



Environmental Restoration Specialists

June 27, 2025

Mr. Maxwell A. George
Environmental Manager
Virgin Islands Water and Power Authority
P.O. Box 1450
St. Thomas, VI 00804

via e-mail to: Maxwell.George@viwapa

Subject: Remedial Action Works for Petroleum Hydrocarbons impacted soil and groundwater at Battery Energy Storage Systems (BESS) Area VIWAPA's Randolph E. Harley Facility, St. Thomas, VI

Dear Mr. George:

ON-SITE ENVIRONMENTAL, INC. (OSE) is pleased to submit as per your request our **revised and updated** technical and economic proposal to remediate the extent of soil and groundwater contamination resulting from dense and heavy petroleum hydrocarbons encountered during steel piles installation at the Battery Energy Storage Systems (BESS) Area VIWAPA's Randolph E. Harley Facility, St. Thomas, VI.

OSE conducted a Limited Remedial Action Investigation (RAI) for the petroleum hydrocarbon-impacted soil and groundwater in the BESS Area. Our evaluation of the RAI report indicates the presence of petroleum hydrocarbons in the soil and groundwater, underneath these areas.

The scope of work proposed herein is based on the data contained in the OSE Site Remedial Investigation Report, with the objective of preparing a remedial action plan consisting of the remediation of impacted soil and groundwater.

SCOPE OF WORK

Provide all the necessary labor, materials, equipment, supervision, and insurances to reduce the existing petroleum hydrocarbon contamination level to the Virgin Islands Department of Planning and Natural Resources (DPNR) acceptable limits on the existing soil and groundwater located inside the above-mentioned facility.

1. Install an innovative technology system for recovering hydrocarbons from the surface of the groundwater. The process, known as Non-aqueous Extraction Technique (NET™), provides continuous removal of the free product with a non-

intrusive method of free product removal from existing monitoring wells without disruption to facility operations. Each system will be installed in all monitoring wells showing the presence of hydrocarbons and will deliver a free product-only waste stream. It will start recovering free product as quickly as it is installed or enters the well. It consists of an electrically operated drive pump head and in-well tubing connected into a storage tank (55-gal drums). This equipment will recover the free product up to a sheen thickness, or less or until there is no longer free product available. The recovery to the tank is totally closed and the free product stays in the storage tank. There will be no water to dispose. The free product recovery rate will depend on the permeability of the soil. OSE will perform all the necessary tests required to guarantee that the system will work before installation.

2. Initiate a remediation activity with a cost effective “in-situ” clean-up technology oriented to reduce rapidly, the source of hydrocarbon contamination to preclude the possible extend of the existing plume that may impact additional soil volume as well as groundwater and shoreline beyond property limits.
 - a. OSE recommends Perozone for the remediation of the petroleum hydrocarbons in the groundwater and the saturated soil. Ozone Oxidation Microbubble System is a chemical oxidation process that involves the injection of ozone microbubbles coated with hydrogen peroxide. Kerfoot Technologies, Inc. has patented this technology and refers to it as “Perozone”. Ozone is a strong chemical oxidant that reacts in gaseous or aqueous form to degrade aromatic ring compounds, halogenated alkenes, and alkanes (including TPH, BTEX and MTBE). Low capital equipment costs, minimal site disturbance during installation, rapid decrease of contaminant mass and concentration in soil and water, are some of the benefits of this alternative providing impressive results that can be seen in weeks. Clean reaction with no hazardous by-product formation and no vapor control necessary area also part of this technique

OSE will also include the following works on the petroleum hydrocarbon-impacted soil and groundwater.

1. Remediation Action Plan and Sampling Plan with a Quality Assurance Project Plan and Standard Operation Procedures for all Remediation and Sampling Activities to be submitted to DPNR.
2. Drilling and installation of **12** “sparge points” injection wells interconnected to a “perozone” system (ozone and hydrogen peroxide) supply to be injected into the groundwater.
3. All TPH-DRO-ORO analytical for groundwater and **seawater** testing during the chemical oxidation process by an independent laboratory.
5. Continuous monitoring and operation of the Perozone System Equipment installed for the total duration of the remediation activities.
6. A Final Report for soil and groundwater clearance to be submitted to the DPNR.

COSTS

The approximate total cost for the In-Situ Remediation of contaminated soil and groundwater as per the following cost breakdown:

| TASKS DESCRIPTION | COSTS |
|--|---------------|
| FREE PRODUCT RECOVERY & MONITORING | \$ 15,180.00 |
| MOBILIZATION AND INSURANCES | \$ 11,385.00 |
| DRILLING & SPARGE POINTS INSTALLATION (20 EA) | \$ 35,483.00 |
| PEROZONE EQUIPMENT & DISTRIBUTION LINES INSTALLATION | \$ 51,422.00 |
| OPERATION & MAINTENANCE (\$20,514.00/mo. x 6 mo.) | \$ 123,085.00 |
| PEROZONE EQUIPMENT (\$2,300.00/mo. x 6 mo.) | \$ 13,800.00 |
| ANALYTICAL TESTS & REPORTS (\$7,014.00/mo. x 6 mo.) | \$ 42,087.00 |
| START UP & LICENSE FEE | \$ 4,200.00 |
| TOTAL | \$ 296,642.00 |

Notes:

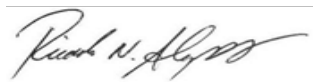
1. VI WAPA will make the necessary arrangements for access to the work area. Water and electricity must be provided by the facility.
2. The expected duration is approximately to six (6) months.

If this proposal meets with your approval, please sign below and return, accepting this proposal as your authorization to proceed. We can start the work immediately.

ON-SITE ENVIRONMENTAL, INC., appreciates the opportunity that you have given us to be at the service of Virgin Islands Water and Power Authority in this project.

Cordially yours,

ON-SITE ENVIRONMENTAL, INC.



Ricardo N. Álvarez, PE, REM
Principal

Accepted by:

Signature

Name and Title
VI WAPA