

**File No.: 11-150/2010-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: 29<sup>th</sup> September, 2020**

To

**The Joint President**  
M/s Adani Hazira Port Private Limited  
Adani Corporate House Shantigram,  
Near Vaishnodevi Circle,  
S G Highway, Ahmedabad-382421,  
Gujarat

**Subject: Development of Project Multi cargo port with supporting utilities and infrastructure facilities at Hazira, Surat, Gujarat by M/s Adani Hazira Port Private Limited – Environmental and CRZ Clearance**

Sir,

This has reference to your letter dated 2<sup>nd</sup> July, 2020, submitting the above proposal online to this Ministry on 13<sup>th</sup> August, 2020 for inclusion of 301.0199 ha of forest land without any change in other approved configuration and profile of cargo for which the environmental clearance was granted in 2013; in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986.

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

3. The project proponent along with the EIA consultant M/s. Cholamandalam MS Risk Services Limited, made a presentation through Video Conferencing and provided the following information:

- (i) **Brief description of the Proposal:** M/s Adani Hazira Port Private Limited (AHPPL) had proposed the development of a Multi Cargo Port in Hazira, Surat District with supporting utilities and infrastructure facilities for its master plan spanning over an area of 873.27 ha which included forest land of 376.64 ha. The ToR for the proposal was issued on 07.04.2011. The required EIA studies was undertaken including conduct of Public Hearing on 14.08.2012. The project was recommended by Gujarat Coastal Zone Management Authority (GCZMA) vide letter No. ENV-10-2012-31-E dated 11<sup>th</sup> May 2012 and was appraised to the EAC for obtaining Environment and CRZ clearance. As the diversion of forest land was under process at the time of consideration of proposal for Environmental Clearance, the same was excluded from the EC granted to AHPPL vide letter no. F.No.11-150/2010-IA-III dated 3<sup>rd</sup> May 2013. Hence the total area available for port development was 496.63 Ha. AHPPL commenced first five-year port development in the available area. In the first phase of development, AHPPL has constructed 6 berths out of the proposed 12 berths, a total of 21.63 MMTPA of cargo was handled in the last financial year 2019-2020 out of the approved 84.1 MMTPA. Now out of 376.64 Ha applied forest land, the



Stage-I forest clearance has been granted for an area of 301.0199 Ha vide order dated 17<sup>th</sup> October 2016 (210.1594 Ha.) and 19<sup>th</sup> October 2016 (90.8605 Ha.) as mentioned below.

- In principle approval for diversion of 210.1594 ha of reserved forest land vide letter dated 17<sup>th</sup> October, 2016 bearing F.No. 8-36/2015-FC.
- In principle approval for diversion of 90.8605 ha of reserved forest land vide letter dated 19<sup>th</sup> October, 2016 bearing F.No. 8-35/2015-FC.

The extant proposal only pertains to inclusion of 301.0199 ha of forest land without any change in other approved configuration and profile of cargo for which the EC was granted in 2013. The table below illustrate details on the approved and proposed developments after expansion.

Table 1 Summary of the Approved and Proposed Expansions.

S. No	Description	Unit	Approved development	Proposed development	Development after Expansion	Proposal
1	Berths	Nos.	12	-	12	EC was obtained for development of 12 berths. Currently, 6 berths have been developed. The remaining will be developed subsequently.
2	Cargo Traffic	MMT	84.1	-	84.1	No additional cargo traffic envisaged apart from the amount permitted as per EC.
3	Port Area	Ha	496.63	301.0199 (376.64 ha of forest land that was initially proposed for diversion by AHPPL, upon consideration and evaluation by the forest department, was later agreed for 301.0199 ha)	797.6499	301.0119 Ha of forest land has been approved for diversion as per Stage – I Forest clearance obtained vide letter No. F.No. 8-36/2015-FC. and F.No. 8-35/2015-FC. This land will be used for port back up and utilities.

S. No	Description	Unit	Approved development	Proposed development	Development after Expansion	Proposal
4	Land to be reclaimed	Ha	225.30 Ha at the North Side of Port limit and 84 Ha at South side of port limit.	-	225.30 Ha at the North Side of Port limit and 84 Ha at South side of port limit.	No additional reclamation is envisaged beyond the permitted EC level.
5	Dredging Limit	MM <sup>3</sup>	Capital – 37 Maintenance- 11	-	Capital – 37 Maintenance- 11	No additional dredging beyond the permitted EC levels are envisaged.
6	Water	MLD	6	-	6	No additional water requirement is envisaged.
7	Power	MW	10	-	10	66 KV grid power supply is drawn from state electricity board supply.
8	Effluent Treatment Plant	MLD	2.5	-	2.5	An ETP of 50 KLD is currently operating against the permitted level of 2.5 MLD.
9	Sewage Treatment Plant	MLD	2.0	-	2.0	STP of 75 KLD is operating which is well below the permitted level of 2.0 MLD.

- (ii) **Nature of project (New/Expansion/Amendment/Extension etc.):** The proposed project is an Expansion Project.
- (iii) **Address of project site (Plot No./Village/ Tehsil/ District/State):** Plot No: Hazira Village Survey No. 179 ,434, 318, 306/A/1; Suvali Village Survey No. 177, 178 **Taluk:** Choryasi, **District:** Surat, **State:** Gujarat.
- (iv) **Geo-coordinates of project site:**  
 Bounded Latitudes (N): From 21.085317 To 21.128267  
 Bounded Longitudes (E): From 72.638097 To 72.642222
- (v) **Area (ha)/Length (km) of the proposed project:** The proposed project is a forest land diversion of area 301.0199 ha comprising of two land parcels of areas 210.1594 ha and 90.8605 ha.

- (vi) **Connectivity to the site:** The site is connected to the National Highway 53 by a four-lane road.
- (vii) **Investment/Cost of the project:** The total cost of the project is INR 1800 Crore.
- (viii) **Item of Schedule to the EIA Notification, 2006:** The proposed project is categorized under 7(e) Ports & Harbours of Schedule of EIA Notification, 2006.
- (ix) **Landuse/Landcover of project site in tabular form:**

S. No.	Landuse/ Landcover	Area (ha)	Percentage	Remarks
1	Forest Land	301.0199	100	The proposed project is inclusion of forest land into the EC Issued on 3 <sup>rd</sup> May 2013

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

S. No	Landuse/ Landcover	Area (ha)	Percentage	Remarks
1	Built-up Land	6296	30.55	-
2	Crop Land	1357	6.58	-
3	Scrub Forest	190	0.92	-
4	Land with scrub	1169	5.67	-
5	Mangroves	1234	5.99	-
6	Mud Flat	4297	20.85	-
7	Sandy Beach	406	1.97	-
8	Aquaculture	749	3.63	-
9	Tidal Flat	2633	12.78	-
10	Water Body	2280	11.06	-
	<b>Total</b>	<b>20611</b>	<b>100</b>	-

- (xi) **Terrain and topographical features:** The proposed project site is a forest land.
- (xii) **Details of water bodies, impact on drainage, if any:** There are no water bodies within the project site. The nearest water body to the project site is a village pond (Hazira Pond) which is at a distance of 1.5 km East (aerial distance).
- (xiii) **Water requirements, sources (during construction and operation phases) and NOC:** The water requirement during the construction phase would be sourced from open market by Trucks. Whereas, for the port operation AHPPL has an approval for developing 6 MLD desalination plant, as per the EC obtained on 3<sup>rd</sup> May 2013, which is to be developed. AHPPL has a consent to receive treated water of 2000 KLD from KRIBHCO through pipeline vide Consent Order No. AWH 87176 dated 17.07.2017). The water requirement beyond 2000 KLD is supplied through tankers, which is currently on an average 40 KLD.
- (xiv) **Groundwater extraction/usage and NOC/Clearance from CGWA/State Ground Water Department:** The Adani Hazira Port currently does not abstract ground water to meet its water requirement. And, no groundwater abstraction is proposed as part of the current proposal of forest land diversion.

- (xv) **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.
- (xvi) **ToR details:** File No.: 10-80/2018-IA-III, Proposal No.: IA/GJ/MIS/82779/2018, Date of ToR Application Submission: 17<sup>th</sup> October 2018, Date of EAC Meeting (Infra-2): 36<sup>th</sup> Meeting held on 26-28 November 2018, Date of ToR Issue: 13<sup>th</sup> December 2019.
- (xvii) **Public Hearing Details and Summary of issues raised and response/commitments by Proponent:** Public Hearing was exempted. The public hearing was conducted on 14.08.2012 for the master plan for Development of Multi Cargo Port at Hazira including forest land but as forest clearance was under process, the EC was granted excluding the forest lands. Therefore, the EAC has exempted Public Hearing for the proposed project as per para 7(ii) of the EIA Notification, 2006.
- (xviii) **If the project involves expansion copy of certified compliance report issued by concerned regional office:** Submitted Ministry's Regional Office (Western Zone) certified compliance report (File No: 6-11/2013(ENV)/1038).
- (xix) **Whether the project involves diversion of forest land and status of application:** The project involves diversion of 301.0199 ha of Forest Land for the development of port backup area of Adani Hazira Port. The forest land of 301.0199 ha comprises of two land parcels – 210.1594 ha and 90.8605 ha. The Stage-I Forest Clearance has been obtained whose details are as follows.
- F.No. 8-36/2015-FC dated 17th October, 2016 - In principle approval for diversion of **210.1594 ha** of reserved forest.
  - F.No. 8-35/2015-FC dated 19th October, 2016 - In principle approval for diversion of **90.8605 ha** of reserved forest.
  - The Stage-I Forest Clearance for both parcels have been submitted.
- (xx) **Whether the project is located within 10 km of Protected Areas (PA) including National Parks, Sanctuaries and Tiger Reserves etc.:** There are no Protected Areas such as Wildlife Sanctuaries, National Parks and Tiger Reserve within 10km from the project site.
- (xxi) **Whether the project is located within the Eco-Sensitive Zone (ESZ) or Eco-Sensitive Area (ESA) notified by the MoEF&CC:** The project site is not located within any Eco-Sensitive Zone or Eco-Sensitive Area notified by MoEF&CC.
- (xxii) **Waste Management:** The Adani Hazira Port handles and disposes various waste generated within its premises in the following ways:
- Construction Waste – Disposed through authorized vendors
  - Municipal Solid Waste – The wastes are segregated as biodegradable and non-biodegradable wastes within the port premises
  - Non-Biodegradable Waste – The non-biodegradable wastes are disposed through authorized vendors
  - Biodegradable Waste – The biodegradable wastes are converted into manure by organic waste converter which is used for the development and nourishment of greenbelt within the port.
  - Hazardous Waste – The hazardous wastes are disposed through Gujarat Pollution Control Board (GPCB) authorized vendors for the region.

- (xxiii) **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) **Details of tree cutting and Green belt development:** As part of the diversion of 301.0199 ha of forest land about 82340 no. of trees will be cut, 96% of which accounting to *Prosopis juliflora*. About 13.114 ha of greenbelt comprising 19,671 no. of plants will be planted at a cost of INR 0.21 Crore.
- (xxv) **Energy conservation measures with estimated saving:** Of the total power requirement of the port, 5% is sourced from renewable energy sources such as solar and wind energy. Besides, the port has installed CFL bulbs, wherever possible, as an energy saving measure, which has contributed to lower energy consumption.
- (xxvi) **Details of Rain Water Harvesting:** Hazira being an area influenced by salinity ingress, harvesting of rain water or ground water recharge measures are not possible.
- (xxvii) **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 CRZ mapping for the proposed forest land diversion was undertaken by the Institute of Remote Sensing, Anna University, Chennai. Based on the CRZ maps, it was found that the proposed project spreads across three CRZ areas, namely CRZ-I(B), CRZ-II, and CRZ-III. The spread of the proposed forest land across the CRZ are as found below:

CRZ Area	Area (Ha)
CRZ-IB	67.80
CRZ-II	84.96
NDZ	0.63
CRZ-III	9.38
<i>Total Forest Area within CRZ</i>	<i>162.77</i>
<i>Total Forest Area Outside CRZ</i>	<i>138.25</i>
<b>Total Forest Area</b>	<b>301.02</b>

The proposal was appraised by the Gujarat Coastal Zone Management Authority (GCZMA) in its 47<sup>th</sup> meeting held on 3<sup>rd</sup> February 2020, where the committee recommended that the AHPPL shall comply to all the condition of earlier recommendations issued in letter no. ENV-10-2012-31-E dated 11<sup>th</sup> May 2012. The GCZMA recommendations has been submitted.

- (xxviii) **Brief description of Socio-economic condition of local people:** The proposed project site is located in the district of Surat. Surat is a district in the state of Gujarat, with Surat city as the administrative headquarters of this district. Cumulative population in the study area is 60,343 with 41,636 males and 18,707 females. The Sex Ratio was found at 449 females per thousand males in the study area, with that of District's and state's ratio of 787 and 919 respectively. The major source of economic activity in the study area is employment and business opportunities associated with the industries in the region. About 4% of the workers are Cultivators, 3% were agriculture labors, 1% workers belong to household industry and 92% belongs to other workers group. 90% of the total populations are literates, which is more than the national literacy rate of 74.04% and state's literacy rate of 75.84%. Based on the field observations, majority of the children in the study area are educated only up to 8th standard.

(xxix) **Land acquisition and R&R issues involved:** The proposed project only involves diversion of forest land. No acquisition of land is envisaged. Therefore R&R is not applicable.

(xxx) **Employment potential, No. of people to be employed:** A total of 1200 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	50
	Temporary	400
Operation	Permanent	150
	Temporary	600
<b>Total</b>		<b>1200</b>

(xxxi) **Benefits of the project:**

*Improvement in Physical Infrastructure*

- Development of facilities and infrastructure will lead to economic growth in the region.
- Proposed development will lead to Industrializations in the form of port associated industries

*Improvement in Social Infrastructure*

- Livelihood Development Programs through CSR Activities.
- Drinking water facility for neighboring villages.

*Employment Potential*

- Proposed Development will lead to creation of both direct and indirect job opportunities.

(xxxii) **Brief summary of specialised Studies carried out for the project as per the ToR:** The proposed project pertains to obtaining the Environmental and CRZ Clearance for the forest land that was excluded in the Environmental and CRZ Clearance granted on 3<sup>rd</sup> May 2013 (F.No.11-150/2010-IA-III) for the development of multi-cargo port with supporting utilities and infrastructure facilities at Hazira, Surat, Gujarat. The forest land was excluded as the Stage-I Forest Clearance was in process. Realizing that, the project was granted Standard ToR with few specific ToR that pertains to CRZ mapping of the proposed project site, compliance to previous EC, and also traffic impact assessment. Based on the CRZ mapping it was identified that the project area falls in CRZ-I(B), CRZ-II, and CRZ-III areas. The port has been complying to all the stipulated conditions as part of the EC and a RO certified compliance report has been submitted as part of this document. From the traffic impact study, it was found that the present road infrastructure is adequate to support the traffic that is envisaged to increase once the port achieves its full operational capacity of 84.1 MTPA. However, as part of the EIA, Air Quality Modelling and Noise Modelling were done and it was estimated that the peak increase in particulate matters, SO<sub>x</sub>, and NO<sub>x</sub> are below the prescribed CPCB standards with PM<sub>10</sub> – 88.23 µg/m<sup>3</sup>, PM<sub>2.5</sub> – 38.18 µg/m<sup>3</sup>,

SO<sub>2</sub> – 15.77 µg/m<sup>3</sup>, and NO<sub>2</sub> – 21.43 µg/m<sup>3</sup>. From the noise modelling, it was observed that the ambient noise level would not exceed beyond the limits beyond the port boundary. And, based on the ecological survey, the forest land for diversion is covered with a mono-culture *Prosopis juliflora* which enunciates the fact that the forest doesn't host any diversity.

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

4. The EAC, taken into account the submissions made by the project proponent that the current proposal only pertains to the inclusion of the 301.0199 ha of forest land without any change in other approved configuration and profile of the cargo for which the EC was granted in 2013, had a detailed deliberation during its 241<sup>st</sup> meeting on 25-26 August, 2020. After a detailed deliberation, the EAC recommended the proposal for grant of Environmental and CRZ Clearance for the inclusion of forest land amounting to 301.0199 Ha with the specific conditions, in addition to all standard conditions applicable for such projects.

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 inclusion of forest land amounting to 301.0199 Ha 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) Since the proposal is for the inclusion of 301.0199 ha of forest land in the existing project, the existing EC, (F.No.11-150/2010-IA-III dated 3rd May 2013), be amended to include the 301.0199 ha of forest land without any change in any conditions and other approved configuration and cargo profile of the project:
- (ii) 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.
- (iii) 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.
- (iv) 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.
- (v) All the recommendations and conditions specified by the Gujarat Coastal Zone Management Authority (GCZMA) vide letter No. ENV-10-2012-31-E dated 11<sup>th</sup> May 2012 and ENV-10-2020-172-Tcell dated 6<sup>th</sup> July, 2020 shall be complied with.
- (vi) 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
- (vii) No storage of petroleum products

- (viii) 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 using online monitoring system. Turbidity should be monitored during the dredging. No removal of silt curtain unless baseline values are achieved.
- (ix) 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.
- (x) 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.
- (xi) 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.
- (xii) 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.
- (xiii) Sewage generated will be treated in STP of 75 KLD capacity. The treated water will be used for flushing, gardening and dust suppression within the port premises.
- (xiv) A continuous monitoring programme covering all the seasons on various aspects of the estuarine environs need to be undertaken by a competent organization 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.
- (xv) 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 report to the regional office of MoEF&CC.
- (xvi) 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.
- (xvii) Suitable preventive measures be taken to trap spillage of fuel / engine oil and lubricants from the construction site. Measures should be taken to contain, control and recover the accidental spills of fuel during cargo handling.
- (xviii) 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.

- (xix) The company shall draw up and implement Corporate Social Responsibility Plan as per the Company's Act of 2013.
- (xx) 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 Rs. 8.5 Crores (computed of slab basis for the project expansion cost of Rs. 1800 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. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> 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.
- 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 report.
- 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (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.

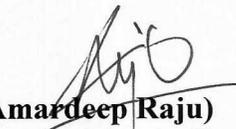


- xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 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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