

Under the Patronage of HE Mohammad AL Mahrouqi, Chairman of PAEW Oman

Expert Workshop on Red Tides and HABs: Impact on Desalination Plants

Partners:

Wednesday, February 8th, 2012

9:00 am

Welcoming remarks



- a. Ambassador Ronald Mollinger Center Director, MEDRC
- b. HE Mohammad Al Mahrouqi, Chairman, PAEW
- c. Prof. Gary Amy, Director, WDRC KAUST
- d. Neil Palmer, CEO, NCEDA

9:20 am

Introduction and purpose of the workshop, S. McCarthy, MEDRC and Prof. David Furukawa, NCEDA



9:30 am

The Global Problem of Red Tides and Harmful Algal Blooms (HABs), Dr. Don Anderson



10:00 am

Morning break

10:15 am

Operational Experiences with Red Tide Events - Case studies



- a. Khor Fakkan RO Plant 2008 Shutdown, Electricity and Water Authority Sharjah, Engineer Redha Khathair
- b. Marine Algal Blooms and Bio-toxins of Potential Concern for Desalination Plants in the Australian Region, Gustaaf Hallegraeff
- c. 2008-2009 Red Tide in Fujeirah: Pre-treatment Trains to Cope with Algal Blooms- Herve Fajour, Veolia Environment
- d. Impact of Red Tide on Oman Desalination Plants, Dr. Hamad Al Hasni, Oman PAEW
- e. Sensitive Areas to Algal Blooms & Impact on Desalination Plants, Dr. Sophie Bertrand, Suez Degremont
- f. Red Tide Impacts on Desalination Facilities in Saudi Arabia, Dr. Nabil Nada, Acwapower
- g. UAE RO Facilities during Red Tide, MOEW UAE, Ebrahim Jamali
- h. Environmental Considerations of Red Tide and HABs Around Desalination Plants, Dr. Khalil Ammar, ICBA
- i. Red Tides and Phytoplankton in Oman, Adnan Al Ansri, SQU
- j. Red Tide Impacts on Desalination Facilities in the Mediterranean Region, Carlos Cousin, Befesa Abengoa



1:00 pm Lunch Break

2:00 pm

Scientific or Experimental Studies

- a. Direct HAB control or suppression: a status report, Dr. Don Anderson
- b. Monitoring the HABs in Oman, Dr. Hamed Al Gheilani, Ministry of Fisheries and Agriculture, Oman
- c. Marine HAB toxin removal during reverse osmosis and distillation, Dr. Don Anderson
- d. Toxin Removal, Mike Dixon, South Australian Water Corporation
- e. Potential Mitigation of Red Tide Impacts by Subsurface Intakes and Algal Toxin Passage through Desalination Process, Tom Missimer, WDRC KAUST

3:20 pm	Afternoon Break
	Scientific or experimental studies (continued)
3:45 pm	Cell Removal by DAF (Bates: Xylem/Leopold) (TBC)
4:15 pm	Transparent Exopolymeric Particles (TEP); Dr. Maria Kennedy, Loreen Villacorte, Jan Schippers, UNESCO IHE; and Prof. Harvey Winters WDRC KAUST
4:45 pm	Algal Organic Matter (AOM) Fouling of (Ceramic) Membranes, Prof. Jean Philippe Croue and Laure Dramas, WDRC KAUST
5:15 pm	End Session
7:30 pm	Reception and Dinner at the Chedi Hotel

Thursday, February 9th, 2012

08:30 am	Tom Pankratz, GWI, "A review of Red Tide Treatment Strategies for SWRO"
09:00 am	Dr. Tony Wachinski, Pall Corporation "Advanced Seawater RO Pretreatment for Red Tide Events"
09:30-11:00 am	Parallel working group discussions on Red Tide Events and Harmful Algal Blooms (biomass, extracellular organic matter, and toxins) <ol style="list-style-type: none"> 1. Assessment/characterization 2. Mitigation strategies 3. Collaborative research project ideas
11:00 am	Morning Break
11:15 – 12:45 pm	Plenary discussion of working group findings, collaborative research project ideas and next steps (Facilitators Peter Steinberg and Don Anderson)
12:45 pm	Lunch Break
1:45 pm	Continuation of plenary discussion of working group findings and identification of collaborative research project ideas and definition of next steps
3:00 pm	Closing remarks by MEDRC, NCEDA, WDRC KAUST/end of session
3:15 – 5:00 pm	Optional Networking and/or Additional Informal Discussions