

1. Record Nr.	UNINA9910969845003321
Titolo	Keeping pace with science and engineering : case studies in environmental regulation / / Myron F. Uman, editor ; National Academy of Engineering
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1993
ISBN	9786610211319 9781280211317 1280211318 9780309562164 0309562163 9780585142517 0585142513
Edizione	[1st ed.]
Descrizione fisica	1 online resource (296 p.)
Altri autori (Persone)	UmanMyron F. <1939->
Disciplina	363.73/7
Soggetti	Environmental engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Papers and speakers' remarks presented during a symposium ... held 11-12 February 1993"--T.p. verso.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""Keeping Pace with Science and Engineering""; ""Copyright""; ""Preface""; ""Contents""; ""Introduction: Environmental Regulation and Changing Science and Technology""; ""NOTES""; ""Nutrient Loadings to Surface Waters: Chesapeake Bay Case Study""; ""THE FORMATIVE YEARS""; ""Federal Studies and Legislation""; ""The Chesapeake Region""; ""Control of Point Source Nutrient Loading""; ""Control of Nonpoint Source Nutrient Loading""; ""THE PERIOD OF THE EPA BAY STUDY""; ""Setting the Stage""; ""The Bay Study""; ""THE ACTION YEARS""; ""Nutrient Research""; ""Nutrient Management"" ""DISCUSSION AND CONCLUSIONS""""The Interplay between Science and Management""; ""Sources of Inertia""; ""Overcoming Inertia""; ""NOTES""; ""REFERENCES""; ""Tropospheric Ozone""; ""A BRIEF HISTORY OF OZONE LEGISLATION AND REGULATION""; ""The 1970 Amendments""; ""The 1977 Amendments""; ""The 1990 Amendments""; ""California Regulation""; ""PIVOTAL ISSUES IN FORMULATING REGULATIONS"";

""Formulation of the Standard""; ""Setting the Original Standard""; ""Revising the Standard""; ""Subsequent Review of the Standard""; ""Emission Control Strategies""; ""Range of Objectives""; ""Spatial Scales""
 ""Motor Vehicles: Inspection and Maintenance""""Technological Improvements and Modifications to the Motor Vehicle""; ""Vehicle Inspection and Maintenance Programs""; ""Motor Vehicles: Reducing Use""; ""Other Topics""; ""Assessment of Progress toward Attainment of the Standard""; ""Retrospective Analyses of State Implementation Plans""; ""Introduction of ""Cleaner"" Fuels""; ""THE INTERPLAY OF REGULATION AND SCIENCE AND TECHNOLOGY DEVELOPMENT""; ""The Response of the Regulatory System to New Scientific Understanding""; ""Incentives and Disincentives in the Regulatory System""
 ""Acceptance of New Information by the Regulatory Community""""Governmental Perspectives, Incentives, and Disincentives""; ""Role of Technology in Shaping Actions of the Regulatory System""; ""A PROPOSAL FOR CONSIDERATION""; ""ACKNOWLEDGMENTS""; ""REFERENCES""; ""Municipal Waste Combustion and New Source Performance Standards: Use of Scientific and Technical Information""; ""FRAMEWORK FOR ANALYSIS""; ""THE MWC INDUSTRY""; ""Historical Development""; ""Current Industry Status""; ""Technology Used between 1975 and 1989""; ""Combustion Design""; ""Composition of Air Emissions""
 ""MWC Air Pollution Control Technology""""EPA INVOLVEMENT IN MWC REGULATION""; ""Chronology of Legislative, Legal, and Regulatory Activities""; ""Need for a Regulatory Program""; ""Projected National Impact""; ""Evaluation of Risks""; ""Options for EPA Involvement in Air Regulatory Programs""; ""Choice of Regulatory Authority""; ""Factors Leading to Federal Involvement""; ""NEW SOURCE PERFORMANCE STANDARDS""; ""Development of Specific Standards""; ""Good Combustion Practices""; ""Particulate and Metal Controls""; ""Acid Gas Controls""; ""Organic Controls""; ""Nitrogen Oxides""
 ""Materials Separation""

Sommario/riassunto

The technical basis of environmental regulation is always at the edge of scientific and engineering understanding. As knowledge improves, questions will inevitably arise about past decisions. Understanding how the regulatory system accommodates changing scientific and engineering knowledge is vital for achieving environmental values. In this new volume, seven case studies shed light on the interplay between environmental regulation and scientific and engineering understanding, with practical conclusions on how science and engineering should be used for more sound and timely regulatory decision making. The book provides helpful timelines of scientific and regulatory developments for the cases, which include Factors impeding clean-up strategies in the Chesapeake Bay. Pivotal questions in the regulation of ambient ozone concentrations. How science has been heeded but also ignored in regulation of new municipal waste combustors. Impact of scientific findings on control of chlorination by-products. Acid rain and what can be learned about research and public policy debate. Controversy over the need for formaldehyde regulation. The effect of public perception on management decisions concerning dioxin. This volume will be of practical interest to policymakers, business and environmental advocates, scientists, engineers, researchers, attorneys, faculty, and students.
