

RESPONSIBLE CARE PROGRAM - COMPETENCY MAPPING, MASTERING, ANALOGY AND DEVELOPMENT (RECAP-COMMAND) - ONE OF THE SUB-COMPONENTS OF ICC'S UMBRELLA PROGRAM ON SOUND MANAGEMENT OF CHEMICALS



MR. RAVI KAPOOR,
PRESIDENT, ICC

The Indian chemical industry is projected to achieve significant growth in the coming years considering ever increasing domestic consumption patterns, besides further supported by the Government initiated Petro-Chemical and Petroleum Infrastructure Regions (PCPIRs) for

improved feed stock security to the downstream chemical industry, besides world class infrastructure with access to ports for international reach; and other trade, 'ease of doing business' initiatives.

While the organized inventory list of chemical industry is yet to commence, various Government Departments, in pursuance of their prevailing provisions of the Acts and Rules maintain the list of chemical industries, which indicates the number of chemical industries in the country are more than 45,000. While the large complexes are few, medium scale industries are more and SSIs are the highest in numbers. The geographical distribution of chemical industry reveals that maximum numbers are located in Gujarat and Maharashtra states, while there are clusters seen in Tamilnadu, Hyderabad, Vizag and scattered in other parts.

Increased public awareness coupled with judicial activism in respect of environment, safety, health, social and security concerns are indications that the projected growth rates could only be realized by synchronized infrastructure development, availability of resources, technology, competent pool of trained professionals and best management practices. Therefore 10-12 % annual growth projections of chemical industry in India demands the need for a comprehensive programme that promotes sound management of chemicals.

Keeping this dictum in the backdrop, the Indian Chemical Council initiated an umbrella programme for Sound Management of Chemicals in India. Many sub-components under this programme are planned to

cover thematic areas of concern to cover environmental, sustainability and regulatory matters.

ICC identified human resources as an effective catalytic intervention to address the challenge to mobilise a large number of chemical industries in the country towards sound management of chemicals, including small and medium scale industries. Specific interventions focused from ICC include knowledge products, competency building and bench marking of professionals.

Accordingly ICC under its Sound Management Chemicals Programme, initiated a Sub-component on RECAP-COMMAND (Responsible Care Programme: Responsible Care Programme-Competency Mapping, Mastering, Analogy and Development). This programme was conceived in July 2016, and the concept has been fine-tuned with the experts of the International Council of Chemicals Associations, American Chemistry Council, Cefic, USCSP and others, which are supporting ICC in various activities

The principle components of the RECAP-COMMAND include the following:

- To build and bench mark the capacities of professionals involved in sound management of chemicals, Responsible Care and other similar programmes
- To design & develop knowledge products
- To sensitize Government and other stake-holders of chemical Industry for coordinated efforts to advance sound management of chemicals

Many interventions to realize above three components under the sub-Component RECAP-COMMAND have been designed, which include following:

- Pursuing the Government bodies for increased acceptance and recognition to Responsible Care Programme
- Publishing revised RC 7 Codes/ Manual by integrating regulatory updates, SAICM interventions, more than a decade of implementation experience, and references of international implementation experience
- Standardisation of RC auditing, rating and review



mechanism to deal with increased number of industries

- Specific case studies for dissemination in capacity building programmes
- Publishing RC code-specific hand-books by availing Indian and international experts
- Introducing two tier system for RC implementation besides RC administration i.e. (i) certified RC Advisers to assist industries pursuing RC implementation, and (ii) empaneled RC auditors to assist ICC in verification of compliance
- Expanding ICC auditors strength and identifying code-specific core Teams
- Training of trainers
- Introducing on-line courses/ webinars
- Promoting distributed leadership programme - Identifying national, zonal and selected key chemical industrial estate level RC leaders
- RC leadership development - capacity building programmes, exposure programmes to key decision makers including govt. officers
- Recognition of excellence by instituting increased number of RC awards, code-specific certification of merits (first, second and consolation) - National and zonal level awards
- Posting many more ICC Guidance Notes (IGNs) on website, covering contemporary issues
- Publishing success stories and maintaining repository of industry experiences
- Sharing experiences across the industrial estates, states and increased visibility in international arena
- Expanding NicerGlobe features and footprint of usage, for effective implementation of distribution code, etc.

ICC secured in principle programmatic support of USCSP for activities covering Product stewardship, process safety, Security and Distribution Codes. The support is expected to cover speakers in capacity building programmes, experts to develop handbooks and specific case studies, training of trainers in various programmes etc. ICC is constantly pursuing for the support for other code-specific activities.

In pursuance of the sub-component on RECAP COMMAND, many activities are under taken, which are as follows:

- USCSP sponsored participation by Mr. Trimbak Hote, Director, RC and Mr. Vipin Doshi, Adviser, RC in IICIT organised INDO-US Workshop on Vulnerability Assessment for Weaponizable Dual Purpose Chemicals during July 28-29, 2016 at Leonia Resorts, Hyderabad.
- ICC-MPCB Workshop for Top Management on Responsible Care, held on November 11, 2016 in Presidential Hall, Vivanta by Taj President, 90 Cuffe Parade, Mumbai, India
- ICC-USCSP Workshop on "Responsible Care Programme: A Global Industry Initiative for Sound Management of Chemicals, held on November 30, 2016 in Saphaire, Taj Krishna, Hyderabad, India
- ICC-USCSP Workshop on "Emerging Challenges: Chemical Security Risk Management and Remediation of Contaminated Sites" held on December 1, 2016 in Clive Dupleix, Taj Coromandal, 37 Mahatma Gandhi Road, Chennai
- ICC-USCSP supported half-day programme on "Responsible Management of Chemicals and Wastes" in Govt. of Gujarat's Wastech 2016-International Summit & Expo "4R-The Way to Sustainability" held on December 3, 2016 in Mahatma Mandir, Gandhi Nagar, Gujarat, India

While the detailed programme of ICC-MPCB programme is covered in the December 2016 edition of the Chemical News, remaining workshops are covered in this edition which we would like to share with you.

It is indeed a compliment that we could effectively interact with regulatory State and Central Pollution Control Boards in recent times, with this momentum and support of member industries. We will continue with our efforts to promote Responsible Care Programmes and work towards a safer and cleaner chemical industry.

Wishing you all a happy, safe, healthy and secured business growth in the New Year, 2017.

- Ravi Kapoor, President, ICC

ICC-USCSP WORKSHOP ON RESPONSIBLE CARE PROGRAMME: GLOBAL INDUSTRY INITIATIVE FOR SOUND MANAGEMENT OF CHEMICALS”

ON NOVEMBER 30, 2016 IN TAJ KRISHNA, HYDERABAD
WITH THE ASSOCIATION OF

TELANGANA STATE POLLUTION CONTROL BOARD, BULK-DRUGS MANUFACTURERS ASSOCIATION,
AMERICAN CHEMISTRY COUNCIL AND SANDIA NATIONAL LABORATORY.

Responsible Care Programme in Andhra Pradesh and Telangana regions was launched by **Sh. Ravi Kapoor**, the Hon'ble President, ICC along with the President (emeritus) of BDMA in the inaugural Session, by releasing Responsible Care Guidance Manual. Official spokes persons of Andhra Pradesh Pollution Control Board and Telangana State Pollution Control Board addressed gathering and endorsed Responsible Care for chemicals industries.

Mr. PMC Nair, Chairman-South Zone, ICC briefed the ICC initiative on Responsible Care and welcomed dignitaries and participants for the workshop.

Mr. N. Sateesh Babu, Director & Head-Environment, Sustainability and Regulatory Issues introduced Indian Chemical Council and its activities of the participants and presented Responsible Care programme in India and the way forward. His presentation highlighted the code specific coverage, procedure to obtain RC logo, mentorship programme, handholding support and the advantages of implementation of RC and recognition from various SPCBs across the country. He also mentioned that joining the RC movement now would facilitate in availing the support of ICC-USCSP programmes to align business with global priorities which avoids surprises, as in any case the Government of India is committed to Strategic Approach to International Chemicals Management (SAICM) of UNEP,

for implementation of several interventions for sound management of chemicals in coming times BY 2020. He has also mentioned that ICC is not just a certifying body, but takes the industry along the sustainability path with the involvement of other RC logo holding industries to achieve distinction of having RC logo.

Mr. Eshwar Reddy, Ex. Director, BDMA in his address emphasized the need for sound management of chemicals in chemical industries and endorsed Responsible Care programme being a comprehensive in respect of safety, health and environmental safeguards, for adoption by all the chemical industries including bulk drugs.

Mrs. Priya Sethi, USCSP in her address briefed the USCSP focused activities across the globe and specific emphasis in India through the Indian Chemical Council. She has also mentioned that USCSP is committed to support ICC for RECAP-COMMAND Programme as designed in consultation to build capacities in respect of Product stewardship, process safety, Security and distribution Code.

Mr. Narayana Reddy, President (emeritus) of BDMA in his address emphasized that growing demands of the clients for sustainability throughout the supply chain demands not only responsible manufacturing but also throughout the life cycle of chemicals. Therefore, Responsible Care is a programme designed and implemented by the chemical industries for such sound management, which is the key for sustained business survival and growth. He invited the industries to explore the same as a measure for advancing their sustainability among the chemical industries.

Mr. N. Raveendhar, Official spokesperson of Telangana State Pollution Control Board, mentioned that despite the region being a hub of synthetic organic chemical industries, hardly few industries are pursuing Responsible Care. It is the high time that industries to adopt the responsible Care programme and ensure safety, health, environment and security of chemicals in their entire life cycle. TSPCB is committed for sustainability and endorse RC programme for adoption by chemical industries and

MR. RAVI KAPOOR, HON'BLE PRESIDENT, ICC ADDRESSING THE GATHERING





DIGNITARIES JOINED PRESIDENT, ICC IN LAUNCHING OF RC PROGRAMME IN AP AND TELANGANA STATES

is open to evaluate the soft provisions extended by other SPCBs for encouraging industries in this region.

Mr. Laxminarayana, Regional Officer, Visakhapatnam, APPCB announced that it endorse responsible Care as a programme for promotion of sound management of chemicals in Andhra Pradesh and Visakhapatnam region having chemical industries has already initiated action in this regard for overall safety, health and environmental management in chemical industries. He has also invited ICC to organize a programme for the benefit of chemical industries in Visakhapatnam region.

Mr. Ravi Kapoor, President of ICC briefed the commitment of ICC in promoting Responsible Care in India and the journey which started with skepticism to a stage where the government bodies are endorsing RC by offering soft provisions and incentives. He welcomed industries from the region to join the journey towards sustainable production and management of chemicals. Implementation of RC programme has substantial influence on ethics that renews the way industry responds to the nature, surrounding public and the value chain as a

whole, which is not only essential for individual business growth but also to achieve projected 10% annual growth of chemical industry in the coming decade. He released RC Guidance Manuals for use by this region and assured to extend handholding support to the industries that commit for Responsible Care Programme. Mr. Kapoor thanked the APPCB and TSPCB for their support to ICC and for endorsing Responsible Care programme as an essential sustainable initiative for chemical industries in this region and for advising industries to adopt the same.

Mr. Daniel Roczniak, Sr. Director, ACC given key note address on global evolution of responsible care programme, presented several codes under the RC and became panel member for discussions and also chaired the a Session. He took the participants to walk along the evolution of RC to the current stage and how the programme works from the global wisdom to plant level implementation and players involved at various stages, for overall benefit of the chemical industries. He also clarified the relative comparison of various ISO Certifications and GRI with respect of RC and emphasized that RC is



SPEAKERS AND DELEGATES

designed by the chemical industry for chemical industry based on the years of experience hence is more practical and achievable to meet overall sound management of chemicals.

Dr. Phillippe Mullier, former VP-EHS of Solvay, presented risk based management of contaminated sites and chaired the Session. He has covered concepts of source, pathway and receptor approach and arriving at conceptual site model based on field investigations and site-specific environmental and geophysical setting. He has covered several in-situ and ex-situ opportunities for remediation of contaminated sites and presented several case studies across the Europe demonstrating cost-effective site-specific applications. His presentation as a part of Pollution prevention Code has been very well received by the participants, particularly in the context of draft proposed regulations in the country for remediation of contaminated sites.

Dr. Cecilia Williams, Principle Scientist, Sandia National Laboratory, USA presented concept of safety and security management and need for integrated approach. Her presentation covered internal and external threats, prioritization of chemicals from threat perception, inventory management, security vulnerability assessment and management of security risks in entire life cycle of chemicals. She has actively involved participants in the discussions and driven them towards integration of security as an essential priority for chemical risk reduction by the industries.

Mr. Saravanan, Head-EHS, Hikel has presented the journey of getting RC logo by Hikel by citing number of case references. His address involved all the industry participants in discussions on various aspects of Codes and the difference that we achieve after implementation. The practical site references of the raised issues by the participants, has effectively facilitated them to realize the systematic and comprehensive gap assessment

followed by implementation support that ICC auditing Teams facilitate. This case study from their own industry category has offered comfort and cleared concerns on procedures and auditing etc. and encouraged industries that it is not just acquiring certificate but the journey that ICC is driving towards Safety, health, environment and security which ultimately awards RC logo a distinction from others.

Mr. H. S. Karangle, Director General, ICC submitted vote of thanks and in his address thanked both Member secretaries of APPCB and TSPCB for sending their officers as a mark of endorsement to ICC and the Responsible Care programme and thanked president (emeritus) and Ex. Director of BDMA for their active integration. He has thanked Mrs. Priya Sethi, USCSP, for attending all the way from USA and for supporting the event to launch RC in this region, and Mr. Daniel Rocznik, American Chemistry Council, Mr. Phillippe Mullier, Belgium and Mrs. Cecelia from the Sandia National Laboratory, USA and Mr. Saravanan from the Hikel, an active industry of ICC for their professional presentations, which have effectively facilitated participants to interact on various issues, which could be comprehensively addressed by systematic RC programme.

We are pleased to inform that 63 delegates registered for the programme besides special invitees and speakers. The participants awarded 96.5% success rating to the Workshop, which itself is a **remarkable response** from the industries in this region for Responsible Care programme.

The programme ended with thanks to all the dignitaries, speakers, participants and special thanks to USCSP for supporting the event to launch RC programme in the region.

Mr. PMC Nair and Mr. Sateesh Babu assured continued support to industries on behalf of ICC in this region and thanked the sincere assistance of Mr. Gireesan, ICC-CWC Help-Desk in Hyderabad.

ICC-USCSP WORKSHOP ON EMERGING CHALLENGES: CHEMICAL SECURITY RISK MANAGEMENT AND REMEDIATION OF CONTAMINATED SITES”

ORGANIZED ON DECEMBER 1, 2016 IN CLIVE DUPLEIX, TAJ COROMANDAL, 37 MAHATMA GANDHI ROAD, CHENNAI

Chemicals can be misused by individuals and groups with malicious intent i.e. i) Weapons of war; ii) Terrorist weapons; and iii) Criminal weapons. This very potential of the chemicals can be reduced by a structured approach for security management, that explores threat analysis, chemical risk based prioritization, inventory management, security risk and vulnerability assessment and security enhancement in respect of physical, personal, transportation and information. The Workshop is designed to facilitate participants to understand

importance and approach for chemical security risk assessment and management.

The Central Pollution Control Board brought out a document on "Implementing Liabilities for Environmental Damages due to Spillage/Fire/Illegal Disposal of Hazardous Waste and Penalty". Some important provisions of this document includes retroactive considerations, purview of civil and criminal domain, thresholds to trigger environmental site assessments, direct and indirect impacts, enormous powers to local officer to judge level of concern,

MR. VIJAY SANKAR, VICE PRESIDENT, ICC WELCOMING MR. KUMAR, TNPCB





ACC AWARDING RC FLAG TO THIRUMALAI CHEMICALS

provisions for collecting more money etc.

Subsequently, the Government of India brought out draft Environment Laws (Amendment) Bill, 2015 on October 7, 2015. The said draft was discussed at length by the chemical industry and ICC collectively represented the reservations of the industry to the MoEF&CC, for factoring them.

While this draft is still with MoEF&CC, the provisions of the draft demands additional knowledge to the industry in contamination of soils and ground waters for cleanup. ICC considered this as one of the priority areas for dissemination of western experiences on the subject from concepts to case studies. The Workshop is designed to benefit the participants in understanding risk based remediation of contaminated sites, which is essential for all chemical operating facilities, if the proposed threshold quantities of spills are of any indication.

With this background, ICC organized a Workshop on "Emerging Challenges: Chemical Security Risk Management and Remediation of Contaminated Sites" in Chennai on December 1, 2016 which was inaugurated by Mr. Vijay Sankar, VP-ICC and dignitaries addressed the gathering in the inaugural session includes Sh. R. Parthasarathy, former President, ICC & Mr. R. Kumar, Addl. Chief Engineer, Tamilnadu Pollution Control Board, Mr. PMC Nair, Chairman, ICC South Zone, Mr. Sateesh Babu, Director, ICC and Sh. Gokhale, Secretary General, ICC.

Mr. PMC Nair welcomed the dignitaries, participants

and highlighted the emerging challenges regarding chemical security and remediation of contaminated sites. ICC in its continued pursuance to the industry needs, designed the workshop to update industry on upcoming regulations, international protocols and need for positioning chemical industry for the same.

Mr. Daniel Rocznik gave a keynote address on global evolution of chemical security programme and

MR. R. PARTHASARATHY, FORMER PRESIDENT, ICC, ADDRESSING THE GATHERING



how it is integrated into Responsible Care Programme for chemical security risk management.

Mr. Sateesh Babu, ICC precisely introduced ICC and its activities and presented the premise for the Workshop by highlighting chemical industry concerns attached to chemical security & remediation of contaminated sites and interventions planned by ICC. He has mentioned that ICC retained its commitment to bring experts on contemporary matters concerned to chemical industry for up-dation of knowledge and invited active interaction with international subject matter experts in the Workshop.

Mr. Vijay Sankar, VP, ICC highlighted that ICC is uniquely positioned to voice the concerns of chemical industry in India covering all sectors from the oil refineries to fine chemicals. To further strengthen its position, we welcome integration of other local, regional and national associations. He welcomed the Manali Industry association as an associate member and asked Southern Zonal Committee to integrate representation from all the segments and regions for taking interventions accordingly. He has also mentioned that ICC is positioning itself with various ministries and recently coordinated the visit of Hon'ble Union State Minister for Chemicals and Fertilizers, in Chennai and appraised chemical industry concerns to explore possible relief. He has thanked Mr. Kumar, TNPCB for their continued support to ICC and its activities in Tamilnadu for the benefit of chemical industries. He thanked international speakers for making it possible to visit Chennai and for their support in sharing the knowledge on chemical security and contamination risk management.

Mr. R. Parthasarathy, former President, ICC highlighted the importance of chemical security as not only external but internal threats due to disgruntled employees and others are of importance for internalization in the risk management plan. His address highlighted that security Code would eventually become a part of the Responsible Care programme in the coming years and hence such programmes facilitate the industries to prepare towards that objective. He also mentioned that the draft National Environmental Amendments Act has many provisions for cleanup of the contaminated sites. While ICC strongly represented on specific provisions of the draft regulation, it is important to realize the line of thinking of the Government and for preparedness in that domain. The specific efforts of ICC in the region, not only through workshops but also on several environmental issues in the recent times is encouraging and at the same time the industry now needs to come together for taking challenges collectively in the interest of industry and environment. He also welcomed ICC Team including international experts to Ranipet and to interact with the industry and



to see the Dumpsite for finding the opportunities to resolve the long pending liability on environment.

Mr. Kumar, TNPCB in his address welcomed ICC initiatives in this region and workshops on contemporary issues for the benefit of industry. He has highlighted that each product and process material balance be established and all the rejects/un-converted materials be managed in such way that least amount of rejects are discharged within the stipulated standards. He has specifically mentioned that Directorate of ICC may recognize the specific measures implemented in Tamilnadu by TNPCB such as RO rejects transportation through pipes to other locations for re-use. The green chemistry and cleaner production are the way forward to avoid subsequent overall chemicals risk management. He has assured participation of TNPCB in ICC Team visit to Ranipet on subsequent day for interacting with local industries and to ascertain the status of dump and surroundings.

Mr. Surianarayanan, Chairman, ICC South Zone EHS Committee, submitted vote of thanks to the dignitaries and participants. He also mentioned that many EHS programmes are being regularly conducted in the region for the benefit of industry and invited active participation.

Dr. Cecilia Williams, Principle Scientist, Sandia National Laboratory, USA presented concept of safety and security management and need for integrated approach. Her presentation covered internal and external threats, prioritization of chemicals from threat perception, inventory management, security vulnerability assessment and management of security risks in entire life cycle of chemicals. She has actively involved participants in the discussions and driven them towards integration of security as an essential priority for chemical risk reduction by the industries.

Dr. Phillippe Mullier, former VP-EHS of Solvay,

presented approach for risk based management of contaminated sites. He has covered concepts of source, pathway and receptor approach and arriving at conceptual site model based on field investigations and site-specific environmental and geophysical setting. He has covered procedures for assessment of contamination of soil and ground water profiles, data requirements, investigation procedures etc. Subsequently, several in-situ and ex-situ opportunities for remediation of contaminated sites and presented several case studies across the Europe demonstrating cost-effective site-specific applications. His presentation as a part of Pollution prevention Code has been very well received by the participants, and many questions were raised by the participants on the choice of technologies and case studies, in particular raised Ranipet Contaminated site related issues.

Mr. Samrat Basak, Partner, ERM has presented the detailed investigations carried out in Ranipet in and around the Hexavalent chromium bearing dumpsite. He has also presented various technologies applied by ERM in India for remediation and closure of the dump-sites/contaminated sites. He has mentioned that the findings of the investigations are being compiled for drawing inferences, which will be shared after discussing with the CPCB and TNPCCB. However, the presentation is welcomed by the participants as an out-come of the initiative of CPCB with the involvement of TNPCCB for remediation of the contaminated site. Participants asked many questions and suggested additional site-specific facts for internalization in the process of appropriate decision making. As such it

has been opined that the findings of the studies may be shared subsequently, for simultaneous evaluation by the industries for providing possible technical views for arriving at cost-effective solutions, in any case the studies are welcome and industry is keen to get the site cleaned-up, as it is long pending liability on environment.

Mr. Krishnamurthy, Member Executive Committee of ICC chaired the Session and steered the healthy discussions on the studies conducted on the contaminated site in Ranipet, among the consultant, international experts and the participants. He has concluded the Session by thanking ERM and participants and suggested to exchange information subsequently, so that appropriate solution could be arrived amicably, to clean up the site.

Mr. PMC Nair thanked all the speakers and participants on behalf of ICC and assured that active participation from the industries in ICC programmes will encourage conducting such programmes in future. Participants thanked ICC for arranging such knowledge sharing workshops and thanked Mr. Kalayanaraman, Regional Secretary for all his local efforts.

ICC with the support of USCSP introduced chemical security risk management for first time in southern region of the country. About 50 professionals could avail the opportunity to hear and deliberate on emerging challenges focusing on Security and remediation of contaminated sites with specific reference to hexavalent Chromium bearing waste, a proven carcinogen. The participants awarded 89.7% success rating to the Workshop.

A PART VIEW OF THE DELEGATES





ICC'S TEAM ASCERTAINING THE DUMP-SITE DATA FROM INDUSTRIES AND TNPCB (FROM LEFT TO RIGHT) MR. DANIEL ROCZNIAK, ACC; MR. CHANDRASEKHAR, TNPCB; MR. SATEESH BABU, ICC, MR. KALYANARAMAN, ICC; LOCAL INDUSTRY REPRESENTATIVES; DR. PHILIPPE MULLIER, (BELGIUM)

ICC TEAM'S VISIT TO RANIPET TO ASCERTAIN CONDITION OF THE HEXAVALENT CHROMIUM BEARING DUMPSITE BY INTERACTING WITH LOCAL INDUSTRY AND SURROUNDINGS ON DECEMBER 2, 2016

The Team of the Indian Chemical Council met then Chairman of TNPCB in the month of January 2016 and requested for remediation of the hexavalent chromium dumpsite in Ranipet, as it is the principle cause of ground water contamination in the estate, which led to imposition of moratorium on expansion and modernization.

Subsequently, treatability studies conducted by ERM, a consultant engaged by CPCB, regarding Ranipet dumpsite has been forwarded by TNPCB to ICC for review and to offer views. ICC reviewed and found that the treatability studies of the groundwater taken from the immediate vicinity of the dumpsite could not be treated to the level of general standards of the Govt. of India for treated wastewater quality. Besides, the concerns of the local industry on the dumpsite were also forwarded for the consideration of TNPCB and asked for findings of investigations details of investigations and findings for review of the available choices for cleanup of the site.

ICC considered remediation of contaminated sites as one of the priority concern, in view of the proposed regulations in India for cleanup of the soils and ground waters. Accordingly, ICC and GPCB jointly organized 3 workshops in Gujarat.

Considering the prevailing conditions in Ranipet, and severity of hexavalent chromium on health, it has been decided to have awareness programme in this region. Accordingly, a Workshop with the USCSP has been organized to impart Chemical security risk and remediation of contaminated sites as emerging challenges for the chemical industry. There were detailed presentations by the international subject matter experts on both topics and ERM presented details of investigations conducted in study

area of the dumpsite in Ranipet, in the Workshop.

Subsequently, a Team of ICC led by N. Sateesh Babu, Director along with the international experts comprising Mr. Phillippe Mullier, Former VP-EHS, Solvay and Mr. Daniel Rocznik from the American Chemistry Council paid a visit to Ranipet on December 2, 2016, to ascertain the site conditions and to interact with surrounding industry representatives.

Detailed investigation findings coupled with environmental and geophysical setting is to be ascertained in order to identify the possible in-situ / ex-situ opportunities. While, the industry representatives appraised that a land piece is available adjacent to the site on up-streamside belongs which can be availed for having scientifically designed secured landfill for pacing the dump, and as such it can serve the surrounding industry for use subsequently (by quoting earlier NGRI studies). The visited Team deliberated on several possibilities that can be applied, but additional data is required to verify the suitability of the interventions and to arrive at cost-effective risk based remediation plan.

Therefore, to relieve chemical industries in the Ranipet industrial estate, it is important to clean up the site, by exploring appropriate interventions. Thanks to CPCB for initiating pre-remedial investigations and proposing to engage suitable contractor for cleanup. The industry is curious to know the approach being considered by the Government in order to ensure that liability due to dump is cleared forever.

ERM is yet to share the findings of investigations for providing the views of for appropriately factoring in the process of decision making, as the surrounding industries are the affected people due to environmental liability.

ICC-USCSP HALF-DAY PROGRAMME ON RESPONSIBLE MANAGEMENT OF CHEMICALS AND WASTES”

ON DECEMBER 3, 2016 IN “WASTECH: INTERNATIONAL SUMMIT & EXPO.” FOCUSING ON 4R-THE WAY TO SUSTAINABILITY, HELD IN GANDHINAGAR, GUJARAT ON DECEMBER 3-4, 2016

Government of Gujarat has organized “Wastech: International Summit & Expo.” focusing on 4R-The Way to Sustainability, held in Gandhinagar, Gujarat on December 3-4, 2016.

For this programme, Government of Gujarat invited ICC to take half-day session on "Responsible Management of Chemicals and Wastes", on Afternoon of the First Day, which was accepted by the Indian Chemical Council.

Mr. Agrawal, the Principal Secretary, Environment, Govt. of Gujarat, in his welcome speech of Wastech programme, did mention about RC programme being administered by the Indian Chemical Council as a commitment of the Govt. of Gujarat, and took pride in being at front end in pursuing RC by the Gujarat industries.

Indian Chemical Council organized Half-Day programme (2 technical Sessions followed by panel discussions) in Gandhi Mandir, Gandhi Nagar, Gujarat, which was attended by about 250 delegates - A massive reach-out opportunity effectively availed by ICC with the support of USCSP.

Mr. Ravi Kapoor, Hon'ble president of ICC chaired both technical Sessions and steered the panel discussions chaired by Sh. P.K. Taneja, Principle Secretary to the Govt. of Gujarat.

Mr. N. Sateesh Babu, Director, ICC presented Management of Risk in Chemical Industry: Regulatory Framework, waste Management and Responsible Care. He covered perceived risks from chemical industry, regulatory instruments, industry concerns on regulatory framework, prevailing practices in Hazardous waste management and Responsible Care (a global voluntary industry initiative being administered by ICC in India) as an integrated industry initiative for management of chemical risk in their entire life cycle.

Mr. Daniel Roczniak presented, Responsible Care as an umbrella programme that seeks sound management of chemicals globally and shared green chemistry and product labeling initiatives and experiences in USA.

Mr. Rana, Director, Heubach Colour Pvt. Ltd. presented series of cleaner production measures and successful application of circular economy concept by converting by once rejects going as a waste into a by-product and later on full-scale product having its own market.

The detailed presentation highlighted the need for process understanding, measures for higher conversion efficiencies for reduction of rejects, and closing the loop of each rejects stream by exploring the secondary value and f not treatment to meet the requirements and beyond by employing various technological interventions.

Dr. Phillippe Mullier, Former VP-EHS, Solvay presented the risk based approach for remediation of contaminated soil and ground waters, which is a focused programme of ICC in the light of recent draft regulation brought out by the Government of India. He has covered concept of source, pathway and receptor approach and arriving at conceptual site model based on field investigations and site-specific environmental and geophysical setting. He has covered procedures for assessment of contamination of soil and ground water profiles, data requirements, investigation procedures etc. Subsequently, several in-situ and ex-situ opportunities for remediation of contaminated sites and presented several case studies across the Europe demonstrating cost-effective site-specific applications.

Dr. Cecelia Williams, from Sandia National Laboratory made a detailed presentation on Safety and Security management in chemical industries. She highlighted need for integration of safety and security for overall risk

MR. RAVI KAPOOR, PRESIDENT - ICC DELIVERING THE WELCOME ADDRESS.





SESSION IN PROGRESS: SEATED ARE: MR. D. K. RANA, DIRECTOR, HEUBACH COLOUR PVT.LTD; MR. DANIEL ROCZNIAK; MR. RAVI KAPOOR AND MR. SATEESH BABU

management. Her presentation covered internal and external threats, prioritization of chemicals from threat perception, inventory management, security vulnerability assessment and management of security risks in entire life cycle of chemicals through specific interventions. She has actively involved participants in the discussions and driven them towards integration of security as an essential priority for chemical risk reduction by the industries.

There were number of questions raised by the participants, which were discussed in detail.

Subsequently, a panel discussion, which was chaired by Sh. P.K.Taneja, Addl. Chief Secretary, Industries & Mines Department, Govt. of Gujarat. Following participated as panel members:

1 Mr. Ravi Kapoor, President - ICC

2 Mr. Masood Mallick, MD - Environment Resource Management (ERM)

3 Mr. Vijay Kulkarni, Vice President, Shapoorji Pallonji Ltd.

4 Mr. Uday Bhaskar, Senior VP, Environment, Reliance Industries Ltd.

Panel discussions covered many issues concerned to sound management of chemicals throughout their life cycle. The focus is on regulations, industry practices and need for commitment to take forward Responsible Care - a comprehensive programme for risk management. Panel also clarified the position and way forward on several environmental issues raised by the participants.

This half-day programme remained another major successful programme of ICC, in Gujarat along with the Govt. of Gujarat.

THE PANELISTS AT THE SESSION: MR. UDAY BHASKAR, SR. VICE PRESIDENT, RIL; MR. MASOOD MALICK, MANAGING DIRECTOR, ERM; MR. RAVI KAPOOR; MR. P.K. TANEJA IAS, ADDL. CHIEF SECRETARY (INDUSTRY & MINES) GOVT.OF GUJARAT & MR. VIJAY KURLKARNI, VICE PRESIDENT, SHAPOORJI PALLONJI LTD.

