groundwater flow and an estimation of the overall hydraulic conductivity of the shallow aquifer beneath the Quarry Pit Landfill.

The State of Hawaii Department of Health and Marine Corps Base Hawaii Environmental had been a part of the approval process from the start of the project.

Cost: \$911,835.

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

19. TITLE AND LOCATION <i>(City and State)</i>	20. YEAR COMPLETED	
Remedial Investigation/Feasibility Study and Remedial Action Work Plan, Remedial Action Completion Report, and Well Decommissioning, Quarry Pit Landfill, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii	PROFESSIONAL SERVICES 2014	CONSTRUCTION <i>(If applicable)</i> N/A

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NAVFAC Hawaii	Ms. Kelly Morishige, P.E.	(808) 471-4616

- A human health risk assessment, which included an evaluation of all potential exposure scenarios (recreational, residential, and commercial), determined that risks to recreational and commercial receptors were acceptable, but residential use would require further evaluation due to localized PCB contamination encountered in a few trenches excavated within the landfill.
- An ecological risk assessment, which included a biological survey and an evaluation of potential hazards to aquatic and terrestrial habitats in the adjacent wetland area, determined that risks to ecological receptors were within acceptable limits.

A Proposed Plan (PP) and Decision Document (DD) were completed noting regulator and Navy concurrence on the preferred remedial approach for the site of land use controls (LUCs) for future recreational and/or commercial use. A Remedial Action Work Plan (RAWP) was prepared that describes short- and long-term implementation actions (i.e., LUCs) and responsibilities for the actions to ensure long-term viability of the remedy. A Remedial Action Completion Report (RACR) was prepared that documented that the remedial action objective in the DD has been achieved; the requisite institutional controls are in place; annual/as-needed site inspections, maintenance, and 5-year reviews have been initiated; and that the site is protective of human health and the environment. As part of the site closure, a total of 14 monitoring wells installed by E2 and previous consultants were decommissioned, and a Monitoring Well Decommissioning Summary Report was prepared.

23 FIRMS INVOLVED WITH THIS PROJECT

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

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

19. TITLE AND LOCATION (City and State) Asbestos Survey, Naval Base Guam, Guam		20. YEAR COMPLETED	
		PROFESSIONAL SERVICES 2020	CONSTRUCTION (If applicable) -
21. PROJECT OWNER'S INFORMATION			
a. PROJECT OWNER NAVFAC Pacific	b. POINT OF CONTACT NAME Mr. Roger Fong		c. POINT OF CONTACT TELEPHONE NUMBER (808) 472-1423

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

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



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

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

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

Project Highlights:

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

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

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

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

Cost: \$1,065,234.

23. FIRMS INVOLVED WITH THIS PROJECT

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

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

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

21. PROJECT OWNER'S INFORMATION

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

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

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

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

21. PROJECT OWNER'S INFORMATION

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

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



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.

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

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

used in its construction; and lead from LBP used on the exterior of Building 204. Five COPCs were found present in 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 <i>(City and State)</i>	(3) ROLE
a.	Element Environmental, LLC	Aiea, HI	Prime Contractor

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

19. TITLE AND LOCATION <i>(City and State)</i>	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
Assessment of the Wahiawa Irrigation System, Wahiawa to Waialua, Oahu, Hawaii	2025	N/A

21. PROJECT OWNER'S INFORMATION

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

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

Cost: \$665,939.

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

19. TITLE AND LOCATION (<i>City and State</i>)	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>If applicable</i>)
Assessment of the Wahiawa Irrigation System, Wahiawa to Waialua, Oahu, Hawaii	2025	N/A

Use of Controlled Environments (i.e., assessed the use of controlled environments such as shade structures or greenhouses 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 Wilikina 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 (<i>City and State</i>)	(3) ROLE
a.	Element Environmental, LLC	Aiea, HI	Prime Contractor
b.	R. M. Towill Corporation	Honolulu, HI	Boundary Survey Plat

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

19. TITLE AND LOCATION <i>(City and State)</i>	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
Facilities Assessment Study East Kauai Irrigation System Kapaa, Kauai, Hawaii	2024	N/A

21. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER State of Hawaii, Agriculture Resource Management Division, Department of Agriculture	b. POINT OF CONTACT NAME Mr. Glenn Okamoto, P.E.	c. POINT OF CONTACT TELEPHONE NUMBER (808) 973-9436
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22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: The East Kauai Irrigation System (EKIS) which is located in Kapaa, Kauai is owned and operated by the State of Hawaii Department of Land and Natural Resources (DLNR). An option being considered by the State is to transfer ownership of the irrigation system to the State of Hawaii Department of Agriculture (DOA).

Project Highlights:

Visual survey of over 15 miles of the EKIS, including sections within remote areas of the upper watersheds of Kapaa.

Cost: \$537,505.

The purpose of this facilities assessment study (FS) is to inventory the irrigation system components (e.g., ditches, siphons, pipelines, flumes, reservoirs, etc.); complete a preliminary condition assessment of the system components; develop a cost estimate to repair the system; develop a cost estimate for operation and maintenance of the system; develop a cost estimate for future improvements to improve efficiency and reliability and to provide metering for the users; identify current and future potential users; identify existing easements and maintenance access points; identify existing permits or required permits for the water intake and use; identify potential Environmental Impact Statement (EIS)/Environmental Assessment requirements for future improvements; and develop cost estimates for future planning and permitting needs.

The FS study area includes what is known as the "North Complex" of the EKIS, including the Wailua Reservoir, Lateral 1 to Kauai's Hindu Monastery, Main Transmission Line including Flumes 1 and 2, Lateral 6 to the Twin Reservoir, Kapaa Stream Intake, Lateral 9 to the Upper Kapahi Reservoir, Upper Kapahi Reservoir, and Lateral 8 from the Upper Kapahi Reservoir to the Twin Reservoir. During the study, a portion of the Hanamaulu Ditch was identified as being part of the "South Complex" of the EKIS. The portion of the "South Complex" owned by DLNR was added to the scope of the study.

Review of Existing Conditions - E2 reviewed available records regarding historical and current irrigation system maps, easement maps, maintenance records and contracts, existing access points and roads, service areas, water use permits, and real property maps.

E2 personnel conducted interviews with the DLNR system manager, DLNR Real Estate, the current operator, the previous operator, as well as current and previous irrigation system users to gather additional information regarding the system. E2 conducted a visual assessment along the entire length of the irrigation system, where accessible, and completed a preliminary condition assessment. The visual assessment included photographs and using a handheld GPS unit to mark locations of structures, when satellite coverage was available.

Facilities Assessment Study - E2 is currently preparing the Facilities Assessment Study Report for the EKIS, Kapaa, Kauai, Hawaii. The report will summarize the inventory of system components, condition assessment of the irrigation system, short-term and long-term capital costs for system repairs, operation and maintenance costs, current and potential users/areas that may be serviced by the system, recommendations for future improvements to improve efficiency and reliability along with estimated costs for the future improvements, recommendations and estimated costs for metering of the system, current easements and access points and recommendations for additional easements or rights of entry, current water use permits and recommendations and estimated costs for future planning and permitting needed.

23. FIRMS INVOLVED WITH THIS PROJECT

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

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

19. TITLE AND LOCATION <i>(City and State)</i>	20. YEAR COMPLETED	
Perfluoroalkyl Substances (PFAS) Wastewater, Biosolids, and Compost Sampling and Testing at NAVFAC Hawaii Wastewater Treatment Plant at JBPHH and Navy Biosolids Treatment Facility at former Naval Air Station, Barbers Point, Kalaeloa	PROFESSIONAL SERVICES 2024	CONSTRUCTION <i>(If applicable)</i> N/A

21. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER NAVFAC Hawaii	b. POINT OF CONTACT NAME Mr. Laine Okimoto	c. POINT OF CONTACT TELEPHONE NUMBER (808) 471-4898
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22. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Scope: Element Environmental, LLC (E2) conducted an environmental investigation for PFAS in NAVFAC Hawaii's WWTP wastewater, biosolids, and land where treated biosolids have been applied as areas to be studied. Three monitoring sites included 1.) The NAVFAC Hawaii Wastewater Treatment Plant (WWTP) at Joint Base Pearl Harbor Hickam (JBPHH), Oahu, Hawaii; 2.) Navy Biosolids Treatment Facility (BTF) at former Naval Air Station, Barbers Point (Kalaeloa) in West Oahu; and 3.) Navy property where Navy biosolids have been applied as a soil amendment.

The overall goal of this project was to provide a one-time snapshot of the PFAS burden in these media as an initial step for assessment of the potential exposure risks to humans and aquatic receptors. Although not sufficient to quantify long-term loads and risks to the environment, data generated from the study will be useful to assess potential risks and the need for follow-up studies.

As part of this goal, sample data will be collected in a manner that allows for the estimation of the dissolved-phase and total PFASs load in wastewater influent and effluent for the targeted day of sample collection. This information can be used with future, additional data to evaluate long term PFAS load to aquatic habitats, irrigated land and land where wastewater biosolids are used as a soil or compost amendment. The data will also provide insight on the fate and transport of PFAS compounds as they pass through a wastewater treatment system, including accumulation in biosolids.

E2 prepared a Work Plan, which included Safety and Health, the sampling methodology, and specifics of sampling. E2 worked in conjunction with the State of Hawaii, Department of Health (HDOH) on the sampling efforts for split sampling.

Sampling efforts have been completed. The types of samples collected from monitoring sites included **wastewater samples**: 24-hour composite samples were collected from one influent and one effluent location. The primary influent sampling location was at the influent headworks located at the WWTP. The effluent sampling location was at Building 1357 within the WWTP. Two sets of samples were collected at each location and analyzed as a total and dissolved fraction. **Biosolids Samples**: biosolids samples were collected from Navy Biosolids Treatment Facility (BTF) at former Naval Air Station, Barbers Point (Kalaeloa). Biosolids was collected in triplicate using a Multi Incremental Sampling (MIS) Approach. **Soil Samples**: soil samples were collected from a location where biosolids were applied at the Navy golf course. The sample was collected in triplicate using a MIS approach.

E2 worked with HDOH to analyze the data, and prepared a summary report of the split sampling. The report included sampling protocol and sample results, a tabulation comparing the Navy's results, HDOH's results, and HDOH's Environmental Action Levels, an analysis of data variability, level of confidence in the consistency of results, risk to the environment, and recommendations for future testing or actions.

Project Highlights:

E2 coordinated sampling schedules with appropriate Navy POCs, HDOH, laboratories, and courier services accounting for shipment schedules, laboratory turnaround time, and sample hold time.

E2 ensured technical accuracy. All completed work complied with federal, state, and local regulatory requirements.

E2 worked with HDOH for split sampling requirements.

Aqueous Sampling: E2 collected the aqueous samples for the Navy and the HDOH and delivered them to the HDOH.

Biosolids Sampling: The Navy hauled and spread the biosolids at the BTF for sampling.

Special consideration is taken prior to and during field activities to avoid PFAS cross-contamination.

Cost: \$144,567.

23. FIRMS INVOLVED WITH THIS PROJECT

a. (1) FIRM NAME Element Environmental, LLC	(2) FIRM LOCATION <i>(City and State)</i> Aiea, HI	(3) ROLE Prime Contractor
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F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE THE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION <i>(City and State)</i>	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
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

d. PROJECT OWNER State of Hawaii and U.S. Coast Guard	b. POINT OF CONTACT NAME Dr. Dennis Mead	c. POINT OF CONTACT TELEPHONE NUMBER (808) 535-3464
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20. 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 (BTX); 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

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, BTX, 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 WHICH BEST ILLUSTRATE THE FIRM'S QUALIFICATIONS FOR THIS PROJECT CATEGORY

19. TITLE AND LOCATION <i>(City and State)</i>	20. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
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

sample results and at the request of the USEPA Region 9, MI sampling of an adjacent concrete building foundation 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

a.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
	Element Environmental, LLC	Aiea, HI	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, P.E. Element Environmental, LLC	Principal Engineer	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
Roger C. Aoki, P.E. Element Environmental, LLC	Senior Environmental Engineer	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐
Matthew J. Neal Element Environmental, LLC	Senior Environmental Scientist	☐	☒	☐	☐	☐	☐	☐	☐	☐	☒
Arlene H. Campbell, L.G. Element Environmental, LLC	Senior Geologist	☐	☐	☒	☐	☐	☒	☒	☒	☐	☒
Eric M. Lau, P.E. Element Environmental, LLC	Senior Environmental Engineer	☒	☐	☐	☒	☐	☐	☐	☒	☐	☐
Bernice M. Balete, P.E. Element Environmental, LLC	Senior Civil Engineer	☐	☐	☐	☒	☒	☐	☐	☐	☐	☐
Marvin D. Heskett, III Element Environmental, LLC	Senior Chemist	☒	☒	☒	☒	☐	☒	☒	☐	☒	☒
Angela K. Peltier Element Environmental, LLC	Senior Geologist	☐	☐	☒	☐	☐	☒	☐	☐	☐	☐
Steven R. Spengler, Ph.D. Element Environmental, LLC	Senior Hydrogeologist/Hydrologist	☒	☐	☒	☐	☐	☐	☐	☐	☒	☐
Jodie C.A. Tsubone, P.E. Element Environmental, LLC	Senior Civil Engineer	☐	☐	☐	☐	☐	☒	☒	☒	☐	☐
Candace K. Yamauchi, P.E. Element Environmental, LLC	Senior Environmental Engineer	☐	☐	☒	☐	☐	☐	☐	☐	☐	☒
Danny C. Liu Element Environmental, LLC	Senior Chemical Engineer	☐	☒	☐	☒	☐	☐	☐	☐	☐	☐
Austin A. Lutey, E.I.T. Element Environmental, LLC	Project Environmental Engineer	☐	☒	☐	☒	☐	☐	☐	☐	☐	☐
John A. Ellis Element Environmental, LLC	Project Environmental Scientist	☐	☐	☒	☒	☐	☒	☒	☐	☐	☒
James D. Tsubone Element Environmental, LLC	Project Geologist	☐	☒	☐	☒	☐	☐	☐	☐	☐	☒
Daniel W. Amato, Ph.D. Element Environmental, LLC	Project Environmental Scientist	☒	☐	☐	☒	☒	☒	☐	☐	☐	☐
Arnold David West Element Environmental, LLC	Project Environmental Scientist	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐
Joshua Agpaoa, E.I.T. Element Environmental, LLC	Project Civil Engineer	☒	☐	☐	☒	☐	☒	☒	☒	☐	☐
Theodore Uekawa, E.I.T. Element Environmental, LLC	Project Environmental Engineer	☒	☐	☐	☒	☐	☒	☒	☒	☐	☐

27. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Large Capacity Cesspool Statewide Audit for the State of Hawaii - Oahu, Maui, Molokai, Kauai, Hawaii Island, Hawaii	6	Phase I and Phase II Environmental Site Assessments Mauna Kapu Station, Waianae Mountain Range, Waianae, Oahu, Hawaii
2	Preliminary Environmental Assessment and Site Inspection, USCG Air Station Barbers Point, Kapolei, Oahu, Hawaii	7	Assessment of the Wahiawa Irrigation System, Wahiawa to Waialua, Oahu, Hawaii
3	Remedial Investigation/Feasibility Study and Remedial Action Work Plan, Remedial Action Completion Report, and Well Decommissioning, Quarry Pit Landfill, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii	8	Facilities Assessment Study East Kauai Irrigation System Kapaa, Kauai, Hawaii
4	Asbestos Survey, Naval Base Guam, Guam	9	Perfluoroalkyl Substances (PFAS) Wastewater, Biosolids, and Compost Sampling and Testing at NAVFAC Hawaii Wastewater Treatment Plant at JBPHH and Navy Biosolids Treatment Facility at former Naval Air Station, Barbers Point, Kalaeloa
5	Limited Hazardous Materials Survey, Building 1756, 91-1071 Yorktown Street, Kalaeloa, Oahu, Hawaii	10	Phase I and Phase II Environmental Site Assessments, and Removal Action - Remediation of 5 Acres, Former Voice of America Site, Maili, Oahu, Hawaii

H. ADDITIONAL INFORMATION

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 20 years
- Small Business
- 36 Personnel
(Professional Engineers, Scientists, Chemists, Hydrologists, and Technical Staff)

PROFESSIONAL SERVICES

PR.2) INDUSTRIAL HYGIENE (HAZARDOUS MATERIALS SURVEY, ASSESSMENT & PLANNING)

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-six (36) professionals have over 420 years of combined professional experience in environmental and engineering services with six (6) 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 27 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, seven (7) 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.

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

AT-A-GLANCE PERSONNEL

- 6 Licensed P.E. (Hawaii-Civil)
- 1 Licensed Geologist
- 2 Ph.D.

BREAKDOWN (36 PERSONNEL)

- 4 Civil Engineers
- 7 Environmental Engineers
- 4 Geologists
- 2 Hydrogeologist/Hydrologist
- 6 Environmental Scientists
- 1 Chemist
- 1 Chemical Engineer
- 7 Technicians
- 4 Administrative Staff

STATE OF HAWAII DOH CERTIFIED

- 22 Asbestos Inspectors
- 1 Asbestos Project Designer
- 20 Lead Risk Assessors
- 11 Lead Inspectors
- 1 Lead Project Designer

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

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

Mr. Roger Aoki, P.E.

- Assign Technical Staff
- Assure Project has Technical Resources
- Contract Compliance
- Quality Assurance
- Project Manager

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 & SAFETY MANAGER

Mr. Matthew Neal

- Execute Safety for Staff and Subcontractors
- Health and Safety Plans
- Authority to Stop Work
- Project Manager

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.

PROJECT MANAGERS

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

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

Environmental Services

- Environmental Compliance Audits and Pollution Prevention Planning
- Phase I, II, and III Environmental Site Assessments (ESAs)
- Environmental Site Investigations (SIs), Remedial Investigations (RIs), Remedial Designs (CERCLA and Resource Conservation Recovery Act [RCRA])
- Hazardous Materials Surveys including Asbestos and Lead-Based Paint (LBP)
- Hazardous Waste Management and Corrective Action Studies
- Soil and Groundwater Remediation
- Landfill/Solid Waste: Permitting; Gas and Groundwater Monitoring, Reporting, and SIs; Fire Management; and Global Positioning System (GPS) Services
- Integrated Solid Waste Management Planning
- Underground Storage Tank (UST) Closures and Remedial Investigations
- Dredged Material Testing and Evaluation
- Water Quality Studies (including National Pollutant Discharge Elimination System [NPDES] Permitting and Monitoring)
- Storm Water and Non-Point Source Pollutant Discharges
- Environmental Assessments (EAs) and Environmental Impact Statements (EISs)
- Environmental Permitting
- Environmental Baseline Surveys (EBSs)
- Risk Assessments
- Biosolids Treatment and Composting
- Phytoremediation and Mycoremediation
- Geographic Information System (GIS)-based Mapping and Databases for Environmental Data

Utilities Services

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

Water Resources Services

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

COUNTY OF HAWAII - PROJECT EXAMPLES

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

Project	Year Completed	Contract Amount	Description
<i>County of Hawaii – Solid Waste Division</i>			
Solid Waste Operational Analysis Study of the County of Hawaii Department of Environmental Management, Solid Waste Division	2025	\$499,782	E2 gathered data, conducted interviews, developed recommendations, collaborated with stakeholders, and is finalizing a Feasibility Study report for the County of Hawaii Solid Waste Division. Future options to be considered: • <i>Curbside Recyclable Collection</i> • <i>Municipal Solid Waste (MSW) Landfill for west (beside expanding WHSL) and east sides</i> • <i>Construction and Demolition (C&D) Landfill for Big Island</i> • <i>WTE, all forms and technologies</i> • <i>Barging MSW To H-POWER, or elsewhere. Residual ash back to Big Island if H-POWER</i> • <i>Materials Recovery Facility (MRF), both clean and dirty options</i> • <i>Expand WHSL</i> • <i>Separate Recycling Division to include Abandoned Vehicle</i>

Project	Year Completed	Contract Amount	Description
<i>County of Hawaii - Wastewater Treatment Plants</i>			
Kealakehe Wastewater Treatment Plant Feasibility Study, Kona	2025	\$256,620	E2 prepared a draft 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 prepared construction plans, specifications, and construction cost estimates to address closure of the UST and existing fuel lines.

Project	Year Completed	Contract Amount	Description
<i>County of Hawaii - Landfills</i>			
Closed Kona Landfill Fire Monitoring	2016	\$389,000	E2 provided various consulting services at two closed landfills, including a geophysical survey, infra-red photography, and mapping to determine landfill boundaries and fire characterization, and preparing a landfill fire management plan. E2 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 and semi-annual monitoring of all functioning probes at the Waimea Landfill. Monitoring activities were 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. E2 conducted an Infrared Survey and the results of the survey were included in the monitoring report. E2 prepared 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

Project	Year Completed	Contract Amount	Description
<i>County of Hawaii - Landfills</i>			
			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 above ground 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 and Joint Base Pearl Harbor-Hickam (JBPHH) Aboveground Storage Tanks and Oil Drum Storage Areas, JBPHH, Oahu, Hawaii (2013, 2015-Ongoing).** 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.
- **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, Halawa Shaft, and Kunia Wells 1. 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, Kalaheo, 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 conducted 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 were 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.** E2 completed planning, design, and preparation of construction documents for the reconstruction/replacement of existing sewer lines. Phase I included the cleaning and inspection of CCTV in accordance with the Pipeline Assessment Certification Program. Phase II assessed the sewer line deficiencies from the CCTV data, developed rehabilitation/replacement alternatives for the system, prepared schematic, and concept drawings for the recommended alternatives, and prepared a cost estimate for the recommended improvements. E2 prepared construction documents for all phases.
- **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, Kawaihoa, Oahu, Hawaii.** A potable water source assessment was completed for the 40.75-square mile Kawaihoa 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 has experience in providing 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 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.

Endorsements

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 has been able to develop a diverse client base since its inception 20 years ago. This success is directly attributable to E2's senior staff's reputation for superior technical performance and management. Below are a few evaluations from E2's past clients.

E2 conducted a statewide Large Capacity Cesspool Audit and received the following endorsement. ***"Consultant was highly adaptable during investigations and provided insight during presentation and submittals to ensure requirements and timelines were met. Consultant was amenable to comments from DLNR and followed up to ensure that proper responses and requirements were incorporated into Reports."*** – Steve Ozoa, DLNR

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 acknowledgement 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 were 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 RMTTC, 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."*

On September 22, 2009, Scott Ezer and I sat in front of the Land Use Commission and heard a solid "denial" on our request for an HMP boundary amendment. This has been a very long process, 10 years and 11 Months have passed since that day. As you are probably aware yesterday, September 24th, 2020 we received approval from the Land Use Commission on our project. "We are very grateful and humbled for the support and hard work each of you put into this project and the FEIS. *Your expertise and professionalism made the difference that helped us achieve that approval we have waited so long for.* On behalf of myself and the company, you all are awesome!!!!" Jay Morford, President of Hawaiian Memorial Life Plan, Ltd.

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

29. SIGNATURE 	30. DATE June 30, 2025
31. NAME AND TITLE Ryan S.W. Yamauchi, P.E., President	

PROFESSIONAL SERVICE PROVIDER QUALIFICATIONS

1. PROJECT CATEGORY OF INTEREST

**PR.2) Industrial Hygiene (Hazardous Materials Survey,
Assessment & Planning)**

PART II - GENERAL QUALIFICATIONS

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

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

9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) Firm	(2) Branch			
12	Civil Engineer	4		C15	Construction Management	3
23	Environmental Engineer	7		D04	Design Build-Preparation of Requests and Proposals	1
24	Environmental Scientist	6		E09	Environmental Impact Studies, Assessments or Statements	2
30	Geologist	4		E11	Environmental Planning	2
34	Hydrogeologist	2		E12	Environmental Remediation	3
11	Chemist	1		E13	Environmental Testing and Analysis	6
10	Chemical Engineer	1		G04	GIS Services	1
02	Administrative	4		S04	Sewage Collection Treatment and Disposal	2
58	Technician/Analyst	7		S07	Solid Wastes; Incineration; Landfill	3
				S13	Storm Water Handling and Facilities	4
				W02	Water Resources, Hydrology, Groundwater	3
	Total	36		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)		PROFESSIONAL SERVICES REVENUE INDEX NUMBER	
a. County Work	4	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
b. Non-County Work	7		
c. Total Work	7		

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE c. NAME AND TITLE: Ryan S.W. Yamauchi, President	b. DATE June 30, 2025
--	---------------------------------

ATTACHMENT 1

**ELEMENT ENVIRONMENTAL, LLC
ORGANIZATIONAL CHART**

KEY PERSONNEL

PRESIDENT



Ryan S.W. Yamauchi, P.E.

Principal-In-Charge
Program Manager
Principal Engineer

Master/Bachelor's Degrees

Years of Experience: 33
Years with Firm: 19

SENIOR VICE PRESIDENT



Roger C. Aoki, P.E.

Technical Program Manager
Quality Assurance Manager
Senior Environmental Engineer

Master/Bachelor's Degrees

Years of Experience: 29
Years with Firm: 19

SENIOR VICE PRESIDENT



Matthew J. Neal

Environmental Investigation Manager
Health and Safety Officer
Senior Environmental Scientist

Bachelor's Degree

Years of Experience: 27
Years with Firm: 19

SENIOR VICE PRESIDENT



Arlene H. Campbell, L.G.

Environmental Compliance Manager
Project Manager
Senior Geologist

Graduate Work/Bachelor's Degree

Years of Experience: 36
Years with Firm: 19

SENIOR VICE PRESIDENT



Eric M. Lau, P.E.

Technical Manager
Project Manager
Senior Environmental Engineer

Master/Bachelor's Degrees

Years of Experience: 21
Years with Firm: 16

ENGINEERS, SCIENTISTS, AND TECHNICIANS

Bernice M. Balete, P.E.

Senior Civil Engineer
Project Manager

31 Years of Experience
15 Years with Firm

Marvin D. Heskett, III

Senior Chemist
Project Manager

35 Years of Experience
11 Years with Firm

Angela K. Peltier

Senior Geologist
Project Manager

21 Years of Experience
19 Years with Firm

Candace K. Yamauchi, P.E.

Senior Environmental Engineer

20 Years of Experience
14 Years with Firm

Jodie C.A. Tsubone, P.E.

Senior Civil Engineer

13 Years of Experience
10 Years with Firm

Danny C. Liu

Senior Chemical Engineer

38 Years of Experience
10 Years with Firm

Steven R. Spenger, Ph.D.

Senior Hydrogeologist/Hydrologist

37 Years of Experience
19 Years with Firm

Austin A. Lutey, E.I.T.

Project Environmental Engineer

18 Years of Experience
18 Years with Firm

John A. Ellis

Project Environmental Scientist

10 Years of Experience
10 Years with Firm

James D. Tsubone

Project Geologist

9 Years of Experience
9 Years with Firm

Daniel W. Amato, Ph.D.

Project Environmental Scientist

9 Years of Experience
7 Years with Firm

Joshua B. Agpaoa, E.I.T.

Project Civil Engineer

7 Years of Experience
7 Years with Firm

Arnold David West

Project Environmental Scientist

8 Years of Experience
8 Years with Firm

Theodore N. Uekawa, E.I.T.

Project Environmental Engineer

4 Years of Experience
4 Years with Firm

Maya Matsuoka

Staff Environmental Scientist

4 Years of Experience
4 Years with Firm

Logan N. Yamamoto

Staff Environmental Scientist

3 Years of Experience
3 Years with Firm

Noa R. Nobrega

Staff Engineer

2 Years of Experience
2 Years with Firm

Erica E. Adamczyk

Staff Geologist

2 Years of Experience
2 Years with Firm

Johnathan P. Valencia

Staff Environmental Technician
IT Technician

2 Years of Experience
2 Years with Firm

Brandon Dela Cruz

Staff Environmental Technician

2 Year of Experience
2 Years with Firm

Brenton K.T. Sasaoka

Staff Civil Engineer

1 Year of Experience
1 Years with Firm

Garrett M. Ito

Shawn Nakamura

Kelton Otsuka

Lauren Hunter

Robin K. Matsuda

Field Technicians

ATTACHMENT 2

**ELEMENT ENVIRONMENTAL, LLC
QUALIFICATIONS OF KEY PERSONNEL**

ELEMENT ENVIRONMENTAL, LLC - KEY PERSONNEL - PROFESSIONAL QUALIFICATIONS																			
NAMES OF KEY PERSONNEL	PROFESSIONAL TITLE	LICENSE	DEGREE	EDUCATION	UNIVERSITY	CERTIFICATIONS, ACCREDITATION, TRAINING													
						YRS. OF EXP - YRS. WITH CURRENT FIRM	OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training	OSHA 30-HR Construction Safety and Health Training	40-HR Construction Safety and Health Training	Hazardous Waste Site Supervisor Training	Anti-Terrorism, Level 1 Awareness Training	Level B Code of Conduct Training (SERE-100)	State of Hawaii, DOH Certified Asbestos Inspector	State of Hawaii, DOH Certified Lead Risk Assessor/Inspector	XRF Safety Training	Confined Space Training	Maritime Security (MARSEC)	Bloodborne Pathogens, First Aid, CPR, and AED Training	Other Training
Ryan S.W. Yamauchi	Principal Engineer	P.E. Hawaii 9566	M.S. B.S.	Civil and Environmental Engineering Civil Engineering	UC Berkeley University of Hawaii at Manoa	33 - 20	X	X	X	X	X	X	HIASB-2905	PB-0117		X		X	USACE Safety and Health Training
Roger C. Aoki	Senior Environmental Engineer	P.E. Hawaii 10019	M.S. B.S.	Civil and Environmental Engineering Civil Engineering	Purdue University University of Hawaii at Manoa	29 - 19	X	X	X	X	X	X	HIASB-2902			X		X	
Matthew J. Neal	Senior Environmental Scientist		B.S.	Environmental Science	Willamette University	27 - 19	X	X	X	X	X	X				X	Cert 15856	X	
Arlene H. Campbell	Senior Geologist	L.G. WA 1664	B.S.	Graduate Work Geology Geology (Minor in Hydrology)	Vanderbilt University Austin Peay University	36 - 19	X	X	X	X	X					X	Cert 15661	X	
Eric M. Lau	Senior Environmental Engineer	P.E. Hawaii 12977	M.S. B.S.	Civil and Environmental Engineering Civil and Environmental Engineering and Biology	Massachusetts Institute of Technology (MIT)	21 - 16	X	X	X	X	X	X	HIASB-3198	PB-0439	X	X		X	
Bernice M. Balete	Senior Environmental Engineer	P.E. Hawaii 10186	B.S.	Civil Engineering	University of Hawaii at Manoa	31 - 15	X	X	X	X	X	X	HIASB-0499 & Project Designer	PB-0449 & Project Designer	X	X		X	DOT HM-181 Hazardous Materials Training
Marvin D. Heskett, III	Senior Chemist		B.S.	Biochemistry	California Polytechnic University at San Luis Obispo	36 - 11	X	X	X	X	X	X	HIASB-4631	PB-1150	X	X	Cert 16457	X	Sampling for Defensible Environmental Decisions, QE3C Data Quality Objectives, Shipley Group NEPA Training, QA/QC 40-hr Course
Angela K. Peltier	Senior Geologist		B.S.	Geology and Geophysics	University of Hawaii at Manoa	21 - 19	X		X									X	ASTM E1527 Standard Practice for Environmental Site Assessments (ESA), Phase I ESA Process
Steven R. Spengler	Senior Hydrologist		Ph.D. M.S. B.S.	Hydrogeology Geology/Geophysics Geology/Chemistry	University of Hawaii at Manoa University of Hawaii at Manoa UC Santa Cruz/UC Riverside	37 - 19	X	X	X	X	X	X				X		X	
Jodie C.A. Tsubone	Civil Engineer	P.E. Hawaii 17048	B.S.	Civil Engineering	University of Hawaii at Manoa	13 - 10	X	X	X	X	X	X	HIASB-4629	PB-1151	X	X	Cert 16661	X	Erosion and Sediment Control Plan Coordinator (ESCP), Dept of Planning & Permitting CCH
Candace K. Yamauchi	Senior Environmental Engineer	P.E. Hawaii 16320	B.S.	Earth and Environmental Engineering	Columbia University	20 - 14	X	X	X	X	X	X	HIASB-3840	PB-1135		X		X	Qualified Stormwater Compliance Manager
Danny C. Liu	Senior Chemical Engineer		B.S.	Chemical Engineering	University of Colorado at Boulder	38 - 10	X		X		X	X			X			X	

ELEMENT ENVIRONMENTAL, LLC - KEY PERSONNEL - PROFESSIONAL QUALIFICATIONS																			
NAMES OF KEY PERSONNEL	PROFESSIONAL TITLE	LICENSE	DEGREE	EDUCATION	UNIVERSITY	CERTIFICATIONS, ACCREDITATION, TRAINING													
						YRS. OF EXP - YRS. WITH CURRENT FIRM	OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training	OSHA 30-HR Construction Safety and Health Training	40-HR Construction Safety and Health Training	Hazardous Waste Site Supervisor Training	Anti-Terrorism, Level 1 Awareness Training	Level B Code of Conduct Training (SERE-100)	State of Hawaii, DOH Certified Asbestos Inspector	State of Hawaii, DOH Certified Lead Risk Assessor/ Inspector	XRF Safety Training	Confined Space Training	Maritime Security (MARSEC)	Bloodborne Pathogens, First Aid, CPR, and AED Training	Other Training
Austin A. Lutey	Project Environmental Engineer	E.I.T.	B.S.	Civil Engineering	University of California Los Angeles (UCLA)	18 - 18	X	X	X	X	X	X	HIASB-3199	PB-0440	X		Cert 15562	X	Manager of Landfill Operations Certificate SWANA #2031001
John A. Ellis	Project Environmental Scientist		Undergraduate Work	Natural Science Courses	In Progress	10 - 10	X	X	X	X	X	X	HIASB-4117	PB-0828	X	X	Cert 18646	X	Radon Measurement Professional NRPP ID 115201-RMP
James D. Tsubone	Project Geologist		B.S.	Geology	Mount Royal University Canada	9 - 9	X	X	X	X	X	X	HIASB-4118	PB-0827	X	X	Cert 16414	X	Radon Measurement Professional NRPP ID 114350-RMP
Daniel W. Amato	Project Environmental Scientist		Ph.D./M.S. B.S.	Botany Biology	University of Hawaii at Manoa University of Vermont	9 - 7	X		X		X	X	HIASB-4628	PB-1148	X	X	Cert 16878	X	Scientific SCUBA Diver, Rescue Diver, Master Diver, Nitrox Certified Diver Certified SP001 Inspector, AST-7378
Arnold David West	Project Environmental Scientist		B.S.	Applied Physics	Jacksonville University Florida	8 - 8	X	X	X	X	X	X	HIASB-4625	MI-Lead Inspector/Risk Assessor P-08520	X			X	
Joshua B. Agpaoa	Staff Civil Engineer	E.I.T.	B.S.	Civil Engineering	University of Hawaii at Manoa	7 - 7	X		X		X	X	HIASB-4791	PB-1137	X			X	Certified SP001 Inspector, AST-7376
Theodore N. Uekawa	Staff Civil Engineer	E.I.T.	M.S./B.S.	Civil Engineering	University of Hawaii at Manoa	4 - 4	X	X	X		X	X	HIASB-5084	PB-1257		X		X	Radon Measurement Professional – NRPP ID 114230-RMP
Maya Matsuoka	Staff Environmental Scientist		B.A.	Environmental Studies and Economics	University of California at Santa Cruz	4 - 4	X	X	X		X	X	HIASB-5085	PB-1254		X		X	Radon Measurement Professional NRPP ID 114465-RMP
Logan N. Yamamoto	Staff Environmental Scientist		B.S.	Biology (Minor Graphic Arts)	Western University	3 - 3	X		X		X	X	HIASB-5340	PB-1383		X		X	Radon Measurement Professional NRPP ID 114430-RMP
Noa R. Nobrega	Staff Civil Engineer		B.S.	Construction Engineering Management	Oregon State University	2 - 2	X	X	X		X	X	HIASB-5385	PB-1385		X		X	
Erica E. Adamczyk	Staff Geologist		B.S.	Geological Sciences	State University of New York, New Paltz-Lehigh University Geological Research Field Camp	2 - 2	X		X		X	X	HIASB-5331	Inspector PB-1359		X		X	
Jonathan P. Valencia	Staff Environmental Technician / IT Technician		B.S.	Computer Engineering	University of Hawaii at Manoa	2 - 2	X		X		X	X	HIASB-5339	PB-1381		X		X	

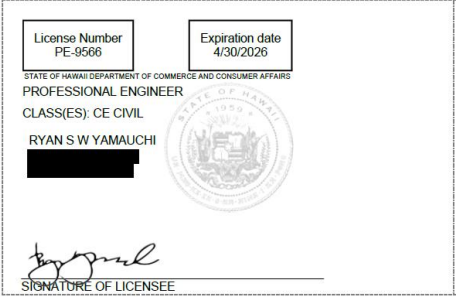
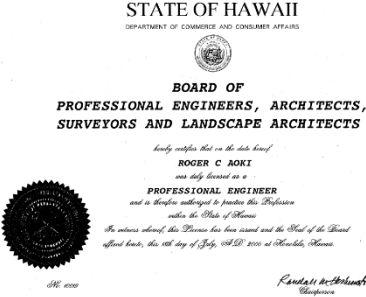
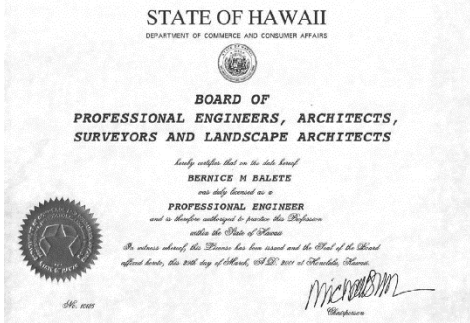
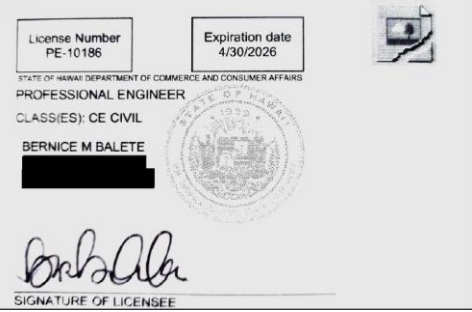
ELEMENT ENVIRONMENTAL, LLC - KEY PERSONNEL - PROFESSIONAL QUALIFICATIONS																			
NAMES OF KEY PERSONNEL	PROFESSIONAL TITLE	LICENSE	DEGREE	EDUCATION	UNIVERSITY		CERTIFICATIONS, ACCREDITATION, TRAINING												
						YRS. OF EXP - YRS. WITH CURRENT FIRM	OSHA 40-HR Initial HAZWOPER and Current 8-HR Refresher Training	OSHA 30-HR Construction Safety and Health Training	40-HR Construction Safety and Health Training	Hazardous Waste Site Supervisor Training	Anti-Terrorism, Level 1 Awareness Training	Level B Code of Conduct Training (SERE-100)	State of Hawaii, DOH Certified Asbestos Inspector	State of Hawaii, DOH Certified Lead Risk Assessor/Inspector	XRF Safety Training	Confined Space Training	Maritime Security (MARSEC)	Bloodborne Pathogens, First Aid, CPR, and AED Training	Other Training
Brandon Dela Cruz	Staff Environmental Scientist		B.S.	Global Environmental Science	University of Hawaii at Manoa	2 - 2	X		X		X	X	HIASB-5430			X		X	
Brenton K. Sasaoka	Staff Environmental Engineer		M.S. B.S.	Civil/Environmental Engineering	University of Hawaii at Manoa	1 - 1	X				X	X	HIASB-5639	PB-1413					
Garrett Ito	Field Technician					3 - 3	X	X	X		X	X	HIASB-5159	Inspector PB-1272				X	Radon Measurement Professional NRPP ID 114492-RMP

ATTACHMENT 3

**ELEMENT ENVIRONMENTAL, LLC
PROFESSIONAL LICENSES AND CERTIFICATIONS**

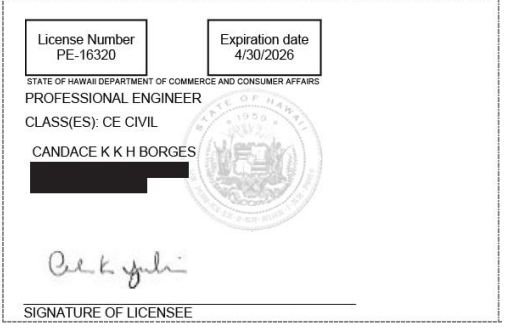
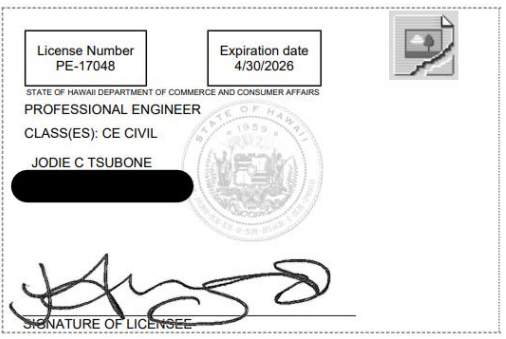
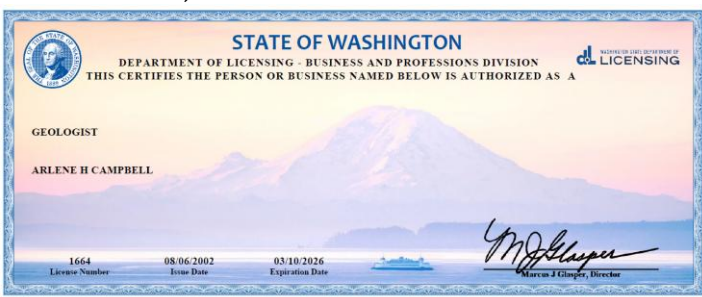
Element Environmental, LLC

Personnel Registered Professional Licenses

NAME	LICENSE NUMBER	EXPIRATION DATE
RYAN S.W. YAMAUCHI	P.E. - No. 9566, HAWAII 	Expires: 4/30/2026 
ROGER C. AOKI	P.E. - No. 10019, HAWAII 	Expires: 4/30/2026 
BERNICE M. BALETE	P.E. - No. 10186, HAWAII 	Expires: 4/30/2026 
ERIC M. LAU	P.E. - No. 12977, HAWAII 	Expires: 4/30/2026 

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 
ARLENE H. CAMPBELL	L.G. - No. 1664, WASHINGTON 	Expires: 3/10/2026

Element Environmental, LLC Asbestos Certifications



Adamczyk

Erica E.

Element Environmental, LLC

HIASB-5331

State Exp. Date 05/10/2025

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	06/12/25	PM	n/a

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



Agpaoa

Joshua B.

Element Environmental, LLC

HIASB-4791

State Exp. Date 09/27/2025

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	07/26/25	PM	na

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



Amato

Daniel W.

Element Environmental, LLC

HIASB-4628

State Exp. Date 09/13/2025

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	09/09/25	PM	n/a

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



Balete

Bernice M.

Element Environmental, LLC

HIASB-0449

State Exp. Date 05/04/2025

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	08/27/25
INS	03/12/25	PM	n/a

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



Dela Cruz

Brandon N.

Element Environmental, LLC

HIASB-5430

State Exp. Date 10/26/2025

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	10/03/25	PM	n/a

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



Ellis

John Andrew

Element Environmental, LLC

HIASB-4117

State Exp. Date 04/28/2026

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	12/13/25	PM	n/a

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



Heskett

Marvin D.

Element Environmental, LLC

HIASB-4631

State Exp. Date 09/17/2025

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	07/26/25	PM	n/a

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



Ito

Garrett M.

Element Environmental, LLC

HIASB-5159

State Exp. Date 01/24/2026

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	12/20/25	PM	n/a

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

Element Environmental, LLC Asbestos Certifications



Lau
Eric Martin
Element Environmental, LLC
HIASB-3198
State Exp. Date 10/11/2025

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	12/20/25	PM	n/a

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



STATE OF HAWAII ASBESTOS CERTIFICATION

Lutay
Austin A.
Element Environmental, LLC
HIASB-3199

Training Course Exp. Dates

W	n/a
CS	n/a
INS	03/6/26
MP	n/a
PD	n/a
PM	n/a

Worker
Contractor/Supervisor
Inspector
Management Planner
Project Designer
Project Monitor



STATE EXP. DATE 5/24/2026



Matsuda
Robin Ken A.
Element Environmental, LLC
HIASB-5211
State Exp. Date 05/16/2026

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	03/26/26	PM	n/a

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



STATE OF HAWAII ASBESTOS CERTIFICATION

Matsuoka
Maya
Element Environmental, LLC
HIASB-5085

Training Course Exp. Dates

W	n/a
CS	n/a
INS	05/14/26
MP	n/a
PD	n/a
PM	n/a

Worker
Contractor/Supervisor
Inspector
Management Planner
Project Designer
Project Monitor



STATE EXP. DATE 7/2/2026



Nobrega
Noa RM
Element Environmental, LLC
HIASB-5385
State Exp. Date 08/17/2025

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	08/12/25	PM	n/a

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



Sasaoka
Brenton KT
Element Environmental LLC
HIASB-5639
State Exp. Date 08/08/2025

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	07/31/25	PM	n/a

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



Tsubone
James D.
Element Environmental, LLC
HIASB-4118
State Exp. Date 04/29/2026

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	01/21/26	PM	n/a

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



Tsubone
Jodie C.
Element Environmental, LLC
HIASB-4629
State Exp. Date 09/14/2025

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	07/03/25	PM	n/a

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

Element Environmental, LLC Asbestos Certifications



Uekawa
Theodore N.
Element Environmental, LLC
HIASB-5084
State Exp. Date **07/02/2025**

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	06/12/25	PM	n/a

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



Valencia
Jonathan P.
Element Environmental, LLC
HIASB-5339
State Exp. Date **06/14/2026**

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	03/26/26	PM	n/a

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



West
Arnold D.
Element Environmental, LLC
HIASB-4625
State Exp. Date **12/15/2025**

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	12/13/25	PM	n/a

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



Yamamoto
Logan N.M.
Element Environmental, LLC
HIASB-5340
State Exp. Date **06/16/2026**

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	03/06/26	PM	n/a

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



Yamauchi
Candace K.K.H.
Element Environmental, LLC
HIASB-3840
State Exp. Date **05/15/2026**

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	01/21/26	PM	n/a

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



Yamauchi
Ryan S.W.
Element Environmental, LLC
HIASB-2905
State Exp. Date **04/23/2026**

State of Hawai'i Asbestos Certification

Training Course Exp. Dates

W	n/a	MP	n/a
CS	n/a	PD	n/a
INS	01/21/26	PM	n/a

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

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- 07/21/2028
Project Designer- 10/29/2027
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

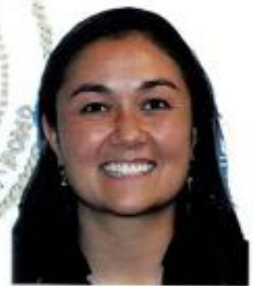
Expiration Dates:
Inspector- 01/24/2028
Supervisor- N/A
Risk Assessor- n/a
Project Designer- n/a
Worker- n/a

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: 1959 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: 1959 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: 1959 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: 1959 Inspector- n/a Supervisor- n/a Risk Assessor- 02/07/2028 Project Designer- n/a Worker- n/a Matsuoka Maya Certification # PB-1254 
State of Hawai'i Lead Based Paint Activities Certification Expiration Dates: 1959 Inspector- n/a Supervisor- n/a Risk Assessor- 08/02/2026 Project Designer- n/a Worker- n/a Nobrega Noa RM Certification # PB-1385 	State of Hawai'i Lead Based Paint Activities Certification Expiration Dates: 1959 Inspector- n/a Supervisor- n/a Risk Assessor- 10/28/2027 Project Designer- n/a Worker- n/a Sasaoka Brenton Certification # PB-1503 
State of Hawai'i Lead Based Paint Activities Certification Expiration Dates: 1959 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: 1959 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 

Element Environmental, LLC
Lead Based Paint Activities Certifications

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



State of Hawai'i
Lead Based Paint Activities Certification

Expiration Dates:

Inspector-	n/a
Supervisor-	n/a
Risk Assessor-	07/24/2026
Project Designer-	n/a
Worker-	n/a

Valencia
Jonathan P.
Certification # PB-1381



MDHHS



ARNOLD WEST
LEAD INSPECTOR/RISK ASSESSOR

P-008520

ANNUAL FEE DUE: 03/31/26

TRAINING & EXAM DUE: 03/31/28

LEAD CERTIFICATION AND COMPLIANCE ASSURANCE SECTION

State of Hawai'i
Lead Based Paint Activities Certification

Expiration Dates:

Inspector-	n/a
Supervisor-	n/a
Risk Assessor-	07/25/2026
Project Designer-	n/a
Worker-	n/a

Yamamoto
Logan N.M.
Certification # PB-1383



State of Hawai'i
Lead Based Paint Activities Certification

Expiration Dates:

Inspector-	n/a
Supervisor-	n/a
Risk Assessor-	02/07/2026
Project Designer-	n/a
Worker-	n/a

Yamauchi
Candace K.K.H.
Certification # PB-1135



State of Hawai'i
Lead Based Paint Activities Certification

Expiration Dates:

Inspector-	03/21/2022
Supervisor-	n/a
Risk Assessor-	10/07/2025
Project Designer-	n/a
Worker-	n/a

Yamauchi
Ryan
Certification # PB-0117



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: 06/02/2025

Status: **Compliant**

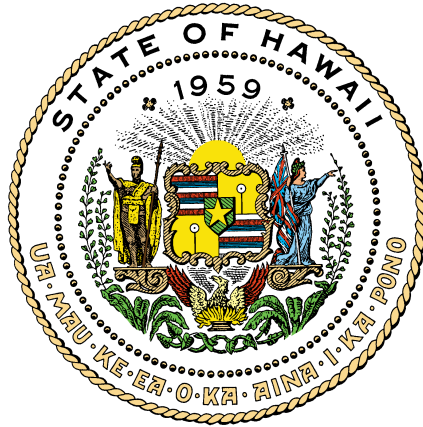
Hawaii Tax#: 27137955-01
New Hawaii Tax#: GE-1660416000-01
FEIN/SSN#: XX-XXX4479
UI#: No record
DCCA FILE#: 40203

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 14, 2025

Director of Commerce and Consumer Affairs

ATTACHMENT 5

**ELEMENT ENVIRONMENTAL, LLC
CERTIFICATE OF LIABILITY INSURANCE**



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

11/04/2024

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 JHC Services Inc dba John Connors Insurance 500 Ala Moana Blvd. Ste. 2-303 Honolulu HI 96813	CONTACT NAME: Jim McAluney PHONE (A/C, No, Ext): (808) 521-3663 FAX (A/C, No): (808) 521-5995 E-MAIL ADDRESS: INSURER(S) AFFORDING COVERAGE INSURER A: Admiral Insurance Company INSURER B: First Insurance Company of Hawaii INSURER C: INSURER D: INSURER E: INSURER F:
INSURED Element Environmental, LLC. 98-030 Hekaha St., Unit 9 Aiea HI 96701	NAIC #

COVERAGES**CERTIFICATE NUMBER:** CL2411411956**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	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR ☒ Prof E&O Liability ☒ Contractors Pollution GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PRO-JECT ☐ LOC OTHER:			*FEIECC10978	11/05/2024	11/05/2025	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 ☒ SCHEDULED AUTOS ☒ HIRED AUTOS ONLY ☒ NON-OWNED AUTOS ONLY ☒ comp \$1000 ☒ coll \$1000			CBA1000219406	11/05/2024	11/05/2025	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 ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) ☐ Y / N If yes, describe under DESCRIPTION OF OPERATIONS below		N / A				PER STATUTE OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

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

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**CANCELLATION**

proof of insurance

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

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