

## 1 SUMMARY

Civil/Environmental Engineer with skills and experience in water treatment and remediation processes, stormwater management, pump stations and distribution/conveyance networks. Experience and interests include design and construction of various water treatment systems, hydraulic systems, environmental assessment of assets such as catch basins, storm sewers, streams and sediments, groundwater and soil sub-surface investigations, evaluating process feasibility and environmental modeling.

## 2 EDUCATION

Michigan Technological University  
MS Environmental Engineering | GPA=3.94

Houghton, MI  
09/14-04/17

Jawaharlal Nehru Technological University  
BS Civil Engineering | GPA=4.0

Hyderabad, India  
09/08-05/12

## 3 CERTIFICATIONS

- Passed Professional Engineer (PE) Examination  
Civil: Water Resources and Environmental Engineering 04/18
- Licensed Engineer-in-Training (EIT), Environmental Engineering: TX-59889 08/17-08/27
- OSHA HAZWOPER 06/17-Present
- DOT HAZMAT 06/17-Present

## 4 WORK EXPERIENCE

### **Environmental Engineer| Arcadis U.S.Inc. | Novi, Michigan | 06/17-Present**

- Conduct field work relevant to site investigations to make remedial and compliance assessments for storm sewers, streams, ditches, sediments, catch basin, manhole and culvert inspections and replacement planning.
- Providing contractor oversight for various system maintenance, repair and construction related activities
- Drafting written communications such as: memoranda, basis of remedial designs, work plans, sub-contractor bid proposals, letters and reports to pertinent regulatory agencies to meet clients' compliance requirements and site closures. Agencies include EPA, MDEQ, MDOT, WDNR.
- Environmental remediation design and implementation tasks, including soil and groundwater remedial system
- Operations, management and maintenance of existing remediation systems, component inspection, troubleshooting and replacement
- Field sampling of groundwater, soil, vapor intrusion (indoor/ambient/sub-slab and soil vapor) and other environmental media

*\*Detailed Project experiences are listed in Resume Addendum*

### **Graduate Research Assistant | Michigan Technological University | Houghton, MI | 08/14-04/17**

- Performed laboratory bench-scale experiments on UV/Hydrogen Peroxide Advanced Oxidation Processes to evaluate treatment feasibility of organic contaminants
- Worked on a computational simulation to model contaminant degradation and byproduct formation to derive comparison between predicted and experimental results

*\*Journal Publications from graduate research work are listed in Resume Addendum*

### **Project Engineer| Indian Institute of Technology-Hyderabad| Hyderabad, India| 02/14-08/14**

Project: Evaluate the regional and global implications of mercury pollution from various sources in India.

- Conducted a thorough literature survey to obtain mercury pollution from point/non-point emissions.
- Developed a mathematical model to predict mercury concentrations in various environmental media.

## **Resume Addendum**

### **PROJECT EXPERIENCES**

#### **Culvert Demolition and Replacement Engineering Design | Arcadis**

- Demolition Plan for impacted culvert adjacent to contaminated site
- Culvert Replacement Planning: Design, construction and material specifications per MDOT requirements

#### **Sediment Contamination Control Design | Arcadis**

- Evaluate horizontal and vertical extent of contaminated plume
- Assess remediation methodology
- Engineering Design for contamination control to prevent suspension from propeller jets

#### **Remediation Engineering Systems | Arcadis**

- Operations, Maintenance and Troubleshooting of Groundwater Treatment Systems
- Ensure compliance for NPDES and City Sanitary permit
- Draft operations & maintenance manual
- Schedule, and coordinate sub-contractor work on pumps, and system components
- Oversight for installation of vapor mitigation systems

#### **Environmental Assessment, Investigation and Monitoring | Arcadis**

- Oversight for installation of soil vapor and sub-slab vapor monitoring points
- Evaluate and inspect manholes, storm sewers, culverts, ditches and wetlands for off-site environmental impacts from contaminated sites
- Environmental sampling of groundwater, soil, indoor air, ambient air, sub-slab and soil vapor.
- Oversight for excavations of contaminated soil
- Perform injection and slug tests
- Draft Site closure reports and associated documents for various regulatory agencies

### **JOURNAL PUBLICATIONS FROM GRADUATE RESEARCH**

- **Kamath, D.**; Mezyk, S.; Minakata, D. Elucidating the Elementary Reaction Pathways and Kinetics of Hydroxyl Radical-Induced Acetone Degradation in Aqueous Phase Advanced Oxidation Processes. *Environ. Sci. Technol.* June 2018. DOI: 10.1021/acs.est.8b00582.
- **Kamath, D.** ; Minakata, D. Ultraviolet and Free Chlorine Aqueous-phase Advanced Oxidation Process: Kinetic Simulations and Experimental Validation. *Environ. Sci. Water Res. and Technol.* June 2018. DOI: 10.1039/c8ew00196k
- Minakata, D.; **Kamath, D.**; Maetzold S. Mechanistic insight into the reactivity of chlorine-derived radicals in the aqueous-phase UV/chlorine advanced oxidation process: Quantum mechanical calculations. *Environ. Sci. Technol.* 2017, 51(12), 6918-6926. DOI: 10.1021/acs/est/7b00507.

### **SKILLS**

- AutoCAD
- Biowin
- ArcGIS

### **PROFESSIONAL AFFILIATIONS**

- Society of Women Engineers (SWE)
- American Society of Civil Engineers (ASCE)