

**GOVERNMENT OF INDIA**  
**MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE**  
**(IA DIVISION-INDUSTRY-3 SECTOR)**

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**Dated: 13.5.2024**

**MINUTES OF THE 78<sup>th</sup> EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 30<sup>th</sup> APRIL, 2024.**

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.

**(i.i) 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.

**Parivesh 1.0**

**Agenda No. 78.1**

**Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat by “Greenfield Chemical Complex” of GHCL Ltd- Reconsideration of Environmental Clearance**

**[Proposal no: IA/GJ/IND3/408164/2022, File No. IA-J-11011/293/2021-IA-II(I)]**

1. The proposal is for Environmental Clearance to the Proposed project to produce Light Soda Ash (LSA) of 11,00,000 TPA capacity, 5,00,000 TPA of Dense Soda Ash (DSA) and 2,00,000 TPA Sodium Bicarbonate (SBC) located at near village Bada, Taluka - Mandvi, District - Kutch in the Gujarat state by “Greenfield Chemical Complex” of GHCL Ltd

2. The project/activity is covered under Category ‘A’ of Item 4 (e) soda ash industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) as the project is located outside the notified industrial area.
3. The ToR was issued by the Ministry, vide letter no. IA-J-11011/293/2021-IA-II(I) dated 10<sup>th</sup> August, 2021. The PP applied for the Environment Clearance in the Common Application Form and submitted the EIA/EMP Report and other documents. The PP in the CAF reported that it is a **Fresh EC case. The proposal was placed in 72<sup>nd</sup> EAC Meeting held on 2<sup>nd</sup> January, 2024, 74<sup>th</sup> EAC meeting held on 6<sup>th</sup> February, 2024 wherein the proposal was deferred for want of requisite information now the proposal is placed in this 78<sup>th</sup> EAC meeting held on 30<sup>th</sup> April, 2024** where project was wherein the PP and an accredited Consultant, M/s. T. R Associates [NABET accreditation till **NABET Accreditation Number: NABET/EIA/2326/RA 0293 valid till 8th April, 2026**], made a detailed presentation on the salient features of the project and informed the following:
4. The PP reported that the Total land area is **5463200 m<sup>2</sup>**; no additional land will be used **for proposed project** and no R& R is involved in the Project. The details of various products are as follows:

Sr. No.	Name of the Product	Production Capacity (MT/Month)	CAS Number	End use
1	Light Soda Ash	11,00,000 TPA	497-19-8	Manufacturing of glass, usage in chemical industry, paper and detergent manufacturing, and food industry
2	Dense Soda Ash	5,00,000 TPA	497-19-8	
3	Sodium bicarbonate	2,00,000 TPA	144-55-8	
Captive Co-generation Power plant Steam (CFBC boilers)			120 MW	
Emergency DG Set			5 MVA	
Note- The production capacities are planned in phased manner and for Phase 1 production capacity for LSA: 5,50,000 TPA, Dense Soda Ash: 2,50,000 TPA, SBC: 1,00,000 TPA and 60 MW for Captive Co-generation Power plant.				

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under E(P) Act/Air Act/Water Act.
6. The PP reported that there is no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. **Marine National Park and Sanctuary,**

**Jamnagar are located at 75 km aerial distance in South direction and Narayan Sarovar Sanctuary is located at more than 100 km aerial distance in North-West directions.** Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Gugal Schedule-I species were found in the study area for which conservation plan has been prepared and submitted to PCCF and Chief wildlife warden dated 9.11.2023.

7. The PP reported that the diversion of 0.9689 ha un-class forest for laying part of sea water intake and effluent disposal pipeline and passage for related construction equipment movement in Kachchh has been obtained vide letter dated 18. 7.2023.
8. The PP reported the Unit has received the Final recommendation letter from GZMA vide file no ENV/ 10/ 2021/184/ T- cell dated 26.12.2023. CRZ details are as:

<b>Activities</b>	<b>Zone</b>
Construction of process plant and utilities etc.	Outside CRZ area
Effluent collection	Outside CRZ area
Seawater Intake system i.e. sump and pump house	CRZ III
Intake Pipeline	CRZ IA, CRZ IB and CRZ IV
Outfall Pipeline	CRZ IA, CRZ IB and CRZ IV

Laying of Seawater Intake and effluent disposal underground pipeline through tunnel from unclassified Forest area, Sand dune area, intertidal area outside project boundary.

9. The PP reported that Ambient air quality monitoring was carried out at 10 locations during December 2019 – February 2020. The baseline data indicates the ranges of concentrations as: PM<sub>10</sub> (19 µg/m<sup>3</sup> to 53 µg/m<sup>3</sup>), PM<sub>2.5</sub> (8 µg/ m<sup>3</sup> to 17 µg/ m<sup>3</sup>), SO<sub>2</sub> (1 µg/m<sup>3</sup> to 14 µg/m<sup>3</sup>), NO<sub>x</sub> (5 µg/m<sup>3</sup> to 16 µg/m<sup>3</sup>), Ammonia (6 µg/m<sup>3</sup> to 19 µg/m<sup>3</sup>), Ozone (2 µg/m<sup>3</sup> to 8 µg/m<sup>3</sup>), Carbon Monoxide (0.09 mg/m<sup>3</sup> to 0.21 mg/m<sup>3</sup>), Hydrocarbons [Methane hydrocarbons (0.23 µg/m<sup>3</sup> to 1.27 µg/m<sup>3</sup>) and Non-Methane hydrocarbons (0.11 µg/m<sup>3</sup> to 0.19 µg/m<sup>3</sup>)], Lead (Pb) (0.05 µg/m<sup>3</sup> to 0.27 µg/m<sup>3</sup>), Arsenic (As) (0.02 ng/m<sup>3</sup> to 0.11 ng/m<sup>3</sup>), Nickel (Ni) (0.11 ng/m<sup>3</sup> to 0.18 ng/m<sup>3</sup>), Benzo(α)pyrene(B[a]P) (ND to 0.03 ng/m<sup>3</sup>) and Benzene (ND to 0.16 µg/m<sup>3</sup>). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.05 µg/m<sup>3</sup> in case of Lignite, Coal and Petcoke with respect to PM<sub>10</sub>, 10.98 µg/m<sup>3</sup> in case of Lignite, 2.55 µg/m<sup>3</sup> in case of Coal and 13.26 µg/m<sup>3</sup> in case of Petcoke with respect to SO<sub>2</sub> and 11.37 µg/m<sup>3</sup> in case of lignite, 7.3 µg/m<sup>3</sup> in case of coal and 5.62 µg/m<sup>3</sup> in case of Petcoke with respect to NO<sub>x</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

10. The PP reported that the total water requirement for project will be 15,20,060 m<sup>3</sup>/day in case of Dry Lime process or 13,63,878 m<sup>3</sup>/day in case of Wet Lime process which will be met from Sea water. Total Effluent of 15,88,570 m<sup>3</sup>/day (Domestic - 160 m<sup>3</sup>/day + Industrial – 15,88,410 m<sup>3</sup>/day) in case of Dry Lime process or 14,48,818 m<sup>3</sup>/day (Domestic - 160 m<sup>3</sup>/day + Industrial – 14,48,658 m<sup>3</sup>/day) in case of Wet Lime process. The Process effluent generated i.e. from distiller waste, brine purification reject, RO/DM rejects will be disposed off along with once through return cooling water/fresh seawater into Arabian Sea as per recommendation of NIO. The characteristics of the discharge water are within the norms prescribed by CPCB.
11. The PP reported that the Power requirement for proposed project will be 120 MW and will be met from Captive Co-generation Power plant. D. G. Set (5 MVA X 1) [Fuel: HSD (60 KL)] shall be provided and used only in case of power failure. Stack (30 meter) and Retrofit shall provide as per CPCB norms to the DG sets. Industry will provide six Steam Boiler (150 TPH) for captive power plant, six lime kilns and D G sets

**12. Details of process emissions generation and its management:**

SR.NO.	Stack attached to	Capacity	Height of the stack (m)	Fuel & its Consumption	Expected Pollutant	APC System	GPCB Limit
1	CPP with flue gas desulphurization CFBC Boiler (6 Nos.)	150 TPH	130 m	Imported Coal/Lignite/ Pet coke (Imported Coal: 13,14,000 TPA, Lignite :19,71,000 TPA, Pet coke: 9,12,500 TPA)	SPM SO <sub>2</sub> NO <sub>2</sub> Hg	Individual ESP with each Boiler	PM ≤ 30 mg/Nm <sup>3</sup> SO <sub>2</sub> ≤ 100 mg/Nm <sup>3</sup> NO <sub>2</sub> ≤ 100 mg/Nm <sup>3</sup> Hg ≤ 0.03 mg/Nm <sup>3</sup>
2	D G Set (2/3 Nos.)	5 MVA	30 m	HSD (60 KL)	HC CO PM NO <sub>x</sub>	Retrofitting	NO <sub>x</sub> 710 ppmv NMHC 100 mg/Nm <sup>3</sup> PM 75 mg/Nm <sup>3</sup>

							CO 150 mg/Nm <sup>3</sup>
3	Lime Kiln 1		68 m	Coke or Briquette or Anthracite (Coke - 1,30,000 TPA, Briquette- 1,55,000 TPA, Anthracite - 1,10,000 TPA)	SPM SO <sub>2</sub> NO <sub>2</sub>	Scrubber and Dust Collector system	SPM ≤ 150 mg/Nm <sup>3</sup> SO <sub>2</sub> ≤ 100 ppm NO <sub>2</sub> ≤ 50 ppm
4	Lime Kiln 2		68 m			Scrubber and Dust Collector system	
5	Lime Kiln 3		68 m			Scrubber and Dust Collector system	
6	Lime Kiln 4		68 m			Scrubber and Dust Collector system	
7	Lime Kiln 5		68 m			Scrubber and Dust Collector system	
8	Lime Kiln 6		68 m			Scrubber and Dust Collector system	

SR.NO.	Stack attached to	Height of the stack (m)	Expected Pollutant	APC System
1	Ammonia Recovery system	42 m	Ammonia	Water scrubber
2	Lime grinding system / Slaker	65 / 20 m	PM / Water vapor	Bag filter / Adequate stack height
3	Calciner unit	37 m	PM	Scrubber, Bag filter

4	Densification	43 m	PM	Scrubber
5	Sodium Bi-Carbonate Unit	30 m	PM	Bag filter
6	Lime Kiln	Closed system	PM	Scrubber and Wet ESP

### 13. Details of Solid Waste/ Hazardous Waste Generation and Its Management:

Sr. No.	Type of Waste	Mode of Disposal
1	ETP Sludge from treatment of effluent generated from captive power plant & RO/DM Plant	The effluent from power plant, RO/DM plant will require only neutralization & it will have negligible BOD/COD. Sludge will be disposed off in nearby landfill site.
2	Used Oil / Used Cotton	It will be sold to MoEF&CC/CPCB registered recyclers only. Approx. 12 KL
3	Discarded Drums	It will be sold to approve traders. Approx. 5 MT/yr
	Discarded Bags	It will be sent back to supplier for reuse.
4	Spent Ion exchange resin	To be sold to authorized recyclers or will be incinerated at MoEF&CC/CPCB approved TSDF for which plant will obtain membership. Approx. 3000 l/yr
5	Lead acid Batteries	It will be sold to authorized agency through auction.
6	Ash (Fly ash & Bottom Ash) from Boiler	The Boiler ash will be used for cement Manufacturing/ Brick Manufacturing. Approx. 750 TPD
7	Limestone rejects	It can be used in Boiler for desulphurization and as a sweetener in cement industry, road making, pavement etc. 5% of lime stone consumption.
8	Settled sludge	Since settled sludge, non-hazardous in nature, it is proposed to be disposed off in Nearby landfill site.

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ **205.07 crore** (capital) and the Recurring Cost (operation and maintenance) will be about ₹ **6.98 Crore** per Annum. Industry proposes to allocate ₹ **18.04 Crore** towards CER.

15. The PP reported that Public Hearing for the Proposed project has been conducted by the State Pollution Control Board at the project site on **17.10.2022**. The main issues raised during the public hearing are related to the air pollutants, water pollutants, schedule 1 conservation plan, fishing, traffic etc.
16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Environment officials for the functioning of EMC.
17. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.
18. The estimated total project cost is **Rs. 3550 Crores**. Total Employment will be **1200** persons as direct.
19. Intake pipeline and outfall pipeline fall in CRZ 1A, 1B and IV area as per demarcation. It was reported that construction of process plant and utilities fall outside the CRZ area. SCZMA recommendation has been obtained for Laying of Seawater Intake and effluent disposal underground pipeline through tunnel from unclassified Forest area, Sand dune area, intertidal area outside project boundary.
20. The Public Hearing earlier was scheduled to be held on 16-04-2022 at 11:00 Hrs, Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Public hearing was then time being postponed due to unavoidable circumstances. After that public hearing was completed on **17-10-2022 at 11.00 Hrs**. Venue: Project Site, Survey no. 432, Village: Bada, Taluka: Mandvi, District: Kutch, Gujarat. Which was presided over by Shri Chetan Mishan(GAS), Sub Divisonal Magistrate & Deputy Collector, Mundra- Kutch. Public hearing Details as given below:

S.No.	Issue related to	Nos. Issues	Concern in PH	GHCL/D reply	Action Plan	Fund Required	Timeline	Responsibility
1	CSR-Fodder	4	Steps to be taken for cattle Care about Madhan community Security regarding fodder supply for livestock.	Fodder will be provided as well as provision for veterinary doctor will be carried out by GHCL foundation under CSR activity.	<ul style="list-style-type: none"> <li>Activities for fodder supply will be carried out under CSR and CER activities for strengthening the bond between the project authorities and the local population. (refer Ch-8 and Table 10.4 in Ch-10). Fodder field will be developed on the Government/allocate land to nearby villages.</li> <li>Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities for communities.</li> <li>During year 2020-2021, GHCL foundation has spent INR 9.03 Crores towards CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting</li> </ul>	<ul style="list-style-type: none"> <li>As per M&amp;EF&amp;CC Office Memorandum FNO. 22-67/2017-IAIII, M&amp;EF&amp;CC, New Delhi, dated on 1st May 2018 GHCL Ltd has earmarked 0.5 % of capital investment (approx. Rs. 18.04 crore), towards the Corporate Environment Responsibility in 5 years</li> <li>GHCL Ltd will spend approx. 4.35 crore* towards Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages as per requirement under CER activities (*value may defer as per actual requirement)</li> </ul>	5 years	GHCL Limited
2	Employment	5	For employment of local villagers Number of employment opportunities to be Priority must be given to nearby 10 villages Regarding priority to nearby villages	Information on employment opportunities has given by Project Proponent that there are different types of employment opportunities in the two phase of the projects i.e. construction	<ul style="list-style-type: none"> <li>The proposed project has a potential for employment of skilled, semiskilled and unskilled employees during construction phase</li> </ul>	<ul style="list-style-type: none"> <li>GHCL Ltd will spend approx. 2.25 crore towards Promoting activities for skill building to improve</li> </ul>	During construction and Operation phase	GHCL Limited



S.No.	Issue related to	Nos Issues	Concern in PH	GHCL/IDreply	Action Plan	Fund Required	Timeline	Responsibility
			for labor work Regarding employment for local communities.	<p>phase and operational phase of the project. GHCL will strive to provide these employment opportunities to the local people, for which work will be done for their skill development and employment opportunities will be provided to the local people.</p> <p>As per requirement, training will be given to local people in coordination with HR department. Priority will be given for employment of local people.</p> <p>In nearby villages a group of women can be formed so that they can work in Grehdyogs (Home-based business). M/s. GHCL shall provide employment to women as per their skills and qualification.</p>	<p>operational phase. The plant will create direct employment in phased manner for about 1200 (operational phase) skilled as well as semi-skilled staff and indirectly large number of unskilled manpower will be engaged for the project. For Employment, local people will get first priority as per suitability and requirement. People will also get employed by the contractors for various project related activities. (Refer Ch-8 of EIA report)</p> <ul style="list-style-type: none"> <li>GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities.</li> </ul>	employment opportunities and women empowerment in nearby villages under CER activities.		
3	CSR-Health	1	Regarding health facilities under CSR activities	Will provide mobile health van facility and upgradation of existing health care infrastructure	<ul style="list-style-type: none"> <li>Industry will provide Mobile Health Care, Health Camps and Specialized Check Up Camps in nearby villages. Necessary support and help will be extended for advanced diagnosis and treatment wherever identified, Free medical health checkup under CSR and CER activities. (Refer Ch-8 of EIA report). We have already initiated mobile health van facility for nearby affected villages of project site.</li> </ul>	<ul style="list-style-type: none"> <li>GHCL Ltd will spend approx. 1.12 crore towards Infrastructure development Such as primary healthcare units and the fulfilment of the basic amenities in PHCs including mobile medical van and Provide Baka-Rasayana to Malnutrition Children in Aanganwadi and PHC of nearby Villages under CER activities.</li> <li>GHCL Foundation will spend approx.</li> </ul>	5 years	GHCL Limited
4	CSR-Education	3	Regarding scholarship under CSR activity Regarding skill development of youth and improvement of	Will build school in future as per requirement and will also upgrade the existing school infrastructure and will carry out	<ul style="list-style-type: none"> <li>Unit will be directed at two levels viz school and skill building to improve employment opportunities. At</li> </ul>		5 years	GHCL Limited

S.No.	Issue related to	Nos Issues	Concern in PH	GHCLLDreply	Action Plan	Fund Required	Timeline	Responsibility
			Conditions To provide educational facilities	skill development activities	<p>school level we intend to promote quality of education and learnability, develop infrastructure of Government schools, provide vocational training as per the requirement under CSR and CER activities.</p> <ul style="list-style-type: none"> <li>GHCL foundation will support local government and NGO to make that program more effective.</li> <li>GHCL foundation will carry out skill development Programme for local youth to improve their employment opportunities, women empowerment under CSR and CER activities.</li> <li>During year 2020-2021, GHCL Foundation has spent INR 9.03 Crores towards CSR activities. CSR projects/activities worth INR 19.09 Cr. were implemented. GHCL wide range of CSR projects have touched and benefitted more than 90,200 lives over the years. Promoting such activities like water conservation, Animal husbandry, health care, SHG, Infrastructure development etc.</li> </ul>	<p>towards Infrastructure development for quality of education, which will ultimately upgrade schools in nearby villages under CER activities.</p>		
5	Air Pollutants (SOx, NOx, Dust)	6	<p>Height of chimney to be installed</p> <p>Levels of Sox and NOx</p> <p>Regarding acid rain cause by Sox</p> <p>Emission of PM during transportation and Emission of heavy metal such as</p>	<p>For minimizing Air Pollution, requisite height of the stacks will be provided as per the NAAQS norms. Besides this, Modern technology equipment's like Dust collector, Electrostatic Precipitator, Scrubber will</p>	<ul style="list-style-type: none"> <li>The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be commissioned before</li> </ul>	<ul style="list-style-type: none"> <li>Air pollution</li> <li>Capital cost would include air pollution control devices like ESPs, Scubbers, Dust extraction</li> </ul>	During operation phase	GHCL Limited

S.No.	Issue related to	Nos. Issues	Concern in PH	GHCL ID reply	Action Plan	Fund Required	Timeline	Responsibility
			mercury. Regarding once through cooling for 120MW. Regarding linkage of fuel and how they are going to use it	installed. As a result, the pollution level will be within standard limits. GHCL will continue to support development of green belt in the surrounding villages through various agencies including GHCL Foundation (AF). GHCL shall endorse AF tree plantation movement of planting trees in entire Mandvi Taluka and 50,000 trees that mentioned, GHCL shall surely nurture those plants for five years.	<p>commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit.</p> <ul style="list-style-type: none"> <li>High efficiency ESPs shall be provided in the flue gas path of the CFB boilers for control of particulate matter.</li> <li>Finely ground limestone will be added to the boiler combustion zone together with coal/lignite to arrest the SO<sub>2</sub> formed during combustion.</li> <li>Lime stone dosing system to the furnace to be designed to achieve higher than 90% capture of SO<sub>2</sub>.</li> <li>Monitoring system (CEMS) of air pollutants SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> will be implemented.</li> <li>So, the expected pollutants will be well within standard norms.</li> <li>The air quality monitoring will be carried out on regular basis by approved agencies by CFCB/GSFCB. (refer Ch-6 and Ch-10 of EIA report)</li> <li>GHCL will implement green belt /plantation program to ameliorate the pollutants and improve the aesthetics and ambient air quality. (refer Ch-10 of EIA report)</li> <li>There is negligible cooling water requirement for power generation. There is no any alternative effective system is available for soda ash plant.</li> </ul>	<p>Stacks, Dry Fog system, Wind screen etc- 89.28 crore</p> <ul style="list-style-type: none"> <li>recuring cost would include operation and maintenance of pollution control devices- 1.50 crore</li> <li><b>Environmental monitoring Programme</b> capital cost include CCEMS, online weather station etc- 3.4 crore</li> <li>Recuring cost – 0.95 crore</li> <li>Greenbelt</li> <li>Capital Cost- 20 Crore</li> <li>Recuring Cost- 0.5 crore</li> </ul>		

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					<ul style="list-style-type: none"> <li>There is no readily available infrastructure for transportation of fuel i.e. rail or water way. So, we have to transport through road. Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. In future, any alternative option available will explore.</li> <li>GHCL Foundation will also promoting plantation activities in nearby villages under CSR and CER activities</li> </ul>			
6	Water pollutants (BOD,COD,Ammonia, Mercury, Sea Weed, Mangroves)	7	<p>Regarding water related question by Koli society</p> <p>Regarding decrease in number of phytoplanktons and disruption of food chain</p> <p>Regarding temperature and presence of ammonia in waste water</p> <p>Regarding presence of mangroves</p> <p>Regarding setup of tunnel for intake of sea water, seismic zone in which company falls, liquification of land due to heat</p> <p>Regarding discharge of effluents into sea containing ammonia and high temperature and death of fishes at Sutrapada plant</p> <p>Regarding quality of effluent in terms of BOD and COD</p>	<p>Effluent will be highly alkaline so it will be mixed with HCL and then it will be disposed off in sea.</p> <p>Design of structure will have done according to seismic zone V.</p> <p>In soda ash industry impact of ammonia is very low.</p>	<ul style="list-style-type: none"> <li>Industry will provide adequate effluent management and monitoring system for disposal of treated water</li> <li>Proper seawater intake and treated effluent disposal (ensure maximum dilution) shall be done as per recommendation Marine EIA report.</li> <li>The water monitoring results of (surface and groundwater and marine) should be carefully evaluated to identify significant changes, if any, adverse change from the baseline accordingly, corrective measures will be taken to ensure the sustenance of water quality. However, there is no ground water pollution is envisage in such soda ash plant,</li> <li>The ammonia concentration in treated waste water well</li> </ul>	<ul style="list-style-type: none"> <li>Capital cost would include cost of ETP, STP etc- 14 crore</li> <li>recurring cost would include operation and maintenance of pollution control</li> </ul>	During operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					<p>within the limit specified by CPCB for soda ash industry.</p> <ul style="list-style-type: none"> <li>There is no such fish kill cases due to treated effluent in existing plant. There are independent studies available which indicates there is no significant adverse impact on marine environment but there will be positive impact on environment.</li> <li>During studies, there is no such mangroves identified in sea water intake and outfall line area.</li> <li>Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.</li> </ul>			
7	Marine Life	1	Effect on marine life due to proposed project	No adverse impact on fish or marine animals and sea weed observed.	<ul style="list-style-type: none"> <li>Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational. The effluent release scheme can then be adequately modified to ascertain necessary dilution, if required. The efficiency of the diffuser must be checked periodically and if necessary, it should be cleaned to revert back to the dilution ascertained through initial tracer studies.</li> <li>There are independent studies available which indicates there is no significant adverse</li> </ul>	<ul style="list-style-type: none"> <li>A provision of Rs. 1 crore to be earmarked for the biodiversity management plan to be implemented in the project area during construction phase and operation phase.</li> <li>For periodic monitoring of the marine area environment during project construction phase, a provision of Rs. 0.5 crore to earmarked.</li> <li>For operation phase, Rs. 0.3 crore per year to be kept provision</li> </ul>	During construction and Operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					<p>impact on environment but there will be positive impact on environment.</p> <ul style="list-style-type: none"> <li>Design of pipeline/tunnel will be done according to seismic zone V. In case of catastrophic failure/ liquification on land, there are no chances of flooding as water transport through gravity.</li> </ul>			
8	Health & Hygiene(Ammonia Leakage)	2	<p>Skin diseases due to Soda Ash</p> <p>Regarding the leakage of ammonia.</p>	<p>GHCL will take care of any such issues related to Health of local peoples and workers.</p> <p>All the necessary measures for handling of chemicals will be implemented to reduce its impact on health of peoples. This information is also provided in the EIA report. All the pockets will have leak detection and repair system technology. Moreover, periodical maintenance will also be carried out. GHCL will ensure that there will be no leakage and therefore, there will not be occupational health issues for workers or villagers working in the plant. Moreover, GHCL will also provide PPE kits to workers for their safety.</p>	<ul style="list-style-type: none"> <li>Ammonia tanks should have latest instrumentation provision for pressure indication, temperature indication and level indication. The provision of instrumentation should be within 100 percent redundancy. Continues recording of major parameters pertaining to the storages shall be maintained in the control room.</li> <li>Unit will provide all the safety measure for ammonia storage as well as also prepare onsite and offsite emergency plan and all the APCM with respective units to mitigate the air pollution. The best available technology-based pollution prevention and control shall used to meet the regulatory standards and these pollution control systems will be</li> </ul>	<ul style="list-style-type: none"> <li>Capital cost would include cost of OHS center, PPEs, fire &amp; safety instruments, automation system for ammonia storage – 3.4 crore</li> <li>Recurring cost would include maintenance charges and training, audit &amp; health check-up etc.- 0.35 crore</li> </ul>	During operation phase	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					<p>commissioned before commencement of operation of the project. Wherever possible, the control systems shall be interlinked with the operational units, so that failure of the control system shall shut down the respective operational unit.</p> <p>There is no significant impact observed in the existing soda ash plants in Gujarat.</p> <ul style="list-style-type: none"> <li>There are rare possibilities of ammonia leakage observed in soda ash plant however, recommendation of Disaster management plan and risk assessment will be followed.</li> </ul>			
9	CSR - Farmers	3	<p>Facilities to be provided to nearby</p> <p>How hygenic the plant will be?</p> <p>How hygenic will be bada plant and what facility will be provided to the farmer.</p>	<p>GHCL Foundation is already providing subsidy for drip irrigation and GHCL will also consider to support this scheme further out of the CSR funds proposed for this project.</p> <p>To help agriculture, GHCL will help farmers as part of our CSR activity in consultation with villagers. The details and type of developmental work will be decided in consultation with villagers. GHCL foundation has been working for farmers through its different schemes like ground water recharge, water harvesting, zero chemical farming, drip irrigation etc.</p>	<p>Industry will Promote environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation solutions, etc. under CSR and CER activities</p>	<ul style="list-style-type: none"> <li>GHCL Ltd will spend approx. 3.00 crore towards Promoting environment friendly and nature-based solutions to enhance productivity of farming (Organic Farming) activities. It covers capacity building on farming techniques, provision of high-quality seeds/manure, efficient irrigation</li> </ul>	5 years	GHCL Limited
10	EIA Report & PH	14	EIA report is not correct	The terrestrial EIA report	<ul style="list-style-type: none"> <li>It is requested to note that as</li> </ul>			GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	advertisement		<p>Regarding the alternative of site modhwa village.</p> <p>Regarding the NIO accreditation to prepare marine EIA report</p> <p>Regarding ToR granted and Study carried out prior of ToR granted.</p> <p>Regarding the advertisement of the PH</p> <p>Regarding NABET accreditation of consultant organization</p> <p>Regarding Marine EIA</p> <p>Regarding NEERI who has prepared EIA report</p> <p>Regarding the correction in EIA report</p> <p>Regarding the monitoring data collection</p> <p>Regarding accreditation certificate of additional studies for ecology.</p>	prepared by CSIR NEERI and Marine EIA report is prepared by NIO, Mumbai	<p>per OM number J-17011/8/92-IA-III dated 8<sup>th</sup> August, 2019, there are 7 institutes/agencies authorized for preparation of CZMPS in consonance with the provision of CRZ notification, 2019 vide GSR 37(e) dated 18/01/2019. IRS anna university Chennai has prepared the CRZ map for GHCL LTD. CSIR -NIO is Expert hired to carryout the Marine EIA study.</p> <ul style="list-style-type: none"> <li>EIA report has been prepared by CSIR-NEERI, which is reputed governmental body and QCI NABET accredited consultant.</li> <li>An extensive study on the ecology and Biodiversity in the study area was conducted by the QCI NABET approved functional area expert.</li> </ul>			
11	Vipassana	3	<p>Project site is near Vipassana meditation center</p> <p>The meditation center will be disturbed due to industry. Ammonia used in the industry.</p> <p>Related to presence of Vipassana center and other religious places in 15km radius of project site</p>	--	<ul style="list-style-type: none"> <li>Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse impacts.</li> <li>The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment.</li> <li>The monitoring of all valued environmental components will be monitored as per the norms prescribed by GPCB/CPCB and the time to- time guidelines issued for soda</li> </ul>	<ul style="list-style-type: none"> <li>Cost of Environment management plant including various installations for Air Pollution, Water Pollution, Noise Control,</li> </ul>	--	GHCL Limited



S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					<p>ash manufacturing industry.</p> <ul style="list-style-type: none"> <li>It is reported in CSIR NEERI report that there are no significant impact expected on man-made sensitive installations and habitations. On basis of study of present environment condition near project area and impact prediction and control measures proposed by GHCL Ltd. The proposed project will not have any significant negative impact on environment.</li> </ul> <p>Company operations are limited to the plant boundary and no negative impacts on Vipassana Centre are anticipated. The company will have robust peripheral Green Belt in order to attenuate noise and air emission due to plant operations.</p>	<ul style="list-style-type: none"> <li>Recurring Cost-0.5 crore</li> </ul>		
12	CSR - Animal Husbandry	3	<p>Regarding arrangements for Animal Husbandry</p> <p>Regarding distribution of kits to Fishermen</p> <p>Regarding number of cattle present in the area</p>	GHCL Foundation will support nearby community by providing education and livelihood support to make them self – reliant.	<ul style="list-style-type: none"> <li>Unit will do promotion through providing support for breed improvement, animal health care, fodder improvement and providing veterinary doctor in nearby villages under CER and CSR activities.</li> <li>Unit will also promote development Initiatives for Fishing Communities such as Creation of infrastructure like ice plants, cold storages as well as provide operational inputs such as fishing boats, nets and engines</li> <li>We have already provided veterinary doctor for nearby affected villages.</li> </ul>	<ul style="list-style-type: none"> <li>GHCL Ltd will spend approx.. 4.35 crore towards</li> </ul> <p>Animal husbandry promotion through providing support for breed improvement, animal health care, Veterinary doctor and others as well as provides Fodder for cattle feeding nearby villages under CER activities</p>	5 years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
13	Site Selection	2	Regarding the alternative of site modhwa village. Regarding showing presence of marshy land near coastline	--	During the site selection, the alternative sites considered for setting-up of the proposed chemical complex project are given below: : Site 1 – Village Pingleswar, Taluka – Abdasa, Dist. Kutch Site 2 – Village Suthri, Taluka – Abdasa, Dist. Kutch Site 3 – Village Bambhdai, Taluka – Mandvi, Dist. Kutch Site 4 – Village Bada, Taluka – Mandvi, Dist. Kutch Site 5 – Village Modhva, Taluka – Mandvi, Dist. Kutch  The site at village bada is considered favorable based on the environmental and logistic advantages over other four sites. Justification of Site selection are given in Chapter-5 of EIA report.	--	--	GHCL Limited
14	Sand Dunes	2	Concern of presence of sand dunes at bada coast Regarding digging of sand dunes for preparation of tunnels for water intake	--	<ul style="list-style-type: none"> <li>• There is no disturbance to existing sand dunes.</li> <li>• Tunnelling work (much below ground level) for laying pipeline through sand dunes will be done by adopting proven construction methodology like micro tunnelling. The detailed Studies on sand dune mapping and morphological changes near the project site was carried by National Institute of Oceanography (NIO), Goa. This report can be referred from CSIR NIO Marine EIA.</li> <li>• GHCL Ltd is committed for conservation plan for sea turtles and sand dunes as suggested by various studies.</li> </ul>	--	--	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
15	Turtle	3	Regarding presence of turtles on the coastline of bada Regarding information on endangered species not mentioned in EIA report Regarding hatching and presence of sea turtles	--	<ul style="list-style-type: none"> <li>Study on Status Survey and Conservation Plan for Sea Turtles along Mandvi Taluka, Bhuj, Gujarat by <b>Zoological Survey of India, Kolkata (April,2019)</b> is attached with EIA report.</li> <li>ZSI study report mention that they did not any encounter any sea turtle and fresh/old nests or crawl marks of turtles on the beach. Since many of the factor for selection of a suitable nesting site are not conducive.</li> <li>As per additional Ecological and Biodiversity study, suggests that the coast near the proposed project site may not be suitable for sea turtle nesting due to narrow supra tidal region, steep slope, dense vegetation and presence of predators such as dogs and jackals. Though, observations suggest that there may be no or negligible probability of sea turtle nesting.</li> <li>GUIDE is also engaged for study of turtle survey and preparing conservation plan.</li> </ul>	<ul style="list-style-type: none"> <li>Contribution to Forest department for Sea Turtle Conservation Activities- 0.20 crore</li> </ul>	10 years	GHCL Ltd
16	Schedule 1 species (Peacock)	4	Regarding presence of greater numbers of peacocks nearby and not	--	<ul style="list-style-type: none"> <li>Details of schedule - 1 species and conservation</li> </ul>	<ul style="list-style-type: none"> <li>the proposed</li> </ul>	10 years	GHCL Ltd

S. No.	Issue related to	Nos. Issues	Concern in PH	G HCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
	Sandha and indian Monitor Lizard)		<p>stated in report</p> <p>Presence of reptiles and amphibians not reported</p> <p>Related to study of presence of Indian Monitor Lizard in study area</p> <p>Regarding presence of gugal trees,</p>		<p>already incorporated in EIA report.</p> <ul style="list-style-type: none"> <li>GHCL shall make financial allocations for taking up wildlife mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife.</li> <li>GHCL Ltd have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule -I species and Critically Endangered species) to CWLW department of Gujarat.</li> </ul>	Allocation for conservation of Schedule 1 species for 10 years is 1.25 crore		
17	Conservation Plan	2	<p>Regarding conservation plan for Schedule 1 species</p> <p>Concern regarding green sea turtles and conservation plan for them</p>	--	<ul style="list-style-type: none"> <li>GHCL shall make financial allocations for taking up wildlife</li> <li>mitigation measures and for contribution to forest department for carrying out activities towards propagation, protection and conservation of wildlife.</li> <li>The unit have submitted Conservation Plan (Flap shell turtle, Green Sea turtle, Indian monitor lizard, Olive Ridley Sea turtle, Black shoulder kite, Eurasian Spoonbill, Indian Peafowl, Marsh Harrier, Oriental Honey Buzzard, Shikra, Short-toed Snake Eagle, Chinkara and Gugal - Schedule -I species and Critically Endangered species) to CWLW</li> </ul>	<ul style="list-style-type: none"> <li>the proposed budget allocation for conservation of Schedule 1 species for 10 years is 1.25 crore</li> </ul>	10 Years	GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					department of Gujarat.			
18	Form 1(Water Bodies, Temples, Schedule 1 Species)	5	Regarding presence of waterbody not shown in form-1 Regarding religious places and lakes not mentioned in PFR report. Waterbody not mentioned in form-1 Data given in form-1 and EIA are different Waterbody not mentioned in form-1	--	<ul style="list-style-type: none"> <li>Environmental settings are given in Chapter-1 and Chapter-5 of EIA report. Approximate distance of water bodies, temples etc are given in EIA report.</li> <li>Through drainage studies of the area, it was observed that there is one stream of 1st order entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, will be diverted to nearby passing Vengadi River in the west.</li> <li>There are also pond inside the premises. It is proposed that pond i.e. inside the premises will be used to store entire annual surface runoff plant use. If permitted by concern authority.</li> </ul>	<ul style="list-style-type: none"> <li>-Cost of drainage network of surface runoff, rainwater collection pond and rain water harvesting system – 53 crores (included in EMP)</li> </ul>		GHCL LTD
19	Govt. Land	3	Regarding type of land to be procured by the industry Regarding status of government land to be procured Providing data for proving gauchar land	--	<ul style="list-style-type: none"> <li>There is no gauchar land within proposed project site. M/s GHCL has applied to Industries Commissioner and District Collector for allotment of aforesaid land. Industries Commissioner has granted In Principle approval for Bonafied Industrial Purpose. District Collector has initiated actions for allotment of Govt. waste land.</li> </ul>			GHCL LTD
20	Fishing	8	Regarding details of Pagadia fisherman not mentioned and Marine EIA is misinterpreted	--	<ul style="list-style-type: none"> <li>Proper seawater intake and treated effluent disposal (ensure maximum dilution) shall be done as per</li> </ul>	<ul style="list-style-type: none"> <li>A provision of Rs. 1 crore to be earmarked for the biodiversity management plan</li> </ul>	During construction and	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			<p>Regarding disturbance to fishes due to presence of pipeline</p> <p>Regarding status of fishing near bada and Mandvi</p> <p>Related to number of fisherman not incorporated in study</p> <p>--</p> <p>Related to presence of dead fishes not reported in study, fishing carried out for commercial purpose</p> <p>Regarding presence of fisherman in study area</p>		<p>Marine EIA report prepared by NIO</p> <p>Industry should be ensured that the effluent released to the sea meets the prescribed GPCB/ CPCB norms at all times. This should be verified through tracer studies after the outfall becomes operational.</p> <p>Details of Fishery and fishermen including their family and population are given in Chapter-3 of marine EIA report.</p> <p>Other than construction phase, there will be no any impact on pagadiya fisher men. As shore line will remain undisturbed.</p> <p>It is mentioned in marine EIA report that no large-scale commercial fishing operation prevail in the study area except for minor shore based and Gill net operations.</p> <p>There are independent studies available which indicates there is no significant adverse impact on environment but there will be positive impact on environment.</p> <p>Unit will also promote development Initiatives for Fishing Communities including pagadiya under CER and CSR activities</p>	<p>implemented in the project area during construction phase and operation phase.</p> <ul style="list-style-type: none"> <li>For periodic monitoring of the marine area environment during project construction phase, a provision of Rs. 0.5 crore to earmarked.</li> <li>For operation phase, Rs. 0.3 crore per year to be kept provision for the monitoring.</li> <li>GHCL Ltd will spend approx. 0.75 crore towards Development Initiatives for Fishing Communities including pagadiya under CER activities</li> </ul>	Operation phase	
21	Water Body (check dams)	2	Related to presence of seasonal river which passes near bada village and presence of dam over it	--	Through drainage studies of the area, it was observed that there is one stream of 1 <sup>st</sup> order	<ul style="list-style-type: none"> <li>Cost of drainage network of surface runoff, rainwater</li> </ul>	During construction and	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
			Related to distance of river from project site		entering the plant area from north. Although, it has small catchment area, it is proposed that this stream, may be diverted to nearby passing Vengadi River in the west, which has two check dams, one for salinity ingress check and on upstream side for storing fresh water. This will not cause any adverse impact on the downstream. For channelizing the monsoon run off from the area adjacent to plant it is required to construct peripheral drain along plant boundary so that flooding is avoided and run off find its way to the natural slope towards Arabian Sea. So, the present hydrological setting of the area will remain unaffected. So, the present hydrological setting of the area will remain unaffected. The additional water enter into the vengadi river through drainage will not impact on check dam. As any additional water above the river and check dam shall overflow to the Arabian sea.	pond and rain water harvesting system - 53 crores (included in EMP)	Operation phase	
22	Traffic (R MH, Heavy Trucks, Road Usage)	4	Regarding number of trucks passing due to project for raw Related to traffic study not mentioned in ToR, impact not carried out Concern regarding public roads Regarding number of trucks passing	--	Traffic study are shown in section 3.2.3 of chapter-3 and impact due to transportation is show in 4.1.4.3 and 4.2.3 of Chapter-4 in EIA report. We will use existing road network as no other transportation i.e. rail/water ways are available. We have carried out calculation on	--		GHCL Limited

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Traffic study (Level of Service) and added on Form Part-C.			
23	CSR General	1	Regarding past data of CSR	<p>GHCL has proposed CSR budget in the EIA report which will be utilized based on need identification and village development meetings. CSR will be implemented with CSR implementing agencies including GHCL Foundation is working in following area.</p> <ol style="list-style-type: none"> <li>1. Agro-livelihood and animal husbandry,</li> <li>2. Education and skill development,</li> <li>3. Health, water, and sanitation.</li> </ol>	<ul style="list-style-type: none"> <li>• GHCL's commitment towards the development of weaker sections of society has been a continuous initiative for more than two decades. Through its "GHCL Foundation Trust", GHCL has upgraded its CSR activities to cover a larger section of the society to provide support to the downtrodden, needy and marginalized citizens and also to create a social infrastructure for their sustenance. GHCL Foundation serves as the Corporate Social Responsibility arm of GHCL Limited and represents our commitment to the holistic development of our surrounding community. During year 2020-2021</li> </ul>			GHCL LTD
S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					Infrastructure development etc.			
			Regarding pollution to be caused by industry		<ul style="list-style-type: none"> <li>• Environmental Management Plan envisages the plans for the proper implementation of mitigation measures to reduce the adverse</li> </ul>	<ul style="list-style-type: none"> <li>• Cost of Environment management plant including various installations for</li> </ul>		GHCL Limited
			Regarding to dusting due to kiln and power plant,					



24	Pollution and Environment General	4	Related to disposal of effluent water	Unit will follow all the rules and regulation with their subsequent amendments as directed by concerned authorities	<p>impacts.</p> <ul style="list-style-type: none"> <li>The EMP implementation will minimize the impact of atmospheric emissions, liquid effluents, solid wastes and noise generation on the surrounding environment</li> </ul>	Air Pollution, Water Pollution, Noise Control, Greenbelt Development, Occupational Health and Safety and other related activities.- 205.07 crore	--	
25	Forest area	2	<p>Related to distance of project site from forest area</p> <p>Details regarding families dependent on forest</p>	There is no classified forest area.	<ul style="list-style-type: none"> <li>There is no forest land within the boundary of proposed project site. However, some part of the unclassified forest area located south of the project site outside boundary. Sea water intake and outfall pipeline will pass through underground micro tunnel in specific corridor to cross forest area. The permission from the Forest Department is</li> </ul>	--	--	GHCL LTD

S. No.	Issue related to	Nos. Issues	Concern in PH	GHCL LTD reply	Action Plan	Fund Required	Timeline	Responsibility
					of 0.9689 Ha. of un-class forest			
26	Supporting for Industrial Development to GHCL LTD	--	For Employment For Infrastructure development in nearby village Social upliftment towards nearby villages Health facilities Women empowerment ment Skill	GHCL LTD team thanked or welcoming the industries		--	--	--
	Total	94						

21. The Proposal was considered in the 72<sup>nd</sup> **EAC Meeting held on 2.1.2024** wherein the EAC deferred the proposal for want of requisite information. Reply to the same was submitted by the PP vide letter dated 30.1.2024, and again the proposal was considered in the 74<sup>th</sup> EAC meeting Reply for the same was submitted on 28.3.2024.

S. No.	Queries Raised by EAC	Reply by PP
(i)	The Committee was of the view that PP shall compare the baseline data collected during December -February 2020 and data collected during December 2022 -February 2023. Accordingly, PP shall also carry out trend analysis of previous baseline data by conducting latest additional one-month baseline data	T R Associates have compared the baseline data collected during December 2019 - February 2020 and data collected during December 2022 - February 2023.  Accordingly, T R Associates have carried out the trend analysis of previous baseline data by conducting latest additional one-month (February 2024) baseline data.
(ii)	The Committee noted that several representations have been received from various level of public raising several issues. The Committee was of the view that representations shall be forwarded to the PP for their response. The Committee also recommended that in the next meeting they will go through the video of proceedings of public hearing. The Committee will go through the response of PP then decide further course of action accordingly	PP informed that same type of questions have been raised in approximately 410 emails. The concerns raise are similar to issue raised in public hearing and samr has been replied in public hearing MoM. The committee deliberated on the each issues raised.

### 13. Deliberations by the EAC

The Committee members have reviewed the public hearing proceeding during the 78<sup>th</sup> EAC meeting held on 30<sup>th</sup> April 2024. Committee members have observed that 1<sup>st</sup> public hearing was scheduled on 6<sup>th</sup> April 2022. Advertisement of the public hearing schedule was given in the local daily newspaper in Gujarati Newspaper: Divya Bhaskar, dated 3<sup>rd</sup> March 2022 and English Newspaper, Times of INDIA, dated 4<sup>th</sup> March 2022, which is 30 days before the Public hearing, as mentioned in the EIA notification 2006 and their amendment also Submitted Draft EIA report to Concern authorities and Executive summary to Affected villages in line with EIA notification. However, it was postponed due to unavoidable circumstances.

A public hearing was rescheduled to 17<sup>th</sup> October 2022, as per the notification date of 9<sup>th</sup> May 2022, which states that in the event of any such postponement, the time duration for convening the rescheduled public hearing should not be less than forty-five days from the date of the first advertisement already published in accordance with the initial date of the public hearing. It shall be ensured that a minimum notice period of fifteen days shall be provided to the public before the re-scheduled date of the public hearing to furnish the responses in writing. The rescheduled advertisement was circulated in the daily local newspaper Divya Bhaskar on 30<sup>th</sup> September 2022 and Times of INDIA on 1<sup>st</sup> October 2022, 15 days before the public hearing as given in to the EIA notification 2006 and their amendment. Also, GPCB has Submitted an EIA report to

Concerned authorities and an Executive summary to the Affected villages in line with EIA notification. PP informed that Approximately 1,000-1,500 individuals may have attended the public hearing. However, only 106 people signed the signature sheet circulated by the GPCB concerned person during the public hearing. Therefore, GPCB reported 106 attendees in the proceedings. In the video film, it was observed that people who were opposing the project, have been given full opportunity to raise the issues before PH committee. Further, 1066 no. Issues were raised by the local people, and a point-wise reply from the project proponent was provided to them. The public hearing continued for about 10-11 hours. Sufficient time was given, the procedure was duly followed, and the concerns raised by the public were addressed, too. 1154, no. of written representations were received, including concerns raised, supporting letters from the affected local people, and replies to the written representation, which were also incorporated into the public hearing proceedings. Most issues raised during the public hearing were the Conservation of sand dunes, Environmental management plan, Vipassana meditation center, Conservation of Ecology and Biodiversity, Accreditation of Consultants, environmentally sensitive receptor distances, employment and other support provided by the project proponent after plant commissioning, etc.

Concerning the project, the proponent informed that it is essential to note the significant contributions of various organizations. The Marine Environment Impact assessment report was prepared by NIO, Mumbai, while the CRZ classification report, complete with a 1:4000 scale demarcation map, was prepared by IRS, Chennai. The sand dune and Biodiversity Conservation plan was developed by GUIDE Institute, Kutch, and the Sea turtle conservation plan was prepared by the Zoological Survey of INDIA (ZSI). Each of these organizations played a crucial role in ensuring the project's compliance with environmental regulations and preserving local biodiversity.

Based on the above details, report representation to the technical committee of GCZMA and give recommendations for CRZ clearance to GHCL Limited. The unit has also received Stage I and II approval from the Concerned forest authority.

PP informed that in the point of NABET accreditation, the project proponent informed that they awarded the project to NEERI in 2018. No NABET-accredited consultant accredited under sector 4 ( e ) was available during that period. NEERI is a nationally reputed organisation, and it also prepared EIA reports earlier for similar soda ash industries. Later, the unit reviewed and revalidated the EIA report with the NABET-accredited consultant M/s. T R Associates. T R Associates has also submitted the undertaking that they have verified the EIA/EMP report and prepared an addendum report describing our findings and observations. T R Associates has presented the committee that they have not observed any significant deviation in the EIA report prepared by the national reputed organisation NEERI. The report discussed in the public consultation is as good as the report prepared by the accredited consultant and is factually correct. Additionally, the structure of the EIA report was complied with according to the EIA notification 2006 and its amendments.

After detailed deliberation, the Committee was of the view that since proposal involves CRZ clearance, views/comments of the CRZ division may also be obtained on the proposal from CRZ angle. The Comments /views of CRZ Division may be placed before the EAC ( Industry -3) for consideration of the project. PP shall also submit clearcut land holding title of the proposed project site.

**Project proposal was deferred for want of above additional information. Additional information shall be submitted online to the PARIVESH portal for further consideration by EAC.**

## Agenda No. 78.2

### **Establishment of new natural and synthetic surfactant chemical manufacturing unit Mouza Kulepairi, P.S. Bagnan, Dist-Howrah, West Bengal by M/s Detergeo Chem (EAST) Private Limited (DCEPL) - Consideration of Environmental Clearance**

**[Proposal No.: IA/WB/IND3/256360/2020, File No.: IA-J-11011/1/2020-IA-II(I)]**

1. The proposal is for Environmental Clearance to the Establishment of new natural and synthetic surfactant chemical manufacturing unit Mouza Kulepairi, P.S. Bagnan, District -Howrah, West Bengal by M/s Detergeo Chem (EAST) Private Limited (DCEPL).
2. The project/activity is covered under Category 'A' of 5(f) Synthetic organic chemicals industry (dyes & dye intermediates) of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended).
3. The ToR was granted by the Ministry, vide letter no. No. IA-J-11011/1/2020-IA-II(I) dated 10.3.2020 . The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a Fresh EC case. The proposal is placed in this 78<sup>th</sup> EAC meeting on 30<sup>th</sup> April ,2024, wherein the PP along with accredited Consultant, M/s Mantec Consultant Pvt Ltd. (NABET Accreditation No. NABET/EIA/2326/RA 030 valid till 20.04.2026] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:
4. The PP reported that the total land area is 1.3493 Ha and no R& R is involved in the Project The details of products to be manufactured are as follows:

<b>S. No.</b>	<b>Product Name</b>	<b>CAS Number</b>	<b>Proposed Manufacturing Capacity (MTA)</b>
1.	Linear Alkyl Benzene Sulphonic Acid 96%	27176-87-0	12,000
2.	Linear Alkyl Benzene Sulphonic Acid 90%	85536-14-7	12,000
3.	Alpha Olefin Sulphonate	68439-57-6	1,000
4.	Sodium Lauryl Ether Sulphate	3088-31-1	24,000
5.	Sodium Lauryl Sulphate	151-21-3	6,000
6.	Cocoamidopropyl Betaine	61789-40-0	3,000
7.	Cocamide Monoethanolamide	68140-00-1	3,000
8.	Cocamide Diethanolamide	68603-42-9	3,000
9.	Ethylene Glycol Distearate	627-83-8	3,000
10.	Ethylene Glycol Monostearate	111-60-4	3,000
11.	Dilute Sulphuric Acid	7664-93-9	12,000

12.	Sodium Sulphate	7757-82-6	400
<b>Total Capacity</b>			82,400

5. The PP reported that there is no violation case as per the Notification No. S.O. 804(E) dated 14.03.2017 and no direction is issued under E (P) Act/Air Act/Water Act.
6. The PP reported that There is no wildlife sanctuary within 10 km distance from the project site. River/ water body Rupnarayan river is flowing at a distance of 3.6 km in East direction No Schedule-1 Species within 10 km distance from the project site.
7. The PP reported that Ambient air quality monitoring was carried out at 8 locations during December 2023 to February 2024 and the baseline data indicates the ranges of concentrations as: PM<sub>10</sub> (52µg/m<sup>3</sup> to 79µg/m<sup>3</sup>), PM<sub>2.5</sub> (25µg/m<sup>3</sup> - 46µg/m<sup>3</sup>), SO<sub>2</sub> (9 µg/m<sup>3</sup>- 16 µg/m<sup>3</sup>) and NO<sub>2</sub> (15 µg/m<sup>3</sup> - 32 µg/m<sup>3</sup>). AAQ modeling study for point source emission indicates that the max. incremental GLcS after the proposed project would be 0.0028 µg/m<sup>3</sup> 0.04142 µg/m<sup>3</sup> and 0.0052 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>x</sub> and NO<sub>x</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
8. The PP reported that the Total water requirement is 213 KLD of which fresh water requirement of 203 KLD will be met from State Water Tankers. Effluent of 10.7 KLD quantity will be treated through Effluent treatment plant. The plant will be based on Zero Liquid discharge system
9. Power requirement 1000 KW. DG sets of capacity 910 KVA and 500 KVA, DG sets are used as standby during power failure. Stack (height 30 m) will be provided as per CPCB norms to the DG sets.
10. 2 TPH fired boiler will be installed. Multi cyclone separator/ bag filter with a stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm<sup>3</sup> for the proposed boilers.
11. **Details of fuel:** Proposed project required fuel.

S. No.	Name of Fuel	Use	Quantity
1.	HSD	DG Set 1	100 L/hr
2.	Sulfur	Sulphonation Plant	500 Kg/hr
3.	LDO	2tph Boiler	155 L/hr

12. **Details of Process Emissions Generation and its Management:** D.G. Set and Sulphonation process emissions are the main sources of air pollution. Impact on air quality due to proposal project will be temporary rise in SPM and RSPM level likely to result from:
  - Fugitive dust emissions at the construction site.

- Use of unpaved roads and trucks tracks by the construction activities.

**13. Details of Solid Waste/ Hazardous Waste Generation and its Management:**

**Details of Hazardous Waste**

S.	Name of Waste	Quantity (MTPA)	Waste Type	Disposal Method	Source of Waste	Physical Status
1.	ETP Sludge (Category 35.3)	1.0 MTPA	Incinerable	Give to TSDF	ETP Filter	Solid
2.	Sulphur Ash	1.0 MTPA	Utilise for further beneficial use	Sell to fertilizer industry	Expired Raw Material	Solid
3.	Spent Oil (Category 5.1)	15 lt/yr	Recyclable	Sell to authorized oil reclamation plant	Pumps, DG, Equipment Seals	Oily

**Details of Non-Hazardous Waste**

S. No.	Name of Waste	Quantity	Waste Type	Disposal Method	Source Of Waste	Physical Status
1.	Discarded Plastic Bags	100 Bags/Yr	Recyclable	Give to authorized recyclers	Stores/Offices	Solid
2.	Used HDPE Drums	500/Yr	Recyclable	Re-use / Give to authorized recyclers	Plant / Warehouse	Solid

14. The Budget earmarked towards the Environment Management Plan (EMP) is ₹ 150 lakhs (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 17 lakhs per annum. Industry proposes to allocate Rs. 40 lakhs towards CER.
15. Industry has will developed greenbelt in an area of 33 % i.e 4453 Sq. m out of total area of the project.
16. The PP reported that the Public Hearing for the proposed project had been conducted by the State Pollution Control Board on 23.08.2021 under the chairman ship of Additional District Magistrate. The main issues raised during the public hearing are;

S. No.	Name of the Person	Points Raised	Replies and Action Plan	Budget
1.	Janab Monirul Islami	He welcomed the project and asked	The project proponent answered that no water will be discharged out of the	1.0 Lakh/year

S. No.	Name of the Person	Points Raised	Replies and Action Plan	Budget
	Village- Shyampur,	about the wastage of the water.	plant area as the project has been conceived as ZLD.	
2.	S.K Ahed Ali Village- Subsit (Paschim)	He welcomed the proposed project and questioned about the greenery development to be done by the project proponent.	The project proponent replied that the adequate plantation will be done to maintain a greenbelt and to comply with the environmental norms.	
3.	S.K Manirul Ali Village- Bagur (Subsit)	He welcomed the proposed project and asked about the possible noise pollution that can be caused by the project	The project proponent said that the adequate measures will be taken to attenuate noise arising out of the project so that it meets ambient noise standards.	
4.	Janab Jahiruddin Ali Village- Patinan	He welcomed the proposed project and asked about the prospect of local employment in the project.	The project proponent replied that both skilled and unskilled workers will be employed from the local areas and also proper training will be imparted so that they can develop themselves as per the project requirement as well as for private entrepreneurship	2.0 Lakh/year
5.	Janab Jiyarul Hussain Village- Kismat Brahman	He welcomed the proposed project and asked about the prospect of local areas.	The project proponent replied that the total work strength, 60% will be from the local areas.	

17. The PP proposed to set up an Environment Management Cell (EMC) by engaging Environment officials for the functioning of EMC.
18. The PP submitted the Disaster Management Plan and On-site and Off-site Emergency Plans in the EIA report.



19. The estimated project cost is Rs. 20 crores. Total Employment will be 40 persons as direct & 160 persons indirect after expansion.

20. **Deliberations by the EAC**

After detailed deliberations, EAC desired the following information:

- (i) Details of air pollution source viz. sulphonation plant; waste heat recovery boiler; and its pollution control measures.
- (ii) Details of ETP and Sewage Treatment Plant.
- (iii) Filter press shall be installed in place of sludge drying bed.
- (iv) Management of Municipal garbage generated from the proposed project site.
- (v) Break up of capital cost and recurring earmarked for implementation of EMP.
- (vi) Revised CER budget alongwith break up.
- (vii) Action plan for development greenbelt alongwith number of tree to be planted and details of species as well as budget and time frame.
- (viii) Consultant shall provide quantified measures to be taken for air pollution control (utilities & process); Wastewater management ; Greenbelt Development; solid waste management; Noise Environment; capital and recurring cost earmarked for EMP including CER; Post monitoring plan in Environment Management Plan chapter of EIA report. Revised EIA report shall be uploaded on Parivesh portal.

Project proposal was deferred for want of above additional information. Above all additional information shall be submitted online to the PARIVESH portal for further consideration by EAC.

**Agenda No. 78.3**

**Proposed Addition of Formaldehyde Production Capacity from 2100 MTPM to 7500 MTPM in Existing Formaldehyde Manufacturing Facility at Village Goyala, Mohana, Tal- Baksi Ka Talab, Deva Road, Lucknow, Uttar Pradesh by Subham Polychem Pvt. Ltd. - Consideration of EC**

**[Proposal No. IA/UP/IND3/246935/2021 / File No. IA-J-11011/43/2021-IA-II(I)]**

1. The proposal is for environmental clearance for the Proposed Addition of Formaldehyde Production Capacity from 2100 MTPM to 7500 MTPM in Existing Formaldehyde Manufacturing Facility at Village Goyala, Mohana, Tal- Baksi Ka Talab, Deva Road, Lucknow, Uttar Pradesh by Subham Polychem Pvt. Ltd.
2. The project/activity is covered under Category 'A' of item 5(f), Synthetic organic chemicals industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended).
3. The standard ToR was issued by the Ministry, vide letter no. IA-J-11011/43/2021-IA-II(I) dated 9.2.2021 .The PP in the Form-2 reported that it is an **Expansion case**. The proposal is now placed in 78th EAC Meeting held on 30<sup>th</sup> April, 2024, wherein the Project Proponent and an accredited Consultant, M/s **Ind**

**Tech House Consult.** (NABET Accreditation Number NABET/EIA/23-26/RA 0309 Valid till 29.04.2026), made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the Existing land area is 2788 m<sup>2</sup> and no additional land will be used for the proposed expansion. The details of products and by-products are as follows:

S.No	Product Details (complete name)	CAS NO.	Existing Quantity	Proposed Quantity	Total Quantity	Uses
1.	Formaldehyde	50-00-0	2100 MT/month	5400 MT/month	7500 MT/month	Formaldehyde is used by plywood and mica laminated sheets manufacturers, who make adhesives like Urea Formaldehyde & Phenol Formaldehyde resins.

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction issued under E (P) Act/Air Act/Water Act.
6. The PP reported that EC was not required for the existing unit as it was installed before EIA Notification, 2006. The PP has obtained CTO with ref. No.: **70285/UPPCB/LUCKNOW (UPPCBRO)/CTO/water/LUCKNOW/2019** obtained for the production capacity of Formaldehyde of 2100 MT/Month. Certified CTO Compliance was issued by UPPCB vide letter dated 03.12.2022. All the conditions are complied.
7. The Certified CTO Compliance Report has been given by the RO, Uttar Pradesh Pollution Control Board on 03/12/2022 and 11/03/2024. No non-compliance is reported in the certified compliance report.
8. The PP reported that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River/ water body a) Imli Nala is situated at an aerial distance of 50 m on East, b) Sarada Canal is at aerial distance of 252 m on East, c) Gomti River at aerial distance of 8.21 Km on SE and no Schedule-I species exist within 10 km study area of the project.
9. The PP reported that Ambient air quality monitoring was carried out at eight (8) locations during 1st Dec 2020 to 28th Feb 2021 and again in the month of October 2023 [post monsoon season] for the purpose of validating earlier baseline study. The baseline data in October 2023 indicates the ranges of concentrations as: PM<sub>10</sub> (62 - 189 µg/m<sup>3</sup>), PM<sub>2.5</sub> (39 – 98 µg/m<sup>3</sup>), SO<sub>2</sub> (6 – 10.5 µg/m<sup>3</sup>) and NO<sub>2</sub> (15.7- 26.2 µg/m<sup>3</sup>). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.119 µg/m<sup>3</sup>, 0.071 µg/m<sup>3</sup>, 0.533 µg/m<sup>3</sup> and 1.91 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub> and NO<sub>x</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

10. A warning letter has been issued to the Director, M/s. Subham Polychem Pvt. Ltd, dated 07th November 2023, “In this regard, as concluded in personal hearing, PP shall engage an Accredited Consultant who will update and validate the existing EIA/EMP report. The onus of the monitoring data and other technical aspects of the EIA/EMP report will be on the new consultant.
11. Based on the above warning letter dated 07th November 2023, PP in their covering letter dated 15th December 2023 reported that PP have engaged Ind Tech House Consult (Accredited Consultant from NABET). Ind Tech House consult has owned the EIA report and prepared an addendum to EIA with respect to Chapter 2, Chapter 3 with 1-month additional baseline monitoring report, Chapter 4 and Chapter 10.
12. The PP reported that the total water requirement is 249 m<sup>3</sup>/day of which fresh water requirement of 246.5 m<sup>3</sup>/day will be met from onsite tube-well. Effluent of 2.3 KLD quantity will be treated in proposed ETP and recycled in green area. Equipment washing effluent of approx. 2 KL during shut down once in 3-4 months will be treated in ETP and recycled in cooling tower. Sewage of approx. 0.4 KLD will be treated in proposed STP and recycled in green area. The plant will adopt Zero Liquid Discharge system and treated wastewater will be completely recycled.
13. The PP reported Power requirement after expansion will be 93.24 kW [connected load 225 KVA] and will be met from Uttar Pradesh Power Corporation Limited. Existing unit has one DG set of 125 KVA capacity and additionally one DG set of 480 KVA is proposed as standby during power failure. Stack (height 11 m from GL) will be provided as per CPCB norms to the proposed DG sets. Stack height of 12 m has been provided to HSD fired boiler (0.5 TPH).
14. **Details of Process Emissions Generation and their Management:** Tail gas from the process is vented out after absorption column at a height of approx. 12m from ground level. The existing manufacturing unit has installed three absorption columns in series before releasing off gases into the atmosphere. Proposed expansion unit will have five absorption columns in series before releasing off gases into the atmosphere. Therefore, emission of traces of methanol and formaldehyde vapour through the vent is not envisaged.
15. **Details of Solid/ Hazardous Waste Generation and its Management: Municipal Solid waste generation** – 2 Kg/day; One small OWC will be installed to process the organic wastes. Remaining wastes will be disposed through authorized agency as per local norms.

Waste Detail	Category as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016	Quantity Generation [Post Expansion]	Utilization/Disposal
ETP Sludge	35.3	Approx. 0.01 MT/year	Will be stored onsite at a secured place and disposed through authorized common HWTSDF
Empty barrels /liners/ containers contaminated with hazardous chemicals	33.1	10 nos./year	

Used Oil	5.1	Approx. 0.1 KL/year	Sold to authorized recyclers
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14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ . 50.0 lakh (capital) and the Recurring cost (operation and maintenance) will be about ₹10 lakhs per annum. Industry proposes to allocate ₹11.6 Lakh towards corporate Environmental responsibility (CER).
15. The Public Hearing for the proposed expansion project has been conducted by the Uttar Pradesh State Pollution Control Board on 20/10/2021 which was presided by the Additional District Magistrate. The main issues raised during the public hearing are related to benefit & job opportunity due to the project, CER spending, pollution control measures.

<b>Issue raised</b>	<b>Response from Project Proponent</b>	<b>Action Plan with time frame and Budget</b>
Shri Nihal, resident of Goyla, asked that where and how will the 2% of the total income received to be spent?	It was apprised by the project manager that RO water will be made available in the village for drinking water and lighting will be arranged by solar energy and trees will be planted in the village. Along with this expense will be incurred for medical facilities.	Proposed CER money [11.6 lakh INR] would be spent in first three years during the post expansion operation phase.
Shri Vinay Dubey of resident of Goyla asked what kind of benefits the youth will get from increasing production?	Apprised by the project manager that due to increase in production youth will get employment according to their ability.	Employment would be given during operation phase of the project.
Shri Vimal resident of Goyla asked whether any kind of pollution will be spread by installing this plant?	It was informed by the project manager that there is no air pollution in it. To prevent noise pollution 125 KVA closed generator has been used. The wastewater that comes out is reused after purification.	Project Proponent will install acoustic enclosure for the proposed new DG set. ETP and STP will be installed as proposed before start of expansion project.
Shri Amir resident of Goyla asked when will be the CSR money spent?	It was informed by the project manager that the expenditure would be incurred after the production of the plant would start.	Proposed CER money [11.6 lakh INR] would be spent in first three years

		during the post expansion operation phase.
ADM had asked to explain in detail about the fire safety.	Flame arrestor would be installed at five places in the plant as told by Sri Vineet Kr Jha, Plant Supply which will reduce the risk of fire.	PESO license is in place. Existing fire approval will be updated.

16. The PP reported that the Industry has already developed greenbelt in an area of approx. 980 m<sup>2</sup> [35%] within the premises. Additional 135.2 m<sup>2</sup> area will be further developed within the premises making the green area 1115.2 m<sup>2</sup> [40% of plot area].
17. The PP proposed to set up an Environment Management Cell (EMC) to engage Environment officials for the functioning of EMC.
18. The PP submitted the disaster and Onsite and Offsite Emergency Plans in the EIA report.
19. The estimated project cost is Rs. INR 450 Lakh [Existing- 98 Lakh + Proposed Expansion - 352 Lakh]. Total Employment will be **09 persons** as direct.
20. **Deliberations by the EAC:**

The Committee noted that a warning letter has been issued to the Director, M/s. Subham Polychem Pvt. Ltd, dated 07th November 2023, “In this regard, as concluded in personal hearing, PP shall engage an Accredited Consultant who will update and validate the existing EIA/EMP report. The onus of the monitoring data and other technical aspects of the EIA/EMP report will be on the new consultant.

Based on the above warning letter dated 07th November 2023, PP in their covering letter dated 15th December 2023 reported that PP have engaged Ind Tech House Consult (Accredited Consultant from NABET). Ind Tech House consult has owned the EIA report and prepared an addendum to EIA with respect to Chapter 2, Chapter 3 with 1-month additional baseline monitoring report, Chapter 4 and Chapter 10.

PP submitted the details of Solid waste/ Hazardous waste generation and its management

- **Municipal Solid waste generation** – 2 Kg/day; One small OWC will be installed to process the organic wastes. Remaining wastes will be disposed through authorized agency as per local norms.
- **Hazardous wastes generation -**

Waste Detail	Category as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016	Quantity Generation [Post Expansion]	Utilization/Disposal
ETP Sludge	35.3	Approx. 0.01 MT/year	Will be stored onsite at a secured place and disposed through authorized common HWTsdf
Empty barrels /liners/ containers contaminated with hazardous chemicals	33.1	10 nos./year	
Used Oil	5.1	Approx. 0.1 KL/year	Sold to authorized recyclers

PP submitted the details of Greenbelt Development.

As per new revised plan, an area of 1115.2 sq m [40% of the plot area] has been earmarked as green area. Existing green area of 980 m<sup>2</sup> [35%] is already developed with 254 trees of different species. Additional plantation will be done with 246 plants within next one year.

S. No.	Components	No. of Trees			Total Budget (in INR)
		Existing	Proposed	Total	
1.	No. of Trees	254	246	500	200,000/- (500*400)
2.	Maintenance of Greenbelt	100,000	100,000	200,000	200,000
<b>Total</b>					<b>400,000/-</b>

#### DETAILS OF GREENBELT DEVELOPMENT WITHIN THE PREMISES

S. No.	Existing Tree Name	No. of Trees	Proposed Tree	No. of Trees
1	Areca Palm	157	Areca Palm	50
2	Areca palm in vase	14	Neem	30
3	Neem	4	Gulmohar	38
4	Guava	6	Ashok	28
5	Gulmohar	1	Guava	15
6	Custard Apple	1	Ficus	35
7	Chickoo sapota	1	Mango	30
8	Jack fruit	3	Others	20
9	Mango	5		
10	Papaya	3		
11	Lemon	4		

12	Peepal (in vase)	5		
13	Ashok	8		
14	Kannair flower	4		
15	Mehendi	1		
16	Bottle palm	3		
17	Tez Patta	1		
18	Lasora	1		
19	Pakhadh	2		
20	Gudhal Flower	3		
21	Lemon Grass	4		
22	Basil	6		
23	Others	17		
	<b>Total Existing</b>	<b>254</b>	<b>Total Proposed</b>	<b>246</b>

PP submitted the EMP Budget

<b>Environment Budget (operational phase)</b>		
<b>Component</b>	<b>Capital Cost (in INR lakh)</b>	<b>Recurring Cost (INR Lakh/ Annum)</b>
<b>Water Pollution control</b> [Evaporator, segregation of effluent, ETP, STP, RWH tank etc.]	22	01
<b>Solid waste Management</b> [Non-hazardous, haz. & MSW]	6.0	0.5
<b>Plantation and maintenance of greenbelt</b>	5.0	2.0
<b>Occupational Health</b>	3.0	0.5
<b>Plant Safety and Risk mitigation measures</b>	12.0	1.0
<b>Environment Management Dept. Staff, furniture, computers and printers</b>	2.0	3.5
<b>Environment Monitoring</b> through external agency	Nil	1.5
<b>Total</b>	<b>50.0</b>	<b>10.0</b>

PP submitted the CER Fund Allocation

As per OM 1st May 2018, 2% of project cost (4.50 Cr) i.e. 9.0 Lakh INR should be allocated under CER activities. However, proponent has allocated INR 11.16 Lakh for CER activities to be completed in next three years.

<b>S. No.</b>	<b>CER Activities</b>	<b>Cost (Lakhs)</b>
1.	Infrastructure for Drinking Water (RO) in Goyala village	<b>1.90</b>
2.	Installation of Solar PV light in School of village Goyala	<b>3.06</b>

3.	Plantation near project area	<b>3.50</b>
4.	Sanitation, health, education and skill development	<b>2.70</b>
<b>Total</b>		<b>11.16</b>

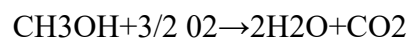
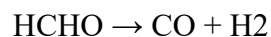
PP submitted the **Findings by Ind Tech House Consult**

M/s Ind Tech House Consult have gone through the report as submitted by M/s SD Engineering Services Pvt. Ltd. The project site has been visited and baseline monitoring has been conducted for one month in October 2023 with respect to ambient air quality, ambient noise, groundwater, surface water and soil quality in the study area.

Project details were discussed with the project proponent and accordingly the EIA report has been amended to certain extent that required necessary change/ addition of information in the EIA report. Chapter 2, 3, 4 and 10 has been revised/recompiled by us (M/s Ind Tech House Consult) based on the site visit, baseline monitoring results, discussion with the client and all the replies/presentation submitted to the EAC. The remaining part of the report remains same.

**Chapter 2 Amendment –**

- Comparative Statement on Salient Features included.
- Area statement submitted.
- Tail gas emission due to side reactions in the process was not mentioned in the report which has been included now.



In this process, no use of off-gases is included. PP has proposed to provide five absorption columns in series to prevent any trace emission of methanol or formaldehyde. Off gases generated during side reactions are vented out after absorption column at a height of approx. 12 m from ground level.

- Water balance with treatment and utilization scheme of effluent has been modified slightly and fresh water consumption has been revised to 246 KLD instead of 250 KLD in earlier submission. The wastewater after treatment in ETP will be recycled within the premises.

**Chapter 3 Amendment –**

Fresh monitoring reports have been submitted.

**Observations on Primary Data of ambient air quality:**

- PM10 concentration in the study area varied from 62 to 189 µg/m<sup>3</sup>
- PM2.5 concentrations in the study area varied from 39 to 98 µg/m<sup>3</sup>
- SO<sub>2</sub> concentration in the study area varied from 6 to 10.5 µg/m<sup>3</sup>
- NO<sub>2</sub> concentration in the study area varied from 15.7 to 26.2 µg/m<sup>3</sup>



- CO concentration in the study area was observed to be 0.68 to 1.00 mg/m<sup>3</sup>

Average concentration of PM<sub>10</sub> and PM<sub>2.5</sub> exceeded at all monitored locations and its continuous exposure to human being can have health impacts. All other parameters like SO<sub>2</sub>, NO<sub>2</sub> and CO were found well within the NAAQS, 2009 limits as specified by CPCB.

**Inference:**

PM 10 and PM 2.5 parameters of ambient air quality is higher in the entire region due to presence of many industrial units nearby and vehicular movement on nearby NH 27 and other roads

**Chapter 4 Amendment –**

- Air quality modeling due to utility operations [DG sets and boiler] has been done fresh by Ind Tech House Consult and findings have been provided. Additionally, air quality modelling due to vehicular emissions have been done which was not mentioned in earlier submitted EIA report.
- Carbon footprint has been estimated considering Scope 1 and Scope 2 Emissions. As calculated, approx. 9278 MT/Annum CO<sub>2</sub> will be generated during post expansion operation phase considering the project operates with full production capacity.

**Air Emission Modelling [Stack Emission]**

**Fresh Modelling Report**

Parameter	Predicted Max Incremental Ground Level Conc.	Remarks
PM10	0.119 µg/m <sup>3</sup>	Maximum GLC values are occurring at coordinate 1000, 0 area towards the East direction
PM2.5	0.071 µg/m <sup>3</sup>	
SO <sub>2</sub>	0.533 µg/m <sup>3</sup>	
NO <sub>X</sub>	1.91 µg/m <sup>3</sup>	
CO	0.00178 µg/m <sup>3</sup>	

**As per Earlier EIA Report**

Parameter	Predicted Max Incremental Ground Level Conc.	Remarks
SPM	0.04569 µg/m <sup>3</sup>	Maximum GLC values are occurring at coordinate (500 ,0).
SO <sub>2</sub>	3.39381 µg/m <sup>3</sup>	
NO <sub>X</sub>	0.38217 µg/m <sup>3</sup>	

**Air Emission Modelling [Vehicular Emission]**

Raw materials and finished products will be transported through road. At present on an average 40 nos. of tankers are leaving or arriving the project site in a month. As estimated, maximum of 8 Nos. of tankers per day [240 nos./month] will be required during post expansion operation phase

**Vehicular Emission Modeling Report**

<b>Parameter</b>	<b>Predicted Incremental Max Ground Level Conc.</b>
CO	0.00705 mg/m <sup>3</sup>
NOX	2.704 µg/m <sup>3</sup>
PM10	0.346 µg/m <sup>3</sup>
PM2.5	0.202 µg/m <sup>3</sup>

### **Chapter 10 Amendment–**

Environmental Management Plan has been recompiled based on all submissions made earlier to EAC, MoEF&CC to avoid any ambiguity in future

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 constituted under the provisions of the EIA Notification, 2006 comprising expert members /domain experts in various fields, examined the proposal submitted by the PP in desired format along with the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the PP.

The EAC noted that the PP has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the PP.

The EAC noted that the EIA reports are in compliance with the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The EAC deliberated on the proposed mitigation measures towards Air, Water, Noise and Soil pollutions. The EAC advised that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during the implementation also 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, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

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 expert members of the EAC found the proposal in order and recommended for 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.

**22. 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) Stack height of 12 m has be provided to the existing HSD fired steam boiler (0.5 Kg/hr).
- (iii) Adequate three absorption column alongwith vent height of 12 m shall be provided to control process emissions i.e methanol and formaldehyde.. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- (iv) The total fresh water requirement from ground water source shall not exceed 246.5 m<sup>3</sup>/day.
- (v) NOC from the Concerned Local authority shall be obtained before start of the construction of plant for drawing of the Ground water 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.
- (vi) Effluent generation shall not exceed 3 KLD. Industrial effluent shall be treated in the proposed ETP. Treated effluent shall be recycled/reused for cooling tower make up. Sewage shall be treated in proposed STP and treated water shall be utilized for horticulture purpose. No effluent/treated water shall be discharged outside the factory premises and zero liquid discharge shall be maintained.
- (vii) The PP shall develop 5-10 m thick greenbelt over an area of 1115.2 sq.m (i.e., 40 %of total plot area), preferably within one year of grant of EC. The additional 246 number of saplings shall be planted and should be of sufficient height, preferably 6-ft within the plant premises. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should 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.

- (viii) 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 send to common incineration site or send for coprocessing. Municipal solid waste shall be segregated into dry and wet garbage at site in accordance to the Solid Waste Management Rules, 2016. Wet waste shall be converted into compost and used as manure for greenbelt development.
- (ix) Monitoring of the compliance of EC conditions shall be submitted with third party audit every year.
- (x) 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. PP shall engage 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. 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 previous year.
- (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 is ₹ 50.0 Lakhs (Capital cost) and Rs. 10 lakh per annum (Recurring cost) shall be kept in 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 previous year.
- (xii) No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.
- (xiii) The project proponent 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.

- (xiv) The project proponent shall comply with the environment norms for synthetic organic chemical as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 608 (E), dated 21.7.2010 under the provisions of the Environment (Protection) Rules, 1986.
- (xv) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent 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.
- (xvi) 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.
- (xvii) 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.
- (xviii) The occupational health centre 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.
- (xix) 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.
- (xx) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- (xxi) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- (xxii) 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.

(xxiii) 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.

**Agenda No. 78.4**

**Manufacturing of Synthetic Organic Chemicals (Acrylate Polymers) located at Survey No.473 & 481, Village Borisana, Taluka Kadi, District Mehsana, Gujarat by M/s Corel Pharma Chem Pvt. Ltd. - Consideration of Amendment in Environmental Clearance-reg**

**[Proposal No. IA/GJ/IND3/298731/2023; File No. J-11011/313/2017-IA-II(I)]**

1. The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter noF. No. J-11011/313/2017-IA-II (I) dated 27<sup>th</sup> July, 2020 and it's transferred on dated: 18<sup>th</sup> December, 2020 for the project M/s. Corel Pharma Chem (India) Pvt. Ltd located at Survey No. 453, 463 & 464, Borisana Village, Taluka: Kadi, District: Mehsana, Gujarat –in favor of M/s. Corel Pharma Chem (India) Pvt. Ltd.
2. The proposal was recommended by the 49<sup>th</sup> EAC meeting held on held during 3rd, 5th & 6th April, 2023.
3. Ministry observed that EC was granted for establishment of unit at survey No. 473 & 481, Village Borisana, Taluka Kadi, District Mehsana (Gujarat). Now, PP wants to change the location of unit at Survey No. 453, 463 & 464, Borisana Village, Taluka: Kadi, District: Mehsana, Gujarat. It appears that the said plots are different from the location for which EC was granted.
4. PP submitted that the unit desires **to add additional land bearing survey No. 463** and merge it with old survey no: - 473 & 481 additional land has been purchased **MAINLY** for greenbelt development and **ALSO FOR** parking facility.

Sr. No.	Amendment requested for	Reasons
1.	Addition of land for project	Additional land has been purchased MAINLY for greenbelt development and as well as to provide parking facility for the tucks which are likely to be came on regular basis and they have

		not to wait on the road and not causes to traffic, we have acquired this additional land for the parking of these trucks.
2.	6 nos. of HAGs are desired to be removed	A higher Kcal/hr Thermic Fluid Heater (TFH) is to be installed to make up for the 6 Hot Air Generators (HAGs) which are desired to be removed. One TFH supplying heat to various locations would be more efficient as compared to 6 HAGs at 6 different locations.
3.	One TFH (4 Lac Kcal/hr) is to be replaced by a TFH (20 Lac Kcal/hr)	Higher Kcal/hr Thermic Fluid Heater (TFH) is to be installed to make up for the 6 Hot Air Generators (HAGs) which are desired to be removed. One TFH supplying heat to various locations would be more efficient as compared to 6 HAGs at 6 different locations. White coal (agricultural briquettes which is a renewable source of energy) is to be used as a fuel in the 20 Kcal/hr TFH. This would in turn replace diesel that was proposed to be used in each of the separate HAGs at various locations.
4.	Steam Boiler – I (3 TPH) is to be replaced by a Steam Boiler – I (6 TPH)	More steam required to increase the reaction rate by increasing the time allowed with a higher reaction temperature.
5.	Change in type of fuel in TFH	White coal (agricultural briquette which is a renewable source of energy) is to be used as a fuel in the 20 Kcal/hr TFH. This would in turn replace diesel that was planned to be used.
6.	Source of water will be a bore-well.	Sardar Sarovar Nigam Limited (SSNL) is at a distance of approximately 5-6 km from the site. A permission letter and installation would take almost 3-4 years. Not only that, Nowadays SSNL does not give water for industrial use, since Narmada water is supposed to be used for domestic and agriculture purpose. Hence, they decided to change our source of water from SSNL to ground water. The unit has obtained NOC for the abstraction of ground water.

## 5. Deliberations by the EAC

During deliberations, EAC discussed the following issues:

- (i) The Committee noted that earlier EC was granted for the **Survey No 453, 463 & 464**, now PP need amendment for **Survey No.473 & 481**. **It was not clear what are reasons for change of survey nos at this stage. Accordingly, a letter from the Government of Gujarat needs to be submitted clarifying earlier survey number was 453, 463 & 464 now denominated as Survey No.473 & 481.**
- (ii) Revised GLC for key parameters for proposed modified utilities to be submitted.
- (iii) Revised water balance to submitted
- (iv) Revised Budget earmarked for capital and recurring EMP cost and its break up.
- (v) Confirmation regarding change in pollution load due to amendment.

**Accordingly, proposal was deferred for want of above additional information. Above all additional information shall be submitted online to the PARIVESH portal for further consideration by EAC.**

**Any other item:**

**Proposed Expansion of Synthetic Organic Chemicals Manufacturing Unit with Production Capacity from 30 TPM to 300 TPM located at Plot No. N-33 & N-34, MIDC Tarapur, Boisar, Palghar, Maharashtra by Vardhman Dyestuff Industries Pvt. Ltd. - Reconsideration of ToR**

**[Proposal No. IA/MH/IND3/416691/2023; File No. IA-J-11011/59/2023-IA-II(I)]**

The proposal was already recommended for TOR in the 72nd EAC meeting held on 2nd January,2024. Due to technical glitch of portal, it got listed under ADS category and thereafter taken into this 78th EAC meeting held on 29-**30 April 2024**. EAC noted the matter and recommended the case for ToR.



**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, ZillaParishad/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 31<sup>st</sup> 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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**List of the Expert Appraisal Committee (Industry-3) members participated during Video Conferencing (VC) meeting**

S. No	Name of Member	Designation
1.	Prof. (Dr.) A.B. Pandit	Chairman
2.	Dr. Suresh Panwar	Member
3.	Prof. (Dr.) Vijayanand S. Moholkar	Member
4.	Dr. (ER.) Dibakar Swain	Member
5.	Shri Dinabandhu Gouda	Member
6.	Dr. Kishore Malviya	Member
7.	Dr. P. Jagannadha Rao	Member
8.	Prof. (Dr.) Suneet Dwivedi	Member
9.	Shri Dinesh Runiwal,	Member
10.	A N Singh	Member Secretary
<b>MOEFCC</b>		
1.	Dr. Kanchan Puri	Scientist-B
2.	Dr. S. Pradeep kumar	Scientist-B
3.	Dr Bhawana Kapkoti Negi	Technical Officer

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**MOM approved by**



**(Prof. Aniruddha B. Pandit)  
Chairman**

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