**Contributions of**

**Dr. Dilip B. Boralkar in the field of**

**Hazardous Waste Management**

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**(1) At Central Pollution Control Board, 1996-2003:**

Dr. D.B. Boralkar while posted as Assistant Secretary (Sr. Scientist) in Central Pollution Control Board, Delhi during 1996-2003 was Divisional Head looking after, among other things, subject of Policy & Law concerning Hazardous Waste Management (HWM). Important contributions during this period are as under:

1. **RESEARCH-BASED PUBLICATIONS:**
* Suggested protocol on survey and preparation of waste management plan for industrial estate. Encology, 10 (8), 8-12, January, 1996.
* Recovery and recycling of secondary lead and its waste disposal in India. Poster Presentation at the 6th World Congress on Integrated Resources Management, held at Geneva (Switzerland), February 12-15, 2002.
* Reprocessing of secondary zinc and environmentally sound management of wastes in India. Oral Presentation of paper in the 6th World Congress on Integrated Resources Management, held at Geneva (Switzerland), February 12-15, 2002.
1. **EXPERT COMMITTEES**
* Member of High Powered Committee on hazardous waste management under the chairmanship of Prof. M.G.K. Menon, appointed by the Government of India at the instance of the Hon’ble Supreme Court of India in the matter of CWP 657 of 1995. Final report submitted to the Court in February, 2001.
* Member of Expert Committee on hazardous wastes management appointed by the Govt. of India under the Chairmanship of Dr. R.A. Mashelkar, Director-General, Council of Scientific and Industrial Research, Govt. of India, New Delhi. (1998-99)
* Member of Expert Committee of CPCB on hazardous wastes management under the chairmanship of Shri Dilip Biswas, Chairman, CPCB. (up to 2003)
* Member of Technical Working Group (TWG) set up by Conference of Parties (CoP) to the Basel Convention on control of transboundary movement of hazardous wastes for disposal, under aegis of UNEP: Participation as member of Indian delegation deputed by the Ministry of Environment & Forests. (1997 - 2003)
* Member of Committee on Uniform Consent Procedure to be followed by the State Pollution Control Board/Pollution Control Committees set up by the Chairman, CPCB under the Chairmanship of Shri M. Devaraj, IAS, Chairman, Tamil Nadu Pollution Control Board. (final report submitted)
* Member of Committee in the Ministry of Environment & Forests on regulation of Import/Export of hazardous wastes under the chairmanship of Shri Vinod Vaish, IAS, Special Secretary, MoEF, New Delhi. (up to March 2001)
* Member of Expert Committee for facilitating the setting up of common hazardous wastes treatment and disposal facilities (CHWTSDF) set-up by the Maharashtra Industrial Development Corporation, (Government of Maharashtra), Mumbai. (1998-2003)
* Member of Expert Committee for setting up of facilities for treatment and disposal of hazardous wastes at Haldia industrial complex, West Bengal. (2001-2002)
* Member of Inter-Ministerial Committee on issues relating to TRIPS Agreement and Trade & Commerce by WTO set-up by the Ministry of Industry & Commerce, New Delhi. (2000-2003)
* Member of Expert Committee for Establishment of Common Disposal Facility for Hazardous Wastes in the State of Karnataka, set-up by the Karnataka State Pollution Control Board. (2001-2002)
* Member of Expert Committee for Establishment of Common Disposal Facility for Hazardous Wastes in the State of Punjab set-up by the Punjab State Pollution Control Board. (2001-2003)
* Member of Expert Committee for Establishment of Common Disposal Facility for Hazardous Wastes in the State of Orissa, set-up by the Orissa State Pollution Control Board. (2000-2001)
1. **TECHNICAL GUIDELINES/REPORTS**
* Guidelines for setting up of operating facility: Hazardous Waste Management,
1998-99. (CPCB Publication)
* Ready Reckoner: Hazardous Waste Management, 1998-99. (CPCB Publication)
* Code of Practice for Environmentally Sound Management of Lead-acid Batteries, Waste/used Oil and Zinc Ash/skimmings. June 2000.
* Criteria for hazardous wastes landfills, 2000-01(CPCB Publication)
* Report of the High Powered Committee on Management of Hazardous Wastes under the Chairmanship of Prof. M.G.K. Menon in the matter of Civil Writ Petition No. 657 of 1995 in the Hon'ble Supreme Court of India. Report submitted to the Hon'ble Supreme Court in January 2001.
* Guidelines for Hazardous Waste TSDF Operations for Andhra Pradesh Board, 2001-02.
* Manual for Design, Construction and Quality Control of Liners and Covers for Hazardous Waste Landfills, December, 2002. (CPCB Publication)
* Inventorisation of hazardous wastes in the State of Orissa. December, 2002. (CPCB Publication)
* Guidelines for (i) common hazardous waste incinerator. (ii) Implementation of environmentally sound technologies for re-refining/recycling of used oil/waste oil (iii) Policy on management of hazardous wastes (iv) transportation of hazardous wastes. (Drafts prepared for CPCB Publication, 2003.)
1. **TECHNICAL VISITS ABROAD**
* Member of Indian delegation attending meeting of Technical Working Group under the Basel Convention, representing Ministry of Environment & Forests, Govt. of India, Geneva, February, 1997.
* Member of Indian delegation attending 4th meeting of the Conference of Parties (CoP) to the Basel Convention held at Kuching, Malaysia, February, 1998.
* Member of Indian delegation attending joint meeting of the Technical Working group with the Consultative Sub-Group of legal an Technical experts of the Basel Convention held at Pretoria (South Africa), November, 1998.
* Member of Indian delegation attending meeting of the Technical Working Group of the Basel Convention held at Geneva, April, 1999
* Member of Indian Delegation attending 5th Conference of Parties to the Basel Convention, held at Basel (Switzerland) December 1999. *(also visited HW Incinerator of M/s CIBA at Basel)*
* Member of Study tour to Hazardous Waste Treatment, Storage and Disposal Facilities (TSDF) in Switzerland and Germany, December, 1999.
* Member of Training programme on Industrial Waste Management held at Tokyo by AOTS (Japan) – CII (New Delhi), Japan, March, 2000.
* Member of Indian delegation attending meeting of the Technical Working Group of the Basel Convention held at Geneva, October, 2000
* Training programme on inventorisation and operation of manifest system for Management of Hazardous Waste held in Germany in December, 10-22, 2001.
* Visit to Incinerator and landfill at M/s. Indaver NV, European Waste Management Centre, Antwerp, Belgium, December 20, 2001.
* Member of Indian Delegation participating in the meeting of Technical Working Group under Basel Convention held at Geneva in May 2002.
* Member of Indian Delegation participating in the 6th meeting of the Conference of Parties (CoP) to the Basel Convention held at Geneva in December, 2002
* Member of Indian Delegation participating in the 1st meeting of Open-Ended Working Group (OEWG) under the Basel Convention held at Geneva in April/May 2003.
* Member of Indian Delegationparticipating in the 2nd meeting of Open-Ended Working Group (OEWG) under the Basel Convention held at Geneva in October, 2003.
1. INTERNATIONAL ASSIGNMENT:
* UNEP – Basel Convention assignment through APCTT, New Delhi, regarding needs assessment for environmentally sound management of hazardous wastes in Nepal, completed in August, 2001.
1. **At Maharashtra Pollution Control Board, 2003-2007:**

Dr. D.B. Boralkar while posted as Member Secretary of Maharashtra Pollution Control Board, Mumbai, during 1996-2003 was Chief Executive Officer of MPCB responsible for enforcement of pollution control and other environmental protection regulations in the State of Maharashtra. This inter-alia included enforcement and management of hazardous management:

1. **EXPERT COMMITTEES**
* Member of the Monitoring Committee appointed by the Supreme Court of India for implementation of directions issued vide order dated 14.10.2003, in the matter of CWP 657 of 1995. (2003-2007)
* Chairman of Sub Committee on Gujarat appointed by the Supreme Court Monitoring Committee for implementation of directions issued vide order dated 14.10.2003, in the matter of CWP 657 of 1995. (2005-2007)
* Member of National Committee on Electronic Waste Management, Central Pollution Control Board. (2005-2007)
* Member of Special Committee appointed by the Government of Maharashtra for considering State of Maharashtra as Plastic bag free area. Nov. – Dec. 2005.
* Member of Empowered Committee for Mithi River Development and Protection Authority, 2005-2007.
* Chairman of the Expert Group on Electronic Waste Management in Maharashtra during 2006 – 2007.
* Member of Peer and Core Expert Committee on Development of Effluent and Emission Standards, CPCB. (2005-2007)
1. **TECHNICAL GUIDELINES/REPORTS**
* Guidelines for operation and maintenance of effluent treatment plants. November, 2004. (MPCB Publication)
* Guidelines for Citizens for Management of Municipal Solid Wastes (English and Marathi): (MPCB Publication) November, 2005.
* Guidelines for management and handling of mycelium wastes from bulk drug industry. (MPCB Publication) December, 2005
* Report on Mithi River Water Pollution and Recommendations for its control. (MPCB Publication), July, 2004
* Report on Pollution Study of Mithi River Basin. (MPCB Publication), June, 2006
* Suggested approach for disposal of excreta and other waste from poultry farms affected due to Bird Flue (MPCB Publication)
* Report on Status of pollution control in Slaughter Houses in Mumbai. (MPCB Publication), 2006
* Strategic Action Plan for Maharashtra Pollution Control Board under Asian Development Bank Project: TA-Cluster for Environmental Management at the State level - Strategic Action Planning for the Pollution Control Boards in India. (MPCB Publication)
* Report on Recycling of Waste Oil: Prevalent Practices and Technology Requirement, July, 2006. (MPCB Publication)
* Report on Assessment on Status of Soil, Plant and Groundwater following Land Disposal of Industrial Waste water at MIDC, Butiburi: July, 2006. (MPCB Publication)
1. **TECHNICAL VISITS ABROAD**
* Member of CII-CIDA sponsored Policy Mission to visit Canada regarding National Environment Policy and issues related to CDM during April 4-12, 2005. Delegation was led by Additional Secretary, MoEF, New Delhi.
* Delegate to 6th International Urban Air Quality Forum, Indianapolis, Indiana and Consultative Meetings with the US Environment Protection Agency at Washington, June 22-28, 2004.
* Delegate to 7th International Urban Air Quality Forum, Menniapolis, and Consultative Meetings with the US Environment Protection Agency at Washington, June 22-30, 2005.
* Delegate to Advancing Environmental Compliance and Enforcement in Asia (AECEN) Regional Forum 2006 at Hanoi, Vietnam on 4-5 December, 2006
* Delegate to BAQ – 2006 held at Yogakarta, Indonesia from December 13 to December 15, 2006
* Participation in 4th International Environment Exhibition and Conference at Abu-Dhabi from 28th to 31st January, 2007.
1. **INTERNATIONAL ASSIGNMENT:**  Assessment of Electronic Wastes in Mumbai Pune Area was completed during 2006-07. This project was financially supported by UNEP and MPCB.
2. **Awards & Appreciations**
* US-AEP Asia Environmental Partnership Environmental Leadership Award to Dr. Dilip B. Boralkar, Member Secretary, MPCB, Mumbai, in 2005.
* Dr. G. Thyagarajan, Chairman of Supreme Court Monitoring Committee for implementation of directions issued vide its order dated 14.10.2003, in the matter of CWP 657 of 1995 regarding management of hazardous wastes in his letter dated 2.8.2004 addressed to Shri A.K. Mago, IAS, Chief Secretary of Maharashtra State observed that “*We appreciate the strong and exemplary action by your State to streamline the enforcement of HW Rules and compliance of Court directions in the right earnest.”*
* Supreme Court of India in its Order dated 4.10.2004 in the matter of WP [C] No. 888/1996 regarding management of municipal solid wastes, observed that “*Unless each state creates a focused “Solid Waste Management Cell” and rewards its cities for good performance, both of which Maharashtra has done, compliance with MSW Rules seems to be an illusion”.*

**(4) During 2007-2011:**

After completion of tenure at MPCB, Dr. Boralkar joined CPCB on 1.6.2007. Then proceeded on long leave and took voluntary retirement w.e.f. 19.11.2008. Since then Dr. Boralkar is Free Lance Senior Scientist and independent counsel for environmental protection.

Dr. Boralkar has been the Expert Member of the Consultative Group of Planning Commission of India for Environment, Forests and Wildlife Sector for the 11th Five Year Plan Mid Term Appraisal Consultative Group (E&F) during the year 2009.

In July, 2010, Dr. Boralkar was invited by Shri Jairam Ramesh, Union Minister of State (I/c) Environment & Forests to Peer Review of the Report by NEERI on “Decontamination and Remediation of Union Carbide Plant Site in Bhopal.”

 In order to achieve the goals the Western Ghats Ecology Expert Panel of MoEF headed by Prof. Madhav Gadgil, Dr. Boralkar was commissioned as an Expert to prepare a paper on the theme “Industrial Pollution.“ This paper is uploaded on the website in January 2011: <http://westernghatsofindia.org>

Dr. Boralkar is also actively engaged in agriculture farming and horticulture at Aurangabad and Borala village in Hingoli Districts in Marathwada. His website is at : <http://www.boralkar.com>

**Mumbai**

**1st February, 2011**

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**Annexure III**

**US-AEP Asia Environmental Partnership**

**Environmental Leadership Award to Dr. Dilip B. Boralkar**

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