Table of Contents

CONTRIBUTING AUTHORS vi
ACKNOWLEDGMENTS viii
FOREWORD xi
ABOUT THE EDITORS xii

PART I: FATE AND TRANSPORT

1. DEVELOPMENT OF A MOBILE LABORATORY SYSTEM FOR SITE CHARACTERIZATION AND ANALYSIS OF SUBSURFACE OIL CONTAMINANTS 1
Ala’a H. Ismail, Majid Al-Rasheedi, Michael Quinn and Ahmad Al-Nijadah

2. GREENHOUSE GAS EMISSIONS MODELING: A TOOL FOR FEDERAL FACILITY DECOMMISSIONING 13
Karen L. Petho, Christopher D. Zevitas, Adam F. Klauber, Jonathan D. Cybulski

PART II: HEAVY METALS

3. NICKEL DERMAL BIOAVAILABILITY IN PIG SKIN INCREASED BY A CHEMICAL MIXTURE: ROLE OF GENDER 29
M.S. Abdel Rahman and R.M. Turkall
PART III: PBCs

4. RELATIONSHIP BETWEEN SEDIMENT MORPHOLOGY AND PCB CONTAMINATION IN THE ACUSHNET RIVER, NEW BEDFORD, MASSACHUSETTS
   Michael W. Morris, Anita Rigassio Smith, Joshua Cummings, Dave Walsh

5. PCBS IN BUILDING CAULK: HEALTH HAZARD OR REGULATORY OVERREACTION?
   James D. Okun

PART IV: REMEDIATION

6. THE TREATMENT OF “MGP” GROUNDWATER CONTAMINATED WITH COMPLEXED CYANIDES, HEAVY METALS AND VARIOUS ORGANICS USING A THREE STAGE ADVANCED OXIDATION PROCESS
   L. Joseph Bollyky, Lance Downs

7. APPLICATIONS AND BENEFITS OF GROUNDWATER RECIRCULATION FOR ELECTRON DONOR DELIVERY AND PH-ADJUSTMENT DURING ENHANCED ANAEROBIC DECHLORINATION
   David Falatko, Sami A. Fam, George Pon

PART V: SEDIMENTS

8. REVIEW OF MECHANICAL AND HYDRAULIC DREDGING AT TWO SEDIMENT REMEDIATION SITES
   James Wescott, John Dirgo, Jack Brunner, Scott Ireland, Scott Cieniawski
PART VI: VAPOR INTRUSION

9. VAPO INTRUSION ASSESSMENT – A COMPARATIVE ANALYSIS OF SUBSURFACE VAPOR SAMPLING METHODS
Laurent C. Levy, David Shea, Daniel B. Carr