NovelEsolutions
Engineering | Environment | Earth

Randy Whitesell, PE, ME

Senior Engineer

EDUCATION:
- *MS | Ocean Engineering | FAU, Boca Raton, FL*
- *BS | Ocean Engineering | FAU, Boca Raton, FL*

CERTIFICATIONS | REGISTRATIONS:
- *Professional Engineer: Florida, Georgia, Tennessee*
- *URS Project Manager Certification*

TRAINING:
- *FEMA IS-00100.c, IS-001000, IS-01001, IS-01003, IS-01007, & IS01008*
- *40-hr OSHA Health and Safety Training*
- *8-hr OSHA Health and Safety Annual Refresher8-hr OSHA Site Supervisor Training*
- *Excavation Safety*
- *10-hr OSHA Construction Safety and Health*
- *OSHA 510 - Occupational Safety and Health Standards for Construction*
- *American Petroleum Institute (API) Service Station Contractor Safety Key*
- *BP Safety Passport and MITT Training*
- *Smith Defense Driving Course*

Professional Experience

Randy Whitesell is an Engineer with over 30 years of engineering and construction experience and is a Florida, Registered Professional Engineer.

Currently Mr. Whitesell recently returned from deployment to FEMA. He has been on deployment since early November of 2017. His position at FEMA is as a Program Delivery Manager.
Mr. Whitesell has experience in hydrographic surveys, underwater assessment, underwater construction and` oversight. He was responsible for the design, implementation, construction, operation and maintenance of remediation systems utilizing bioremediation, chemical remediation, pump and treat, air sparging, soil vapor extraction, and dual phase extraction technologies. He provides engineering design, implementation, construction, and operation and maintenance of remediation systems in a broad array of lithologies. Mr. Whitesell has provided senior oversight and project management for site assessments and remediation projects from initial field investigation through site closure. Other responsibilities include providing technical support, principal review and guidance to the technical and professional staff.

Representative Project Experience

Engineer of Record / Design Engineer, Shell Oil, Florida Department of Environmental Protection Funded Cleanup 7430 Atlantic Blvd., Jacksonville, Florida. Provided engineering design and implementation of a large-scale petroleum AS/SVE remediation project. The hydrocarbon impacted area covered approximately 2 acres across a commercial plaza with various businesses and a large parking lot. The site had two very sensitive areas; there were large Live Oak trees within the hydrocarbon plume that required protection and non-disturbance of the area beneath the drip line of the trees and a sensitive waterway down gradient of the hydrocarbon plume.
To address the Live Oaks remediation wells and piping trenches were reposition and all work around the drip line was performed by hand. The City of Jacksonville was on site various times to monitor the work around these trees.
The hydrocarbon plume was migrating towards a sensitive waterway down gradient. To stop this migration the groundwater flow was analyzed, and the remediation system was altered so that some of the remediation AS/SVE wells were installed ahead of the migrating plume. The site achieved cleanup goals within approximately one year of operation.

Engineer of Record / Design Engineer, BP No. 461, Florida Department of Environmental Protection Funded Cleanup Altamonte Springs, Florida. Provided additional assessment multi-level pilot testing, engineering design and implementation of a large-scale petroleum remediation project. The lithology at the site consisted of a sand layer to approximately 45 feet below land surface (bls) followed by a 5-foot thick clay

layer that was at the groundwater table. There was approximately a 5-foot layer of sand below that setting on a hard-weathered limestone that became more porous with depth. Groundwater impacts continued to depths over 100 feet bls. Because of the depth to groundwater being approximately 45 feet bls and the groundwater impact so deep 3 SVE wells and 2 AS wells were used for the pilot test. The AS and SVE wells were screened at various depths. During the pilot test the intermediate well (approximately 50 feet bls) was opened to take readings. It was observed that a large amount of vapors were escaping through that well. An air sample was taken and analyzed. The results indicate that well was passively venting over 100 pounds of hydrocarbons per day. Therefore, the final design incorporated those results into it and created chimney/vent wells to capture the hydrocarbons trapped below the confining clay layer. Although the site was transferred to another consultant for the implementation of the RAP they installed the system as designed and during the first quarter of operation the with only the SVE system in operation (as the concentrations were too high to turn on the AS system) they removed over a 1000 pounds of hydrocarbons. Project included: assessment data review and additional assessment recommendations to optimize remediation, remedial action design, modeling of site data to optimize treatment system design.

Engineer of Record / Design Engineer, Coastal Mart No. 428, Waldo, Florida. Provided engineering design and implementation and construction management and oversight of a large excavation that included sheet piling, free product recovery and source removal. Upon completion of the excavation chemical remediation was performed.
The hydrocarbon impacts were predominately confined to a tight clay lens approximately 3 feet below land surface, 8 feet thick, and approximately 5000 square feet lying within the site boundaries. Groundwater was not encountered until approximately 14 feet below land surface. The clay lens was bordered by sands and silty sands on all sides. Since the primary area of remediation was very tight clay the remediation technology that was initially evaluated was high vacuum extraction. However, since the clay was bordered on all sides by sand source removal was evaluated as well. A cost comparison between performing a source removal and using high vacuum extraction was prepared. Since no pilot tests were performed this evaluation included estimating the time to cleanup based on contaminate transport, porosity, and retardation. The radius of influence was based on a combination of stagnation point calculations and past experience. The source removal was approximately $100,000 less expensive than high vacuum extraction and could reach Post Active Remediation Monitoring at a much quicker rate. Also, should there be a need for additional remediation in the future the remediation would be perform in a sandy environment which would be much more cost effective and a greater success rate than if the clay had remained. Upon further evaluation and since the site was no longer in operation it was determined that it was less expensive to remove the UST and UST systems than it was to work around them. This also would allow any hydrocarbon-impacted soils found within the UST area to be removed as well.
The entire clay lens was removed along with the free product. To address the hydrocarbon-impacted groundwater beneath the clay chemical remediation was performed. Upon completion of the source removal and backfilling chemicals were injected at various points below the base of the excavation and approximately 5-foot into the groundwater.
Project also included: soil and groundwater assessment data review and additional assessment recommendations to optimize remediation, remedial action design, preparation of construction drawings and sediment erosion control plan.

Project Manager / Lead Engineer, NoPetro - Lynx Mass Transit, Orlando, Florida. Provided project management and engineering and construction management for the conversion of the Lynx Mass Transit

System vehicles from petroleum to natural gas. The project included the conversion on the maintenance facilities as well as the construction of a fast fill station to fuel the vehicles.
The existing maintenance facility had to be retrofitted to allow the use of natural gas instead of petroleum as well as bringing the facility up to the current Florida Building Codes. This included upgrading the ventilations systems, mechanical delivery systems, and safety systems.
A new a fast fill fueling facility was constructed to allow for public use as well as access for the mass transit fleet. The facility was fully automated and has a main entry for the public and side entry for the mass transit vehicles. Permitting was performed through Orange County Building Department. Some of the hurdles encountered included that the lot used for the facility had many native trees and wetlands that had to be addressed before clearing began.

Project Manager / Engineer of Record, Solid Waste Authority, West Palm Beach, Florida. Provided project management, construction management, and was the engineer of record for the design and construction of a wetwell system to handle the effluent from the landfill. The wetwell was designed to handle overflow from the existing wetwell should it be needed as well as to divert flow from the existing wetwell when maintenance was needed. The wetwells provide temporary storage until the effluent could be inject into a deep well for disposal.

Construction Oversight and Safety Officer, Coast Guard Station, Islamorada, Florida. Provided construction oversight and safety officer for the demolition of an existing building and the installation of a prefabricated Hazardous Materials Storage Building and the repair of building damages caused by Hurricane Irma. The work included asbestos and lead sampling and the demolition and disposal of a small concrete building. Along with that the soffit system on a multistory building had to be replaced. This property abuts the Snake Creek Channel in Islamorada, Florida and the demolition of the storage building was at the water edge which created obstacles with respect to dust, debris, and environmental controls. All this work was performed under USACE EMA 385-1-1 and OSHA 1920 and 1926 guidelines.