

## **ERIK D. WHITE, PE**

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### **EXPERIENCE PROFILE**

Mr. White, President of UEG Consulting, LLC, provides his clients with extensive industrial-focused experience that includes wastewater and stormwater compliance, engineering evaluations, water sustainability-related projects, and soil and groundwater remediation design. Core competencies include:

- Developing and Implementing NPDES Permitting Strategies
- Developing Stormwater Permitting Plans
- Developing Spill Prevention Control and Countermeasures Plans
- Executing Clean Water Act Section 316(a) and 316(b) Programs
- Conceptual Engineering Designs
- Devising Water-Sustainability Programs

#### SELECTED TECHNICAL PROJECT EXPERIENCE

# **Industrial Wastewater and Stormwater Compliance/Evaluations**

- Permitted multiple complex water and wastewater projects including:
  - Obtaining NPDES permits for peak-generating, coal-fired, and gas-fired combined cycle power generation facilities in multiple states, including a provision to allow a facility to utilize treated POTW influent as the power generation facility's influent.
  - Permitting discharges from a wet corn milling facility that discharges to Lake Michigan, an outstanding state resource water that requires facilities to comply with stringent end-of-pipe (no mixing zone allowance) limitations. The permit allows the facility to continue to operate at capacity.
  - Permitting discharges from a coke plant in Pittsburgh, PA that was driven by a Consent Order between the client and PADEP, USEPA, and the local health department resulting in compliance with a Consent Order with minimal to no fines.
  - Obtaining NPDES Permit with a waiver to allow a chemical manufacturing facility in Illinois to increase their discharge while maintaining compliance with stringent antidegradation requirements.
- Obtained temperature variances under Clean Water Act (CWA) Section 316(a) for several Indiana clients to allow them to discharge to effluent-dominated streams saving the clients millions of dollars in chiller systems.
- Provided strategic support for compliance with the CWA Section 316(a) temperature variance regulations for a pulp and paper mill in the upper Midwest. A CWA Section 316(a) variance would save the client millions in costs for construction of diffusers.
- Provided strategic compliance services for compliance with the newly promulgated CWA Section 316(b) regulations for existing manufacturing and electric generation facilities clients. Support includes implementing intake monitoring field studies, providing technology design assistance, and preparing the information necessary for compliance with the CWA Section 316(b) rule, resulting in millions of dollars in savings for client facilities.

- Provided limited fatal flaw evaluation for new facilities in Indiana and New Jersey. Fatal flaw
  evaluations included evaluating the feasibility of obtaining new authorizations for discharge
  (and withdrawal). Results of the fatal flaw evaluation were utilized by the clients to evaluate
  timeframes and costs that would impact the individual project.
- Developed a multi-stage strategic compliance approach for an oil re-refining facility in northwest Indiana to comply with stringent pre-treatment permit cyanide limits. The approach, which consisted of re-developing the cyanide limit, obtaining a site-specific criterion modification from the State of Indiana, and assessing treatment options for cyanide, averted an impending "cease and desist" order.
- Provided strategic support for a lens manufacturer in southern New Jersey for compliance
  with stringent cadmium pre-treatment limits. The support included in source sampling to
  evaluate the contributions of cadmium, bench-scale studies to evaluate the optimal
  treatment scheme, and developing conceptual-level capital cost estimates. The capital cost
  estimates helped the client make a decision to convert their lens manufacturing process to a
  cadmium-free system.
- Provided on-going compliance support for a developer in the Virgin Islands. The on-going
  compliance support includes preparing modification and application packages for Territorial
  Pollutant Discharge Elimination System (TPDES) permits, supporting stormwater
  compliance activities during construction and operations activities, and assisting a
  subtentant in maintain compliance with the client's existing TPDES Permit.
- Conducted multiple waste minimization evaluations, prepared Spill Contingency Plans, Stormwater Pollution Prevention Plans, and Facility Response Plans for multiple industrial sites throughout the U.S.

### **Conceptual Engineering Design**

- Implemented engineering evaluations for several clients including:
  - Conducting conceptual engineering evaluations for different make-up and discharge scenarios for a future gas-fired combined-cycle power generation facility to be located along Lake Manassas in Virginia.
  - Providing conceptual-level costs for several scenarios to meet stringent effluent nutrient limits for either direct discharge to the lake or to maximize the re-use of the water (via treatment) for subsequent discharge to the local POTW.
  - Evaluating potential treatment options/water discharge scenarios for an integrated steel mill in northwest Indiana, including the impacts of effluent water quantity and characteristics associated with current and future shutdown of coke batteries at the steel mill's coke plant. This evaluation was used to assess cost impacts to wastewater permitting/treatment related to the shutdowns.
  - Evaluating existing pre-treatment system process for removing fats and oil and grease (FOG) from a waste stream at a chemical plant originating from a process that produces shave gel products. The evaluation included in-lab jar tests of polymers and other chemicals to test effectiveness of treatment, operation of a pilot unit consisting of batch tanks and a pilot-scale filter press, conduction of a treatability study on the full-scale system, and data evaluation for preparation of a report for recommended improvements.
  - Evaluating flow and quality of a blast furnace recycle system for an integrated steel mill along Lake Michigan which consisted of chemical addition to control scale and corrosion, clarification, settling, and dewatering utilizing vacuum filtration.
  - Evaluating technologies to remove total suspended solids (TSS) containing lead from waste stream originating from a basic oxygen furnace gas cleaning system.
     Duties included site visits to sample stream, surveying available space for installation of treatment equipment, and vendor consultations.

# Remedial Study/Design

- Conducted pilot studies at a former oil shale retorting site located in Rock Springs, WY.
   Designed a pilot-scale system to test the effectiveness of in-situ bioremediation of organic contaminants in the groundwater. Interacted with the construction vendor during construction and operation, data evaluation, and preparation of a remedial alternative analysis report.
- Implemented a focused feasibility study (FFS) at a former waste management area at an air force base in San Antonio, TX used to manage solvents primarily consisting of chlorobenzenes. Primary author/lead engineer for the preparation of 30 percent conceptual design documents for the chosen alternatives.
- Conducted a treatability study to test the effectiveness of removing light non-aqueous phase liquid (LNAPL), ground water containing dissolved constituents of LNAPL, and soil vapor under vacuum-enhanced extraction using vacuum enhanced removal technology ("bioslurping"). Prepared specifications and drawings for bidding, obtained vendor quotations, worked with the vendor during design, and implemented the system.

# **Water Sustainability Experience**

- Developed a program to allow an international clothing manufacturer to assess their water
  use footprint at their owned and operated (O&O) facilities throughout the world. The O&O
  portion included their sewing and washing facilities, their administrative offices, and their
  multiple retail stores. The information was used by the client as the first step for a worldwide water stewardship program that was successfully implemented.
- Evaluated an international bottling corporation's water use, proposed opportunities for water reduction, and acted as primary technical advisor in developing a corporate-wide goal for optimization of water use.
- Estimated water footprints for the airline and amusement industries which will be used to implement a corporate-wide water sustainability program for each industry.

#### **REGISTRATIONS & CERTIFICATIONS**

Professional Engineer: Illinois, Indiana, Delaware, Maryland, New Jersey, New York, Pennsylvania

# **EDUCATION**

**MS, Environmental Engineering**, University of Michigan **BS, Civil Engineering**, University of Massachusetts

### PRESENTATIONS & PUBLICATIONS

White, Erik, Golando, Michael, and Gardner, R. William. "Papers, Please - Responding to Agency Information Requests in the Digital Age.". Presented at Indiana Chamber of Commerce Environmental Conference, October 22, 2018.

White, Erik, and Kirkland, Ryan. "Reuse of Treated Municipal Wastewater for Boiler Feedwater and Cooling Tower Makeup: Case History in the Power Industry." Presented at WEFTEC Conference, New Orleans, Mississippi, 2018.

White, Erik, and Golando, Michael. "Complying with Your Industrial Pre-Treatment Permit." Presented at Indiana Chamber of Commerce Environmental Conference, October 24, 2017.

White, Erik, and Golando, Michael. "Real World Examples – Complying with Stormwater Regulations." Presented at Indiana Chamber of Commerce Environmental Conference, October 21, 2016.

White, Erik, and Hall, Scott. "Coke Making Industry Regulatory Update". Paper presented at WEFTEC 2015, September 26-30, 2015.

White, Erik. "Clean Water Act Section 316(b) Compliance Scenario Approaches". Presented at the 4C Environmental Conference, February 16-19, 2015.

White, Erik, Childress, Neil, Semer, Robin, Scharre, David, "De Minimis Approach For Meeting Anti-Degradation to Address Water Quality Issues With Respect to NPDES Discharges From New GTCC Plants." Paper presented at Turbo-Expo 2001, June 4-7, 2001.

White, Erik, Waller, Sharon, Scharre, David, Semer, Robin, "Anti-Degradation Studies for NPDES Discharges from New Gas Fired Combined Cycles Power Plants." Paper presented and published at Power-Gen 2000, November 14-16, 2000.

Scharre, David, Semer, Robin, White, Erik, "In-Situ Bioremediation at the Rock Springs In-Situ Oil Shale Retort Site, Rock Springs, Wyoming." Proceedings of the Thirty-Second Mid-Atlantic Industrial and Hazardous Waste Conference, June 26-28, 2000.

Bedessem, Marjorie, Semer, Robin, White, Erik, Scharre, David, "Microbial Enumeration as a Tool for Bioremediation Monitoring." Proceedings of the Thirty-Second Mid-Atlantic Industrial and Hazardous Waste Conference, June 26-28, 2000.