Port Everglades Environmental Corporation
Environmental Assessment, Design, Installation, Operation and Maintenance of Free Product Recovery Systems, System Decommissioning, Environmental Liability Management

CONTRACT ROLE
Prime

LOCATION
Port Everglades
Broward County,
Florida

PROJECT TEAM
Tim Harman, P.E.
Joseph Lundquist, P.E.
Kaled Essraowi, CMA, CMR
Andy Hooper, P.E., GC
Joe Newton, GC, PSSC
Jeremy Hess
Howard "Cody" Miller
Steve Pitts

PERIOD OF PERFORMANCE
1993 to Present

APPROXIMATE FEE
$4,500,000

CLIENT
Port Everglades Environmental Corporation (PEECO)
(FDEP FAC ID No.: 06/8942977)

CLIENT CONTACTS
Kevin McHale, P.G.
PEECO Technical Committee Chairman
(713) 432-6620

Handex Consulting and Remediation, LLC (HCR) has provided continuous environmental consulting, assessment, and remediation services to the Port Everglades Environmental Corporation (PEECO) since 1993. Port Everglades is a port terminal facility with active underground petroleum pipeline corridors, owned and operated by the Broward County Board of County Commissioners and the Port Everglades Department of Broward County while environmental issues associated with the common areas of the Port are coordinated by a consortium of oil companies incorporated as PEECO.

HCR Innovations and Client Benefits

- Innovative Management Approach: Multi-party coordination for site cleanup and cost share in advance of upcoming major construction.
- Innovative Use of Technology: LPH collection systems with closed high permeability trenches and hydrophobic in-well separation.

Since established as a deep-water harbor in 1927, discharges of various petroleum constituents have resulted in documented liquid phase hydrocarbons (LPH) in the groundwater. Services provided include design, installation, operation and maintenance of free product recovery systems throughout the port common areas. In addition, HCR has conducted numerous pilot tests and site assessment activities for the monitoring and assessment of cost effective and practical solutions for environmental liability management. Environmental studies include tidal studies, exfiltration tests, environmental contamination assessments and free product efficacy assessments. In 1993, HCR subcontracted a Risk Assessment / Justification (RA/J) on behalf of PEECO for the Common Areas at Port Everglades. Field activities were completed in part by HCR personnel due to their familiarity with the lithology and logistics of the Port. The RA/J report was submitted and approved under a Risk Assessment Approval Order (RAAO) in June 1995.

Free product recovery has been conducted in the Common Areas utilizing a variety of in-well phase-separation technologies to eliminate aboveground separation and handling costs. Four free product recovery systems (Pier 1, Berth 9; Pier 2, Berth 7; Area West of Slip 1; and Area 26) were installed in 1999 and began operation in 2000. The systems with a combined 40 recovery wells were operated until 2007 and decommissioned in 2012. Additionally, two free product recovery systems consisting of a total of 36 recovery wells began operation in 2008 at Pier 1, Berth 12 (East) and Berth 13 (West) as a seawall abatement system.

The East and West systems currently remain in operation through funding under the FDEP Free Product Recovery Initiative. Based upon tank recovery information, over 70,000 gallons of product has been recovered by the above referenced free product recovery systems.

Working with the Port Everglades Department of Broward County and FDEP, on behalf of PEECO, HCR installed and initiated operation of six Closed LPH Collection Systems utilizing Large Diameter Filter Scavengers on Pier 1, Berths 9 and 10 in 2013 to remove product in advance of the proposed slip widening project. Based on the success of the initial array, FDEP authorized the installation of six additional Closed LPH Collection Systems, which were installed and began operation in 2014. The twelve systems have collected a total of approximately 10,000 gallons of LPH since September 2013. The budgeted cost of the LPH Collection system installation and O&M to date is approximately $871,146.

HCR has also conducted assessment activities and evaluated environmental impacts in additional common areas at the port. Assessment was conducted, on behalf of PEECO, along the fuel pipelines to the west of Slip 2 (Area 18) in 2013 to evaluate potential petroleum impacts prior to the proposed Slip 2 Westward Lengthening Project. Additional assessment for the evaluation of LPH was also conducted along the seawall of Berths 16, 17, and 18 in 2014.