

**SALIENT FEATURES OF THE
ENVIRONMENTAL MANAGEMENT
PLANS/PROGRAMMES**

- ❖ CHEMFAB ALKALIS LIMITED (CCAL) was the first Membrane Chlor-Alkali Plant in India. The successful performance of CCAL under Indian condition prompted the Government of India to take a policy decision that “all future chlor alkali plants will be only with Membrane technology”. The Membrane Technology resulted in the elimination of mercury pollution and conservation of enormous amount of energy. Today, the overall GHG reduction as a result of implementing this technology in all the Chlor alkali plant sin India is approx. 14lakh tonnes of CO2 besides eliminating mercury.
- ❖ CCAL, in line with their policy of TECHNOLOGICAL DYNAMISM WITH ENVIRONMENTAL COMMITMENT, selected the non-polluting Technology for its Chlor-Alkali Plant during the year 1985.
- ❖ In addition to striving higher efficiency, Chemfab Alkalis Limited (CCAL) emphasizes protection of the environment in all activities and minimizing the impact of its business operation on the environment.
- ❖ A clearly defined EMS policy (ISO 14001) is in place from 1996. It ensures full implementation of quality and environmental control system.
- ❖ CCAL is the first Chlor-alkali Company to be certified for ISO-

14001 environment management system.

- ❖ Measures and monitors all the parameters related to environment.
- ❖ Monitors the specific consumption of raw material / chemicals and energy consumption.
- ❖ CCAL is the FIRST Chlor-alkali plant in India to prepare Carbon Footprint in 2012-13 with the help of Tata Energy Research Institute (TERI), Bangalore, and is the only Chlor-alkali industry in India to have such a report every year.
- ❖ CCAL has undertaken a study on "Carbon Sequestration potential and Bio-diversity assessment from the Plantation activities in association with TERI, New Delhi.
- ❖ The Environment Cell has twelve members on roll who are independent in monitoring of critical parameters and supporting major monitoring in ensuring eco-friendly operation of the Plant.
- ❖ CCAL has a highly sophisticated laboratory and the best in the Chlor-alkali Sector in India, accredited by NABL.
- ❖ CCAL laboratory is recognized by DuPont, USA for analysis of Chlor alkali Samples and is the only lab recognized by the agency in India
- ❖ CCAL caters the special analysis requirement of other chlor-alkali industry in India as well as overseas customers.

- ❖ The major instruments in the laboratory are:
 - ❖ UV-VIS Spectrophotometer
 - ❖ Inductively coupled plasma spectrometer
 - ❖ TOC Analyzer
 - ❖ Gas Chromatograph
 - ❖ Ion-Chromatograph
 - ❖ Online analyzer for excess NaOH/Na₂CO₃
 - ❖ Online Hardness analyzer in feed brine for Calcium and Magnesium
 - ❖ Online continuous monitoring system for process stacks and treated effluent.
 - ❖ Automatic weather monitoring station

In recognition of the stringent safety and environment control systems adopted by CCAL, has bagged numerous awards (List attached).

YEAR	CREDENTIALS
1985	First Chlor-alkali Plant in India to go for Membrane Technology eliminating the hazardous mercury and asbestos from the process. Based on the performance of Chemfab Alkalis in the year 1986, the Government of India took a policy decision that all future Chlor-alkali plants either grass root or expansion should adopt membrane cell technology only. This has saved billions of units of electricity for the country.
1988	Prestigious Federation of Indian Chambers of Commerce and Industry (FICCI) for outstanding achievement in Environmental Protection and Pollution Control. Chemfab Alkalis limited (CCAL) – pioneer in implementing environ-friendly energy saving Membrane Cell Technology, in India, eliminating hazardous mercury and asbestos from the process.
1989	Patented process for recovery of Barium Sulphate from solid waste.
1990	Excellence in Plant operation Award by M/s. Du Pont, USA.
1992	ICMA Award for Environment Control Strategies and safety in Chemical Plant.
1994	National Energy Conservation Award by Ministry of Power

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1998	Certified to ISO 14001 by LRQA for Environmental Management Systems
2002	Certified to OHSAS 18001 by BSI for Occupational Health and Safety Management System.
2002	<ul style="list-style-type: none"> ➤ Greenest Caustic – Chlorine company, with No.1 status, as rated by Centre for Science and Environment. Award presented by the present Prime Minister Dr Manmohan Singh. Eco efficiency of 94.7% while the sector average is only 52.5% ➤ Wastewater discharge is 0.13 KL/Ton while the Indian average is 2.83 KL/Ton, i.e average Indian industries' effluent discharge is 2100% more than CAL. ➤ Water consumption at CAL is 3.9KL/Ton -while Indian average is 8.4KL/Ton, i.e average~ Indian industries' water consumption is 215% more than CAL's water consumption.
2003	ICMA award for water Resource Management in Chemical Industry for the year 2002-03.
2006	Chemfab Alkalis have already implemented new technology wherein the Barium chemicals can be totally eliminated. Sodium Sulphate, is recovered as by-product, which is impurity in the salt, without any addition of chemicals.
2008	Energy Conservation Award by Bureau of Energy Efficiency, New Delhi and Renewable Energy Agency of Pondicherry.
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2012	The company on their own initiative in reducing greenhouse gases developed a patent process in reducing the Carbon-di-oxide emission from the flue gas stack. This will reduce the CO2 emission to the tune of 3600 MT per Annum which is equitant to 3600 CDM.
2013	Certificate of Merit for Water Resource Management in Chemical Industry for the year 2012 from Indian Chemical Council, Mumbai
2014	'Silver' Award for outstanding achievement in Environment Management for the year 2014 from Greentech Foundation, Delhi.
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2016	CCAL has received the GCUBE AWARD – 2016 runners up in the Level-II (< 1000 crores) - Manufacturing – Non-Metallurgical Category. The award was presented by Mr.Bhagat Singh Koshiyari - MP and former CM of Uttarakhand on 22.04.16 at the India International Centre, New Delhi.
2016	Silver' Award for outstanding achievement in Safety Management System for the year 2016 from Greentech Foundation, Delhi.
2016	CCAL has has been declared as the Winner of 'Special Commendation' for 'Golden Peacock Environment Management Award' for the year 2016, by the Awards Jury under the Chairmanship of Justice M. N. Venkatachaliah , former Chief Justice, Supreme Court of India.
2016	CII Award- EHS Excellence Award 2016-Sector Award(Chemical)-FIRST PLACE
2016	CII Award-EHS Best Practices Award 2016-Four Star Rating Award
2016	FICCI Chemicals and Petrochemicals Awards 2016- Winner –Most Environment friendly Company in India.
2016	Winner- National Energy Conservation Award by Ministry of Power
2017	Govt of Puducherry, Department of Agriculture - Farm Fest -2017-cum-XXXI Flower, Vegetable and Fruit show – First prize in Medicinal Garden and Plants
2017	Quality Assurance Laboratory of CCAL accredited by NABL in the Field of Chemical Testing
2017	CII- Environmental Best Practices Award – 2017 : “ Most Innovative Environmental Project Award ” & Most Useful Environmental Project Award ” for Biodiversity development and Assessment, Carbon Sequestration potential from plantation activities in CCAL
2017	CII- National Award for Excellence in Water Management -2017 – Identified CCAL as a "Noteworthy Water Efficient unit" in "within the fence" category
2017	National Safety Award for the performance year - 2015 – Runner up – Based on lowest average frequency rate
2017	Indian Chemical Council - CCAL permitted to use the "Responsible Care logo" for a period of three years
2017	Indian Chemical Council – ICC Award for Excellence in Management of Environment -2016
2017	Singapore Environment council-SEC Singapore Environmental Achievement award(regional)- 2017
2017	CII-ITC Centre of Excellence for Sustainable Development - CII-ITC Sustainability Awards -2017 Awarded "Commendation for Significant Achievement in

	Environment Management”.
2017	Greentrch Foundation-Green tech safety award 2017: Gold award in chemical sector for outstanding achievement in safety management.
2017	CII – SR Excellence Awards in Environment, Health And Safety - 2017 4 Star Rating For Commitment to EHS Practices.
2018	Govt of Puducherry, Department of Agriculture - Farm Fest -2018-cum-XXXII Flower, Vegetable and Fruit show – First prize in Medicinal Garden and Plants
2018	CII National Energy Efficiency Circle Competition – 2018 Winner for "The Best Managed Electrical System, Safety and Power Quality"
2018	<u>CII-SR EHS Award 2018 For Excellence in EHS Practices</u> Award 1: <u>Sectoral Award</u> - First Place in Process Industry-Chemicals/Paints/Fertilizers Award 2: <u>Rating Award</u> - Five star Rating Award among all sectors.
2018	Asia Sustainability Reporting Awards – 2018 : <u>Awarded as Finalist under the Category : Asia’s Most Transparent Report</u>
2019	<u>CII Environment Best Practices Award – 2019</u> CCAL was awarded the “Most Innovative Environmental Project” for the manufacture of soda ash from flue gas.
2019	ICC AWARD FOR EXCELLENCE IN MANAGEMNT OF HEALTH & SAFETY- 2018:CERTIFCATE OF MERIT IN CATRGORY 2.
2020	CII-Environmental best practices award 2020- :Innovative Environmental Project Award for the conversion of non-hazardous brine sludge to bricks.
2021	FICCI Chemicals and Petrochemicals Awards -2021 Award for Sustainability in Best Green Product – Conversion of Brine Sludge to Bricks.
2021	FICCI Chemicals and Petrochemicals Awards -2021 Award for Sustainability in Best Green Process – Production of Soda Ash from flue gas
2021	ICC Award for excellence in Management of Environment.
2021	FICCI Award for excellence in sustainability in chemicals(Private sector)
2021	FICCI Award for excellence in sector award(Chlor Alkali)

2023	First prize- Best Medicinal and Plants category, Department of Agriculture and Farmers welfare. Government of Puducherry.
2023	First prize- Best Ornamental Garden category, Department of Agriculture and Farmers welfare. Government of Puducherry.