PROFESSIONAL PROFILE

CONTACT INFORMATION

Main: (281) 397-3805
Direct: (281) 214-8200
Email: ghorwitch@rouxinc.com
Website: www.rouxinc.com

19450 State Highway 249
Suite 260
Houston, TX 77070

EDUCATION

MS, Civil Engineering, University of Houston, 1982
BS, Civil Engineering, Wayne State University, 1976

PROFESSIONAL LICENSES

Registered Professional Engineer in KS, LA, ME, MA, MI, MS, NH, NC, OK, TX, VA, WV, WI

Gary R. Horwitch, MS, PE

Technical Director

EXPERIENCE SUMMARY

Mr. Horwitch has more than forty years of experience in the design and construction of environmental projects.

TECHNICAL SPECIALTIES

Mr. Horwitch's expertise involves working primarily on the permitting, design, construction, and certification of municipal, industrial non-hazardous, and hazardous waste treatment, storage, and disposal (TSD) facilities.

REPRESENTATIVE PROJECTS

- **Landfills, Treatment, Storage & Disposal, Senior PM, Multiple/Various Locations.** Served as the Engineer-of-Record for more than 50 municipal, industrial non-hazardous and hazardous treatment, storage, and disposal (TSD) facilities. Managed site selection, permit application preparation, engineering design, and construction. Responsible for liner and leachate collection systems; final cover systems; landfill gas management system design; closure and post closure care plans; operational plans; hydrology, geotechnical, and geo-hydrological services; waste characterization and waste acceptance plans; financial planning (business pro-formas); aspenmix, slurry, and conventional barrier cut-off walls; ground and surface water monitoring plans; needs analysis, SPCC, SWPPP Plans and other studies. Also served as the main witness during the technical hearing on the merits for these facilities, which included justifying the design elements in each of these facilities during an official hearing process.
- **Compliance Plans for SPCC, Facility Response & SWPPP, Project Manager, Various Projects.** Prepared and certified over 50 Spill Prevention Control and Countermeasure Plans, Facility Response Plans, and Storm Water Pollution Prevention Plans for state and Federal National Discharge Pollution Elimination System permits at various landfills, transfer stations, hauling/transportation yards, pipe yards, and offshore support facilities and other operations facilities. Performed annual audits of sites to determine compliance with regulations. Provided documentation and guidance to keep clients in compliance with regulations.
- **SPCC/SWPPP/EERP Combined Plans.** Prepared and certified 10 separate SPCC, SWPPP, and Environmental Emergency Response Plans (Combined Document) for a confidential client in North Carolina.
- **SPCC PLANS, Enterprise TE Products Pipeline Company.** Prepared and certified various SPCC for various sites located in the State of Arkansas. Plans included initial preparation, revisions due to process changes, and five-year renewals.
- **Drainage System Design/Build, Senior PM, Chemical Facility, Orange, Texas.** Managed the hydraulic analysis, design, and design/build for the storm water and process wastewater for a chemical manufacturing facility in Orange, Texas. Due to facility expansion, the initially designed storm water management system needed to be replaced with a drainage system capable of managing the selected design storm event wherein the on-site flooding would be effectively managed during storm events. As part of this project, prepared conceptual drawings of the revised drainage system, detailed engineering drawings, and managed the construction of the drainage improvements using the firm's in-house construction company.

- **Drainage System Evaluation, Senior PM, Chemical Facility, Dumas, Texas.** Managed the hydraulic analysis and preparation of a conceptual design effort for the retrofitting of a 100-acre chemical facility in Dumas, Texas. The facility's existing storm water management design included a series of lift station, storm water impoundments, and water treatment system. Due to facility expansion and the addition of new units at the facility, the storm water management design was evaluated to determine what additional infrastructure could be added to separate out non-contact storm water from contact storm water. Non-contact storm water is allowed to be discharged though a general NPDES permit while contact storm water is allowed to be discharged though a site-specific permit after applicable treatment.
- **Boiler Ash Pond Closure, Principal Engineer, Arkansas.** Managed the preparation of a closure plan for a temporary boiler ash impoundment at a paper mill in Arkansas. The project consisted of the in-site stabilization of the boiler ash and the installation of a concrete final cover system over the stabilized boiler ash. As part of this project, a series of bench scale solidification tests were performed on the boiler ash to determine the needed percentage of additive to obtain the needed bearing strength of the solidified boiler ash to support a reinforced concrete final cover system that could be used as a future working platform for the drying of additional boiler ash prior to off-site disposal. Included in the project were detailed plans and specification, regulatory approvals, contractor bidding services, contractor selection, construction management services and regulatory certifications.
- **Asphalt Pond Closure, Principal Engineer, North Texas.** Managed the preparation of a closure plan for a spent asphalt landfill at a refinery in North Texas. The landfill was closed in accordance with the TCEQ solid waste management rules and included the in-situ stabilization of a portion of the landfilled spent asphalt (to be able to support an alternate cover system along with the design and installation of the lightweight concrete closure cover system overlain by a flexible membrane liner system and grassed synthetic cover layer. Included in the project were detailed plans and specification, regulatory approvals, contractor bidding services, contractor selection, construction management services and regulatory certifications.
- **Hazardous Waste Disposal Facility Redesign, Senior PE, Municipal, Robstown, Texas.** Served as Engineer-of-Record during the complete redesign and re-permitting of an existing hazardous and industrial non-hazardous waste disposal facility. The facility included numerous smaller trench and fill landfill cells that were incorporated into the limits of one-large landfill cell. Additionally, the design of the landfill included a perimeter subsurface barrier wall and interior pumping wells to remediate groundwater contamination from the existing landfill cells that were being incorporated into the larger cell. When completed, this facility provided adequate hazardous waste disposal capacity for greater than 20 years and is one of two operational commercial hazardous waste disposal facilities in the State of Texas.
- **Design & Permitting, Waste Transfer Stations, Senior PE, Municipal, Houston, Texas.** Served as Engineer-of-Record for the design and permitting of two TCEQ construction and demolition (C&D) solid waste transfer stations. These sites were both permitted within the limits of the recently promulgated 100-year floodplains established by Tropical Storm Allison Relief Project which revised the limits of the 100-year flood plains within Harris County during the permitting process.
- **Hazardous Waste Landfill Closures, Senior PM, Chemical Facility, Orange, Texas.** Managed the closure of 14 hazardous solid waste landfill cells which were located within the confines of an active chemical facility, as such, the design of the units had to take into consideration the operations of the site. For instance, due to operational considerations, two units were closed by specifying covers that could be used for permanent access across the site (pavement systems for cover systems) and two other units had to be designed taking into consideration flair structures that were located adjacent to the units to be closed.
- **NPL Site RCRA Remediation, Project Director, State, Edmondson, AR.** Managed RCRA remediation activities at the Gurley Oil Pit NPL Site. Due to government regulations, the design of the closure unit had to be sufficiently flexible to accommodate different volumes of hazardous waste encountered during the EPA-mandated closure activity.
- **Remedial Design Gallaway Ponds Superfund Site, Senior PM, State, Gallaway, Tennessee.** Directed the remedial design phase of the Gallaway Ponds Site Superfund project. Due to governmental regulations, the design of the closure unit had to be sufficiently flexible to accommodate different volumes of hazardous waste encountered during the EPA-mandated closure activity.
- **Remediation/Closure, Valley of the Drums, Senior Project Engineer, Bullitt County, Kentucky.** Served as Engineer-of-Record during the remediation and closure of the "Valley of the Drums" site which included the management of in excess of 10,000 previously land filled hazardous waste drums. The drums had to be reclaimed, emptied, treated, and re-disposed within the redesigned landfill unit.
- **Solid Waste Transfer Station Construction, Senior PM, Municipal, Houston, Texas.** Project involved a procurement for collection of solid waste from approximately 50 percent of

the residences for transfer to two different landfill sites. Responsible for the design and construction of three solid waste transfer stations. Two were completely new designs and the third was a retrofit of an existing transfer station that had ceased operation approximately 10 years before the redesign process. The main goal was to create an acceptable design for the bidders that were proposing to operate the City's transfer stations. The challenge in the design process was to create transfer stations that would accommodate the different types and models of collection vehicles along with the bidder's different separation philosophies.

- **Permitting/Project Manage, State Government Agency, Texas.** Served as Engineer-of-Record for the environmental permitting and construction of a Type IV Solid waste Landfill in Montgomery County, Texas. The Site provided in excess of 50 million cubic yards of disposal capacity for Montgomery County and Harris County.
- **Federal Environmental Assessment, Senior PE, Proposed PotAsh Solution Mining Facility, San Juan County, Utah.** Served as one of the senior professionals during the preparation of an Environmental Assessment (EA) related to obtaining the necessary state and federal permits for conducting exploratory borings in search of the quantification and estimation of PotAsh reserves in San Juan County, Utah. My responsible for the portion of the EA related to the design and permitting of federal and state drilling permits for the well pads and roadways leading to the well pads which included but is not limited to fugitive dust control plans, weed control plans, endangered species, endangered vegetation, visual mitigation plans, and a Permit of Intention to Conduct Drilling Activities. The Federal EA is in the final stages of approval with the Bureau of Land Management (BLM) and the State EA has been obtained from SITLA.
- **Design & Permitting, Hazardous Waste Salt Dome Storage, Dayton, Texas.** Served as project manager during preparation of a RCRA Part B Permit Application for the Hunter Industrial Facilities, Inc., Hazardous Waste Management Facility which will be located in Dayton, Texas. The facility is designed to treat, solidify, and dispose of hazardous waste in geologically stable salt domes. This RCRA Part B Permit Application conforms to current Texas Natural Resource Conservation Commission (TNRCC), and the United States Environmental Protection Agency (EPA) regulations. The facility design incorporates a comprehensive Air Emissions Control System based upon EPA and TNRCC guidance. The facility design further incorporates a zero-discharge storm water management plan.
- **Senior Project Engineer, Hoot Landfill Complex, Texarkana, Texas.** Served as the Senior Project Manager during the design and construction of a perimeter slurry wall groundwater barrier system that surrounded four forty-acre discrete landfill areas. Each of these landfill areas had been operated under a different permit and to be able to tie all four of these landfills into one above-grade landfill, the State of Arkansas required that leachate from the below grade landfills be managed separately. The below grade landfills were capped with a composite liner and leachate collection system prior to landfill waste in the above grade portion of the landfill. At closure, a multi-layer final cover system was installed over the entire 160-acre landfill complex.
- **Senior Project Engineer, Clow Road Landfill, Houston, Texas.** Served as the senior project manager during the design of a perimeter soil bentonite barrier cut off wall surrounding a municipal solid waste landfill that had been burning for a number of years. The barrier cut off wall, when combined with waste excavation and a multi-layer final cover system installation was successful in eliminating the underground fire. The project also involved the installation of perimeter gas venting wells and monitoring points to effectively monitor the escape of methane from the site. The site was officially closed and has been ion post closure for approximately 15 years.
- **Landfill Design/Construction Projects, Senior Project Engineer, New Orleans, Louisiana.** Served as Engineer-of-Record for the environmental permitting, design and operations of an above-grade Type III landfill that was located on top of a closed Type II landfill. The specific landfill site provided a Type III landfill for disposal of construction and demolition waste within five miles of the downtown area. Additionally, during the design and permitting phase, the landfill was opened to serve as the primary disposal location for debris from Hurricanes Katrina and Rita.
- **Litigation Support/Technical Expert, Construction Demolition Waste Landfill, Conroe, Texas.** Retained by the Applicant during the environmental permitting of a Construction/Demolition Waste landfill. Acted as the Engineer-of-Record and main Expert Witness during the State of Texas Technical Hearing on the Merits of the project.
- **Litigation Support/Technical Expert, Hazardous Waste Disposal Facility, Dayton, Texas.** Retained by the Applicant during the environmental permitting of a hazardous waste salt dome depository project. Acted as the Engineer-of-Record and main Expert Witness during the 63-day State of Texas Technical Hearing on the Merits of the project.
- **Litigation Support/Technical Expert, Construction Demolition Waste Landfill, Houston, Texas.** Retained by the Applicant during the environmental permitting of a Construction/Demolition Waste landfill. Acted as the Engineer-of-Record and main Expert Witness during the State of Texas Technical Hearing on the Merits of the project.

- **Litigation Support/Technical Expert, Slope Failure Analysis, Houston, Texas.** Retained by the operator of the site to act as their expert witness related to a slope stability failure at the construction demolition waste landfill. Testified on the initial design of the below grade side slopes and the cause of the slope failure.
- **Litigation Support/Technical Expert, Construction Hazardous Waste Landfill, Robstown, Texas.** Retained by the Applicant during the environmental repermitting of a hazardous waste landfill and provided a redesign that helped the client increase the total hazardous waste that could be accepted at the site by approximately 500%. Acted as the Engineer-of-Record and main Expert Witness during the State of Texas Technical Hearing on the Merits of the project.