5 Requirements for Onsite Environmental Oversight

On-site monitoring is a key component of ensuring that the procedures documented in this C-EHMP are implemented properly and function as intended (e.g. appropriate installation and location of erosion and sediment control measures, cleanliness of equipment, suitability of secondary containment for fuel storage and equipment, screening of potential contaminated material, and stockpile segregation, etc.). A qualified environmental professional (QEP) will be retained as the environmental monitor to provide guidance on implementing the recommended measures and to develop additional mitigation measures if the need arises. The onsite QEP will have completed Hazardous Waste Operations and Emergency Response (HAZWOPER) 40-hour training with a current 8-hour refresher.

Monitoring events will be conducted at an appropriate frequency based on specific work tasks/procedures and the potential for adverse impacts to occur. An appropriate schedule (frequency and duration of site visits) will be established between the QEP and all involved regulatory agencies regarding when the QEP is onsite. The steepness of the slope may require the use of belaying equipment to inspect the site.

In general, the QEP will be familiar with the day-to-day conduct of project activities and be on-site during activities with the potential to impact human health or the environment, when contaminated media will be disturbed, when mitigation measures are implemented, or as determined in discussion with the regulatory agencies.

Monitoring will be conducted with greater frequency during periods of inclement weather (e.g., heavy precipitation, and strong winds) and during critical components/tasks of the project, such as working in contaminated groundwater. The steepness of the slope and the heavy rains that occur at the site will require additional Best Management Practices (BMP) inspections and potentially more BMP replacements than projects in flatter, drier locations.

The QEP will be onsite whenever potentially contaminated soil or groundwater may be disturbed and when hazardous vapors may be present. If demolition activities include abatement of lead-based paint or asbestos, abatement activities will be completed in accordance with all State and Federal laws and regulations prior to demolition. This is necessary to ensure the protection of construction workers, the general public, and the environment. Key monitoring stages may include, but are not necessarily limited to:

- Performing work in the Nanue Bridge ROW
- Potential soil movement activities associated with bridge repairs (e.g., hand tool excavation).
- Installation of erosion and sediment control measures.
- Decontamination of vehicles and equipment.
- Soil sampling.

The primary responsibility of the QEP is to ensure that the environmental and human health protection measures are implemented and adhered to and that any movement or disturbance of contaminated material (on-site as offsite removal and storage is not approved) meets the C-EHMP requirements and is properly documented.

Typical responsibilities of the QEP include those identified below:

- Preventing exposure to lead-impacted soil by communicating the requirements of the C-EHMP to project members during pre-job and tailgate meetings.
- Remain onsite as per the schedule established between parties prior to project start. The QEP will remain on-call during non-critical work periods to respond to emerging environmental issues.
- Review the contractor's work procedures to ensure functionality and compliance with the C-EHMP and applicable regulations, standards, and BMP.
- Provide advice in preparing for work activities in a manner that mitigates adverse environmental or health effects.
- Exercise the authority to modify and/or halt any construction activity at any time if deemed necessary for the protection of human health and the environment.
- Advise project members if project activities have caused or are likely to cause an environmental incident and make recommendations for corrective action.
- Monitor compliance with the C-EHMP and relevant permit conditions.
- Liaise directly with project members and provide technical advice for the purpose of resolving situations that may impact human health and the environment as they arise.
- Maintain complete records of activities related to the implementation of the C-EHMP. This includes any measurements taken (e.g. pH, turbidity, temperature, conductivity, photoionization detector [PID] screening, air monitoring, equipment calibration, manifests, truck receipts, truck counting spreadsheets, etc.), photographs, and incident reports.
- Complete and submit environmental monitoring reports to the HDOH HEER and report any unanticipated adverse effects on the environment. Such reports will include the nature of the effect, its cause, mitigation and/or remediation implemented, and whether a work stoppage was ordered, as well as photographs, analyses, and measurements, if applicable.
- Report unanticipated encounters with contamination at the site in accordance with Hawaii Revised Statutes (HRS) 128D. Reportable releases include contamination not already identified at the site, as well as tanks, drums, and/or abandoned pipelines that are not identified in advance and are encountered during excavation.

Additional details regarding the QEP monitoring schedule shall be included in the Contractor's updated C-EHMP or C-EHMP Addendum.

Table 5-1: Project Activities When QEP Must Be Present

Activity	Planned at Site?		QEP Will Be Present?		Monitoring Equipment to be Used by QEP
	Yes	No	Yes	No	
Environmental Sampling	X		X		Sampling Supplies
Geotechnical Sampling	X		X		Sampling Supplies
Silt Fence Installation	X		X		Logbook and camera
Demolition: Not planned		X	X		None
Grading	X		X		Gilian Pumps (personal cassettes) General Air Monitoring
Excavation – hand tools only.	X		X		Gilian Pumps (personal cassettes) General Air Monitoring
Dewatering: Not Planned		X		X	None, not planned
Soil Stockpiling (Potential)			X		None
Soil Import		X	X		None, not planned
Work Below High-Water Mark		X		X	None, not planned
Engineering Control Installation and Testing	X		X		Logbook
Installation of Erosion/ Sediment Controls	X		X		Logbook
Prior to/During Rainstorm Events	X		X		Logbook

Table 5-2: Frequency of QEP Monitoring Activities

QEP Monitoring Activities	Monitoring Required Site?		Frequency		Monitoring Equipment to be Used by QEP
	Yes	No	Daily	Weekly	
Discharge of Sediment to Stream (should be prevented through BMPs)		X		NA	Horiba U-10 Multiprobe Meter
PID		X		NA	Not applicable for Lead as a COC
pH, Turbidity, Temperature, conductivity.		X		NA	Horiba U-10 Multiprobe Meter
Air Monitoring	X		X		Gilian Pumps (personal cassettes) General Air Monitoring.
Ensuring decontamination zones are established and used	X		X		Logbook, camera
Checking for Proper Manifests (if needed)	X		X		Documents/logbooks/invoices
Counting Trucks Leaving Site		X		NA	None
Collecting Photographs	X		X		Cameras
Documenting Incidents	X		X		Logbooks
Daily Monitoring/Production Reports	X		X		Logbooks, notes

Note: QEP monitoring will be downgraded from daily monitoring and switched to every two weeks (or two times per month)