



ENVIRONMENTAL AND MINERAL ENGINEERING GROUP MSC

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MSC

ENVIRONMENTAL AND MINERAL ENGINEERING GROUP

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PART ONE

PRESENTATION

The Environmental and Mineral Engineering group MSC, develops its activity in the execution of projects, advising, professional formation and management of strategic operations based on a scientific-technical action with a unique concept of the high technology and engineering applied together, that are shaped into a quality and effectiveness that does not have comparison in this kind of performances. This idea to combine the investigation and the high technology with the applied engineering came about as a consequence of the long experience of those responsible in the investigation done on the environmental subject, where it was verified that some very dynamic multidisciplinary equipments, mounted between the investigation and the application of new knowledge, gave results in their highest works in the tradition.

- + MSC works in this line as a scientific-technical group in the allotment of responsibility of projects, including the execution of key in hand work. Once the project is defined, MSC starts up its team, develops a program and assigns each part of the Project to the best specialist of the Team, thus maintaining a completely multidisciplinary activity.

MSC has the best specialists for each subject. With the mentioned methodology, they are able to realize Projects and Studies to fit, contributing the best individualized solutions for each case without deviations or imbalances of any kind, in the lack of conditional bonds, which permits an independent and autonomous total a the time of proposing these solutions, which will always be the most useful for the client, according to their interests.

The Environmental and Mineral Group includes the help of Universities, Laboratories, and numerous industrial assembly businesses, construction, etc., that realize the work necessary for all performance controlled by MSC.

On the other hand, the performance of MSC can be orientated to investigation, to study and pointed technical problems resolution, to the correction of functional deficiencies, to product and industrial materials design and to any type of activity related with Environmental Engineering within any technology, to be informed or participating in performances orientated with applied investigation.

**WE DON'T WORK BY THE BOOK;
WE WRITE THE BOOK (24 PUBLICATIONS TO-DATE).**

MSC can present high-level consultation to the Directors of Businesses and Politicians, in a way so that these people arrange for inestimable information about actual situations and about the future that allows them to make better decisions.

The MSC Group offers training for personnel of Organizations and Businesses or industries that present problems, and masters-level university training or specialized courses. This training is guaranteed by many years of experience in institutions, businesses, centers and universities in the entire world.

In respect to publications, MSC has developed the largest collection of Environmental Engineering in the world, with 18 volumes, and the Grand Environmental and Contamination Dictionary, which is also the greatest of the world, with the Editorial Mundi Prensa de Madrid (España).

To-date, the Team has been active or is active in Spain, Bolivia, Mexico, Venezuela, the Dominican Republic, Argentina, France, Portugal, Guatemala, Honduras, Switzerland, Argelia, the United States and Angola.



PART TWO:

MS AWARDS AND HONORARY MENTIONS

- + World-wide University directors advice of the best Doctoral thesis Award, presented as world model
- + National Agrarian Investigation Award
- + National Award to the best scientific agrarian publication
- + Award to the United Nations of the best Environmental Engineering Project in Latin America
- + European Union Award for the best Physics study in Territory Arrangement
- + European Union Award to the best industrial recycling technology
- + Agrarian Engineers College of Cataluña Award
- + National Fruit Fair Award
- + Madrid City Council Award to the best environmental technology
- + Mentioned by the World Congress of Inventors to the best appropriation and valuation of residues
- + Mentioned in the International Agricultural Machinery Fair of Saratoga



PART THREE

PERFORMANCE AREAS

+ AGRICULTURE

- + Position in agriculture exploitation and cultivation of abandoned lots
- + Establishment of drainage systems
- + Establishment of irrigation systems
- + Development, key in hand, of integrated agriculture units
- + Development of cattle feed units
- + Chicken Operations
- + Grain factories
- + Organic fertilizer factories
- + Transformative industries of agricultural and cattle products

+ LABORATORY DESIGN AND ERECTION

- + To-date the following laboratories have been erected:
- + National Environmental Analysis Laboratory. Agriculture Ministry (Spain)
- + Regional Laboratory of Latin America for the Environment (project developed in Mexico)
- + CIS Technology Laboratory (Spain)
- + General Conserver Laboratories (Spain, France)
- + National Laboratories of the Ministry of Agriculture (Anglola)
- + Laboratories of the Europurines factories (Spain)

+ KEY IN HAND ERRECTIONS

- + Logistics: Construction and erecting of grocery stores
- + Boiler making
- + All kinds of factories
- + Storage
- + Industrial Sanitation

+ CONSTRUCTION AND INFRASTRUCTURE

- + Highways
- + Urbanizations
- + Hydraulic Works (canals, siphons, irrigation systems, etc.)
- + Industrial ships

- + **APPLIED INVESTIGATION**
 - + New technologies design
 - + Industrial problem resolution
 - + Yield optimization
 - + Applied environmental engineering
 - + Applied agrarian investigation

- + **MINING**
 - + Mining Investigation
 - + Investigation of quarries
 - + Underground Studies
 - + Hydrogeology

- + **ENGINEERING OF THE ENVIRONMENT**
 - + Base studies
 - + Atmospheric contamination
 - + Waste waters
 - + Industrial Activities Contamination
 - + Industrial waste
 - + Urban waste
 - + Nuclear activities
 - + Integral development of lots
 - + Environmental management systems

- + **FORMATION**
 - + Specialized environmental technologies
 - + Applied environmental engineering
 - + Water treatments by ecological techniques
 - + Applied environmental management

- + **TECHNICAL PUBLICATIONS**
 - + 24 Books published to-date
 - + 4 books pending publication



PART FOUR:

HIGH-LEVEL BANK AND LARGE INDUSTRIAL GROUP CONSULTATION AREAS. SPECIFIC PROSPECTIVE ANALYSIS

- + WORLD-WIDE EXPANTION OF THE ECONOMY AND ENVIRONMENT INDUSTRIES: REAL AND PROSPECTIVE**
 - + Business relations with the environment
 - + Competition
 - + Of the Businesses
 - + Of the industrial sector
 - + International level competition
 - + Liberalization incidents about the environment
 - + Electronic sector exchanges
 - + Transportation sector incidents
 - + Agriculture sector incidents
 - + Business environmental strategies

- + ENTERPRISAL CONTEXT IN THE EUROPEAN UNION**
 - + Supranational Organizations Influence
 - + Business consequences
 - + Business resources
 - + Green strategies for businesses

- + ENVIRONMENTAL FORECASTS FOR BUSINESSES**
 - + Decentralization
 - + Management forecasts
 - + Situation forecasts
 - + Investment forecasts
 - + Legislation forecasts
 - + Strategic forecasts

- + **ENVIRONMENTAL AUDITS**
 - + Of conformity with the prevailing norms: supervising businesses
 - + Of Mergers: Risks that can be run
 - + Company Takeovers: Risks that can be run
 - + Of acquisitions: Risks that can be run
 - + Of accidents: Causes and responsibilities (to-date we have done Audits, Studies, and Legal Peritages in the cases of the Prestige, mad cows, Torrey Canyon, Aznalcollar, Canal de Isabel II, etc.)
 - + Of responsibilities: Wastes, emissions, etc.

- + **ENVIRONMENTAL INSURANCE**
 - + Civil contamination responsibility
 - + Insurance Conditions
 - + Risk coverage
 - + Clauses of coverage
 - + Customized policies

- + **ENVIRONMENTAL MANAGEMENT OF THE BUSINESSES**
 - + Implantation of environmental management systems according to the norm UNE-EN ISO 14.001

- + **THE COMPANIES IN FRONT OF THE SUSTAINABLE DEVELOPMENT. FORECASTS.**
 - + Economic treatment
 - + Instruments
 - + Ecological economy and environmental economy: The new criteria.

- + **INSTRUMENTS OF ENVIRONMENTAL MANAGEMENT FOR BUSINESSES**
 - + Human resources
 - + Administrative Documentation
 - + Environmental plans
 - + Audits
 - + Life cycle analysis
 - + Communication

- + **CONSULTATION OF ENVIRONMENTAL INSTALLATIONS: WASTE PURIFICATION, EMISSIONS CONTROL, WASTE MANAGEMENT, ETC.**
 - + Analysis of possibilities
 - + Deciding on the most appropriate solution
 - + Under the costs point-of-view
 - + Under the legal point-of-view
 - + Under the ecological point-of-view
 - + Under the management point-of-view
 - + Design and definition of technologies specific to the treatment of industrial waste

- + **RESPONSABILITIES OF THE ENVIRONMENTAL SUBJECT**
 - + Civil responsibility
 - + Penal responsibility
 - + Industrial responsibility
 - + Responsibility for activities
- + **INVESTEMENTS AND SELECTION OF INDUSTRIAL TECHNOLOGIES. THE DIRTY SYSTEMS**
 - + Utility
 - + Investment decision
 - + Optimization of emission rights, of waste, etc.
 - + Assistance in the special decision
 - + Multicritical analysis
- + **INTRODUCTION OF NORM ISO 14.001**
- + **ECOLOGICAL PURIFIERS OF LOW INSTALLATION COST AND MINIMUM MAINTENANCE COST OR RENTABLE MAINTENANCE**
- + **SPECIAL STRATEGIES**
 - + Ecoproducts
 - + Life cycle
 - + Ecological etiquette
 - + Bottles and packaging
 - + Publicity and ecological marketing
 - + Economic models, of market and of commerce
 - + Economic and tourism models
 - + Management and treatment of heavy metals in the environment
 - + Integral management of industrial waste waters
 - + Prospective analysis of any sector of enterprisal activity
- + **PROSPECTIVE FORECAST CONSULTATION**
 - + Future contamination and new propositions. New systems of fighting
 - + The future of resources
 - + Minerals
 - + Limits
 - + Substitution
 - + The future of water. Forecasts
 - + Economic development and the environment. Forecast
 - + Industrial development in the future
 - + The future of energy. Forecasts
 - + The future of transportation
 - + The future of waste
 - + The technology of the future
 - + Tourism in the future
 - + The future environmental economy
 - + The future environmental economy of businesses.



CURRICULUM VITAE

MARIANO SEOÁNEZ CALVO

DR. DE MONTES, ENGINEER. SPECIALIST IN ENVIRONMENTAL CONTAMINATION ENGINEERING

AGE: 61 years.

LANGUAGES: French, English, German, Portuguese.

GRANTS: WORLD BANK, OCDE, EISENHOWER in France, Switzerland, Germany and USA during various years.

JOBS PERFORMED:

- + Investigator, by opposition, specialist in environmental deflections, National Institute of Agrarian Investigations.
- + Director (and creator) of the National Environmental Analysis Department (Ministry of Agriculture).
- + Coordinator in Spain of the Animal Waste Network of the FAO.
- + Advisor to the Gabinete Technician of the Ministry of Agriculture of Spain.
- + Technical Advisor to the Government of Mexico.
- + Technical Advisor to the Government of Venezuela.
- + Technical Advisor to the Government of the Republic of the Ukraine.
- + Technical Advisor to the Government of the Republic of Angola.
- + President of various Environmental Engineering companies.

CURRENT FUNCTION:

Scientific advisor, Private Consultant and Coordinator of multidisciplinary design equipment and execution of Environmental Engineering Projects and Installations, as well as high level courses and Environmental Engineering Masters programs.

FINISHED PROJECTS

More than 400 Environmental Engineering Projects realized in Spain, Mexico, Bolivia, USA, France, Switzerland, Portugal, Angola and Venezuela.

BOOKS PUBLISHED:

- + The Environment, Atmospheric Contamination and Vegetation. Ed. J.V.H. Madrid. 1972.
- + Agrarian Contamination. INIA. Madrid. 1977.
- + Environmental Contamination. New technical and legal plans. National Institute of Criminology- Complutense University. 1978.
- + Agrarian Appropriation and Treatment of Urban Waste Waters. INIA. Madrid. 1978.
- + Agrarian Contamination. Bibliographic notes from CIFCA. (PNUMA). 1981.
- + Environmental Treatment. CEOTMA-INIA-ICONA. Polytechnic University of Madrid. 1981.
- + Planification and Control of Environmental Contamination. Itsemap-Mapfre. 1985.
- + Natural technologies for the use and treatment of urban waste waters. Applied Environmental Engineering. Mundi Prensas 1995.
- + Environmental Audits and Environmental Company Management. (Empresarial ecoauditing and ecomanagement), Mundi Prensas. 1996.
- + Industrial Ecology: Environmental Engineering applied to industry and business. Manual for environmental responsibilities. 2nd Edition 1997. Mundi Prensas.
- + Environmental and Contamination Dictionary (definitions in Spanish, with translations in French and English), More than 70,000 exceptions. Mundi Prensas. 2nd Edition 1999.
- + Environmental Engineering applied to the Continental Environment. 2nd Edition 1999. Mundi Prensas.
- + The Environment in Public Opinion. Mundi Prensas. 1997.
- + Applied Environmental Engineering. Practical cases. Mundi Prensas. 1997.
- + Environment and Development. Mundi Prensas. 1998.
- + Environmental Engineering applied to industrial reconversion and the restoration of degraded industrial landscapes. Practical cases. Mundi Prensas. 1998.
- + Ground contamination: Studies, treatment and management. Mundi Prensas. 1999.
- + Waste waters: Treatment of artificial molds. Scientific fundamentals. Technologies. Design. Mundi Prensas. 1999.
- + Manual of business environmental management: Systems of environmental management, environmental audits, evaluations of environmental impact and other strategies. Mundi Prensas. 1999.
- + Waste: Problematic, description, management, appropriation and destruction. Mundi Prensas. 1999.
- + Treatment of recycled and recuperated waste products. Mundi Prensas. 2000.
- + Manual of marine contamination and its restoration. Mundi Prensas. 2000.
- + Treatment of urban environmental management. Mundi Prensas. 2001.
- + Treatment of climatologic applied to environmental engineering. Climatic analysis. Use of climatic analysis in environmental studies. Mundi Prensas. 2002.
- + Treatment of atmospheric contamination: Problems, treatments and management. Mundi Prensas. 2002.
- + Manual of treatment, recycling, appropriation and management of wastewaters of agro alimentacion industries. Mundi Prensas. 2003.

COURSES AND MASTERS GIVEN:

THE MOST RELEVANT ONES ARE:

- + Environmental Contamination Course. Suffolk University, Madrid. 1995.
- + Water Contamination Course. 1996. Superior Technical School of Agronomic Engineers of Cordoba.
- + Masters in Environmental Engineering. Repeated during the academic of 1992/93 through 1995/97. Superior Technical School of Engineers. Polytechnic University. Madrid.
- + Masters in Environmental Management and Engineering. Repeated during the academic years of 1996/97 through 1997/98. European Business School (ESNE), Salamanca.
- + Course of the evaluation of environmental impact on agrarian and agro industrial activities. Official College of Agronomic Engineers of Castilla and Leon and Cantabria. Zamora. 1997.
- + Masters in Environmental Management at the School of High Direction and Administration of Businesses (EDAE), Business Commerce Organization of Lugo. 1997.
- + Courses about landscape restoration and instruments of environmental management. University of Valladolid. ITAGRA (Technical Agrarian and Alimentation Institute), 1997.
- + Course about Environmental Management of Solid Wastes. Central University of Francisco of Vitoria. Complutense University. 1998. Madrid.
- + Course of ground contamination. Exploitative. 1998. Jaen.
- + Masters in Management and Engineering of the Environment. Commerce Organization of Lugo. 1997/98.
- + Course of business Environmental Management. Central University of Francisco of Vitoria. Complutense University. Repeated since 1999.
- + Masters in Management and Engineering of the Environment. 1999/2000. Commerce and Industry Organization. The Ferrol.
- + Course of Environmental Contamination. 1981. Independent University of Mexico. School of Architecture.
- + Masters in Applied Environmental Engineering. Repeated since 1998. Private University of Santa Cruz (UPSA), Bolivia.
- + Course of technologies and management of solid waste. 2000. Private University of Santa Cruz (UPSA), Bolivia.
- + Course of energy and the environment. 2000. Private University of Santa Cruz (UPSA), Bolivia.
- + Course of municipal environment management. 2000. Private University of Santa Cruz (UPSA), Bolivia.
- + Masters in Applied Environmental Engineering. 2000/2001. Private University of Santa Cruz (UPSA), Bolivia.
- + Practical Course of business environmental management. 2000/2001. Central University of Francisco of Citoria. Complutense University.
- + Masters in integral management of the environment. Repeated since 1992. European Business School. Madrid.

AWARDS AND HONORARY MENTIONS:

- + Doctoral Thesis presented by Spain as world-level model in the General University Directors Conference celebrated in Mainau (Germany) 1973.
- + National Agrarian Investigation Award. 1978.
- + United Nations Award for the best Latin American Environmental Engineering Project. 1981.
- + National Award to the best technical book "The Agrarian Contamination". 1997.
- + Award of the European Union to the best Physics study with in the territory. 1994.
- + Award of the College of Agronomical Engineers of Cataluna. 1978.
- + Award to the National Agricultural And Fruits Fair of San Miguel (Lerida).