GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION – INDUSTRY - 3 SECTOR)
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Dated: 10.07.2025

MINUTES OF THE 104th EXPERT APPRAISAL COMMITTEE (INDUSTRY- 3 SECTOR) MEETING HELD ON 30th June 2025- Parivesh 1.0 Portal

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)

Time: 10:30 AM onwards

(i) Opening Remarks by the Chairman

Prof. (Dr.) A.B. Pandit, Chairman welcomed the Committee members and opened the EAC meeting for further deliberations.

(ii) Details of Agenda items by the Member Secretary

The Member Secretary then apprised the Committee about the details of Agenda items to be discussed during this Expert Appraisal Committee (EAC) meeting.

(iii) Confirmation of Minutes of the 103rd EAC Meeting held on 13th June, 2025

The EAC noted that the final minutes of the above meeting were issued after incorporating the comments offered by the members and approved by the Chairman.

Agenda No. 104.1

Proposed expansion project of manufacturing of Marine Chemicals, Fertilizers, Organic Chemicals and Captive Co-Gen Power Plant at Survey No. 164, Village: Ratadia, Near, Khavda, Ta. Bhuj, Dist. Kutch, Gujarat by M/s. Solaris Chemtech Industries Ltd. – Reconsideration of Environmental Clearance

[Proposal No. IA/GJ/IND3/280064/2020, F. No. IA-J-11011/271/2020-IA-II(I)]

1. The proposal is for seeking Environmental Clearance of the project for expansion of existing production of Marine Chemicals, Fertilizers Organic Chemicals from 3005 MTPM to 112917 MTPM and Captive Co-Gen Power Plant from 7.675 MW to 33.275 MW at Survey No. 164, Village: Ratadia, Near, Khavda, Ta. Bhuj, Dist. Kutch, Gujarat by M/s. Solaris Chemtech Industries Ltd.
2. The project is covered under the Category A of item 5(a), 5(f) and 1(d) of the Schedule of Environmental Impact Assessment (EIA) Notification, 2006 and amended from time to time since the project site is located outside notified industrial area.
3. Ministry vide letter no. J-11011/400/2008-IA-II (I), dated 13.05.2009 has issued EC earlier for Expansion of Bromine Recovery & related Bromine Derivatives manufacturing in favor of M/s. Solaris Chemtech Limited. The same EC is transferred by MoEFCC in favour of M/s. Solaris Chemtech Industries Limited vide letter no. J-11011/400/2008-IA-II (I), dated 08.02.2012.

4. ToR has been issued by Ministry vide letter No. IA-J-11011/271/2020-IA-II-(I); dated 07.11.2020. The proposal was considered by EAC in its 44, 48, 52 and 87th EAC meetings held on 19.12.2022, 30 01.2023, 30.05.2023 & 21.10.2024 respectively and deferred for want of additional information. The project proposal was considered by the Expert Appraisal Committee (Industry-3) in its 104th meeting held on 30.06.2025 wherein the Project Proponent and the accredited Consultant namely M/s. San Envirotech Pvt. Ltd., Ahmedabad (NABET Accreditation Number: NABET/EIA/25-28/RA 0402, valid till 21.03.2028) made a detailed presentation on the salient features of the project and informed that:

5. Existing land area is 222578 m^2. No additional land will be required for proposed expansion. **Details/Status of Land Ownership/Land Possession:**

Sr. No.	Plot no./ Survey no./Gat no.	Plot area (Sq. m.)	Date of land allotment (if applicable)	Date of land Possession (if applicable)	Date of lease/sale deed/ land transfer (if applicable)	Validity of lease/sale deed or possession certificate	Name on the lease/sale deed Or allotment /possession certificate
1.	Survey No. 164	222578	25.02.2023	25.02.2023	--	--	Solaris Chemtech Ltd.

6. The details of products and capacity are as under:

Sr. No.	Name of the Products	Quantity (MT/Month)			Uses	Type of products	Schedule as per EIA Notification,2006
		Existing as per CCA	Proposed Addition	Total			
1	Liquid Bromine	1700.0	1375	3075	Chemical industry	Inorganic Chemical	Non-EC
2	Hydrobromic Acid (48%)	180.0	2037	2217		Inorganic Chemical	Non-EC
3	6-Chloro Hexanone	5.0	00	5.0	Chemical industry	Organic Chemicals	5(f)
4	n – Propyl Bromide	270.0	417	687	Chemical industry	Organic Chemicals	5(f)
5	n – Butyl Bromide					Organic Chemicals	5(f)
6	TBBA-Tetra Bromo Bisphenol A	850.0	0.0	850	Chemical industry	Organic Chemicals	5(f)
	HBr in TBBA (33% W/W)					Inorganic Chemical	Non-EC
7	Potassium Schoenite ($K_2SO_4.MgSO_4.6H_2O$)	0.0	29583	29583	Agriculture	Fertilizer	5(a)
8	Syngenite ($K_2SO_4.CaSO_4.H_2O$)					Fertilizer	5(a)
9	Potassium Sulphate (SOP)					Fertilizer	5(a)
10	Potassium Nitrate (KNO_3)					Fertilizer	5(a)

11	Magnesium Sulphate ($MgSO_4$)					Fertilizer	5(a)
12	Magnesium Hydroxide ($Mg(OH)_2$)	0.0	57333	57333	Chemical industry	Inorganic Chemical	Non-EC
13	Magnesium Oxide (MgO)					Inorganic Chemical	Non-EC
14	Magnesium Chloride ($MgCl_2$)					Inorganic Chemical	Non-EC
15	Enriched Mix Mineral Salt	0.0	16667	16667	Chemical industry	Inorganic Chemical	Non-EC
16	Zinc Bromide (75%)	0.0	1667	1667	Chemical industry	Inorganic Chemical	Non-EC
17	Lithium Bromide						
18	Calcium Bromide (CaBr) (52%)						
19	Calcium Bromide Solid Powder						
20	Sodium Bromide (45%)						
21	Sodium Bromide Solid Powder						
22	Di Bromo Neo Pentyl Glycol (DBNPG)	0.0	833	833	Chemical industry	Organic Chemicals	5(f)
23	2,4,6 Tri Bromo Phenol (TBP)					Organic Chemicals	5(f)
24	Deca Bromo Diphenyl Ethane (DBDPE)					Organic Chemicals	5(f)
25	Tri Bromo Neo Pentyl Alcohol (TBNPA)					Organic Chemicals	5(f)
26	Captive Co-Gen Power Plant	7.675 MW	6.4x4= 25.6 MW	33.275 MW	Captive power use	CPP	1(d)
	Total	**3005**	**109912**	**112917**			

7. Details of Certified compliance report submitted by RO, MoEF&CC.

CCR was obtained vide letter no. J-11/60-2022-IROGNR dated 05/02/2025 and Closer report of partially complied condition is awaited.
Summary of Compliance Status as per CCR dated 05.02.2025 is given below:

S. N.	Title	Number
1.	Complied	19
2.	Partially / Partly Complied	6
3.	Not Complied	--
4.	Agreed to comply by the project proponent	4
5.	Noted by the unit	--
6.	Condition not applicable to the unit	--
7.	Being complied	1
	Total Conditions	**30**

Regarding the coal dusts and ashes were spread all around the power plant area, PP informed that they have improved coal storage and handling area by way of covering coal storage area which resulted to control the spread off coal dusts and ashes around

the power plant area. Regarding installation of an additional bromine sensor at the tanker loading point, PP informed that additional bromine sensor has been installed at the tanker loading point. Regarding submission of risk assessment report, PP informed that copy of risk assessment and budget earmarked for environment management have been submitted to IRO, MoEFCC, Gandhinagar. IT was suggested to install silo for storage of fly ash. The Committee was satisfied with the response.

8. Details/Chronology of existing EC, CTO, CTE:

- 1st EC obtained vide letter no. J-11011/400/2008-IA-II(I), dated 13/05/2009 from MoEF.
- EC transfer obtained vide letter no. J-11011/400/2008-IA-II(I), dated 08/02/2012 from MoEF
- Consent to Operate obtained vide order no.: AWH: 78489, dated 28/04/2016, valid up to 22/03/2022 from GPCB.
- Consent to Operate (Renewal) obtained vide order no.: AWH: 119276, dated 13/06/2022, valid up to 22/03/2028 from GPCB

Sr. No.	Environment related Clearance/Permit Type	Granted by	Document No. & Date
1	Environment Clearance	Ministry of Environment, Forests (MoEF), Govt. of India	J-11011/400/2008-IA-II(I), dated 13/05/2009
2	Consolidated Consent & Authorization (CC&A)	Gujarat Pollution Control Board	Consent Order No. AWH: 78489, dated 28/04/2016, valid up to 22/03/2022
2	CCA renewal	Gujarat Pollution Control Board	Consent Order No. AWH: 119276, dated 13/06/2022, valid up to 22/03/2028

9. It is reported that, there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance of the project site. Pond of Khavda Village is at a distance of 2.5 km in E direction from project site. There is one Schedule-I Species found in 10 km radius namely Indian Peafowl (Pavo Cristatus). Conservation plan is submitted to the Deputy Conservator of Forest, Bhuj-Kutch on 06.12.2022 and again reminded on 23.10.2024 with an allocated budget of Rs. 1040000/-. Approval is awaited.

Details of project site proximity (in km) to sensitive areas:

• Habitation	Khavda, about 2.10 km
• School	Khavda Govt. high School, about 2.5 km
• River/Water body	Khavda Village Pond: ~2.5 km
• Hospital	Ratadiya PHC 6.15 km

10. Ambient air quality monitoring was carried out at 8 locations during October, 2020 to December, 2020 and the baseline data indicates the ranges of concentration as: PM_{10} (58.0 - 65.9 µg/m^3), $PM_{2.5}$ (22.1 - 34.2 µg/m^3), SO_2 (9.3 - 12.3 µg/m^3), NOx (11.6 - 15.9 µg/m^3). AAQ modeling study for point source emission indicated that the maximum incremental GLCs after the proposed project would be 6.536 µg/m^3, 4.911 µg/m^3, 3.036 µg/m^3, 0.168 µg/m^3, 0.185

$\mu g/m^3$ and 0.868 $\mu g/m^3$ with respect to PM_{10}, SO_2, NOx, Br_2, Cl_2, HBr. The resultant concentrations are within the national ambient air quality standards (NAAQS).

11. Total water requirement is 91316 KLD, of which fresh water requirement of 9614 KLD will be met from desalination of brine water. Remaining water requirement of 4101 KLD will be recycle/treated water and 77601 KLD will be Brine water as a raw material for Bromine recovery.

12. Total industrial effluent generation will be 86032 KLD, of which 3596 KLD will be close loop recycle. Hence actual w/w generation will be 82436 KLD. Domestic sewage generation will be 35 KLD. Source of wastewater generation will be process effluent (75895 KLD), Scrubber (30.0 KLD), stripper washing (5811 KLD), cooling bleed off (810 KLD), boiler blow down (470 KLD), RO Reject (2316 KLD), Water with Lime slurry (700 KLD). Effluent is segregated into two streams one is from Bromides, TBBA and Organics products and second stream is from Bromine Recovery plant. Both the streams are treated separately and treated effluent will be sent to evaporation pan for recovery of mineral salt, which is one of the raw materials of products. Generated 35 KLD of domestic wastewater/sewage will be treated in STP and treated sewage will be reused in greenbelt.

13. Rainwater storage tank capacity (nos. x KL): 5 nos. x 200 KL

14. Power requirement after expansion will be 32000 KVA will be partially met from PGVCL (Paschim Gujarat Vij Company Limited) and partially by Captive Co-gen Power Plant. Existing unit has DG sets of 500 kVA and 1735 kVA capacity. After expansion, unit proposed to add 3 more DG Sets of 500 kVA x 3 nos. DG sets are used as standby during power failure. Stack (height 12 m, 30 m and 21 m) will be provided as per CPCB norms to the proposed DG sets.

15. At present, flue gas emission is from stack attached with Boilers of 15 TPH & 45 TPH, where Coal is used as a fuel and standby DG Set-1 & 2 (500 kVA & 1735 kVA). ESP is installed on existing boilers as APCM. After expansion, there will be addition of 5 nos. stacks of Boilers and 6 nos. stacks of Hot Air Generators and one common stack of standby D. G. Sets (DG Set-3, 4 & 5 (500 kVA x 3 nos.). Coal will be used as fuel in proposed utility. ESP and ESP + Wet scrubber will be installed as APCM to boilers. Cyclone Separator & Bag filter will be installed as an APCM on HAG to achieve the emission norms. Total Flue stacks after expansion will be 16 nos. (Existing: 4 nos. + Additional: 12 nos.). Details of flue gas stacks are given below.

Flue Gas stacks

Sr. No.	Stack attached to	Fuel Type	Stack Height (m)	APC measures	Probable Emission
Flue Gas Stacks-Existing					
1.	Boiler (15.0 TPH)	Imported Coal 63 TPD	63	ESP	PM: 50 mg/Nm^3 SO_2: 600 mg/Nm^3 NO_x: 300 mg/Nm^3 Hg: 0.03 mg/Nm^3
2.	Boiler (45.0 TPH)	Imported coal 189 TPD	60	ESP	
3.	DG Set (500 KVA)	HSD 150 Lit/hr.	12	Adequate stack height	
4.	DG Set (1735 KVA)	HSD 400 Lit/hr.	30	Adequate stack height	

Flue Gas Stacks-Proposed					
1.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	PM: 50 mg/Nm^3 SO_2: 600 mg/Nm^3 NO_x: 300 mg/Nm^3 Hg: 0.03 mg/Nm^3
2.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	
3.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	
4.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	
5.	Boiler (30 TPH) (non-salt-based products)	Coal 131 TPD	47	ESP +Wet scrubber	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
6.	Hot Air Generator-1 (non-salt-based products) 5 Lakh kcal/hr.	Coal 2 TPD	24	Cyclone Separator	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
7.	Hot Air Generator-2 (Salt based products) 4 Lakh kcal/hr.	Coal 1.6 TPD	24	Cyclone Separator	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
8.	Hot Air Generator-3 (Salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
9.	Hot Air Generator-4 (Salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
10.	Hot air generator-5 (Salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
11.	Hot air generator-6 (salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm
12.	DG Set-4, 5 & 6 (500 kVA x 3 nos.)	Diesel 630 lit/hr.	21	Adequate stack height	PM: 150 mg/Nm^3 SO_2: 100 ppm NO_x: 50 ppm

16. **Details of fuel: Existing and Proposed**

Details of fuel consumption

Sr. No.	Name of Fuel	Fuel consumption		
		Existing	Proposed addition	Total
1	Imported Coal	252 TPD	994.6 TPD	1246.6 TPD
2	HSD	550 lit/hr.	630 lit/hr.	1180 lit/hr.

17. **Details of Process emissions generation and its management:**

At present, there is process emission from stack attached with Bromine plant-1, Bromine plant-2, Bromine plant (HBr, n-PBr, n-BBr & 6 CHX), 1 Bottling Plant, TBBA Plant, 1 Bromine ETP tank and 1 Chlorine Charging Station. After proposed expansion, 20 nos. of new vents will be added. These vents include vents attached with Bromine plants, N Propyl Bromide, HBr Plant, Process reactor of DBNPG, TBP, DBDPE, TBNPA, Air dryers, Rotary dryers and

Calciner. Total process stacks after expansion will be 27 nos. (Existing: 7 nos. + Additional: 20 nos.). Details of process gas stacks are given below.

Process Gas stacks

Sr. No.	Stack attached to	Stack Height (m)	APC measures	Probable Emission
Process Gas Stacks – Existing				
1.	Bromine Plant-1	30	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3 Cl_2: 9 mg/Nm^3 HBr: 30 mg/Nm^3
2.	Bromine Plant-2	30		
3.	Bottling Plant	32	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3
4.	Bromine Plant (HBr, n-PBr, n-BBr & 6 CH_X)	14	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3 Cl_2: 9 mg/Nm^3 HBr: 30 mg/Nm^3
5.	TBBA Plant	30	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3 HBr: 30 mg/Nm^3
6.	Bromine ETP Tank	17	Alkali Scrubber	Br_2: 2 mg/Nm^3 Cl_2: 9 mg/Nm^3
7.	Chlorine Charging Station	20	Alkali Scrubber	Cl_2: 9 mg/Nm^3
Process Gas Stacks – Proposed				
1.	Bromine Plant-3	20	Water and Alkali Scrubber	Br_2: 2 mg/Nm^3 Cl_2: 9 mg/Nm^3 HBr: 30 mg/Nm^3
2.	Bromine Plant Plant-4	20	Alkali Scrubber	
3.	Bromine Plant Plant-5	20	Alkali Scrubber	
4.	N Propyl Bromide	20	Alkali Scrubber	
5.	Hydrobromic Acid	30	Alkali Scrubber	
6.	ZnBr/LiBr/CaBr/ NaBr	30	Alkali Scrubber	
7.	HBr in TBBA	30	Alkali Scrubber	
8.	Process reactor of DBNPG	30	Alkali Scrubber	
9.	Process reactor of TBP	30	Alkali Scrubber	
10.	Process reactor of DBDPE	30	Alkali Scrubber	
11.	Process reactor of TBNPA	30	Alkali Scrubber	
12.	Air dryer for $CaBr_2$ solid	25	Bag filter	PM<45 mg/Nm^3
13.	Air dryer for NaBr solid	25	Bag filter	PM<45 mg/Nm^3
14.	Air dryer for LiBr	25	Bag filter	PM<45 mg/Nm^3
15.	Rotary dryer 1 (for SOPM - Schoenite)	15	Bag filter	PM<45 mg/Nm^3
16.	Rotary dryer 2 (for SOP - Sulphate of potash)	15	Bag filter	PM<45 mg/Nm^3
17.	Rotary dryer 3 (for Syngenite)	15	Bag filter	PM<45 mg/Nm^3
18.	Rotary dryer 4 (for $MgSO_4$)	15	Bag filter	PM<45 mg/Nm^3
19.	Rotary dryer 5 (for $(MgOH)_2$)	15	Bag filter	PM<45 mg/Nm^3
20.	Calciner (for MgO)	25	Bag filter	PM<45 mg/Nm^3

18. Details of Solid waste/Hazardous waste generation and its management.

All the Hazardous waste shall be managed and disposed as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. ETP sludge will be disposed at approved TSDF site, Process Sludge will be incinerated at common CHWIF. Discarded containers/liners will be sold to registered recyclers. Used Oil will be sold to registered re-refiners.

Solid waste shall be managed and disposed as per the Solid Waste Management Rules, 2016. Fly ash will be collected, stored in silo and sell to brick manufacturers or cement industries. Garbage will be segregated into wet and dry waste. Wet garbage will be converted into compost and utilize for greenbelt.

Details of hazardous wastes are given below:

Sr. No.	Name of waste	Source	Category as per HAZ Rule, 2016	Quantity			Disposal Method
				Existing	Proposed addition	Total after expansion	
1.	ETP sludge	ETP	35.3	1500 MT/Month	15000 MT/Month	16500 MT/Month	Collection, Storage, Transportation, and disposed off at approved TSDF site
2.	ETP sludge	ETP (Bromide Plant)	35.3	20 MT/Month	30 MT/Month	50 MT/Month	
3.	Process Sludge	Process	20.4	66 MT/Month	--	66 MT/Month	Collection, Storage, Transportation, and incinerate at common CHWIF
4.	Discarded Containers / Liner/Bags	Material storage	33.1	3.6 MT/Year	5.4 MT/Year	9.0 MT/Year	Collection, Storage, Decontamination, Transportation, Disposal by selling to Authorized Recycler
5.	Used Oil	Driving units	5.1	10.2 MT/Year	25 MT/Year	35.2 MT/Year	Collection, Storage, Transportation, Disposal by selling to Registered Reprocess

Details of other wastes (non-hazardous) management

Sr. No.	Name of non-hazardous Waste	Source of generation	Quantity (MTPA)	Management

1.	Fly Ash	Boiler	1500	Collection, stored in silo and sell to brick manufacturer or cement industries
2.	Garbage	Domestic	84	Garbage will be segregated into wet and dry waste. Wet garbage will be converted into compost and utilize for greenbelt.
3.	STP sludge	STP	6.0	Used as manure within premises.

- **Area earmarked interim storage for Hazardous waste is 600 m^2**

19. Public Hearing for the proposed expansion project has been conducted by the Gujarat Pollution Control Board on 15.09.2021. Public hearing notice was published on 29.07.2021 in 2 nos. of prominent newspapers namely Divya Bhaskar (Gujarati) and Times of India (English). The Public Hearing was attended by 141 nos. of persons. Public hearing was conducted at Open Ground, Near M/s. Solaris Chemtech Industries Ltd., Unit-II, Survey No. 164, Village: Ratadia, Near Khavda, Taluka: Bhuj, Dist. Kutch on date 15.09.2021 presided by the following presiding officers Shri Hanumantsinh Jadeja, GAS (Resident Additional Collector & Additional District Magistrate, Kutch) and Shri T. C. Barmeda (Regional Officer, GPCB-Kutch)
    The main issues raised during the public hearing are related to:

Issue raised	Response/Commitment from Project Proponent	Action Plan	Budget Allocation
Shri Harun Node, Village: Moti Daddhar, Ta. Bhuj, Dist. Kutch • Company has not claimed in EIA Report that, there is no any Sanctuary or grazing land declared by government is present in radius of 10 km. This is absolutely wrong information. • The Banni area (Sargu-Nana and Sargu-Mota) has been declared as a protected forest as per the State Govt. Notification, 1955.	• There is no protected sanctuary falls in 10 km radius from the project site. At the time of study Banni grassland was sub jurisdictive matter with NGT. Hence we have not mentioned in Draft EIA report. • The Banni Grass area not declared as protected forest by Government of **Gujarat or India**. It was declared as protected forests, by Government of Kutch Notification dated 11.05.1955 in the **Kutch District**, Gujarat • At the time of EIA study, protected Banni Grassland was sub jurisdictive matter with NGT. Now decision is declared and Banni Grassland is covered under Protected Grassland. Banni Grassland is around at 0.340 km from the project site in south direction.	• Unit has developed greenbelt towards south side of the project area to protect Banni Grassland.	Unit as earmark around **Rs. 733.5 Lakhs** as capital cost allocation and around **Rs. 144.5 Lakhs** per annum earmark as Operational and maintenance expenses as implementation of EMS system.

Issue raised	Response/Commitment from Project Proponent	Action Plan	Budget Allocation
• Endangered flora, fauna and animal are found throughout the area. The world's rarest Agama bird which is called locally as “Titodi” which is falls under extinct species is living inside the Lana plant. Apart from this, there is a reptile in this area which has very special characteristics. It is called “Sandha” in the local language. The law provides for seven years' imprisonment for hunting these reptiles.	• There is no endangered species of flora & fauna found within study area. Only Sandha (local name), Common name: spiny-tailed lizard, Scientific name: Saara hardwickii is found within study area and it covered in Vulnerable as per IUCN conservation status. It is covered in our EIA Report. We did not notice presence of Titodi at the time of the study.		
• According to the company's EIA report, hazards waste will be converted into a fertilizer. If fertilizer is to be made; to whom will you give it and which company will buy it, agreement is with which company this information is not provided in the EIA, so the issue of disposal of hazard raises doubts here. The answer to this question was not found satisfactorily in the company's presentation.	• It is innovative activities to convert Calcium, Magnesium and Potassium salt to Fertilizer. Require permission from Agriculture Department will be obtained after start the production and before sale it to Market.		
• Fresh water requirements, Handling of Hazardous Chemicals, Hazardous waste management, CRZ permission, seismic zone and related construction criteria, Disaster management and other environment and safety criteria consider or not.	• Sea water use as process water. Unit has desalination plant for use of utilities water. ETP waste converts to Calcium, Magnesium and Potassium salt to Fertilizer. Require permission from Agriculture Department will be obtained after start the production and before sale it to Market.	• Unit has installed automatic sensor for chlorine and bromine at sensitive locations within the premises like collection, storage, transportation points. Sirens are set in such a way that, if the concentrations exceed a threshold limit, it automatically turn on. These two hazardous chemicals are and will be on full alert to prevent leakage of chemicals. • Unit has setup Disaster management team to	

Issue raised	Response/Commitment from Project Proponent	Action Plan	Budget Allocation
		take immediately action to mitigate any emergency situation. • Unit has designed the plant to considering the norms of seismic zone. • Unit has installed ESP to control PM and to minimize emission of SO_2 unit are using a coal having sulfur concentration of less than 0.5%. Adequate install ETP to control industrial effluent as per SPCB/CPCB norms. • Bromine and Chlorine handing by unit. Unit has installed automatic sensor for chlorine and bromine at sensitive locations within the premises like collection, storage, transportation points with siren system. • Currently Hazardous waste is disposed at TSDF site and after desire permission, unit will convert ETP waste to Fertilizer. Require permission from Agriculture Department will be obtained after start the production and before sale it to Market.	
Mr. Abbhas Zakab Bhiya, Village: Khari, Taluka Bhuj, Dist Kutch • He said that unit is working since long for production of Bromine Chemicals based on Israeli technology. He discussed about water environment and health effect on surrounding residing and environment.	• Unit have adequate ETP and Occupational Health Centre to taking care of their employees and surrounding residing to periodical health checkup and if require, necessary treatment at the Centre or nearby Hospital.	• Installed and operate ETP regularly. • Unit has own OHC with fulltime doctor and 24 hrs ambulance services. • Unit is updating their OHC and arranges periodically Health camp in surrounding.	Unit has earmark around **Rs. 35 Lakhs** per annum or more if require to operate OHC.

Issue raised	Response/Commitment from Project Proponent	Action Plan	Budget Allocation
Mr. Amad Mohammad Khatri, Village Khavda, Ta. Bhuj, Dist. Kutch • He said that; Death of fish and sanga resulted to thrown off material and also damaging crop.	• Unit is not throwing any material outside the premises and Hazardous waste what so ever generated is manage as per HAZ Rule-2016 and amendment thereof.	• Desire membership is obtained by unit.	Unit has earmarked around **Rs. 50.5 Lakhs** as capital cost allocation and around **Rs. 15.0 Lakhs** per annum or more earmark as disposal cost of Hazardous waste at TSDF site.
Shri Abdul Gani Sama Village: Tuka, Ta: Bhuj, Dist. Kutch. • He said about Safety system must be improved for staff working in the company. Company must employ educated local youth on permanent basis. • Other than this; company must employ some workers after providing necessary training which is currently working under contractor. • He inform that CSR fund use for improvement of education along with manage environment issue; • Health service initiated by the company is limited to certain villages. It must expand in entire Banni-Pachcham because it is problem of the entire area. • Scope of Animal hospital must reach in all villages of entire Banni-Pachcham. • I am not against the development plan of the company but company must act after keeping all types of safety and CSR must utilize for development of society by keeping all to gather.	• Unit is giving first priority to local for employment in company. • Developed training Centre to provide require training in company and if better opportunity in outside industries. • Unit has own OHC with fulltime Doctor and 24 hrs. ambulance services. • Unit is updating their OHC and arranges periodically Health camp in surrounding. • Unit is utilizing CSR fund for improve the local environment along with Health and Education.	• Unit has developed Employment training Centre. • Unit has own OHC with fulltime Doctor and 24 hrs ambulance services. • Periodically arrange Health checkup camp in surrounding and provide free of cost medicine. • If operation is require, unit provide total financial help to concern patient.	2% of profit of company is earmark as CSR fund for upliftment of surrounding.

Issue raised	Response/Commitment from Project Proponent	Action Plan	Budget Allocation
Shri Sama Anvar Sadhak, Village: Dhrobana, Tal: Bhuj, Dist: Kutch • He said that company is providing employment to local and resulted to reduce the migration. • Along with above, he suggested that keep environmental matter in mind, so no harm to local people. Employ locally unemployed youth and give permanent employment to persons working from so many years in contract. Suggest to medical camp. Construct check dam to conserve rain water runoff from Black hills which use for cultivation in this area and water can be utilize for drinking of people and animals.	• Unit is utilizing CSR fund for improve the local environment along with water harvesting activities. • Unit is giving first priority for Employment to surrounding • Provide necessary training before joining of company. • Unit has own OHC with fulltime Doctor and 24 hrs. ambulance services. • Periodically arrange Health checkup camp in surrounding and provide free of cost medicine.	• Unit has developed Employment training Centre. • Unit has own OHC with fulltime Doctor and 24 hrs ambulance services. • Periodically arrange Health checkup camp in surrounding and provide free of cost medicine. • If operation is require, unit provide total financial help to concern patient.	2% of profit of company is earmark as CSR fund for upliftment of surrounding.
Shri Haji Allana Haji Hasan Sama, Sarpanch, Village: Dhoravar, Tal: Bhuj, Dist: Kutch • He said current management is doing well for development of surrounding area. • 6 tractors/water tankers are providing drinking water to surrounding. This management is give first priority to develop surrounding area and then second priority to develop company. • The company providing agriculture training in surrounding. • Unit has built 2 dams in 1 year so that 3 villages can get benefit. • Above all the works done by company is for public benefits and **welcome the project**.	Shri Haji Allana Haji Hasan Sama has welcomed the project with summary of CSR activities done by unit.	--	--

Issue raised	Response/Commitment from Project Proponent	Action Plan	Budget Allocation
Mr. Harunbhai Sumra Village: Kakkar, Khawda Group Gram Panchayat, Ta. Bhuj, Dist. Kutch • First speaker Harunbhai Node Saheb talked about Sargu Gram Panchayat, Green Tribunal, Banni Protected Forest etc. My farm is next to 3 farms from here. Our farms have become very salty due to the salt water coming from Banni. **There is no grass in it even this area is largest grassland in Asia.** • He suggests that company is giving employment on contract basis and no private labor can be done here permanently. My request is to provide employment to the people of this area when the plant grows.	• Unit is giving first priority for Employment to surrounding Provide necessary training before joining of company.	--	--
Shri Ismail Sama Village: Dinara, Ta. Bhuj, Dist. Kutch • He informed that The company has been operating since 1996. At the time of start the industrial activities, only 6 to 8 students were pass in 10th standard. Today this figure in increase mother than 100. Which indicate that education level is improve in this **area and comply is supporting to this activities.**	• Unit is giving first priority to local for employment resulted to get motivation for get education for better job. • Unit motivating education and provide the scholarship also.	• Unit has developed Employment training Centre.	2% of profit of company is earmark as CSR fund for upliftment of surrounding.

Public consultation:

i. **Details of advertisement given:** Date of advertisement: 29.07.2021, Name of newspaper: Divya Bhaskar (Gujarati) and Times of India (English)

ii. **Date of public consultation:** 15.09.2021

iii. **Venue of public consultation:** Open Ground, Near M/s. Solaris Chemtech Industries Ltd., Unit-2, Survey No. 164, Village: Ratadia, Near Khavda, Ta. Bhuj, Dist. Kutch – 370510, State: Gujarat.

iv. **Designation of Presiding Officer:** Shri Hanumantsinh Jadeja, GAS (Resident Additional Collector and Additional District Magistrate) and Shri T. C. Barmeda (Regional Officer, GPCB, Kutch-West and representative of Member Secretary GPCB).

v. **Whether the commitments in public hearing form part of specific conditions/ EMP as per MoEF&CC OM dated 30/09/2020 and 25/02/2021:** Unit has committed Rs. 150.0 Lakhs to spent as CER activity

20. **Details/Status of approved Water Supply Permission:**
Fresh water requirement will be met from desalination of Brine water. It is collected during the high tide period in collection sump.

21. **Details/Status of approved Wildlife Conservation Plan:**
There is one Schedule-I Species found in 10 km radius namely Indian Peafowl (Pavo Cristatus). Conservation plan is submitted to the Deputy Conservator of Forest, Bhuj-Kutch on 06.12.2022 and again reminded on 23.10.2024 with an allocated budget of Rs. 1040000/. Approval is awaited.

22. Industry has developed greenbelt in an area of 26700 m^2 (12%) inside the factory premises and 21% i.e. 48967.16 m^2 in surrounding and approach road of project site.

23. Total Employment will be 500 Persons after expansion. Industry proposes to allocate Rs. 1.5 Crore @0.75% of project expansion cost towards CER.

24. The estimated project cost is Rs. 500 Crore including existing investment of Rs. 300 Crore. Total capital cost earmarked towards environmental pollution control measures is Rs. 8.399 Crore and the Recurring cost (operation and maintenance) will be about Rs. 1.445 Crore per annum. The breakup of capital and recurring cost is as follows:

Sr. No.	Activity	Approximate Capital Cost (Rs. in Lakhs)	Approximate Recurring Cost per annum (Rs. in Lakh)	Basis for cost estimate
1	Air pollution control	175	30	Capital cost will include installation of stack, air pollution control system, D.G Set, recurring cost for operation & maintenance cost
2	Water pollution control	375	80	Capital cost includes Installation cost of ETP, Evaporation Pond, STP and recurring cost include maintenance charges, operation cost of EMS, manpower salary
3	Noise pollution control	8.0	0.5	Capital cost includes providing acoustic enclosure, silencer, Anti-Vibration pads, maintenance cost, Noise PPEs

4	Solid/Hazardous waste management	50.5	15.0	Capital cost would include providing of hazardous and solid waste storage area and recurring cost would include waste handling, transportation and disposal cost
5	Environment monitoring and management	5.0	4.5	Safety audit, Third party environment monitoring, sample collection and analysis charges
6	Green belt	45	5.0	Capital cost will include cost of trees, plantation cost, soil/manure charges and maintenance charges include manpower salary, watering of plants, replacement of any dead plant etc.
8	Occupational health (OHC)	25	5.0	Capital cost include cost of OHC, OHS training of staff, PPE, first aid facility and recurring cost will include maintenance of equipment in OHC, Health check-up of workers
9	CER Activity	150	--	Fund allocation for CER activities will be done in Village
10	Cost of conservation plan of Schedule-I species, if any	10.4	--	Budget for conservation of Schedule-I species
11	Rain Water Harvesting System	50.0	4.5	Rain Water Harvesting Structure
	Total	**839.9**	**144.5**	

Sr. No.	Activity	Amount allocated (Rs.)
1. Total Cost	Construction cost, Installation of plant & machineries, Installation of Environmental Management System, Utility, Miscellaneous	500 Crore
2. EMP Cost	Installation of EMS (Air, Water, Haz waste storage facility, Membership of TSDF site), Env. Laboratory, Rain Water Harvesting system, Greenbelt development	Rs. 8.399 Crore
3. Recurring Cost	Operational and Maintenance cost of EMS (ETP, APCM & waste disposal), maintenance of rain water harvesting structure, Environmental monitoring, Health check-up of workers, PPE to workers	Rs. 1.445 Crore/Annum
4. CER Cost	Water Harvesting Activities at village area, Drinking water storage with RO systems, Medical camp during rainy days and provide free medicine, Greenbelt Development at Common place of villages, Additional Medical Equipments provide to Primary Health center of sturdy area	Rs. 1.5 Crore

5. Land	Open Land in existing set up will be utilized for proposed expansion project	
6. PH Commitment	Given in EIA Report	CER amount of Rs. 150 Lakhs will be utilized for upliftment of surrounding area.
7. Greenbelt	**Capital:** Land development, Plantation cost, Fertilizer **Recurring:** Manpower, Fertilizer	Capital: Rs. 45 Lakhs Recurring: Rs. 5.0 lakhs/annum
8. Conservation Plan	Budget for Conservation of Schedule-I Bird Species - Peacock or Indian Peafowl (Pavo Cristatus)	Rs. 10.4 Lakhs
9. Water Approval	--	-
10. Critical issues related to the project, if any	No any critical issues related to the project	--

25. **Deliberations by the EAC:**

The following points were discussed during the meeting:

1. PP reported that the conservation plan is submitted to the Deputy Conservator of Forest, Bhuj-Kutch on 05.12.2022 and again reminded on 23.10.2024 with an allocated budget of Rs. 1040000/-.
2. PP submitted CCR obtained vide letter no. J-11/60-2022-IROGNR dated 05/02/2025, and action taken report vide letter dated 19.03.2025 was submitted to IRO-MoEFCC, Gandhinagar.
3. PP informed that no intake water permission is required as water is taken from low laying salt pan area, where water is filled up due high tide.
   During the high tide in the sea (occurs primarily due to the gravitational pull of the Moon on Earth's oceans, causing the water to bulge out on the side facing the Moon) sea water goes on off shore and salt producers collect this water in salt pan. After desire evaporation, Salt can be recovered from seawater by “Agaria” (salt producers). During this process, seawater evaporated, concentered and salt get precipitate and brine water density increase (Concentrated Brine) having majorly Magnesium Bromide and Magnesium chloride Content discharge outside the Salt Pan. This Concentrated Brine collected in the Collection sump by gravity and from there we pumped it for Bromine Recovery. PP is not directly drawn sea water from sea. Hence no need of sea water intake permission as pumping station from where brine sea water collected by gravity is in our own lease land. The land in the Rann of Kutch and is lease by Company and as per lease agreement, Company is allowed to manufacture Salt and Salt based bromine and allied chemicals and salt is not its by-product but a pre-product, which is recovered by many local salt producers. So, both the land - Salt Recovery pan as well as Sump from where we are pumping the Brine water is in our lease land given by the Government of Gujarat on lease basis. We are not directly withdrawing sea water. There is no any

physical activity carried out in CRZ area. Hence CRZ clearance for the drawl of sea water is not required.

4. PP informed that there is no need to revise the greenbelt action plan because they have already submitted action plan for greenbelt development against ADS raised vide 44th EAC Meeting (Industry-3 sector), dated 19.12.2022. Currently they have achieved committed greenbelt submitted as a part of action plan. In addition to this, PP has developed greenbelt in 81 Ha in last 2 financial years with total nos. of trees 2200.
5. PP submitted a copy of valid CTO dated 11.06.2022 issued by GPCB which is valid till 22.03.2028.
6. PP also submitted revised action plan for issues raised during the public hearing regarding anticipated pollution issues.
7. PP vide GPCB letter dated 04.05.2023 informed that as per the superimposed CRZ map having sheet no. G 42 V 4/SE submitted by M/s. Solaris Chemtech Industries and considering the approved CZMP-2011 of District Kutch, it can be concluded that M/s. Solaris Chemtech Industries is approx. 26.00 km away from CRZ area and does not require CRZ clearance. During the 87th EAC meeting, the committee referred this matter to the CRZ division for their comments. The CRZ division observed that this is an expansion project that had previously been granted Environmental Clearance and is reportedly located outside the CRZ area. However, the Industry Sector has not explicitly clarified whether the seawater drawl/intake is from within the CRZ area or outside it. Additionally, the GCZMA letter dated 17/05/2023 does not provide clear information regarding the water intake location. The CRZ division further mentioned that if the project is located outside the CRZ area, no further comments from the CRZ division would be necessary. Additionally, the EAC noted that the GCZMA letter dated 17/05/2023 specifically states that Solaries Chemtech Industries is approximately 26 km away from the CRZ and therefore does not require CRZ clearance.
8. The proposal was first raised in the 44th meeting held on 16th - 19th December, 2022 wherein the baseline data was considered as valid.

The committee was satisfied with the response provided by PP on above information. Further, Committee desired to submit the above information in writing. Accordingly, PP has submitted the desired information and EAC found the information/commitments satisfactory.

The EAC deliberated the Onsite and Offsite Emergency plans and also the various mitigation measures proposed during the implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, as amended from time to time.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the

recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for the grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate–legislations, etc., as may be applicable to the project. The PP shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

26. The EAC, after detailed deliberations, **recommended the project for the grant of environmental clearance, subject to the compliance of the terms and conditions as under, and general terms and conditions in Annexure-I**:

(i) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(ii) ESP along with stack height of 63m and 60 m shall be provided to existing Coal fired Boilers of capacity (1x 15TPH + 1x45 TPH) to control particulate emissions as per CPCB /SPCB norms. 5 fields ESP along with stack height of 60 m shall be provided to proposed Coal fired Boilers of capacity (4x 45TPH) to control particulate emissions as per CPCB /SPCB norms. ESP followed by wet scrubber along with stack height of 47 m, shall be provided to proposed Coal fired Boilers (1 x 30 TPH) to control particulate emissions as per CPCB /SPCB norms. Multicyclone separator followed by bagfilter along with stack height of 24 m, 24 m, 30m, 30m, 30m and 30m respectively shall be provided to proposed coal fired Hot Air Generator (5 lakh Kcal /hr., 4 lakh Kcal /hr., 50 lakh Kcal /hr., 50 lakh Kcal /hr., 50 lakh Kcal /hr. and 50 lakh Kcal /hr.,) to control particulate emissions as per CPCB /SPCB norms. Stack height of 12 m and 30m respectively shall be provided to the existing DG sets (1 x 500 KVA and 1 x 1735 KVA) as per CPCB/SPCB norms. Stack height of 30m shall be provided to the proposed DG sets (3x500 KVA) as per CPCB/SPCB norms.

(iii) Water and Alkali Scrubber along with adequate stack height shall be provided to control process emissions viz. Br_2, Cl_2, and HBr generated from the existing and proposed Bromine plants. Water and Alkali Scrubber along with adequate stack height shall be provided to control process emissions viz., Br_2, Cl_2, and HBr generated from the existing Bottling plant, Bromine plant (HBr, n-PBr, n-BBr & 6 CH_X), TBBA Plant, Bromine ETP Tank and Chlorine Charging Station. Water and Alkali Scrubber along with adequate stack height shall be provided to control process emissions viz., Br_2, Cl_2, and HBr generated from the proposed N Propyl Bromide, Hydrobromic Acid, ZnBr/LiBr/CaBr/ NaBr, HBr in TBBA, Process reactor of DBNPG, Process reactor of TBP, Process reactor of DBDPE and Process reactor of TBNPA. Bag filter along with adequate stack height shall be provided to control particulate emissions generated from the proposed Air dryer for $CaBr_2$ solid, Air dryer for NaBr solid, Air dryer for LiBr, Rotary dryer 1 (for SOPM - Schoenite), Rotary dryer 2 (for SOP - Sulphate of potash), Rotary dryer 3 (for Syngenite), Rotary dryer 4 (for $MgSO_4$), Rotary dryer 5 (for $(MgOH)_2$) and Calciner (for

MgO). The scrubbed water should be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.

(iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by SPCB.

(v) Total fresh water requirement from desalination of brine water from pond filled during high tide shall not exceed 9614 KLD and remaining water requirement from Brine water as a raw material for Bromine recovery shall not exceed 77601 KLD.

(vi) NOC from the Concerned Authority shall be obtained before start of the construction of plant for drawing of the water from pond filled during high tide for the project activities. State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.

(vii) Total industrial effluent generation shall not exceed 86032 KLD, Wastewater from process (75895 KLD), Scrubber (30.0 KLD), stripper washing (5811 KLD), cooling bleed off (810 KLD), boiler blow down (470 KLD), RO Reject (2316 KLD), Water with Lime slurry (700 KLD, shall be treated in the ETP (Neutralization and Settler). Effluent from ETP will be sent to evaporation pan for recovery of mineral salt, which is one of the raw materials of products. Domestic wastewater/sewage shall be treated in STP and treated sewage will be reused for horticulture purpose. Industrial unit shall maintain ZLD.

(viii) The green belt of at least 5 m-10m width shall be developed in an area of 26700 m^2 (12%) inside the factory premises and 48967.16 m^2 (21%) in surrounding and approach road of project site. Indigenous species shall only be developed as part of greenbelt and non-indigenous / alien species shall be replaced with native species. No invasive or alien or non-native tree species shall be selected for plantation. PP shall develop at least 20 variety of species as a part of greenbelt. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP shall annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(ix) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(x) Roof top rain water shall be collected in 5 x 200 KL underground RCC storage tank. The rain water collected shall be reused within the plant after filtration as per requirement. Storm water

from the open area shall be collected separately and stored in an underground RCC storage tank, which has shall be recycled/reused within the plant premises.

(xi) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP Rs. 839.9 Lakhs (Capital cost) and Rs. 144.5 Lakhs per annum (Recurring cost)] shall be kept in a separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(xii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions by engaging Environment Officials. In addition to this, one safety & health officer as per the qualification given in Factories Act, 1948 shall be engaged within a month of grant of EC. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(xiii) Plantation of saplings shall be carried out as a part of tree plantation campaign "EK PED MAA ke NAAM" and details of the same to be uploaded in the Meri LiFE portal (https://merilife.nic.in) in respect to this Ministry's OM No. IA3-22/3/2024-IA.III(E-241594) dated 24th July 2024.

(xiv) All the hazardous waste shall be managed and disposed as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Hazardous waste such as Distillation Residue and Off Specification Products shall be either sent to common incineration site or send for coprocessing. Solid waste shall be segregated into dry and wet garbage at site in accordance to the Solid Waste Management Rules, 2016. Wet garbage shall be converted into compost and used as manure for greenbelt development. Fly ash shall be stored in silos and used for filling low lying area after prior approval of SPCB or sent for brick manufacturer or co-processing in cement industries.

(xv) The PP shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(xvi) The project proponent shall comply with the environment norms for ‘Fertilizer Industry’ as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 1607 (E), dated 29th December, 2017 under the provisions of the Environment (Protection) Rules, 1986.

(xvii) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989,

as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996. The occupier of new as well as expansion projects shall be required to comply with the provisions of the MSHIC Rules, 1989 including notifying their activities or seeking site approval from the concerned authorities, to address operational safety aspects. In doing so, various schedule, particularly Schedule-5 of the said rules may be referred.

(xviii) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xix) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xx) The occupational health center for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xxi) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xxii) The unit shall make the arrangement for the protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxiii) The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xxiv) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xxv) There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places.

(xxvi) Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Chemicals shall be stored in covered sheds and wind breaking walls/curtains shall be provided around biomass storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.

(xxvii) PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.

(xxviii) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

ANNEXURE-I

GENERAL EC CONDITIONS

- No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- The PP shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.
- The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. The activities shall be undertaken by involving local villages and administration. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- A copy of the clearance letter shall be sent by the PP to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- The PP shall also upload/submit six monthly reports on PARIVESH Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the respective Integrated Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six-monthly compliance status report shall be posted on the website of the company.
- The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Integrated Regional Office of MoEF&CC by e-mail.
- The PP shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at **https://parivesh.nic.in/**. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.

- The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
- This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

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Annexure-II

List of the Expert Appraisal Committee (Industry-3) members participated in Day - I during Video Conferencing (VC) meeting

S. No.	Name of Member	Designation
1.	Prof. (Dr.) A.B. Pandit	Chairman
2.	Dr. Suresh Panwar	Member
3.	Dr. (ER.) Dibakar Swain	Member
4.	Shri Dinabandhu Gouda	Member
5.	Dr. Kishore Malviya	Member
6.	Dr. P. Jagannadha Rao	Member
7.	Shri A N Singh	Member Secretary
MoEFCC		
1.	Dr. Kanchan Puri	Scientist-B
2.	Dr. Bhawana Kapkoti Negi	Technical Officer

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MoM approved by

(Prof. Aniruddha B. Pandit)

Chairman