

File No.: 10-44/2017-IA.III
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan,
Jor Bagh Road, Ali Ganj
New Delhi – 110 003

Dated: 14th October, 2020

To

Deputy General Manager (Env)
M/s Gujarat Maritime Board,
"Sagar Bhavan", Sector 10/A,
Opp: Air force Station, Sachivalaya,
Gandhinagar-382010 (Gujarat).

Subject: Incorporation of service jetties and allied facilities at Rozi Pier Port, Jamnagar, Gujarat by M/s Gujarat Maritime Board, Gandhinagar – Environmental and CRZ Clearance

Sir,

This has reference to your online proposal to this Ministry on 23rd Jul 2020 in favour of Environmental Clearance for incorporation of service jetties and allied facilities at Rozi Pier Port, Jamnagar, Gujarat by M/s Gujarat Maritime Board, Gandhinagar over an extent of 9.2 ha area at Village - Jamnagar, Tehsil - Jamnagar, District- Jamnagar, State -Gujarat.

2. The above mentioned proposal was considered by the Expert Appraisal Committee (EAC) for Infrastructure, CRZ and other Miscellaneous projects in its 241st meeting on 25-26th August, 2020.

3. The project proponent along with the EIA consultant M/s SV Enviro Labs & Consultants Enviro House, made a presentation through Video Conferencing and provided the following information:

- (i) **Brief description of the Proposal:** M/s Gujarat Maritime Board, Gandhinagar, Gujarat had proposed the **Incorporation of service jetties and allied facilities at Rozi Pier Port, Jamnagar, Gujarat by M/s Gujarat Maritime Board, Gandhinagar** over an extent of 9.2 ha at Village - Jamnagar, Tehsil - Jamnagar, District- Jamnagar, State -Gujarat. It was proposed that the existing 400 m piled jetty and 100 m wharf will be expanded by having additional 300 m wharf by reclamation and CC Block wall. Boat Jetty of 105 m length and 7 m (which includes 50 m marine police jetty, 30 m forest jetty, 25 m GMB jetty) and backup area of 56.3 m² with 78 m of retaining wall and approach bund of 230 m length and 7 m wide alongwith 1000 m x 30 m backup area will be constructed for smooth handling of cargo in environmentally safe and sound manner. The ToR for the proposal was issued on The ToR for the proposal was issued on 07th Sept. 2017. The required EIA studies were undertaken including conduct of Public Hearing on 27th Feb 2019. The extant proposal falls under 7 (e) Ports, Harbours under EIA Notification, 2006.
- (ii) **Nature of project (New/Expansion/Amendment/Extension etc.):** New Project.
- (iii) **Whether the proposal was considered in earlier meetings of EAC: If yes, provide date of EAC meeting and reasons for deferment, if any:** Yes, TOR meeting held during 21-24 Aug 2017.



- (iv) **Whether proposal is part of interlinked project: If yes, provide details in brief:** No.
- (v) **Address of project site (Plot No./Village/ Tehsil/ District/State):** Village - Jamnagar, Tehsil - Jamnagar, District- Jamnagar, State -Gujarat.
- (vi) **Geo-coordinates of project site:** Latitude 22°33'52.59"N to 70° 2'24.47"E; Longitude 22°34'10.93"N to 70° 2'45.33"E.
- (vii) **Area (ha)/Length (km) of the proposed project:** 9.2 Ha.
- (viii) **Connectivity to the site:** The project site is connected as following-

Nearest city	Jamnagar
District headquarters	Jamnagar
Nearest railway station	Jamnagar Railway Station - 8.0Km
Nearest Airport	Jamnagar Airport - 11.45 km

- (ix) **Investment/Cost of the project:** The total cost of the project is ₹71.15 Crores.
- (x) **Item of Schedule to the EIA Notification, 2006:** The proposed project is categorized under 7(e) Ports & Harbours of EIA Notification, 2006.
- (xi) **Landuse/Landcover of project site in tabular form:**

S. No.	Landaus/Land cover	Area (ha)	Remarks, if any
1	Total Wharf Area	400 m (Length)	Existing
		400 m (Length)	Proposed
2	Storage Area	0.4	Existing
3	Total Platform	9.01	Existing
4	Reclamation area	9.2	Proposed
5	GMB Jetty, Forest Jetty & Marine Police Jetty	105 m (Length)	Proposed
6	CC Wall	30m × 1000m (Length)	Proposed

- (xii) **Landuse/Landcover around 10 km radius of project site (1 km in case of Highway projects):**

LULC Statistics			
S. No.	LULC_Class	Area (Ha)	Area (%)
1	Water bodies	1736.52	6 %
2	Settlement	1424.28	5 %
3	Sea	10200.92	32 %
4	Road Network	1598.84	5 %
5	Open Scrub	1483.68	5 %
6	Agricultural Fallow Land	1290.34	4 %
7	Mangrove Swamp	6012.68	19 %
8	Mud	2616.22	8 %
9	Dry Land	2213.11	7 %
10	Saltpan	2112.68	7 %
11	Fallow Land	812.68	3 %
Total		31501.94	100.00

- (xiii) **Terrain and topographical features:** Topographical maps of Survey of India (SOI) were obtained for land use study as well to develop contour and drainages pattern of area. The soil in the project site and in the study area is mostly clayey, medium black. Dominantly the soil is very deep, well drained and fine to medium textured. In Study area, soil having high water and moisture retention capacity due to clay contain, clay belong to montmorillonite mineralogy.
- (xiv) **Details of water bodies, impact on drainage, if any:** Following water bodies exist nearby the project site.

S. No.	Area	Distance (Km)
1	Bedi bangar Creek	0.1
2	Hadda Creek	0.8
3	Shanka Creek	8.6
4	Lakhota lake	13.7

During construction phase, there would be generation of some sewage due to personnel involved in the construction work. With the implementation of mitigation measures, the potential for contamination of surface and ground water resources resulting from sewage disposal is expected to be insignificant. The major impacts on marine water quality are envisaged due to the civil works activities like driving of piles, construction of berth, approach way, movement of construction equipments etc. will have a high potential to disperse the fine grained sediments in the water, thus increasing the particular load which in turn can adversely influence the photosynthetic activity further affecting the marine life. However, this rise in turbidity will be only during the construction phase. The runoff from the site containing construction materials, debris and construction waste and excavated earthen materials may have adverse impacts on the water environment especially on nearby marine water resources. Proper mitigation measures shall be implemented to avoid such runoff as well as spillage of construction materials so that the materials in runoff cannot enter into the water bodies. Rise in turbidity will be only during the construction phase and the incidence of turbidity will be minimal due to prevention of any runoff from site. However, due to small scale of construction involved, and the short duration of activities, the impact is considered of low significance.

- (xv) **Water requirements, sources (during construction and operation phases) and NOC:**
Construction phase: It is estimated that approx. 243.5 KLD will be required once all facilities are functional. During operation phase, the sewage generated of quantity 19.0 KLD will be treated in a sewage treatment plant and treated water will be used for landscaping. The Gujarat Water Supply and Sewerage Board (GWSSB) is responsible for providing of water during construction and operation phase. Hence there would not be any impact on local water sources and its competitive users.
- (xvi) **Groundwater extraction/usage and NOC/Clearance from CGWA/State Ground Water Department:** No, ground water will be extracted for the proposed project. Gujarat Water Supply and Sewerage Board will provide water.
- (xvii) **Whether the project is in Critically Polluted area (Yes or No. If yes, provide brief details):** No, the project is not located in Critically Polluted Area identified by Central Pollution Control Board.
- (xviii) **ToR details:** File No.: 10-44/2017-IA-III, Proposal No.: IA/GJMIS/164848/2017, Date of ToR Application Submission: 30th Jan 2017, Date of EAC Meeting (Infra-2): 21st Meeting held on 21-24 August, 2017, Date of ToR Issue: 7th September, 2017.



- (xix) **Public Hearing Details and Summary of issues raised and response/commitments by Proponent:** The public hearing was conducted on 27th February 2019 at Rozi Pier Port, Taluka-Jam Nagar, District-Jamnagar, Gujarat. The main issues raised in the public hearing were related to pollution in general and damage of Marine life. The proponent has responded that all mitigation measures shall be fully implemented as per Environmental and CRZ Clearance.
- (xx) **Whether the project involves diversion of forest land and status of the forest clearance:** Not applicable.
- (xxi) **Whether the project is located within 10 km of Protected Areas (PA) including National Parks, Sanctuaries and Tiger Reserves etc:** Yes, the proposed site falls within 10 km Marine National Park and sanctuary, Jamnagar. Application submitted to NBWL clearance vide FP/GJ/Others/4185/2019.
- (xxii) **Whether the project is located within the Eco-Sensitive Zone (ESZ) or Eco-Sensitive Area (ESA) notified by the MoEF&CC:** No, the proposed development is within the existing Rozi Port.
- (xxiii) **Waste Management:** The solid waste of 75 kg/day generated during the development of the proposed project will consist of paper, cotton rags, plastic, tins etc. Along with Municipal Solid waste, hazardous waste i.e. waste oil from DG sets and ETP sludge will be generated during the operation of the project. The solid waste and hazardous waste generated from seaward side from the construction barges, construction site, dredgers etc. will be collected twice in a week at shore on jetty using an authorized garbage vehicle and through SPCB approved collection vehicle. The type of waste, source and quantity will be noted prior to disposal and then the vehicle will be sent to weigh bridge for weighing before it will be disposed of at an authorized waste disposal site. Used oil generated from diesel generators/ engines will be disposed to SPCB authorized waste oil recyclers. Hazardous waste handling and management procedures shall be followed. **STP details:** No Sewage Treatment Plant (STP) is proposed as part of the proposal. However, the port has an approval to develop STP of 2.0 MLD, but currently an STP of capacity 75 KLD is operated to treat the sewage generated.
- (xxiv) **CETP/STP details:** The wastewater generated by washing of jetties, cleaning and packing shed, etc. of quantity 119 KLD will be treated in Effluent treatment plant and recycled. The treated water of quantity 107 KLD will be reused within the premises for washing, cleaning etc. thus water saving of the project will be 116.5 KLD. Sewage generated (19.0 KLD) will be treated in 20 KLD Capacity and reused within premises for landscaping.
- (xxv) **Details of tree cutting and Green belt development:** There is no tree cutting involved in this project. Rozi Pier Port has endeavoured in maintaining eco-balance by way of tree plantation in and around port area. Extensive plantation is carried out every year. The survival rate of plants is very low due to saline soil and adverse weather conditions. Ongoing efforts are taken to increase the area under plantation. Additionally, green belt development is undertaken at, roadside and near residential and office buildings at Jamnagar and surrounding villages. As per CPCB guidelines, green belt will be developed on 33 % of the total project area.
- (xxvi) **Energy conservation measures with estimated saving:** As part of energy conservation measures the Rozi port facility will be installed with LED bulbs and Solar powered lights (150 nos.), with an estimated savings of 5% from overall energy consumption.
- (xxvii) **Details of Rain Water Harvesting:** Presently, GMB is having 35 no's of RWH pits.



- (xxviii) **Whether the project is in CRZ area: If yes, provide details of components in CRZ area, layout on CRZ map of 1:4000 scale prepared by an authorised agency and appraisal by State Coastal Zone Management Authority (SCZMA) and copy of their recommendations:** The proposed project falls in the CRZ area. Institute of Remote Sensing, Anna University has been carried out the CRZ mapping and GCZMA also recommended this project.
- (xxix) **Whether the project involves foreshore facilities. If yes, provide details of shoreline study, dredging details, disposal of dredge material, reclamation, cargo handling with dust control measures and oil Spill Contingent Management Plan.:** There is no capital dredging involve in this project and shoreline changes studies done by CWPRS which is included in the EIA report. Reclamation, dust control measures and Oil spill contingency plan included in the EIA report.
- (xxx) **Brief description of Socio-economic condition of local people:** The livelihood is very much dependent on natural and economic endowments and institutional arrangements. Agriculture holds significant position in the economy of Jamnagar District. The district shows a dominance of cash crops (oil seed and lint) over the food crops (cereal and pulse). The reason is that, the preference for the high value crop (cotton, groundnut) got introduced through the extension services of public and private players. Fisheries and marine resources constitute another important source of livelihood in the coastal talukas. The sea coast is the main source of fisheries in Jamnagar. The fishing population is found in Jamnagar, Khambhalia, Okhamandal, Jodia and Kalyanpur talukas only. During 2006- 07, 2181 mechanized and 407 non – mechanized boats were active for fishing. They landed approximately 67,146 Metric Tons of marine fish production in 2011-12. Jamnagar district caters over 70% of the country's requirement for brass parts supply. Salt industry is well developed with around 17 salt work units operational in the district. 34,000 people get employment in Micro, Small and Medium enterprises (MSME).
- (xxxi) **Land acquisition and R&R issues involved:** Not applicable as the proposed project is within existing Rozi Port.
- (xxxii) **Employment potential, No. of people to be employed:** A total of 500 people will be employed for the current project, inclusive of temporary and permanent employees. The detailed breakup of employee numbers during both construction and operation phases are given below:

Phase	Employment Type	No. of Persons
Construction	Permanent	00
	Temporary	00
Operation	Permanent	50
	Temporary	450
	Total	500

- (xxxiii) **Benefits of the project:** The creation of service jetties will positively influence and infrastructure development, which will imply additional investment opportunities in the Jamnagar region. This would result in generation of revenue for the government in terms of taxes from the proposed project and resultant industrial development from in this region. The proposed project creates direct opportunities for both skilled and unskilled jobs during the construction and operations phase. The project will require procurement and vendor networks for products and services, transport etc and hence there should be additional revenue generation for local vendors and suppliers in Jamnagar.

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(xxxiv) **Brief summary of specialised Studies carried out for the project as per the ToR:** The marine studies were conducted by Andhra University. The study includes the impact on the rivers, estuary and the sea, intertidal biotopes, corals and coral communities, molluscs, sea grasses, sea weeds, subtidal habitats, fishes, other marine and aquatic micro, macro and mega flora and fauna including benthos, plankton, turtles, birds etc. as also the productivity.

(xxxv) **Details of Court cases:** There are no court cases against the proposed project.

4. The EAC during its 241st meeting on 25-26th August, 2020, taken into account the submissions made by the project proponent M/ Gujarat Maritime Board, Gandhinagar, Gujarat that the current proposal only pertains to the Incorporation of service jetties and allied facilities at Rozi Pier Port, Jamnagar, Gujarat over an extent of 9.2 Ha area at Jamnagar, Gujarat. After a detailed deliberation, the EAC recommended the proposal for grant of Environmental and CRZ Clearance subject to fulfilment of specific conditions other than all standard conditions applicable for this project.

5. The Ministry of Environment, Forest and Climate Change has considered the proposal based on the recommendations of the Expert Appraisal Committee (Infrastructure, CRZ and other Miscellaneous projects) and hereby decided to grant Environmental and CRZ Clearance for the Incorporation of service jetties and allied facilities at Rozi Pier Port, Jamnagar, Gujarat over an extent of 9.2 Ha land area at **Village** - Jamnagar, **Tehsil** - Jamnagar, **District**- Jamnagar, **State** – Gujarat under the EIA Notification, 2006 as amended and CRZ Notification 2011, subject to strict compliance of the following specific conditions, in addition to all standard conditions applicable for such projects.

A. SPECIFIC CONDITIONS

- (i) The Environmental and CRZ Clearance to the project is primarily under provisions of EIA Notification, 2006 and CRZ Notification, 2011. It does not tantamount to approvals/consent/permissions etc required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes as applicable to the project.
- (ii) The project proponent shall abide by all the commitments and recommendations made in the Form-II, EIA and EMP report, submissions made during Public Hearing and also that have been made during their presentation to EAC.
- (iii) Construction activity shall be carried out strictly according to the provisions of the CRZ Notification, 2011. No construction works other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- (iv) All the recommendations and conditions specified by the Gujarat Coastal Zone Management Authority (GCZMA) vide letter No. ENV-10-2020-104-Tcell dated 9th June, 2020 shall be complied with.
- (v) The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained. Creek water monitoring program shall be implemented during the construction phase.
- (vi) Dredging shall not be carried out during the fish breeding season. Dredging, etc. shall be carried out in confined manner to reduce the impacts on marine environment. As committed, Silt curtains shall be used to minimize spreading of silt plume during dredging operation. Turbidity should be monitored during the dredging using online monitoring system. No removal of silt curtain unless baseline values are achieved.



- (vii) Wherever possible, dredged material shall be used for bank nourishment. With the enhanced quantities, the impact of dumping on the estuarine environment should be monitored and necessary measures shall be taken on priority basis if any adverse impact is observed.
- (viii) An independent monitoring be carried out by any Government Agency/Institute to evaluate the impact during dredging. Impact of dredged material on estuarine environment along with shore line changes should be monitored by the PP and necessary mitigation measures be taken in case any adverse impact is observed. The details shall be submitted along with the six-monthly monitoring report.
- (ix) Marine ecological monitoring and its mitigation measures for protection of phytoplankton, zooplanktons, macrobenthos, estuaries, sea-grass, algae, sea weeds, Crustaceans, Fishes, coral reefs and mangroves etc. as given in the EIA-EMP Report shall be complied with in letter and spirit.
- (x) A copy of the Marine and riparian biodiversity management plan duly validated by the State Biodiversity Board shall be obtained and implement in letter and spirit.
- (xi) Sewage generated will be treated in STP of 20 KLD capacity. The treated water will be used for flushing, gardening and dust suppression within the port premises.
- (xii) Mangroves conservation and management plan to be prepared in consultation with State Forest department and approved plan shall be implemented.
- (xiii) A continuous monitoring programme covering all the seasons on various aspects of the estuarine, coastal and marine environs including intertidal and sub-tidal marine flora and fauna with focus on sea turtles, corals and sea grass (if any) need to be undertaken by reputed universities available in the State or by entrusting to the National Institutes/renowned Universities/accredited Consultant with rich experiences in marine science aspects. The monitoring should cover various physico-chemical parameters along with PHC coupled with biological indices such as microbes, plankton, benthos and fishes on a periodic basis during construction and operation phase of the project. Any deviations in the parameters shall be given adequate care with suitable measures to conserve the marine environment and its resources. Adequate funds be allocated for the same.
- (xiv) Continuous online monitoring of air and water covering the total area shall be carried out and the compliance report of the same shall be submitted along with the 6 monthly compliance reports to the regional office of MoEF & CC.
- (xv) The actions shall be in accordance with proposed landscape planning concepts to minimise major landscape changes. The change in land use pattern shall be limited to the proposed port limits and be carried out in such a way as to ensure proper drainage by providing surface drainage systems including storm water network.
- (xvi) All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to the RO, MoEF&CC along with half yearly compliance report.
- (xvii) The company shall draw up and implement Corporate Social Responsibility Plan as per the Company's Act of 2013.
- (xviii) As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 1st May, 2018, project proponent has proposed that an amount of ₹1.42 Crores (computed @2% for the project cost of ₹71.15 Crores) shall be earmarked under Corporate Environment Responsibility (CER) Plan with special focus on providing healthcare facilities to the



government hospitals in light of COVID 19 pandemic. A small portion of the fund can also be used for the activities such as Health, Water supply, Sanitation, Road development, Solar lights in nearby areas and Education etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

B. STANDARD CONDITIONS:

I. Statutory compliance:

- (i) The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (incase of the presence of schedule-I species in the study area).
- (ii) Construction activity shall be carried out strictly according to the provisions of CRZ Notification, 2011 and the State Coastal Zone Management Plan as drawn up by the State Government. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- (iii) The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- (iv) All excavation related dewatering shall be as duly authorized by the CGWA. A NOC from the CGWA shall be obtained for all dewatering and ground water abstraction
- (v) A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- (vi) All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Coast Guard, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.

II. Air quality monitoring and preservation:

- (i) The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the project area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- (ii) Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed emission standards.
- (iii) Shrouding shall be carried out in the work site enclosing the dock/proposed facility area. This will act as dust curtain as well achieving zero dust discharge from the site. These curtain or shroud will be immensely effective in restricting disturbance from wind in affecting the dry dock operations, preventing waste dispersion, improving working conditions through provision of shade for the workers.



- (iv) Dust collectors shall be deployed in all areas where blasting (surface cleaning) and painting operations are to be carried out, supplemented by stacks for effective dispersion.
- (v) The Vessels shall comply the emission norms prescribed from time to time.
- (vi) Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- (vii) A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

III. Water quality monitoring and preservation:

- (i) The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.
- (ii) Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality. Silt curtains shall be used to contain the spreading of suspended sediment during dredging within the dredging area.
- (iii) No ships docking at the proposed project site will discharge its on-board waste water untreated in to the estuary/ channel. All such wastewater load will be diverted to the proposed Effluent Treatment Plant of the project site.
- (iv) Measures should be taken to contain, control and recover the accidental spills of fuel and cargo handle.
- (v) The project proponents will draw up and implement a plan for the management of temperature differences between intake waters and discharge waters.
- (vi) Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.
- (vii) Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- (viii) Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused for horticulture, flushing, backwash, HVAC purposes and dust suppression.
- (ix) A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.
- (x) No diversion of the natural course of the river shall be made without prior permission from the Ministry of Water resources.

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- (xi) All the erosion control measures shall be taken at water front facilities. Earth protection work shall be carried out to avoid erosion of soil from the shoreline/boundary line from the land area into the marine water body.

IV. Noise monitoring and prevention:

- (i) Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- (ii) Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipments.
- (iii) Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.
- (iv) The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures:

- (i) Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- (ii) Provide LED lights in their offices and residential areas.

VI. Waste management:

- (i) Dredged material shall be disposed safely in the designated areas.
- (ii) Shoreline should not be disturbed due to dumping. Periodical study on shore line changes shall be conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring reports.
- (iii) Necessary arrangements for the treatment of the effluents and solid wastes must be made and it must be ensured that they conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986.
- (iv) The solid wastes shall be managed and disposed as per the norms of the Solid Waste Management Rules, 2016.
- (v) Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
- (vi) A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
- (vii) Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.
- (viii) Oil spill contingency plan shall be prepared and part of DMP to tackle emergencies. The equipment and recovery of oil from a spill would be assessed. Guidelines given in MARPOL and Shipping Acts for oil spill management would be followed. Mechanism for integration of terminals oil contingency plan with the overall area contingency plan under the co-ordination of Coast should be covered.

VII. Green Belt:

- (i) Green belt shall be developed in area as provided in project details with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
- (ii) Top soil shall be separately stored and used in the development of green belt.

VIII. Marine Ecology:

- (i) Dredging shall not be carried out during the fish breeding and spawning seasons.
- (ii) Dredging, etc shall be carried out in the confined manner to reduce the impacts on marine environment.
- (iii) The dredging schedule shall be so planned that the turbidity developed is dispersed soon enough to prevent any stress on the fish population.
- (iv) While carrying out dredging, an independent monitoring shall be carried out through a Government Agency/Institute to assess the impact and necessary measures shall be taken on priority basis if any adverse impact is observed.
- (v) A detailed marine biodiversity management plan shall be prepared through the NIO or any other institute of repute on marine, brackish water and fresh water ecology and biodiversity and submitted to and implemented to the satisfaction of the State Biodiversity Board and the CRZ authority. The report shall be based on a study of the impact of the project activities on the intertidal biotopes, corals and coral communities, molluscs, sea grasses, sea weeds, sub-tidal habitats, fishes, other marine and aquatic micro, macro and mega flora and fauna including benthos, plankton, turtles, birds etc. as also the productivity. The data collection and impact assessment shall be as per standards survey methods and include underwater photography.
- (vi) Marine ecology shall be monitored regularly also in terms of sea weeds, sea grasses, mudflats, sand dunes, fisheries, echinoderms, shrimps, turtles, corals, coastal vegetation, mangroves and other marine biodiversity components including all micro, macro and mega floral and faunal components of marine biodiversity.
- (vii) The project proponent shall ensure that water traffic does not impact the aquatic wildlife sanctuaries that fall along the stretch of the river.

IX. Public hearing and human health issues:

- (i) The work space shall be maintained as per international standards for occupational health and safety with provision of fresh air respirators, blowers, and fans to prevent any accumulation and inhalation of undesirable levels of pollutants including VOCs.
- (ii) Workers shall be strictly enforced to wear personal protective equipments like dust mask, ear muffs or ear plugs, whenever and wherever necessary/ required. Special visco-elastic gloves will be used by labour exposed to hazards from vibration.
- (iii) In case of repair of any old vessels, excessive care shall be taken while handling Asbestos & Freon gas. Besides, fully enclosed covering should be provided for the temporary storage of asbestos materials at site before disposal to CTSDF.
- (iv) Safety training shall be given to all workers specific to their work area and every worker and employee will be engaged in fire hazard awareness training and mock drills which will be conducted regularly. All standard safety and occupational hazard measures shall be implemented and monitored by the concerned officials to prevent the occurrence of untoward incidents/ accidents.



- (v) Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- (vi) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (vii) Occupational health surveillance of the workers shall be done on a regular basis.

X. Corporate Environment Responsibility:

- (i) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- (ii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- (iii) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- (iv) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

XI. Miscellaneous:

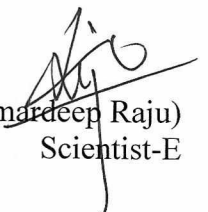
- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (v) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the



Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

- (vi) The criteria pollutant levels namely; PM_{2.5}, PM₁₀, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- (vii) The project proponent 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, commencing the land development work and start of production operation by the project.
- (viii) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- (ix) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- (x) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- (xi) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (xii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- (xiii) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- (xiv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- (xv) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- (xvi) Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

7. This issues with the approval of the Competent Authority.


(Amardeep Raju)
Scientist-E

Copy to:

1. The Principal Secretary, Department of Forests & Environment and Chairman, GCZMA, Govt. of Gujarat, Sachivalaya, Gandhinagar

2. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 32
3. The Member Secretary, Gujarat Pollution Control Board, Sector 10-A, Gandhi Nagar - 382043
4. The APCCF (C), MoEF& CC, RO (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Link Road No.3, Ravishankar Nagar, Bhopal –16
5. Monitoring Cell, MoEF&CC, Indira Paryavaran Bhavan, New Delhi.
6. Guard File/Record File
7. Notice Board.


(Amardeep Raju)
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