Personal Information:-

Madhavan Natarajan
nmadhavan@ucscalumni.com
408-726-8063
38675 Paseo Padre Pkwy, #112, Fremont, CA 94536-6161 US

Current Study:-

6/2007 Certificate in Environmental Health and Safety Management
University of California Santa Cruz Extension, Cupertino, California, US
Units: 47.1 GPA: 3.21 out of 4.0
Major: Hazardous Material Management; Occupational Health and Safety

Relevant Coursework and Certifications: 40-Hour Hazardous Waste Operations and Emergency Response Training (Federal OSHA, 29 CFR §1910.120 Training). During the one year course work familiar with various federal and state regulations on hazardous materials, occupational health and safety. The regulations practiced on course are 29 CFR §1910; 40 CFR protection of environment and 8 CCR on occupational health and safety; 40 CFR § 86.521–90 Hydrocarbon analyzer calibration; 40 CFR § 86.1324–84 Carbon dioxide analyzer calibration; NIOSH Manual of Analytical Methods (NMAM); Combustible Gas Detection; Gas Sensor Calibration; Correction factors for combustible gas (LEL) sensors; Occupational Medicine Program; 40 CFR § 1910.95 Occupational Noise Exposure; Acoustics of Speech and Hearing, Sample Preparation and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique; physical quantities and corresponding SI units. Industrial Hygiene and Health, Environmental Fate of Pollutants, Bio-safety, Human Factors of Safety and Health (Ergonomics) are my favorite study subjects. Under Safety Management the terms are familiar with Blood borne pathogens, Confined space safety, Emergency action plans, Forklift safety, Hazard communication, Hearing protection and fire prevention, Injury and illness prevention programs compliance with SB 198, Lock-out/tag-out, Personal protective equipment, Respiratory protection and Safety regulations. Through the course regulatory Framework for Toxic and Hazardous Materials gained a clear knowledge on clean air and water quality act. Proposition 65, RCRA and HWCL, regulation of hazardous materials, MSDS, State and federal superfunds, Worker safety and training were paid good attention during the course. Comparison of key metrics, Conservation and alternative energy programs, Energy reduction, Recordable injury/illness rate, Need Analysis and Outline Evaluation Criteria were practiced during the course work.

Previous Education:-

9/2004 Certification in Care and Maintenance of Photographic Materials
National Research Laboratory for conservation of cultural property, Lucknow, Uttar Pradesh, India

During the program, types and factors of deterioration of photographic materials and principles and techniques of care and maintenance of photographic materials were discussed and demonstrated.

3/2002 Certification in Basics of Photography
Jawaharlal Nehru University, New Delhi, India

1/2001 Doctorates in Environmental Chemistry
Jamia Millia Islamia, New Delhi, India
Major: Groundwater, Soil Chemistry & Geology

Title of Ph.D. Thesis: Environmental chemistry of fluoride and related elements in groundwater and associated soil of Ajmer district, Rajasthan, India.

Knowledge of environmental field activities (e.g., sampling and analysis of Air, Soil, Plants and Water; remediation; core sampling of river and estuarine; sampling of groundwater monitoring wells) - (e.g., Arsenic, Defluoridation, Fresh water, Groundwater, Mercury, Dissolved Organic carbon, Dissolved Organic Phosphorus, Particle size analysis, Sediment & Soil analysis, Suspend Sediments, Total Organic Carbon, Total Organic Phosphorus)
pH, Eh (ORP, or Redox), EC, DO
Alkali earth metals (Mg, Ca, Sr, Ba)
Alkali metals (Li, Na, K)
Halogens (F, Cl, Br)
Non-Metals (As, C, dissolved H_4SiO_4, NO_3N, PO_4P, SO_4)
Transition metals (Cr, Mo, Mn, Fe, Co, Ni, Cu, Zn, Cd, Hg, Pb)

Scientific Instruments Handling - AAS + Hydride Generator + Cold Vapor, AAS + Hydride Generator + Flame, AAS + Air Acetylene, AAS + N_2O Acetylene, Carbon & Sulphur Analyzer, Chloride Ion Selective Electrode, Deionizer, Double Junction Electrode, Dowex Resin, Electrical Conductivity Cell, Fluoride Ion Selective Electrode, Ion Chromatography, Nitrate Ion Selective Electrode, ORP electrode, Particle Size Analyzer, Single Junction Electrode, UV Spectrophotometer, X ray Diffraction

Information of field documentation, technical report writing and analysis skills in one or more of the above technical areas are physically powerful. Strong communication skills, team player with a strong work ethic.

Computer & Software - Data Analysis, Adobe Acrobat, Adobe Photoshop, Coral Draw, Microsoft Access, Microsoft Excel, Microsoft Office , Microsoft Outlook, Microsoft Power Point, Microsoft Windows, Microsoft Word, PHREEQC, Sigma Plot, Sigma Stat, SPSS for Windows, SYSTAT, Windows 2000, Windows 94, Windows 95, Windows XP

1/1994 Certification in Auto CAD
Regional Engineering College, Tiruchirappali, Tamil Nadu, India

The course included lectures, tutorials and practices on computers, Auto CAD and hands on experience on local area network

7/1993 Certification in French
Madurai Kamaraj University, Madurai, Tamil Nadu, India

Prescribed texts and grammar, comprehension and general composition writing

6/1992 Masters in Applied Geology
Bharathidasan University, Tiruchirappali, Tamil Nadu, India
Major: Applied Geology
Minor: Geophysics and Geochemsitry

In post graduation, Photo Geology (drainage pattern and land forms), Geomorphology, Structural Geology, Geotectonic, Indian Stratigraphy, advanced Crystallography, Optical & Descriptive Mineralogy, Igneous, Sedimentary & Metamorphic Petrology, Economic Geology, Mineral Economics & Ore Beneficiation, Geochemistry, Geophysics, marine geology, Coal & petroleum geology, Engineering Geology, Hydrology, Environmental Geology, physical oceanography, plate tectonics, remote sensing, seismology, weathering and volcanology were studied in detail. Visit as well field work was made into opencast mining and underground mining (Coal, Copper, Chromites, Iron, Mica, Lead and Zinc). During thesis work a field survey was conducted in upper cretaceous limestone formation and various marine fossils were collected physically and identified. M.Sc Thesis Title: - Fauna of Kalangudi formation, Ariyalur group, Upper Cretaceous formation, Thiruchirappalli, India

12/1990 Certification Post Graduate Diploma in Ecology & Environment
Indian Institute of Ecology and Environment, New Delhi, India

During the course, State of Indian's Environment; Population & Community Ecology, Natural Resources Conservation, Environmental Protection & Law, Environmental Impact Assessment, Pollution Monitoring and Control, Research Methodology and System Analysis were studied in detail. For award of the program, a project work on Industrial Diary effluent and its pollution was conducted and a report was submitted.

10/1988 Bachelors in Geology
Bharathidasan University, Tiruchirappali, Tamil Nadu, India
Major: Geology
Minor: Mathematics, Physics and Economics

In under graduation, geology was major subject and fully trained in different types of geological forms (fold, fault, and unconformity). Paleontology with types of fossils, Indian Stratigraphy, identification of Minerals, types of rocks (Igneous, Sedimentary and Metamorphic Petrology), mining and prospecting were studied during the bachelor’s degree. Training on survey and using of geological maps were conducted through practical. Economics, Physics and Mathematics were ancillary subjects. During the field work various forms of rocks, minerals were identified and its association, economic importance were studied.

3/1985 High School
St. Mary's Higher Secondary School, Madurai, Tamil Nadu, India
Major: Physics, Chemistry, Biology and Mathematics
Minor: Tamil & English language

Work experience:-

5/2003 – 6/2006

Research Associate

School of Environmental Sciences Jawaharlal Nehru University, New Delhi, India

Fellowship awarded by Council of Scientific and Industrial Research (CSIR) to do research on arsenic concentration in sulphide ore mining and smelting places as a source of arsenic in groundwater. Also, I did field as well sample collection in Bengal Delta Basin and found a reason for high arsenic concentration in newly built wells on Holocene sediments between river Ganges and river Mahananda. Interestingly looking dissolved silica as well acid neutralizing capacity (ANC) of Trans-Himalayan River (Indus). Earlier, I did work on mercury concentration in river sediments of Yamuna, a main tributary to river Ganges. The knowledge gain helped me to study more on Environmental Safety and Health management (EHS).

1/2002 – 4/2003

Senior Research Fellow Extended

School of Environmental Sciences Jawaharlal Nehru University, New Delhi, India

Fellowship awarded by Council of Scientific and Industrial Research (CSIR) and looked mercury and arsenic enrichment in natural environment due to metal mining in India. Afford time, supervision and guidance to various students for their Master and Doctoral programs; Prepared annual reports on the activities of various projects; prepare and develop drafts of new project proposals related to arsenic, mercury, fluoride and asbestos and assist in fundraising for approved projects.

3/2001 – 9/2001

Senior Technical Assistant

School of Environmental Sciences Jawaharlal Nehru University, New Delhi, India

Seven months relevant professional experience in the design, development and performance of work related to biogeochemistry and environmental law for India. Experience in planning and organizing international/regional conferences, workshops and training courses were taken during the period. This given me a good opportunity to work in a team and in a multicultural environment.

5/1994 – 8/1999

Research Fellow

School of Environmental Sciences Jawaharlal Nehru University, New Delhi, India

I was selected to work in a Ministry of Rural Development funded project. The main theme of the project was fluoride and related element in groundwater of an arid region (Ajmer District, Rajasthan) where drinking water scarce for million human as well domestic animals. Each year fieldwork was conducted seasonally (pre monsoon, monsoon and post monsoon). All samples were analysed immediately as soon as they were brought to the laboratory. Soil samples were fractionated (sand silt & clay) and looked for its fluoride content. Fluoride concentration was studied in groundwater samples with relation to its major

cation and anion composition. Relation also found with size of the fractionated soil fluoride versus groundwater fluoride. Statistical software was used to analyse the data (SPSS) and graphical plots were made in a Microsoft compatible packages like Excel, and Sigma Plot. Finally, the full survey report with path breaking finding was submitted to Indian government to take an appropriate solution to provide clean water for the inaccessible desert terrain. A major paper published through Royal Society of Chemistry, London. This is not an independent work and it involved a team of members including a Research Associate, a Project Director at University and a scientific advisor at Government Ministry. The project progress evaluated yearly on the basis of its achievement by furnishing compiled data, report presentation and further get extended.

Job Related Training:-

December 17-19, 2001: Training program on climate change: vulnerability Assessment and adaptation strategy at Jadavpur University, Kolkata, India.

June 16-27, 2003: Participated and completed the course on climate variability studies in the ocean. Tracing and modeling the ocean variability at Miramare, Trieste, Italy.

Sep2003-Feb2004: Took course work on hydrology at Uppsala University, Sweden.

Skill Sets:-

Among languages, Tamil is one of the classical languages and it is my mother tongue. English is my second language. Understand Malayalam, Hindi, French & Swedish language. Handle Windows NT and familiar with net working. Strong knowledge of advanced computer skills, including at strong skills in windows based word processing, spreadsheet, database; Working knowledge of basic statistics; Desirable Knowledge of geographic information systems (GIS) and statistical analysis software; Experience in early warning and remote sensing and familiarity with the speciality software applications associated with them; Familiarity with quantitative and qualitative survey techniques. Some experience in remote sensing interpretation and analysis. Having good representational skills and ability to follow and develop a given scope of work. Professional Photographer (Nikon F3) and find best pictures through Kodak TMAX 100 film. Knowledge in Handling Analytical Instruments: AAS, GC, Ion meter, Ion chromatography (HPLC) and etc. I am holding a valid driving license to drive light four wheeler as well two wheeler in India. Interested to study more on history and cultural diversity in the United States. Registered member at Audubon society to protect great natural heritage of North America and regularly participating and telling congress to take action on current advocacy campaigns. Manage to travel independently in the San Francisco Bay Area by taking major transit providers. Able to stream various online radio stations through radio locator.

Peer Reviewed Journals:-

(6) Madhavan, N and V. Subramanian (2006). Factors affecting arsenic concentration in groundwater in West Bengal. Environ. Chem. Lett. 4: 79-82. DOI: 10.1007/s10311-006-0037-2

(5) Subramanian, V., Madhavan, N., (2005). Asbestos problem in India. Lung Cancer 49 Supp. II: S9 - S12. DOI: 10.1016/j.lungcan.2005.03.003

(4) Subramanian, V., Madhavan, N., Saxena, R and Lundin, L-C. (2003). Nature of distribution of mercury in the sediments of the river Yamuna (Tributary of the Ganges), India. J. Environ. Monit., 5 (3), 427-434. DOI: 10.1039/b211263a

(3) Madhavan, N and Subramanian, V., (2002). Fluoride in fractionated soil samples of Ajmer District, Rajasthan. J. Environ. Monit., 4 (6), 821-822. DOI: 10.1039/b208151b

(2) Madhavan, N and Subramanian, V., (2001). Fluoride concentration in river waters of south Asia, Curr. Sci. 80: 1312-1319

(1) Madhavan, N and Subramanian, V. (2000). Sulphide mining as a source of arsenic in the environment, Curr. Sci., 78: 702-709

Articles Published in Books:-

(8) Subramanian, V and N. Madhavan (in revision). Arsenic in the Bengal Delta Plain, West Bengal, India and Bangladesh: An overview. In Arsenic in Soil and Groundwater Environments: Biogeochemical Interactions. Edited by P. Bhattacharya, A.B. Mukherjee, R.H. Loeppert. Series Editor: J. O. Nriagu in Trace Metals and other Contaminants in the Environment. Elsevier BV, Amsterdam.

(7) Subramanian, V., V, Ittekkot, D, Unger and N, Madhavan (2006) Silicate weathering in South Asian Tropical River Basins. In: The Silicon Cycle: Human Perturbations and Impacts on Aquatic Systems. SCOPE Series, 66. Island Press, Washington, D.C., USA, pp. 3-13. (ISBN 1-59726-115-7)

(6) Madhavan. N and V. Subramanian (2006). Environmental impact assessment including evolution of Fluoride and Arsenic contamination process in groundwater and remediation of contaminated groundwater system. In Sustainable Development and Management of Groundwater Resources, edited by M. Thangarajan, Capital Publishing Company, New Delhi. pp.128-155. (ISBN 81-85589-30-5)

(5) Madhavan, N and Subramanian, V (2003). Sulphide mining as a source of arsenic in Khetri and Zawar, Rajasthan, India. In SP9o-Trace elements issues in developing countries. Edited by G. R. Gobran and N. Lepp in Proc. 7th (ICOBTE) Intern. Conf. on the Biogeochem. of Trace Elements, Uppsala, Sweden. V.1(III), pp18-19. (ISBN 91-576-6582-6)

(4) Subramanian, V and N. Madhavan (2003). More on the arsenic problem. In SYM01p-Arsenic in soil and groundwater environment: Biogeochemical Interaction. Edited by G. R. Gobran and N. Lepp in Proc. 7th (ICOBTE) Intern. Conf. on the Biogeochem. of Trace Elements, Uppsala, Sweden. V.2, pp118-119. (ISBN 91-576-6582-6)

(3) Madhavan. N and V. Subramanian (2003). The fluoride problem in Ajmer District, Rajasthan. Recent trends in hydrogeochemistry, edited by AL.

Ramanathan and R. Ramesh, Capital Publishing Company, New Delhi. pp.167-172. (ISBN 81-85589-12-7)

(2) Subramanian. V., N. Madhavan and S. A. S. Naqvi (2002). Arsenic in Our Environment - A Critical Review. Environmental Hazards in South Asia, edited by V. Subramanian. Capital Publishing Company, New Delhi. pp.189-214. (ISBN 81-85589-05-4)

(1) Dorje Dawa and N. Madhavan (2001). Preliminary Study on Water Quality of Indus River and other Aquatic Systems in the Ladakh Himalaya. Ecohydrology, edited by V. Subramanian. Capital Publishing Company, New Delhi. pp.87-90. (ISBN 81-85589-06-2)

Seminars/Conferences/Workshops/Refresher courses etc. participated:-

(15)Madhavan, N (2007). Genesis of arsenic in Bengal Delta Plain: An overview in Indian Geological Congress (IGC- Feb. 2007), TNAU, Coimbatore, India.

(14)Madhavan, N and V. Subramanian (October 7- 8, 2004). Fluoride and arsenic content in contaminated groundwater of Rajasthan and West Bengal in national seminar on arsenic and fluoride contamination in groundwater at NERIWALM, Tezpur, India. pp.268-274.

(13)Subramanian, V and N. Madhavan (September 29 - October 2, 2004). Asbestos problem in India in IASLC Mesothelioma Workshop, Ermating, Switzerland.

(12)Madhavan, N (September 2003 to February 2004). Attended course work on Groundwater Hydrology and Hydrological Modeling, Uppsala University – Sweden.

(11)Madhavan, N and Subramanian, V (June 15-19, 2003). Sulphide mining as a source of arsenic in Khetri and Zawar, Rajasthan, India in SP9o-Trace elements issues in developing countries. Edited by G. R. Gobran and N. Lepp in Proc. 7th (ICOBTE) Intern. Conf. on the Biogeochem. of Trace Elements, Uppsala, Sweden (ISBN 91-576-6582-6). V.1(III), pp18-19.

(10)Subramanian, V and N. Madhavan (June 15-19, 2003). More on the arsenic problem in SYM01p-Arsenic in soil and groundwater environment: Biogeochemical Interaction. Edited by G. R. Gobran and N. Lepp in Proc. 7th (ICOBTE) Intern. Conf. on the Biogeochem. of Trace Elements, Uppsala, Sweden (ISBN 91-576-6582-6). V.2, pp18-19.

(9) Madhavan, N (June 2003). Attended course work on climatic change - ICTP, Trieste, Italy.

(8) Madhavan, N (May 12 – 14, 2003). Title of poster accepted for presentation, Water quality of Indus river in Ladakh Himalaya in AWRA 2003 spring specialty conference on Agricultural Hydrology and Water Quality at Kansas City, Missouri, USA.

(7) Madhavan, N (February, 1-2, 2002). Preliminary study on water quality on river Indus in National Workshop on Water Quality, ENVIS Newsletter Biogeochemistry and Environmental Law, V.8 (1), pp.7-8.

(6) Dorje Dawa and N. Madhavan (November 26 - 29, 2001). Preliminary study on water quality of Indus river and other aquatic systems in the Ladakh Himalaya in UNESCO Training workshop on Ecohydrology, ENVIS Newsletter Biogeochemistry and Environmental Law, V.7 (3), pp7.

(5) Subramanian, V and N. Madhavan (November 29- December 1 2000). Arsenic in our environment - A critical review in Proceeding of the Brain Stroming Session on the Arsenic Problem. A Joint Publication of UNESCO - ENVIS, ENVIS Center on Biogeochemistry, Jawaharlal Nehru University, New Delhi. pp.1-28.

(4) Madhavan, N and V. Subramanian (25-29 February 1999). Uptake of flurodie by activated charcoal in Proceedings of the National Semianar Environment & Health 1999. Fluoride contamiantion, Fluorosis & Defluoridation techniques. Editors. KD. Gyani, AK. Vaish and P. Vaish. Published by Society Affiliated to Research and Improvement of Tribal Areas.

(3) Subramanian, V and N. Madhavan (18-21 November 1998). Water quality assessment in Ajmer District, Rajasthan, in Proceedings of the International Seminar on Applied Hyrrogeochemistry. Organised by Department of Geology, Annamalai University, Chidambaram. pp.26.

(2) Subramanian, V and N. Madhavan (24-26, November, 1997). Soil-Bound fluoride in Ajmer district, Rajasthan in National Conference with International Participation on Environmental & Eco-Development of Pushkar valley of Rajasthan. Abstracts compiled by KC. Sharma & VP. Dixit. Maharshi Dayand Saraswati University, Ajmer, Rajasthan. pp18.

(1) Subramanian, V and N. Madhavan (16-18 February 1996). Uptake and release of fluoride by soil in Third National Water Congress, 1996. Theme Rural Water supply sustainability issues (Vol. 1). Organised by Centre for Rural Development & Technology, Indian Institute of Technology, Delhi. pp.100.

Foreign Visits:-

6/2006	University of California Extension, Santa Cruz, CA, USA
8/2005	Myanmar and Thailand
9/2003-2/2004	Uppsala University, Sweden
6/2003	International Centre Theoretical Physics, Trieste, Italy
5/2003	American Water Resources Association conference, Kansas City, Missouri, USA

List of professional societies and activities in international affairs:-

ISCA	Indian Science Congress Association
AAAS	American Association for the Advancement of Science
ACS	American Chemical Society
AWRA	American Water Resources Association
NGWA	National Groundwater Association

Desired:-

Position:	Environmental Health and Safety; Research and analysis Field
Wage:	Negotiable USD per Hour
Employment:	Full Time
Commute:	ACE, BART, Muni, & VTA
Travel:	Up to 25%
Sponsorship:	Visa/ Green Card
Relocate:	Willing to relocate

Relevant Documents: - Down loadable at www.geocitites.com/nmadhavan

Referees:-

(1) Mr. David Pais, Environmental Heath and Safety (EHS) Manager, Seagate Technology LLC, 920 Disc Drive, Scotts Valley, CA 95066, USA Tel. +1-831-439-8827 email: david.pais@seagate.com

(2) Ms. Inna Zaltsmann, University of California Extension, 10420 Bubb Road, Cupertino, CA 95014-4150, USA Tel. +1- 408-861-3821 email: ia@ucsc-extension.edu

(3) Prof. V. Subramanian, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi 110067, India Tel. +91-11-26704316 email: subrama42@yahoo.com; subra@mail.jnu.ac.in

(4) Prof. R. Ramesh, Institute for Ocean Management, Anna University, Chennai 600025, India Tel. +91-44-22300108 email: ramesh@annauniv.edu; rramesh_au@hotmail.com

(5) Dr. AL. Ramanathan, Associate Professor, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi - 110 067, India. Tel. +91-11-26704314 email: alr0400@mail.jnu.ac.in ; alrjnu@hotmail.com

(6) Dr. Rajinder Saxena, Director of Studies in Air & Water Science, Department of Earth Sciences, Uppsala University, Villavägen 16, SE-752 36 Uppsala, Sweden. Tel. +46-18-471-2251 email: Rajinder.Saxena@hyd.uu.se

(7) Dr. Indrajeet Chaubey, Associate Professor, Department of Agricultural and Biological Engineering, Purdue University, 225 S. University Street, West Lafayette, IN 47907-2093, USA. Tel. +1-765-494-5013; Fax +1-765-496-1115 email: ichaubey@purdue.edu