

No.11-70/2006-IA-III
Government of India
Ministry of Environment and Forests
(IA-III Division)

Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110003

Sep-08

Sub: Construction of 13th to 16th Cargo berth at Kandla by M/s Kandla Port Trust (KPT) - Environmental Clearance - Reg.

Reference is invited to the letter No. EG/WK/4660(EC)/496 dated 0.10.2007, 17.05.3008 and 04.08.2008 from M/s Kandla Port Trust on the above mentioned subject.

1. The project is for construction of 4 additional cargo berths (numbered 13th to 16th cargo berths) to the existing 12 berths and the required back up areas in the existing areas by M/s Kandla Port Trust. Presently the port has eleven general cargo berths primarily for handling dry cargo traffic and four oil jetties for handling POL products and other liquid cargo traffic. 12th cargo berth is under construction. The estimated capital dredging for the 13th to 16th berths is one lakh Cum/berth (i.e. 4 lakh Cum). Dredging shall be carried over a period of 4months /berth. Bunds will be formed at the dumping ground prior to the commencement of the dredging as per standard norms. The proposed berths with total berthing length of 1200 m will be designed for a draught of 14 m. Initially these berths will cater to the vessels having 13 m draught. Subsequently, by the year 2010, after progressive deepening of approach channel, vessels having draught up to 14 m will be handled on these berths. Each of the four berths shall be 300 meters long and 55 meters wide with 100 tonnes capacity bollards and berthing fender blocks at 30 m intervals at the quay face. Soil available from capital dredging of the berth will be utilized for reclaiming low laying areas behind the berth. Area required for the project is 102.17 ha. Water supply is met from GWS& SB. 550 to 600 KLD of sewage is treated in the treatment plant having capacity of 3300 KL and 60 % of treated water is reused and 240 KLD is discharged into Sea. Dredging materials of 4,32,000 Cum is proposed to be filled in low-lying area behind 13th and 16th berths. The garbage of 3000 kg and construction materials of 50,000 kg will be land filled.

2. The proposal was considered by Expert Appraisal Committee at its meeting held on 29th and 30th November 2007 and 23rd and 24th April, 2008 and has recommended the proposal after waiving the public hearing as the project is within the Kandla Port Trust limit.

3. The proposal has been examined in this Ministry and environmental clearance under the provisions of Environmental Impact Assessment Notification 2006 and Coastal Regulation Zone Notification, 1991 is hereby accorded to the above project subject to the effective implementation of the following conditions:-

(A) Specific Conditions:

1. All measures indicated in the letter dated 04.08.2008 shall be strictly complied with.
2. Necessary clearances from the Gujarat State Pollution Control Board shall be obtained before initiating the project.

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3. The project proponent shall not undertake any destruction of mangroves during construction and operation of the project.
4. Sewage arising in the port area shall be treated to conform to the standards stipulated by Gujarat Pollution Control Board and shall be utilized/re-cycled for gardening, plantation and irrigation.
5. Project proponent shall be prepare a Disaster Management Plan covering emergency evacuation mechanisms etc., to deal with natural disaster events and regularly update from time to time.
6. There shall be no withdrawal of ground water in COASTAL REGULATION ZONE area, for this project. The proponent shall ensure that as a result of the proposed constructions, ingress of saline water into ground water does not take place. Piezometers shall be installed for regular monitoring for this purpose at appropriate locations on the project site.
7. The facilities to be constructed in the COASTAL REGULATION ZONE area as part of this project shall be strictly in conformity with the provisions of the COASTAL REGULATION ZONE Notification, 1991 as amended subsequently.
8. Green belt area shall be developed along the project and budget earmarked
9. No product other than those permissible in the Coastal Regulation Zone Notification, 1991 shall be stored in the Coastal Regulation Zone area.

B. General Conditions:

(i) Construction of the proposed structures shall be undertaken meticulously conforming to the existing Central/local rules and regulations including Coastal Regulation Zone Notification 1991 & its amendments. All the construction designs/drawings relating to the proposed construction activities must have approvals of the concerned State Government Departments/Agencies.

(ii) Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. shall be ensured for construction workers during the construction phase of the project so as to avoid felling of trees/mangroves and pollution of water and the surroundings.

(iii) The project authorities must make necessary arrangements for disposal of solid wastes and for the treatment of effluents by providing a proper wastewater treatment plant outside the COASTAL REGULATION ZONE area. The quality of treated effluents, solid wastes and noise level etc. must conform to the standards laid down by the competent authorities including the Central/State Pollution Control Board and the Union Ministry of Environment and Forests under the Environment (Protection) Act, 1986, whichever are more stringent.

(iv) The proponents shall provide for a regular monitoring mechanism so as to ensure that the treated effluents conform to the prescribed standards. The records of analysis reports must be properly maintained and made available for inspection to the concerned State/Central officials during their visits.

(v) In order to carry out the environmental monitoring during the operational phase of the project, the project authorities shall provide an environmental laboratory well equipped with standard equipment and facilities and qualified manpower to carry out the testing of various environmental parameters.

- (vi) The sand dunes if any, on the site shall not be disturbed in any way.
- (vii) A copy of the clearance letter will be marked to the concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (viii) The Gujarat Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/Tehsildar's Office for 30 days.
- (ix) The funds earmarked for environment protection measures shall be maintained, in a separate account and there shall be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards shall be reported to this Ministry's Regional Office at Bhopal and the State Pollution Control Board.
- (x) Full support shall be extended to the officers of this Ministry's Regional Office at Bhopal and the officers of the Central and State Pollution Control Boards by the project proponents during their inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.
- (xi) In case of deviation or alteration in the project including the implementing agency, a fresh reference shall be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection.
- (xii) This Ministry reserve the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.
- (xiii) This Ministry or any other competent authority may stipulate any other additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.
- (xiv) The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment & Forests at <http://www.envfor.in>. The advertisement shall be made within 7 days from the date of issue of the clearance letter and a copy of the same shall be forwarded to the Regional Office of this Ministry at Bangalore.
- (xv) The Project proponents shall inform the Regional Office at Bhopal 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 Land Development Work.

5. The above mentioned stipulations will be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (protection) Act, 1986, the Hazardous Chemicals (Manufacture, Storage and Import) Rules, 1989, the Coastal Regulation Zone Notification, 1991 and its subsequent amendments and the Public Liability Insurance Act, 1991 and the Rules made thereunder from time to time. The project proponents shall also ensure that the proposal complies with the provisions of the approved Coastal Zone Management Plan of Gujarat State.



E. Thirunavukkarasu
Deputy Director

To,

1. M/s Kandla Port Trust, Post Box No.50, Gandhidham, Kutch, Gujarat
2. The Member Secretary, Gujarat State Pollution Control Board,
3. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum- Office Complex, East Arjun Nagar, Delhi ?110032.
4. Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No. 3, Ravishankar Nagar, Bhopal – 462016 (M.P.)
5. The Regional Office Cell, Ministry of Environment and Forests.
6. Guard File.
7. Monitoring File



E. Thirunavukkarasu
Deputy Director

F.No.11-70/2006-IA.III
Government of India
Ministry of Environment & Forests
(IA.III Section)

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi - 110 003.

Dated: 7th February, 2014

To,
The Chief Engineer,
M/s Kandla Port Trust,
Administrative Office Building,
Post Box No. 50, Annexe Bldg.
Gandhidham, Kutch, Gujarat - 370 201

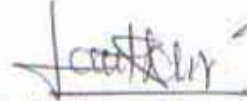
SEC D)
Shri A. Dave
D. B. J. J.

Subject: Extension of validity of Environmental and CRZ Clearance granted for construction of 13th to 16th Cargo berth at Kandla Port, Gujarat by M/s. Kandla Port Trust - Reg.

This has reference to your letter No: EG/WK/4660(EC)/Part/25 dated 08.04.2013 seeking extension of validity of Environmental and CRZ Clearance granted vide letter no. F.No.11-70/2006-IA-III dated 01.10.2008. The issue was discussed by the EAC in its 128th meeting held on 20th - 23rd November, 2013 and committee recommended for the extension of validity of the clearance dated 01.10.2008 for a period of five years. Accordingly, the validity of the clearance is extended up to 30.09.2018.

20/03/14 Shri Anand
Shri Anand
EMC

All other conditions remain unchanged.



(Lalit kapur)
Director (IA-III)

Copy to:

- 1) The Principal Secretary, Department of Forests & Environment and Chairman, GCZMA, Govt. of Gujarat, Sachivalaya, Gandhinagar.
- 2) The Chairman, CPCB, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32.
- 3) The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhinagar-382 010.
- 4) The Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No. 3, Ravishankar Nagar, Bhopal-462016 (M.P.)
- 5) Guard File.
- 6) Monitoring Cell, MoEF.

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(Lalit Kapur)
Director (IA-III)

No. PD-24015/26/2016-PD-IV
Government of India
Ministry of Shipping

Transport Bhawan, Parliament Street,
New Delhi-110001 Dated : 5th December, 2016

OFFICE MEMORANDUM

Subject: Minutest of the SFC Meeting regarding construction of 14th & 16th berth for multi-purpose Cargo from internal resources- Kandla Port Trust.

The undersigned is directed to forward herewith approved Minutes of the SFC meeting on the subject cited above held on 18.11.2016 at 10.30 AM under the Chairmanship of Secretary (Shipping) for information and further necessary action.

2. This issues with the approval of the Secretary (Shipping).



(Rameshwar Kumar)
Under Secretary to the Govt. of India

To

- (i) NITI Aayog, (Sh. Amit Bhardwaj, SRO), New Delhi
- (ii) Ministry of Finance, Department of Economic Affairs, (Sh. Mrutyunjay Behera, Director), North Block, New Delhi.
- (iii) Ministry of Law & Justice, Deptt. of Legal Affairs (Dr. R.J.R. Kashibhara, Dy. Legal Adviser), Shastri Bhawan, New Delhi.

Copy to:-

- (i) Chairman, KPT

Copy also to:-

- (i) PS to Secy (S)
- (ii) Sr. PPS to AS&FA
- (iii) PPS to JS(P)

Minutes of the SFC Meeting taken by Secretary (Shipping) on 18.11.2016 for the Project of Construction of 14th & 16 Berth for Multi-purpose Cargo (Other than Liquid/Container) at Kandla Port through Internal Resources.

The following officers attended the meeting:-

| | | |
|----|------------------------|--|
| 1 | Shri Rajive Kumar | Chairman & Secretary (Shipping) (In the Chair) |
| 2 | Shri Sanjeev Ranjan | AS & FA |
| 3 | Shri Pravir Krishn | JS (P) |
| 4 | Shri Mrutyunjay Behera | Director (DEA) |
| 5 | Dr. R.J.R. Kasibhara | Dy. Legal Adviser (Ministry of Law & Justice). |
| 6 | Shri Amit Bhardwaj | SRO, NITI Aayog |
| 7 | Shri Ravi Parmar | Chairman (Kandla Port Trust) |
| 8 | Shri Alok Singh | Dy. Chairman, (Kandla Port Trust). |
| 9 | Shri B. Krishnamoorthy | Director (MOS). |
| 10 | Shri B Poiyaamozhi | Consultant (Ports) |
| 11 | Shri K.C. Kuncharia | CME & CE (STAT) (Kandla Port Trust) |
| 12 | Shri D.N. Sondhi | FA & CAO (Kandla Port Trust) |
| 13 | Shri N M Parmar | SE (Civil), Kandla Port Trust |

2. Chairman welcomed the participants and requested the Chairman KPT to brief both the project i.e. Berth No. 14 & 16. Accordingly, a power point presentation (copy enclosed) was made, highlights of which are the following:

(i) The port has witnessed consistent increase in traffic from 41.52MMTPA in 2003-04 to 100.05 MMTPA in 2015-16.

(ii) The present capacity of existing dry cargo berths to handle non container dry cargo is 45 MMTPA.

(iii) Dry cargo Traffic has gone up from 26MMT in 2011-12 to 34.96 MMT in 2015-16.

(iv) KPT is using Berth No. 11 & 12 to handle dry cargo in absence of containers.

(v) The Traffic projection for the port is 84 MMTPA of Dry cargo by 2020 & 121 MMTPA by 2029

(vi) Details of 14th Berth:

| | | |
|----------------------------|---|--|
| (a) Optimal Capacity | : | 4.50MMTPA |
| (b) Capital cost | : | Rs. 253.00 Cr. |
| (c) Source of fund | : | Internal Resources |
| (d) Project time schedule | : | 24 months from the date of issue of work order |
| (e) Revised Financial IRR: | : | 15.32% |

(vii) Details of 16th Berth:

| | | |
|---------------------------|---|--|
| (a) Optimal Capacity | : | 4.50MMTPA |
| (b) Capital cost | : | Rs. 278.00 Cr. |
| (c) Source of fund | : | Internal Resources |
| (d) Project time schedule | : | 24 months from the date of issue of work order |

Revised Financial IRR: 14.23%

3. A summary of the discussion and decision taken is as under:

(i) All the queries raised by DEA, NITI Aayog, IFW and Development Wing of the Ministry of Shipping have been addressed. (Details annexed).

(ii) Representative of Niti Ayog was of the view that as per the recent OM issued by the Ministry of Finance Department of Expenditure, Representative of Department of Expenditure has to be included in the Committee. AS & FA clarified that the requirement of participation is only in case proposed outlay is greater than Rs. 300 Crore. However, it was decided that a copy of the SFC memo may be forwarded to the Department of Expenditure for their information. Comments, if any be awaited for 10 days after which necessary action be taken by the Ports as per the approval of this Committee.

(ii) Chairman desired to know as to whether the provision of the backup storage area considered in the proposal will be sufficient to ensure smooth evacuation of the Cargo. It was confirmed by the port trust that the area shall be sufficient to cater to the storage requirements on the volume of cargo to be handled.

(iii) Chairman desired that the date of submission of the bid may be extended to provide circulation of the SFC memo to Deptt. Of Expenditure. till the approval of SFC. Accordingly, it was decided to extend the bid submission date till 12.12.2016.

4. SFC approved the proposal of "Construction of 14th & 16th berth for Multi-purpose Cargo from Internal Resources of Kandla Port for the Block estimated cost of Rs. 253.00 Crore and Rs. 278.00 Crore respectively.

5. The SFC meeting ended with a vote of thanks to the Chair.

SFC Memorandum-14th Cargo Berth
Tabular form-Queries Raised By Various Department & Compliance Given By KPT
Compliance by KPT

| Sr. No | Observations raised by Department of Economic Affairs | Compliance by KPT |
|--------|---|--|
| 1 | After termination of the contract KPT took the physical possession of the site and planning to initiate fresh bidding under EPC mode. It may be clarified whether legal views have been obtained. In case there are any arbitration/dispute to ensure that the proposal bidding would not in any way impinge upon | There is no arbitration at present pending against earlier concessionaire, M/s Royal Maritime Handlers Pvt. Ltd. However, the legal proceeding for recovery of Rs. 45 lakhs (approx) is being initiated. |
| 2 | Status of approvals from Ministry of Railways, Environment and CRZ clearance etc for construction may be placed on records. | <ul style="list-style-type: none"> • For implementation of 13th to 16th cargo berths, MoEF has already accorded the Env. & CRZ clearances in Sept-2008 with handling capacity of 2 MMTPA for each berth. Subsequently, handling capacity of each berth is revised to 4.5 MMTPA. Accordingly, an amendment in CRZ & Environment clearance from MoEF & CC is under processed. • The work of providing Rail connectivity to Berth No. 13, 14, 15 & 16 from takeoff point to west end of berth will be executed by Indian Port Railway Corporation Limited (IPRCL), the DPR for the work is prepared and submitted to Western Railway by Rail Vikas Nigam Limited (RVNL), the consultant nominated by IPRCL. The DPR is in process for the approval of competent authorities of Western Railway. |
| 3 | It is mentioned that the entire expenditure for the project will be met by KPT from its internal resources, accordingly, the financial preparedness of the authority may be placed on record. | At the end of the year 2015-16, IEBR is to the tune of Rs. 2318.75 Crores, thus Kandla Port Trust has sufficient funds to execute 14th & 16th Cargo Berth from its Internal Resources |
| 4 | The procurement should be based on international competitive bidding criterion so that cost competitiveness remains intact. | Procurement of all important equipments will be as per international bidding process through Global Tender. |

| | | |
|---|---|---|
| 5 | <p>It has been stated that after construction of berth, operation of berth will be outsourced. It is noted that the capital expenditure has two phases. In the first phase, construction of berth and back-up area would be undertaken with capital outlay of Rs. 149.11 crore(plus escalation, etc). The second phase comprises of two harbor mobile cranes, electrification, office building, godown, etc. of Rs. 83.77 Crores(plus escalation, etc). In view of over 6 years of gap between the earlier attempts for bidding BOT mode, fresh BOT being at least for Phase-2 may be contemplated.</p> | <p>It is decided to undertake the Phase – II of the project through internal resources, the procurement of the HMCs may be undertaken by KPT, when the berths are ready to be commissioned. However, if Phase – II is proposed to be executed on BOT basis, then the procurement of HMCs, electrical works, office building, godowns etc. will form part of the BOT project and will have to be done by the BOT operator.</p> |
| 6 | <p>As per Kandla port Trust website, Development of Multi Purpose cargo berth (Other than liquid/ Container) at Tuna Tekra on BOT Basis, Stage-II is at planning stage with 18MMTPA capacity . It may be confirmed that all the future projects are planned with diligent demand-supply study and do not hamper the feasibility of the instant Project.</p> | <p>Traffic projection based on CAGR is worked out at 10.02% for dry cargo projected upto 2029. The dry cargo traffic projection at Kandla port trust as per maritime agenda -2020 is 83.8MMT (excluding container). The present handling capacity of existing dry cargo berth to handle non-container dry cargo including barge jetties are assessed 45MMTPA. Further, based on CAGR traffic projection of 10.02%, it is expected that dry cargo of 120.93MMTPA will be handled by 2029(10 years after commissioning of proposed 14th berth). Further, it is confirmed that all the future projects are planned with diligently demand supply studies and will not hamper the feasibility of the instant projects.</p> |
| | <p>Observations raised by Niti Ayog</p> | <p>Compliance by KPT</p> |
| 1 | <p>As per the latest guidelines for project appraisal issued by Department of Expenditure, MoF (Aug-2016), the project FIRR should not be less than 10%. However, in the instant cases for both the projects, the FIRR are less than 10%(For 14th berth-8.99% and 16th berth-8.07%)</p> | <p>The FIRR as worked out for 14th & 16th Cargo Berths @ 8.99% & 8.07% respectively is on lower side, due to the fact that Kandla activity, specially dry cargo, tariff is subsidised, since last many years.</p> |

Moreover, the FIRR has been calculated on the basis of two assumption i.e, project would be completed in two years duration and traffic growth of 10.09% CAGR. In case the project is not completed within two years, it may have a bearing on the project growth of 10.09%, it may have adverse implication on the revenue assumptions. MoS may under take sensitivity analysis of these two factors on the project FIRR.

It has been observed that the Net surplus of the KPT is sharply declining over last three audited years.

Sensitivity analysis has been carried out for increase in construction period and Capital cost thereof and for Traffic projection, details are tabulated as under :

Sensitivity Analysis : CAPEX & construction Period

| Construction Capital | 14 th Cargo Berth | 16 th Cargo Berth |
|----------------------|------------------------------|------------------------------|
| Period | Cost | |
| 24 Month | 0% | 8.07% |
| 30 Month | 5% | 7.38% |
| 36 Month | 10% | 6.72% |

Sensitivity Analysis : Traffic Projection

| | 14 th Cargo Berth | 16 th Cargo Berth |
|-----------------|------------------------------|------------------------------|
| 0% (4.5 MMT) | 8.99% | 8.07% |
| -5% (4.275 MMT) | 8.48% | 7.60% |
| -10% (4.05 MMT) | 7.97% | 7.12% |

The Net surplus of KPT for the year 2015-16 is Rs. 422.12 Crore. Further, in each of the last 3 years i.e. 2012-13 to 2014-15, the decline in Net surplus is on account of one time contribution to Pension Fund & Gratuity Fund. However Operating surplus for each of the 4 years, as per Audited Annual accounts depicts an increasing trend, the details are tabulated as under :

| | Operating Surplus | Net Surplus (Before Tax) |
|---------|-------------------|--------------------------|
| 2012-13 | 265.44 | 389.15 |
| 2013-14 | 143.90 | 133.15 |
| 2014-15 | 264.10 | 46.94 |
| 2015-16 | 360.56 | 422.12 |

| 4 | It is felt that the execution of above two proposed projects is going to further impact the port's financial health adversely. | At the end of the year 2015-16, IEBR is to the tune of Rs. 2318.75 Crores, thus Kandla Port Trust has sufficient funds to execute 14 th & 16 th Cargo Berth from its Internal Resources. | | | | | | | | | | |
|----------------------------|--|--|--------------------|-----------------|----------------------|------|----------------------------|------|----------------------|------|----------------------------|-------|
| | Observations raised by IFW | Compliance by KPT | | | | | | | | | | |
| 1 | From para 3.2 of SFC it appears that the port has been attempting since 2009 to outsource the some of work on BOT basis which is not fructifying due to low revenue shared from the market. Now KPT wants to carry out through internal resources. The FIRR is 8.99% & the EIRR is 10.60%. Adequate justification to justify the project may be furnished. | Based on the recent TAMP order dated 28.09.2016 vide G.N No. 357 regarding 6 Nos. of 100T or above MHC income has been revised and further O & M cost has also been revised and hence, FIRR & EIRR has been reworked out as under : FIRR - 15.32% EIRR - 17.42% | | | | | | | | | | |
| 2 | Similarly, from the block estimate, it appears that the cost of MHC of look above has been estimated as Rs. 60 Crores. KPT may be asked to authentic the realistic estimate so as to avoid RCE problems later. | The Budgetary offers for Design, Manufacture, Supply, Erection, Testing and Commissioning of 02 Nos. of 100 Ton & above capacity of Mobile Harbour Crane at Dry Cargo Berths called by the Mechanical Engineering Department in the year 2016 and a copy of Comparative Statement of Budgetary Offers is Placed at Annexure - II . Average Cost of 2 Nos. of MHC of 100 Ton & above capacity is Rs. 60.00 Crores. | | | | | | | | | | |
| 1 | Observations raised by Development Wing (Mos) Due to unsuccessful attempts made for award of the project on BOT basis, the port has decided to take up the project through internal resources in order to meet the traffic requirement and also to avoid diversion of cargo nearby ports. It may be necessary to bring out the identified cargo considered under multipurpose berth for justification along with traffic potential based on the requirement in the hinterland. | <ul style="list-style-type: none"> The Ministry appointed consultants M/s. McKenzie and AECOMM have studied the requirements of the hinterland and other aspects related to traffic potential of Kandla Port and have come up with the traffic projections for the port till 2035 which are indicated below. <table border="1" data-bbox="177 1167 395 1899"> <thead> <tr> <th>Traffic Projection</th> <th>Dry Cargo (MMT)</th> </tr> </thead> <tbody> <tr> <td>2025 (Base Scenario)</td> <td>59.2</td> </tr> <tr> <td>2025 (Optimistic Scenario)</td> <td>63.5</td> </tr> <tr> <td>2035 (Base Scenario)</td> <td>96.5</td> </tr> <tr> <td>2035 (Optimistic Scenario)</td> <td>111.3</td> </tr> </tbody> </table> | Traffic Projection | Dry Cargo (MMT) | 2025 (Base Scenario) | 59.2 | 2025 (Optimistic Scenario) | 63.5 | 2035 (Base Scenario) | 96.5 | 2035 (Optimistic Scenario) | 111.3 |
| Traffic Projection | Dry Cargo (MMT) | | | | | | | | | | | |
| 2025 (Base Scenario) | 59.2 | | | | | | | | | | | |
| 2025 (Optimistic Scenario) | 63.5 | | | | | | | | | | | |
| 2035 (Base Scenario) | 96.5 | | | | | | | | | | | |
| 2035 (Optimistic Scenario) | 111.3 | | | | | | | | | | | |

- The port has handled a Dry cargo traffic (ex. Container & BOT cargo) of 28.4 MMT at berths 1 to 12 during FY 2015-16. The need for more berths, may be justified considering the present and the future volumes of Dry cargo, considering the present and the future capacity of dry cargo berths : 1 to 10, and also keeping in view the higher traffic projections suggested by the consultants.
- The need for more berths, may be justified considering the present & future volumes of Dry cargo, considering the present and the future capacity of dry cargo berths : 1 to 10, and also keeping in view the higher traffic projections.

The increase in Dry cargo (ex. Containers) traffic at Kandla port during last 5 years :

| Year | Traffic (in Lakh Tones) | % increase / decrease |
|---------|-------------------------|-----------------------|
| 2015-16 | 348.17 | 16.84 |
| 2014-15 | 298.43 | 10.86 |
| 2013-14 | 269.19 | (-) 9.77 |
| 2012-13 | 298.35 | 14.68 |
| 2011-12 | 260.15 | 8.61 |
| 2010-11 | 239.52 | |

The stack yard of approx. Area is 23.70 Ha is available as the backup area of the berth.
Design Vessel size is considered as 75000 DWT.
Optimal handling Capacity of berth has been considered as 4.50 MMTPA.

The Block Estimate has been prepared on the rates of accepted tender of the work of Construction of Oil Jetty No. 7 at Kandla and SOR 2016. The work of Oil Jetty No. 7 was awarded more than a year back. Moreover, the approvals of and tendering system of the subject work may take a few more months. Hence, a provision of 5% Escalation has

2 The port has stated that the development of the berth would be as per the land use plan of the Kandla port. The details of the stack yard availability for the berth along with the design vessel and capacity of the berth with basis may be include in the proposal.

3 It is mentioned in a block estimate prepared for the proposal that the component of the proposal projected include construction of Quay, development of backup area, procurement of wharf crane along with ancillary facilities including water supply and electrification at

| | | |
|---|--|---|
| | <p>estimate cost of 273 cores. The basis for inclusion of 5% to the estimate as escalation may be elaborated. Further, contingency charges of only 1.5% has been included which also need clarification.</p> | <p>been considered to meet with the escalation expected till award of work.</p> <p>As per the KPT Works Manual Clause No. 1.5.4 (5) (Guidelines for preparation of preliminary estimates) in addition to the provision for all expenditure which can be foreseen, a provision of contingency shall be kept in the PE for miscellaneous expenditure like surveying, material testing, estimating, designs, drawings and other field requirements etc. accordingly a provision of contingency @ 1.5% of Estimates costing more than Rs. 100 Lakhs has to be included.</p> |
| 4 | <p>The financial Internal rate of return has been estimated at 8.99% only. This appears to be lower side. As the berths in operation are taken as basis for calculation of the return. It may be explored as to whether the port user charges would be adequate for better financial return for the project.</p> | <p>The Port user charges of Kandla are fixed after cross subsidization of around Rs. 138 Crores from Vadinar activity (Vadinar activity is a surplus activity). Hence to mitigate the operating expenses incurred for providing various services at Kandla including 16% RoCE, the user charges being imposed are comparatively on lower side in view of cross subsidization from Vadinar activity, being in surplus. Hence the revenue estimation results into lower income projections.</p> |
| 5 | <p>It is mentioned at para 5 of the SFC memo that the cost estimate is variable to the extent of +/-10%. It is required that the cost estimate should be firm and realistic. Hence, it may be confirmed accordingly.</p> | <p>It is confirmed that the cost estimate is firm. However, since the detailed designs are to be worked out by the consultant to be appointed for the purpose after approval of the project, a leeway has been shown as +/- 10%.</p> |
| 6 | <p>The design and drawings as indicated at para 6 of the SFC memo would be prepared by Technical Advisor to be appointed. The charges if any as per the drawing of the port components may have to be incorporated accordingly along with the charges in cost, if any.</p> | <p>As stated under para 3 above, a provision of 1.5% has been kept in the Block Estimate as against contingencies, which includes the consultancy charges.</p> |

**SFC Memorandum-16TH Cargo berth
 Compliance Given By KPT
 Compliance by KPT**

Tabular form- Queries Raised By Various Department & Compliance Given By KPT

| Sr. No. | Observations raised by Deptt of Economic affairs | Compliance by KPT |
|---------|--|--|
| 1 | <p>KPT had earlier awarded (June 2010) the Project on BOT basis with Concession period of 30 years. Due to poor performance of the concessionaire, the development of the berth could not be completed and made operational even within a time period of 7 years. The reason behind delay of construction by concessionaire (BOT) is not clear from the documents.</p> | <ul style="list-style-type: none"> • In Feb-2009, PPPAC had approved the implementation of 13th to 16th cargo berths on BOT Basis. Accordingly, in Apr-2009, bids were invited among prequalified bidders for 13th to 16th cargo berths. • After approval of CCEA in Aug-2009, bids submitted by bidders were opened in Sept-2009. However, only the bid of 13th cargo berth was accepted and the bids for remaining 14th to 16th berths were not accepted because the Royalty quoted by the bidders were low. • Subsequently, for implementation of 14th & 16th berths, again the bids were re-invited for two times viz. in Jan-2010 & in Aug-2010. Finally, in Dec-2010 the bids for all 14th, 15th & 16th cargo berths were accepted. Subsequently, in Feb-2011, Concession agreement for 16th cargo berth was executed with the SPV formed by successful bidder of 16th berth. Thereafter, after fulfillment of conditions precedents by both the parties, concession of the 16th berth was awarded to the concessionaire on 29.09.12 which is also scheduled date of start of construction phase of 24 months of 16th Cargo berth. • However, due to non-payment of the License Fees, non-payment of Liquidated Damages for delay in fulfillment of Conditions Precedent, non replenishment of Performance Guarantee and non-adherence with the Project schedule as provided in the Concession Agreement by the concessionaire of 16th berth, Termination notice was issued to the concessionaires on 20.02.2014 to terminate the concession Agreement of 16th berth. As per Termination Notice, the concession Agreement stands terminated on 18.08.2014. |

| | | |
|---|--|---|
| 2 | <p>After termination of the contract KPT took the physical possession of the site and planning to initiate fresh bidding under EPC mode. It may be clarified whether legal views have been obtained. In case there are any arbitration/dispute to ensure that the proposal bidding would not in any way impinge upon</p> | <ul style="list-style-type: none"> Concessionaire, M/s PSLIPPL of the 16th Cargo Berth invoked the Arbitration on 10.10.2014 as per Concession Agreement. Accordingly Arbitration Proceedings are going on. Till date 19 arbitral meetings have been completed. Cross examination of both the parties have been completed. In next arbitral meetings, recording of Oral evidence/argument will be carried out. In the Claim statement of Claimant, there is not any submission regarding fresh bidding of the project. The legal advice has been obtained from Port Advocate, there is no injunction operative against KPT from allotting / developing cargo berth jety no.16, thus there is no legal fetter for developing cargo berth jety no.16 |
| 3 | <p>Status of approvals from Ministry of Railwas, Environment and CRZ clearance etc for construction may be placed on records.</p> | <ul style="list-style-type: none"> For implementation of 13th to 16th cargo berths, MoEF has already accorded the Env. & CRZ clearances in Sept-2008 with handling capacity of 2 MMTPA for each berth. Subsequently, handling capacity of each berth is revised to 4.5 MMTPA and length of 16th Cargo Berth extended from 300 M to 350 M. Accordingly, an amendment in CRZ & Environment clearance from MoEF & CC is under processed. The work of providing Rail connectivity to Berth No. 13, 14, 15 & 16 from takeoff point to west end of berth will be executed by Indian Port Railway Corporation Limited (IPRCL), the DPR for the work is prepared and submitted to Western Railway by Rail Vikas Nigam Limited (RVNL), the consultant nominated by IPRCL. The DPR is in process for the approval of competent authorities of Western Railway. |
| 4 | <p>It is mentioned that the entire expenditure for the project will be met by KPT from its internal resources, accordingly, the financial preparedness of the authority may be placed on record.</p> | <p>At the end of the year 2015-16, IEBR is to the tune of Rs. 2318.75 Crores, thus Kandla Port Trust has sufficient funds to execute 14th & 16th Cargo Berth from its Internal Resources.</p> |

| 5 | The procurement should be based on international competitive bidding criterion so that cost competitiveness remains intact. | | Procurement of all important equipments will be as per international bidding process through Global Tender. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|--|------------------------------|---|----------------------|------------------------------|------------------------------|---------------|-------------|--|----------|----|-------|----------|----|-------|----------|-----|-------|--|--|-------|--|------------------------------|------------------------------|--------------|-------|-------|-----------------|-------|-------|-----------------|-------|-------|
| | Observations raised by Niti Aayog | | Compliance by KPT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | As per the latest guidelines for project appraisal issued by Department of Expenditure, MoF(Aug-2016), the project FIRR should not be less than 10%. However, in the instant cases for both the projects, the FIRR are less than 10%(For 14 th berth-8.99% and 16 th berth-8.07%) | | The FIRR as worked out for 14 th & 16 th Cargo Berths @ 8.99% & 8.07% respectively is on lower side, due to the fact that Kandla activity, specially dry cargo, tariff is subsidised, since last many years. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Moreover, the FIRRs have been calculated on the basis of two assumption i.e, project would be completed in two years duration and traffic growth of 10.09% CAGR. In case the project is not completed within two years, it may have a bearing on the project growth of 10.09%, it may have adverse implication on the revenue assumptions. MoS may under take sensitivity analysis of these two factors on the project FIRR. | | Sensitivity analysis has been carried out for increase in construction period and Capital cost thereof and for Traffic projection, details are tabulated as under : Sensitivity Analysis: CAPEX & construction Period <table border="1" data-bbox="558 1097 805 1960"> <thead> <tr> <th>Construction Capital</th> <th>14th Cargo Berth</th> <th>16th Cargo Berth</th> </tr> </thead> <tbody> <tr> <td>Period</td> <td>Cost</td> <td></td> </tr> <tr> <td>24 Month</td> <td>0%</td> <td>8.99%</td> </tr> <tr> <td>30 Month</td> <td>5%</td> <td>8.23%</td> </tr> <tr> <td>36 Month</td> <td>10%</td> <td>7.51%</td> </tr> <tr> <td></td> <td></td> <td>6.72%</td> </tr> </tbody> </table> Sensitivity Analysis: Traffic Projection <table border="1" data-bbox="319 1108 502 1971"> <thead> <tr> <th></th> <th>14th Cargo Berth</th> <th>16th Cargo Berth</th> </tr> </thead> <tbody> <tr> <td>0% (4.5 MMT)</td> <td>8.99%</td> <td>8.07%</td> </tr> <tr> <td>-5% (4.275 MMT)</td> <td>8.48%</td> <td>7.60%</td> </tr> <tr> <td>-10% (4.05 MMT)</td> <td>7.97%</td> <td>7.12%</td> </tr> </tbody> </table> | Construction Capital | 14 th Cargo Berth | 16 th Cargo Berth | Period | Cost | | 24 Month | 0% | 8.99% | 30 Month | 5% | 8.23% | 36 Month | 10% | 7.51% | | | 6.72% | | 14 th Cargo Berth | 16 th Cargo Berth | 0% (4.5 MMT) | 8.99% | 8.07% | -5% (4.275 MMT) | 8.48% | 7.60% | -10% (4.05 MMT) | 7.97% | 7.12% |
| Construction Capital | 14 th Cargo Berth | 16 th Cargo Berth | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Period | Cost | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 Month | 0% | 8.99% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 Month | 5% | 8.23% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 Month | 10% | 7.51% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6.72% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 14 th Cargo Berth | 16 th Cargo Berth | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0% (4.5 MMT) | 8.99% | 8.07% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -5% (4.275 MMT) | 8.48% | 7.60% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -10% (4.05 MMT) | 7.97% | 7.12% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| 3 | It has been observed that the Net surplus of the KPT is sharply declining over last three audited years. | <p>The Net surplus of KPT for the year 2015-16 is Rs. 422.12 Crore. Further, in each of the last 3 years i.e. 2012-13 to 2014-15, the decline in Net surplus is on account of one time contribution to Pension Fund & Gratuity Fund. However Operating surplus for each of the 4 years, as per Audited Annual accounts depicts an increasing trend, the details are tabulated as under :</p> <p>(Rs. In Crores)</p> <table border="1" data-bbox="933 1086 1189 2004"> <thead> <tr> <th></th> <th>Operating Surplus</th> <th>Net Surplus (Before Tax)</th> </tr> </thead> <tbody> <tr> <td>2012-13</td> <td>265.44</td> <td>389.15</td> </tr> <tr> <td>2013-14</td> <td>143.90</td> <td>133.15</td> </tr> <tr> <td>2014-15</td> <td>264.10</td> <td>46.94</td> </tr> <tr> <td>2015-16</td> <td>360.56</td> <td>422.12</td> </tr> </tbody> </table> | | Operating Surplus | Net Surplus (Before Tax) | 2012-13 | 265.44 | 389.15 | 2013-14 | 143.90 | 133.15 | 2014-15 | 264.10 | 46.94 | 2015-16 | 360.56 | 422.12 |
|---------|---|---|--|-------------------|--------------------------|---------|--------|--------|---------|--------|--------|---------|--------|-------|---------|--------|--------|
| | Operating Surplus | Net Surplus (Before Tax) | | | | | | | | | | | | | | | |
| 2012-13 | 265.44 | 389.15 | | | | | | | | | | | | | | | |
| 2013-14 | 143.90 | 133.15 | | | | | | | | | | | | | | | |
| 2014-15 | 264.10 | 46.94 | | | | | | | | | | | | | | | |
| 2015-16 | 360.56 | 422.12 | | | | | | | | | | | | | | | |
| 4 | It is felt that the execution of above two proposed projects is going to further impact the port's financial health adversely. | <p>At the end of the year 2015-16, IEBR is to the tune of Rs. 2318.75 Crores, thus Kandla Port Trust has sufficient funds to execute 14th & 16th Cargo Berth from its Internal Resources.</p> <p style="text-align: center;">Compliance by KPT</p> | | | | | | | | | | | | | | | |
| Sr. No. | Observations raised by IFW | Compliance by KPT | | | | | | | | | | | | | | | |
| 1 | The IRR & ERR has been worked out as 8.07% & 9.55% respectively which is below the mandatory bench mark of 12%. The justification given by port that the project is of national importance is very generic. | <p>Based on the recent TAMP order dated 28.09.2016 vide G.N No. 357 regarding 6 Nos. of 100T or above MHC income has been revised and further O & M cost has also been revised and hence, FIRR & EIRR has been reworked out as under :</p> <p>FIRR - 14.23%</p> <p>EIRR - 16.17%</p> | | | | | | | | | | | | | | | |
| 2 | With IRR of 8.07% which is below the bench mark rate, KPT needs to furnish details of other benefits that would accrue from the project that justifies the proposed investments. | <p>The FIRR & EIRR re-worked out as explained vide reply para above for 16th Cargo Berth @ 14.23% and 16.17% respectively, which is above the benchmark of 12%.</p> <p>FIRR - 14.23%</p> <p>EIRR - 16.17%</p> | | | | | | | | | | | | | | | |
| Sr. No. | Observations raised by Development Wing | Compliance by KPT | | | | | | | | | | | | | | | |

Due to unsuccessful attempts made for award of the project on BOT basis, the port has decided to take up the project through internal resources in order to meet the traffic requirement and also to avoid diversion of cargo nearby ports. It may be necessary to bring out the identified cargo considered under multipurpose berth for justification along with traffic potential based on the requirement in the hinterland.

The Ministry appointed consultants M/s. McKenzie and AECOMM have studied the requirements of the hinterland and other aspects related to traffic potential of Kandla Port and have come up with the traffic projections for the port till 2035 which are indicated below.

| Traffic Projection | Dry Cargo (MMT) |
|----------------------------|-----------------|
| 2025 (Base Scenario) | 59.2 |
| 2025 (Optimistic Scenario) | 63.5 |
| 2035 (Base Scenario) | 96.5 |
| 2035 (Optimistic Scenario) | 111.3 |

The port has handled a Dry cargo traffic (ex. Container & BOT cargo) of 28.4 MMT at berths 1 to 12 during FY 2015-16. The need for more berths, may be justified considering the present & future volumes of Dry cargo, considering the present and the future capacity of dry cargo berths : 1 to 10, and also keeping in view the higher traffic projections suggested by the consultants.

The need for more berths, may be justified considering the present & future volumes of Dry cargo, considering the present and the future capacity of dry cargo berths : 1 to 10, and also keeping in view the higher traffic projections.

The increase in Dry cargo (ex. Containers) traffic at Kandla port during last 5 years :

| Year | Traffic (in Lakh Tones) | % increase / decrease |
|---------|-------------------------|-----------------------|
| 2013-16 | 348.17 | 16.84 |
| 2014-15 | 298.43 | 10.86 |
| 2013-14 | 269.19 | (-) 9.77 |
| 2012-13 | 298.35 | 14.68 |
| 2011-12 | 260.15 | 8.61 |
| 2010-11 | 239.52 | |

| | | |
|---|--|---|
| 2 | <p>The port has stated that the development of the berth would be as per the land use plan of the Kandla port. The details of the stack yard availability for the berth along with the design vessel and capacity of the berth with basis may be include in the proposal.</p> | <p>The stack yard of approx. Area is 25.30 Ha is available as the backup area of the berth. Design Vessel size is considered as 75000 DWT. Optimal handling Capacity of berth has been considered as 4.50 MMTPA.</p> |
| 3 | <p>It is mentioned in a block estimate prepared for the proposal that the component of the proposal projected include construction of Quay, development of backup area, procurement of wharf crane along with ancillary facilities including water supply and electrification at estimate cost of 273 cores. The basis for inclusion of 5% to the estimate as escalation may be elaborated. Further, contingency charges of only 1.5% has been included which also need clarification.</p> | <p>The Block Estimate has been prepared on the rates of accepted tender of the work of Construction of Oil Jetty No. 7 at Kandla and SOR 2016. The work of Oil Jetty No. 7 was awarded more than a year back. Moreover, the approvals of and tendering system of the subject work may take a few more months. Hence, a provision of 5% Escalation has been considered to meet with the escalation expected till award of work. As per the KPT Works Manual Clause No. 1.5.4 (5) (Guidelines for preparation of preliminary estimates) in addition to the provision for all expenditure which can be foreseen, a provision of contingency shall be kept in the PE for miscellaneous expenditure like surveying, material testing, estimating, designs, drawings and other field requirements etc. accordingly a provision of contingency @ 1.5% of Estimates costing more than Rs. 100 Lakhs has to be included.</p> |
| 4 | <p>The financial Internal rate of return has been estimated at 8.07% only. This appears to be lower side. As the berths in operation are taken as basis for calculation of the return. It may be explored as to whether the port user charges would be adequate for better financial return for the project.</p> | <p>The Port user charges of Kandla are fixed after cross subsidization of around Rs. 138 Crores from Vadinar activity (Vadinar activity is a surplus activity). Hence to mitigate the operating expenses incurred for providing various services at Kandla including 16% RoCE, the user charges being imposed are comparatively on lower side in view of cross subsidization from Vadinar activity, being in surplus. Hence the revenue estimation results into lower income projections.</p> |
| 5 | <p>It is mentioned at para 5 of the SFC memo that the cost estimate is variable to the extent of +/-10%. It is required that the cost estimate should be firm and realistic. Hence, it may be confirmed accordingly.</p> | <p>It is confirmed that the cost estimate is firm. However, since the detailed designs are to be worked out by the consultant to be appointed for the purpose after approval of the project, a leeway has been shown as +/- 10%.</p> |

| | | |
|---|---|---|
| 6 | The design and drawings as indicated at para 6 of the SFC memo would be prepared by Technical Advisor to be appointed. The charges if any as per the drawing of the port components may have to be incorporated accordingly along with the charges in cost, if any. | As stated under para 3 above, a provision of 1.5% has been kept in the Block Estimate as against contingencies, which includes the consultancy charges. |
|---|---|---|

KANDLA PORT TRUST



PRESENTATION TO STANDING FINANCE COMMITTEE FOR THE
PROPOSAL OF

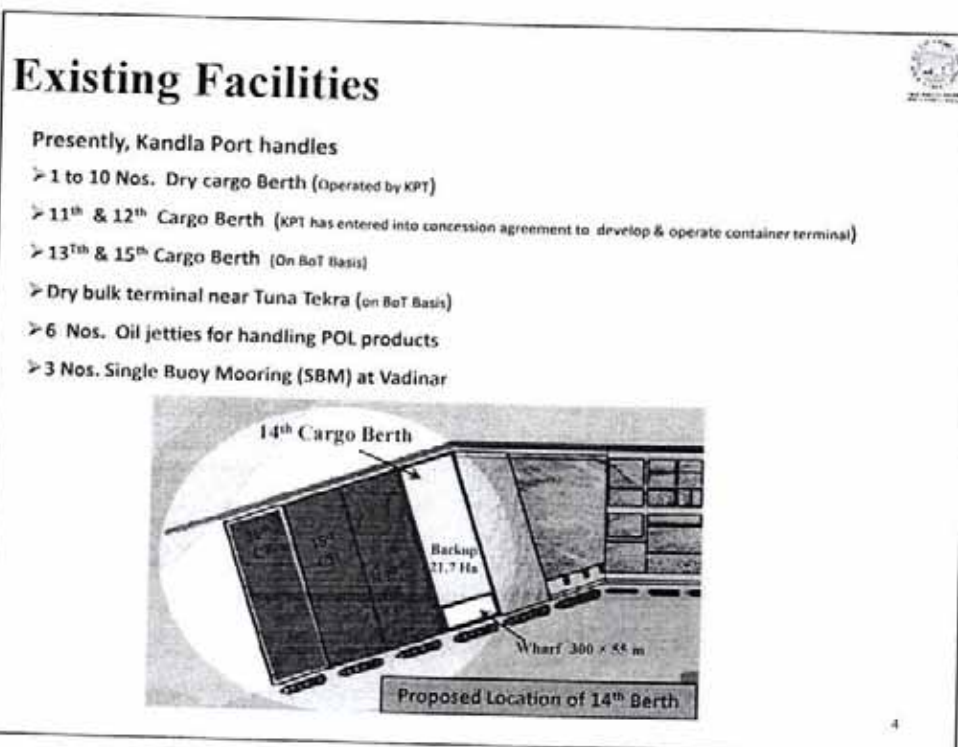
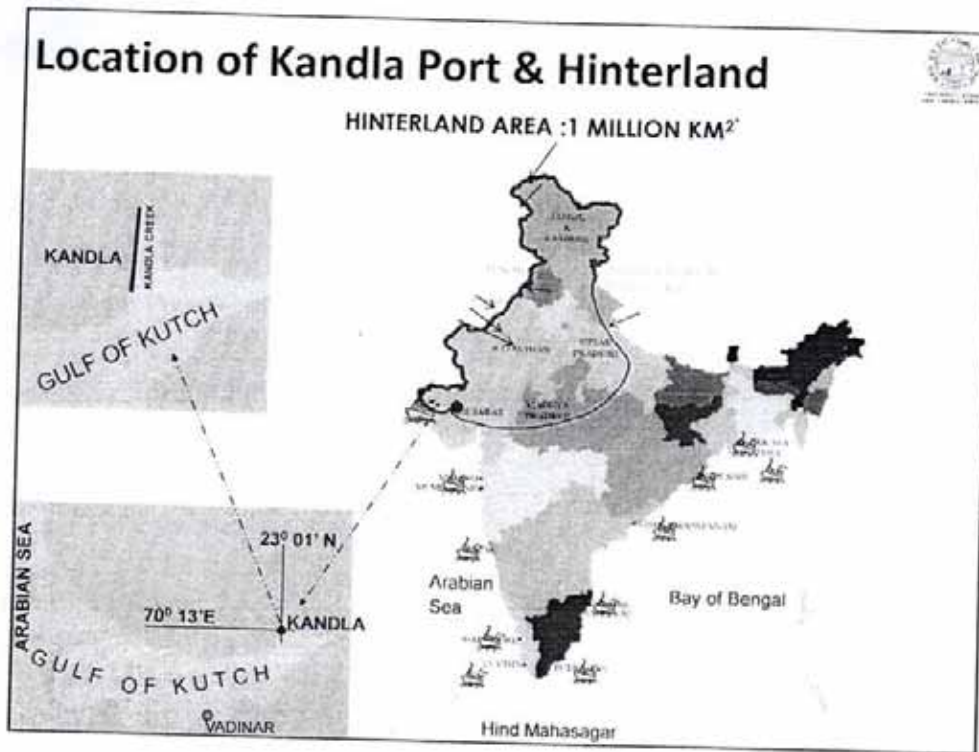
**Construction Of 14th Berth For Multi-purpose Cargo
Through Internal Resource (Other Than Liquid/Container)**

November 18, 2016
New Delhi, India

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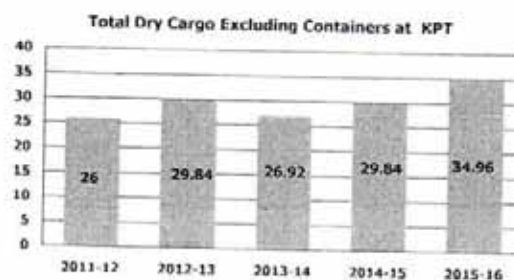
- Location of Kandla Port & Hinterland
- Existing Facilities at Kandla Port
- Need for additional Capacity
- Proposed Berth Development
- 14th Berth-Project Snapshot
- Cost Estimate For The Project And Financial Viability
- Present Status & Project Implementation Schedule



Cargo Handling Capacity of KPT



- The traffic handled by the Kandla Port has shown a consistent increase and growing at a faster pace. The total traffic (both liquid and dry cargo) handled by the Port has increased from 41.52 MMTPA in 2003-04 to 100.05 MMTPA in 2015 -16.
- The present handling capacity of existing dry cargo berths to handle non container dry cargo including Barge Jetties, as assessed is 45 MMTPA .
- The increase in Dry cargo (ex. Container) Traffic at Kandla port during last 5 years has gone from 26 MMT in 2011-12 to 34.96 MMT in 2015 -16, with berth occupancy 85% on almost all available days as against idle berth occupancy of 75%.



5

Need for additional Capacity



- KPT is using Berth No. 11 & 12 to handle dry cargo in absence of containers. Now, both the berths are handed over to the new concessionaire for handling of container, thereby creating a shortage of two berths to handle the existing dry cargo.
- As per traffic projection made under Maritime agenda, 84 MMTPA of Dry cargo is expected to be handled by 2020 & based on CAGR of 10.02%, dry cargo of 121 MMTPA is expected to be handled by 2029 thereby creating a gap in available facilities to handle expected traffic projections
- To cater the expected demand and traffic growth, capacity addition is proposed through developing additional handling facilities/berths.

6

Proposed Berth Development



- Earlier, to develop the 13th to 16th cargo berth on BOT basis, 4 BOT operators each for 13th, 14th, 15th & 16th cargo berth were selected. Berth 13th & 15th is currently operational on BOT basis; but on account of poor performance of 14th & 16th berth, the CAs were terminated.
- On 4th June 2016, a decision was taken in meeting held under chairmanship of Hon'ble Minister (Shipping) with all Major Port Trusts to activate berths No. 14 and 16th and KPT vide its Board meeting held on 12.08.2016 decided to construct the 14th and 16th cargo berths through internal resources.
- Accordingly, SFC memorandum and feasibility report including block estimate of Rs. 253 Cr. for 14th cargo berth has been submitted to ministry for approval.

7

14th Cargo Berth - Project Snapshot



| Name of Project | Development of 14th Cargo Berth at Kandla Port (Other than Liquid / Container) |
|--|--|
| Length of the wharf | 300 meters |
| Width of the wharf | 55 meters |
| Back Up Area in Ha | 21.70 |
| Design Vessel Size | 75000 DWT |
| Optimal Capacity - Multipurpose Cargo (in MMTPA) | 4.50 |
| Design load for wharf | 5 MT/m ² |
| Draught and Depth Alongside the Berth | 13m & -14.1 m below CD |
| Capital Cost | Rs. 253.00 Cr. |
| Source of funds | Internal Resources |
| Project time Schedule | 24 months from the Date of Issue of Work Order |
| Expected Commissioning by End of | FY 2019-20 |
| Financial IRR (As per actual income, O&M Cost) | 8.99% |
| Revised Financial IRR | 15.32% |

8

Cost Estimate For The Project And Financial Viability



➤ The block estimate of the project is Rs. 253 Crores with construction period of 24 months from the date of issue of work.

| Project Phases | Estimate Cost 14 th Berth |
|--|--------------------------------------|
| Phase-I (Berthing Structure, Backup area etc.,) | 162.0 Cr. |
| Phase-II (Wharf Cranes, Water supply and Fire fighting line, Electrification, Road, Railway etc.,) | 91.0 Cr. |
| Total | 253.0 Cr. |

➤ The Block Estimate includes following components :

- Construction of wharf of 300 M x 55 M on Pile foundation.
- Development of Backup area.
- Construction of other Civil Structures like Office Building, Godowns, Custom Fencing wall etc.
- Providing Internal Roads and Railway Network.
- Electrification works including High Mast Lighting tower.
- Handling equipments like Mobile Harbour Cranes of 100 T.

➤ The expenditure will be borne by KPT from its internal resources and the returns (FIRR) has been worked as under :

| 14th CB | As per Actual Income and O&M cost of existing 1 to 12 Berths operated by the KPT | Revised |
|---------|--|---------|
| FIRR | 8.99% | 15.32% |
| EIRR | 10.60% | 17.42% |

INTER MINISTERIAL CONSULTATION



- Observation of DEA and the compliance of KPT is at [hyperlink](#)
- Observation of NITI Aayog and the compliance of KPT is at [hyperlink](#)
- Observation of IFW and the compliance of KPT is at [hyperlink](#)
- Observation of Development Wing and the compliance of KPT is at [hyperlink](#)

Present Status & Project Implementation Schedule



- NIT for the 14th cargo berth has been issued on 29.09.2016 and same has been published in National, State level and local newspaper. The same has been informed to MoS vide Letter no. CN-1/WK/2243/31 dt; 5/10/2016.
- The pre-bid meeting was held on 18.10.2016 and also on request of bidder the bid submission date has been extended till 24.11.2016
- MoEF has already accorded the Env. & CRZ clearances in Sept-2008 with handling capacity of 2 MMTPA for each of the 13th to 16th cargo berth. Subsequently, handling capacity of each berth is revised to 4.5 MMTPA, an amendment in CRZ & Environment clearance from MoEF & CC is under process.
- Expected date of issue of work order: March-2017.
- Construction period: 24 months from date of issue of work order.
- Expected commissioning of berth by the March-2019.

11



THANK YOU

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KANDLA PORT TRUST



PRESENTATION TO STANDING FINANCE COMMITTEE FOR THE
PROPOSAL OF

**Construction Of 16th Berth For Multi-purpose Cargo
Through Internal Resource (Other Than Liquid)**

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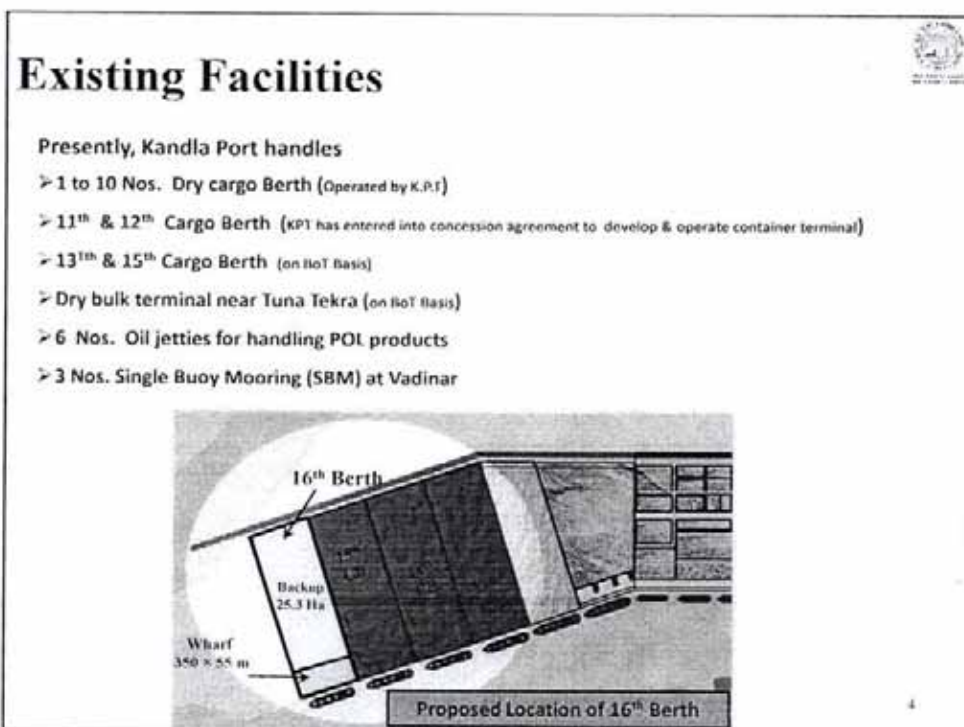
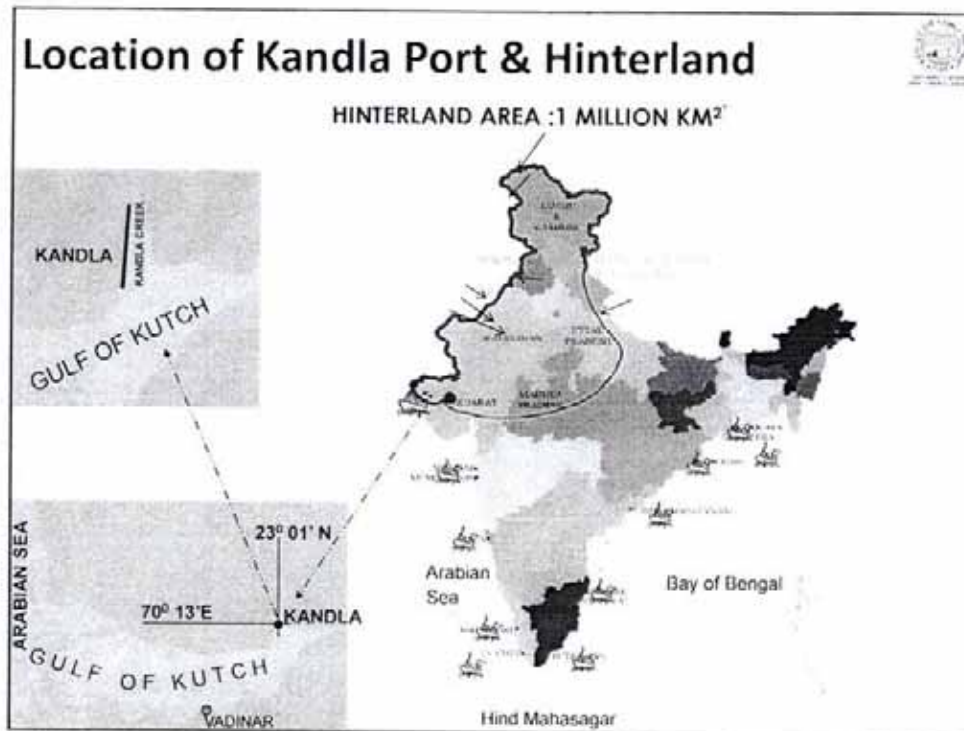
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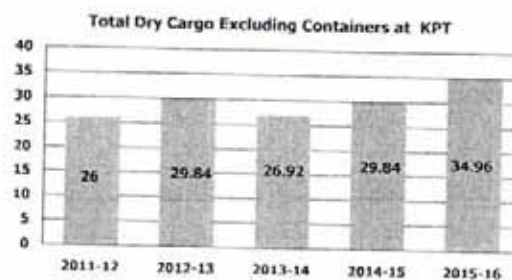
2



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Need for additional Capacity



- KPT is using Berth No. 11 & 12 to handle dry cargo in absence of containers. Now, both the berths are handed over to the new concessionaire for handling of container, thereby creating a shortage of two berths to handle the existing dry cargo.
- As per traffic projection made under Maritime agenda, 84 MMTPA of Dry cargo is expected to be handled by 2020 & based on CAGR of 10.02%, dry cargo of 121 MMTPA is expected to be handled by 2029 thereby creating a gap in available facilities to handle expected traffic projections.
- To cater the expected demand and traffic growth, capacity addition is proposed through developing additional handling facilities/berths.

6

Proposed Berth Development



- Earlier, to develop the 13th to 16th cargo berth on BOT basis, 4 BOT operators each for 13th, 14th, 15th & 16th cargo berth were selected. Berth 13th & 15th is currently operational on BOT basis; but on account of poor performance of 14th & 16th berth, the CAs were terminated.
- On 4th June 2016, a decision was taken in meeting held under chairmanship of Hon'ble Minister (Shipping) with all Major Port Trusts to activate berths No. 14 and 16th and KPT vide its Board meeting held on 12.08.2016 decided to construct the 14th and 16th cargo berths through internal resources.
- Accordingly, SFC memorandum and feasibility report including block estimate of Rs. 278 Cr for 16th cargo berth has been submitted to ministry for approval.

7

16th Cargo Berth - Project Snapshot



| Name of Project | Development of 16 th Cargo Berth at Kandla Port (Other than Container) |
|--|---|
| Length of the wharf | 350 meters |
| Width of the wharf | 55 meters |
| Back Up Area in Ha | 25.30 |
| Design Vessel Size | 75000 DWT |
| Optimal Capacity - Multipurpose Cargo (in MMTPA) | 4.50 |
| Design load for wharf | 5 MT/m ² |
| Draught and Depth Alongside the Berth | 13m & - 14.1 m below CD |
| Capital Cost | Rs. 278.00 Cr. |
| Source of funds | Internal Resources |
| Project time Schedule | 24 months from the Date of Issue of Work Order |
| Expected Commissioning by End of | FY 2019-20 |
| Financial IRR | 8.07% |
| Revised Financial IRR | 14.23% |

8

Cost Estimate For The Project And Financial Viability



- The Block Estimate of the project is Rs. 278 Crores with construction period of 24 months from the date of issue of work.

| Project Phases | Estimate Cost 14 th Berth |
|---|--------------------------------------|
| Phase-I (Berthing Structure, Backup area etc.) | 187.0 Cr. |
| Phase-II (Wharf Cranes, Water supply and Fire fighting line, Electrification, Road, Railway etc.) | 91.0 Cr. |
| Total | 278.0 Cr. |

- The Block Estimate includes following components :
- Construction of wharf of 355 M x 55 M on Pile foundation.
 - Development of Backup area.
 - Construction of other Civil Structures like Office Building, Godowns, Custom Fencing wall etc.
 - Providing Internal Roads and Railway Network.
 - Electrification works including High Mast Lighting tower.
 - Handling equipments like Mobile Harbour Cranes of 100 T.
- The expenditure will be borne by KPT from its internal resources and the returns (FIRR) has been worked as under :

| 14 th CB | As per Actual income and O&M cost of existing 1 to 12 Berths operated by the KPT | Revised |
|---------------------|--|---------|
| FIRR | 8.07% | 14.23% |
| EIRR | 9.55% | 16.17% |

9

INTER MINISTERIAL CONSULTATION



- Observation of DEA and the compliance of KPT is at [hyperlink](#)
- Observation of NITI Aayog and the compliance of KPT is at [hyperlink](#)
- Observation of IFW and the compliance of KPT is at [hyperlink](#)
- Observation of Development Wing and the compliance of KPT is at [hyperlink](#)

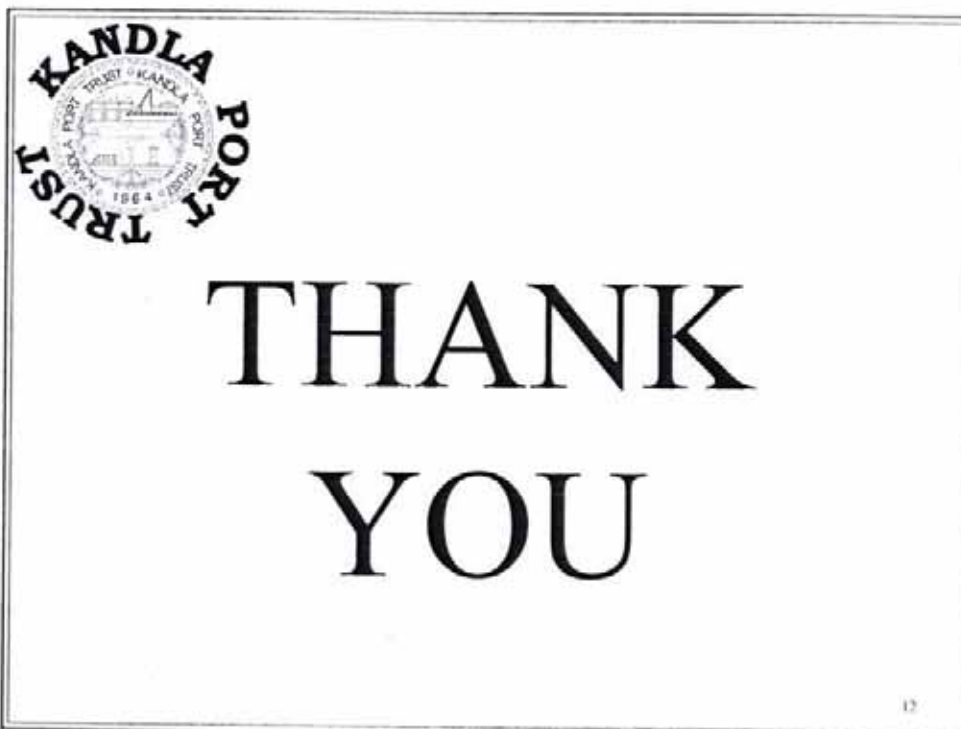
10

Present Status & Project Implementation Schedule



- NIT for the 16th cargo berth has been issued on 29.09.2016 and same has been published in National, State level and local newspaper. The same has been informed to MoS vide Letter no. CN 1/WK/2243/31 dt; 5/10/2016.
- The pre-bid meeting was held on 18.10.2016 and also on request of bidder the bid submission date has been extended till 29.11.2016
- MoEF has already accorded the Env. & CRZ clearances in Sept-2008 with handling capacity of 2 MMTPA for each of the 13th to 16th cargo berth. Subsequently, handling capacity of each berth is revised to 4.5 MMTPA, an amendment in CRZ & Environment clearance from MoEF & CC is submitted for approval.
- Expected date of issue of work order : March-2017
- Construction period: 24 months from date of issue of work order
- Expected commissioning of berth by the March-2019

11



12

KANDLA PORT TRUST



Development of 16th Multipurpose Cargo Berth at Kandla Port from internal resources

FESIBILITY REPORT

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LIST OF ABBREVIATIONS

| | |
|--------------|----------------------------------|
| CAGR | Compounded Annual Growth Rate |
| DSCR | Debt Service Coverage Ratio |
| DWT | Dead Weight Tonnage |
| GRT | Gross Registered Tonnage |
| KPT | Kandla Port Trust |
| MT | Metric Tonne |
| MMTPA | Million Metric Tonnes per Annum |
| NPV | Net Present Value |
| IRR | Internal Rate of Return |
| POL | Petrol Oil Lubricant |
| SEZ | Special Economic Zone |
| TAMP | Tariff Authority for Major Ports |
| MAT | Minimum Alternate Tax |

CHAPTER -1 PROJECT SNAPSHOT AND EXECUTIVE SUMMARY

PROJECT SNAPSHOT

| | |
|---|---|
| Name of Project | Development of 16th Multipurpose Cargo Berth at Kandla Port |
| Length of the wharf | 350 meters |
| Width of the wharf | 55 meters |
| Back Up Area in Ha | 25.30 |
| Design Vessel Size | 75000 DWT |
| Optimal Capacity - Multipurpose Cargo (in MMTPA) | 4.50 |
| Design load for wharf | 5 MT/m ² |
| Draught and Depth Alongside the Berth | 13m & -14.1 m below CD |
| Capital Cost | ₹278.00Cr. |
| Source of funds | Internal Resources |
| Project time Schedule | 24 months from the Date of Issue of Work Order |
| Expected Commissioning by End of - | FY 2019-20 |
| Viability Indicators | |
| Financial IRR | 8.07% |
| Economic IRR | 9.55% |

EXECUTIVE SUMMARY

1.1 Need for the Facility

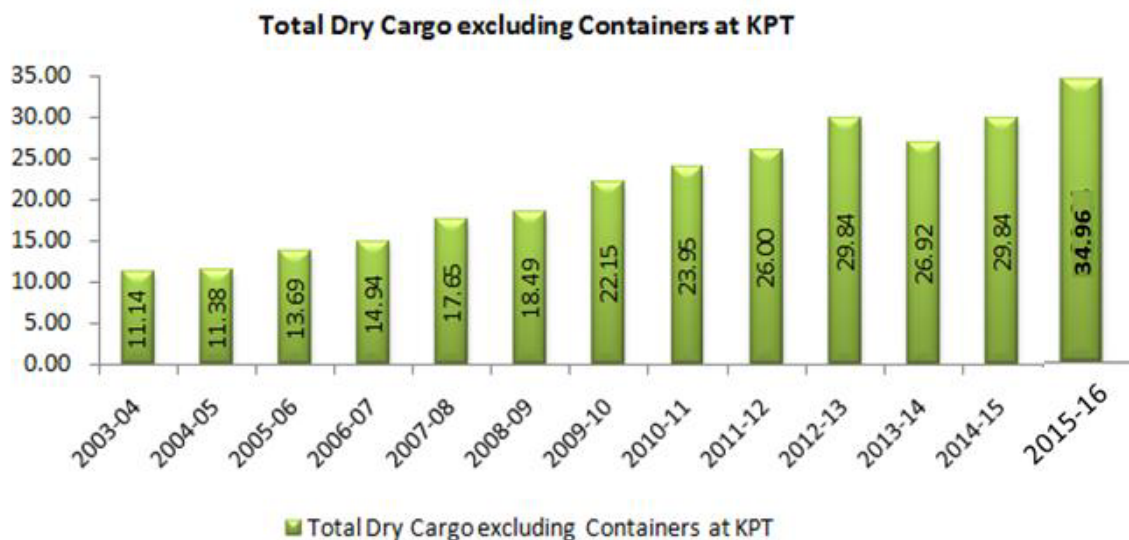
Kandla Port is one of the busiest Ports of India. Kandla Port has been achieving first position among all the Major Ports of India in the terms of cargo handling for the most of the years in last decade. Thus, Kandla Port Trust has been contributing the most for the development of port capacity and handling seaborne trade of the country.

Especially northern India is heavily dependent on Kandla Port Trust for its trade requirements due to its peculiar land locked location compared to many other regions of India which are comparatively quite nearer to the sea shore. Some states of central India like Madhya Pradesh are also dependent for its specific trade requirement on Kandla Port Trust.

Hence, considering the vast hinterland that is dependent on KPT for seaborne trade and currently prevailing traffic congestion at existing facilities of KPT, capacity additions are of utmost importance at KPT for serving the economy of the influence region and in turn, the economy of the whole country in the best possible manner.

Presently, Kandla Port handles dry cargo at its twelve general cargo berths viz. 1 to 10, 13 & 15 (Ten being operated by K.P.T & two by concessionaires), six oil jetties for handling POL products and other liquid cargo traffic at Kandla and thee Single Buoy Mooring (SBM) at Vadinar for handling crude oil. KPT has entered into concession agreement with concessioner to develop and operate container terminal at existing 11th & 12th cargo berth.

The traffic handled by the Port has shown a consistent increase and growing at a faster pace. The total traffic (both liquid and dry cargo) handled by the Port has gone from 41.52 million tones in 2003-04 to 100.05 million tones in 2015 -16. It shows the CAGR of 8.10% over the said ten years' period. During 2015-16, Kandla Port handled 100.05 MMT of cargo, which is 16.50% of total cargo traffic handled by all twelve major ports. Analysis of Dry Cargo (i.e. excluding liquid and containers) handling has been carried out as presented below :



Dry cargo (excluding liquids and containers) have been the significant portion of the total cargo handled at KPT. It has been hovering around 25-32% during the last decade. Dry cargo traffic has been growing steadily at CAGR around 8% during the last 10 year's analysis.

Dry Cargo Traffic (excluding containers) has been growing at 8.12% over the past 10 years which, of course includes fairly prolonged period of recession and low growth. However, this may be expected to improve along with improvement of the facilities at KPT, better overall economic environment of the country.

The Country's GDP is growing at present at an average growth rate of 5-6% and this growth rate is going to be accelerated to 7-8% in coming years. Traffic of Dry cargo has been projected in Maritime Agenda 2020 issued by Ministry of Shipping for future period based on the potential of traffic of dry cargos originating from Hinterland, industries coming up in the Kutch region, development of port infrastructure and country's Economy is as shown below:

Dry Cargo Traffic Projections at Kandla Port Trust as per Maritime Agenda – 2020

| Year | Traffic Projections MMT for Dry Cargo excluding containers |
|---------|--|
| 2012-13 | 31.65 |
| 2013-14 | 37.82 |
| 2014-15 | 43.26 |
| 2015-16 | 48.38 |
| 2016-17 | 55.52 |
| 2017-18 | 60.96 |
| 2018-19 | 65.25 |
| 2019-20 | 83.80 |

The present handling capacity of existing dry cargo berths to handle non container dry cargo including Barge Jetties, as assessed is 45 Million Tonnes. As against this, Dry cargo berths have handled a Dry cargo to the tune of 35 MMT (excluding containerized cargo), with berth occupancy 85% on almost all available days as against idle berth occupancy of 75%.

Further as per traffic projection as per Maritime agenda it is expected that about 84 MMTPA of Dry cargo will be handled by 2020. Further, based on CARG of 8.12% by 2020 (10 years after commission of proposed 16th cargo berth). The projected dry cargo is 96.35 MMTPA.

Thus, in view of the expected recovery in the economic growth of the country, steadily growing dry cargo traffic at Kandla and over-utilized dry cargo handling infrastructure at Kandla Port, it is felt that the additional facilities are required.

A gap of traffic projections and allocation to available facilities has been found as the indication of requirement of the capacity addition through proposed project.

1.2 Project Viability

The financial viability of the Project has been evaluated on the rates for Port dues, berth hire, wharfage, storage and cranes handling rail bound cargo arrived at. The proposed Project can be considered as financially viable based on the following viability indicators:

| S.No. | Indicator | Value |
|-------|---------------|-------|
| 1. | Financial IRR | 8.07% |
| 2. | Economic IRR | 9.55% |

CHAPTER – 2 INTRODUCTION

2.1 Inception of Kandla Port

The Port of Kandla, built in 1931, owes its origin to the ruler of the then princely state of Kutch, Maharao Khengarji III. He wanted an all weather closed port for his kingdom and built an RCC jetty where ships of about 8.8 meters draft could berth round the year. This jetty which is located at Old Kandla became the nucleus of what in later years was to emerge as the Kandla Port.

After Independence, due to the loss of Karachi Port, the onus of northern trade was required to be shifted to alternative port on west coast & location of present Kandla Port was selected by an expert committee under the inspirational and able guidance of the great visionary & Iron Man of India, Sardar Patel. The expert committee known as 'The West Coast Major Port Development Committee' was constituted on 17th Feb-1948 to explore the possibilities of establishing a deep-sea port to cater to the vast hinterland. The committee submitted its report on 30th April, 1948 recommending that the Major Port should be sited at Kandla.

On January 20, 1952, Pandit Jawaharlal Nehru, the then Prime Minister of India, laid the foundation stone for the new Port on the Western Coast of India. It was declared a Major Port on April 8, 1955 by Late Shri Lal Bahadur Shastri, the then Minister of Transport and the Port Trust was formed in 1964 under the Major Port Trust Act 1963 enacted by Parliament. Since then the Major Port of Kandla has come a long way in becoming the 'Port of the New Millennium'. The development of Port took place in two distinct complexes viz. (I) Oil jetty complex at Old Kandla and (II) Dry Cargo Berth complex at New Kandla.

2.2 Port Profile

Kandla Port is situated at Latitude 23° 01' N and Longitude 70° 13' E on the shores of the Kandla Creek. It is in the district of Kutch and is located on the west bank of Kandla creek which runs into the Gulf of Kutch at a distance of 90 nautical miles from the Arabian Sea. The width of the channel varies from 200 meters to 1,000 meters. The contour depth along the shipping channel is around 10 meters. The total length of the Kandla Port approach Channel is around 23 kms. Navigation is permitted during the day and night according to the draft of the ship. Pilots board the ships at Outer tuna buoy (OTB) at least two hours before high tide. Dredging is undertaken throughout the year. Ships with 13 meters draft can also be brought in during the tidal window.

The port is operational throughout the year as it is an all weather port. There are no adverse wave effects as it is a sheltered port situated in a creek. There is scanty rainfall in this region which is one of the main reasons that the port can handle food grains. The port is well connected with the hinterland by broad gauge railway system and National Highway No. 8-A. The port can handle dry bulk, break bulk, liquid bulk and container cargo. Kandla is the closest major port to the Middle East and Europe. Kandla is also en-route port for ships calling at Karachi, Pakistan's only major port handling its seaborne cargo.

2.3 Port Highlights

- Strategic location closest to the northern hinterland
- Cost effective port
- Vast amount of land available for future expansion
- All weather port operational round the year
- Large hinterland of over one million square kilometers
- Dry port suitable for handling food grains
- A Special Economic Zone (KASEZ) in the vicinity to attract trade
- Large storage facilities for liquid cargo – POL products, Edible Oil and Chemicals

2.4 Oceanographic, Meteorological and Geotechnical details

Tidal Conditions

Tides at Kandla are semi-diurnal in character. The tidal heights with respect to port Chart Datum, with local Mean Sea level as + 3.884 is presented in the table below:

| | |
|------------------------|-----------|
| Highest High Water | + 7.59 m |
| Mean High Water Spring | + 6.66 m |
| Mean High Water | + 6.185 m |
| Mean High Water Neaps | + 5.71 m |
| Mean Low Water Neaps | + 1.80 m |
| Mean Low Water | + 1.3 m |
| Mean Low Water Spring | +0.80 m |
| Lowest Low Water | + 0.4 m |
| Average Spring Range | 5.86 m |
| Average Neap Range | 3.91 m |
| Mean Range | 4.885 m |

Waves

Kandla Creek is protected from wave disturbances by a number of shoals at its outfall into the gulf. This provides the setting for a basin with absolute tranquility. The creek provides calm waters round the year for easy movement of shipping. Thus, Kandla has become an all-weather Port of repute. The high amplitude tides coupled with a large storage area has resulted in high flushing velocities inside. This has helped in cleansing of the navigational channels, thus providing minimum siltation. Outside in the gulf, the complex flow phenomenon has given rise to a number of shoals, which are dynamic in nature. The Port of Kandla is approached through the channel starting from the Outer Tuna Buoy. The shallow depths at the turning point of the channel are over passed during high tides by vessels approaching the harbour. Ship movements are normally confined to the high tides. Siltation in the channel is confined to a reach of hardly 3 km only. The Port region is free from any significant wave disturbances.

Silt and Salinity

Silt charge and salinity observations were carried out during dry and monsoon months in April and September 1983 at locations east and west of Kandla Creek and at two stations in

the Gulf of Kutch. The waters of the Creek are heavily silt charged, the range being 1 to 3 ppt. The Creek waters have a salinity ranging from 23 to 25 ppt.

Temperature and Humidity

The climate of Kandla Port is generally tropical and dry. The air temperature varies from less than 10⁰ C in winter to about 44⁰ C in summer. The mean, maximum and minimum temperature observed in the different months at Kandla is presented in the table below:

| Months | Mean of Max. Temp. | Mean of Min. Temp. |
|-----------|--------------------|--------------------|
| January | 25.2 | 13.0 |
| February | 27.5 | 15.5 |
| March | 32.0 | 20.2 |
| April | 34.6 | 23.5 |
| May | 35.9 | 25.7 |
| June | 35.0 | 27.7 |
| July | 32.4 | 27.2 |
| August | 30.7 | 25.4 |
| September | 33.3 | 24.5 |
| October | 34.2 | 23.1 |
| November | 32.4 | 20.2 |
| December | 25.6 | 13.5 |

Kandla region is fairly dry and only July, August and September are humid months. The range of maximum relative humidity varies from 0% to 100%, whereas minimum values vary between 0 and 30%, except during July, August and September, when minimum values vary between 25% and 50%.

Rainfall

Rainfall in Kandla is very low. Between January and April, there is normally no rainfall. Rainfall generally remains confined between June end and mid September. During the remaining months, the rainfall is scanty. The annual average rainfall is around 200mm only.

Wind Conditions

From long term observation of wind velocities and directions, following inferences can be made:

| | |
|----------------------|---|
| January | The predominant direction is between NNE and NNW with speed range normally between 12 and 19 Km/hr. which may exceed for about 10 % of the time. |
| February | The direction changes from NNE and SSW, but predominantly between WSW and SSW. The wind speed from SSW varies between 12 and 39 km/ hr. for 15 % of the time and for rest of the time it generally varies between 12 and 19 Km/ hr. |
| March | The direction lies between NNW and SSW, but predominantly between WSW and SSW. The wind speed from SSW varies between 12 and 39 km/ hr. for 15 % of the time and for rest of the time it generally varies between 12 and 19 Km/ hr. |
| April to June | The direction for wind is between WSW and SSW. The wind speed reaches a maximum of 39 km/ hr. except in July, when the speed may exceed the range. |
| October | The direction of wind changes from SSW to NNW. Wind speed ranges between 12 |

| | |
|------------------------|--|
| | and 19 km/ hr. but the limit may exceed for 10 % of the time. |
| Nov. & Dec. | The predominant direction is between NNE and NNW and the speed is between 12 and 19 km/hr. |

Storms and Cyclones

Kandla port is not generally affected by cyclonic storms. During June 1998, a severe cyclonic storm, which passed over Kandla Port with a wind speed of 150 km/hr., resulting in high tidal waves of 10.5 m with strong current, caused extensive damages to the Port installations, crafts and human lives.

Sub- Soil Data

As per the Feasibility Report prepared by KPT in April 2009 for Development of 13-16th Cargo Berths, the average ground level at situ of the proposed berth is +5.0 M above chart datum. The sub-soil profile consists of silty clay upto -15.0 M having an average 'C' value of 23kn/M2, a gravely and medium sand with clay fines upto -20 M with 'N' values being 15-30. Brown clay is met with below -20 M upto -25 M with 'C' values of about 100 kn/M2 and wet density of 200 kn/M3. The layer below -25 M is dense to very dense Silty sands.

2.5 Connectivity

Airway

The national airlines operate daily flights through the district headquarters at Bhuj as well as Gandhidham which lies 67 Km. & 20 Km. respectively from Kandla Port.

Railway

Broad gauge(BG) tracks directly connect the Port at New Kandla with the principal cities of Bombay, Ahmadabad, Surat, Baroda, etc., and also Delhi, Punjab and Haryana through the route Ahmadabad-Ratlam- Kota - Mathura to Delhi. The second route is via Palanpur - Ajmer to Delhi.

Apart from this, the existing meter gauge line from Bhildi to Samdari has been converted to BG, which provides direct link to Jodhpur in Rajasthan & Bhatinda in Punjab and reduces the reach to Hinterland by 118 Km.

Road

Kandla is connected to the National Highway grid system through NH 8A coming from Mumbai via Ahmedabad and Morbi and terminates at the Port. All main gates of cargo jetty complex as well as oil jetty complex are directly connected to N. H. 8 A by four lane wide roads. The city of Gandhidham where the Port Administrative Office and the main staff colony are located, also lies on NH 8A about 13 Km. from the Port. The port enjoys fully developed road network, both in and around the Port area to facilitate faster movement of cargo.

3.1 Port Infrastructure

The Port handles cargo at two locations, viz. Kandla and Vadinar (near Jamnagar). Presently, Vadinar has three Single Buoy Moorings (SBMs), two installed by the Indian Oil Corporation (IOC) & one installed by Vadinar Oil Terminal Ltd. (VOTL) for handling of crude oil for its refineries. Apart from 3

SPM, there are two product jetties for handling of finished POL products. These SBMs can accommodate vessels up to 3 Lakhs DWT size and have a capacity to handle around 42.45 Million tons of crude traffic per annum. Kandla has, at present, 12 dry cargo berths along with 2 container handling berths and six oil jetties. The existing fourteen general cargo berths have a continuous quay length measuring 3132 m. The total Custom Bonded Port Area inside the custom fencing is 496 hectares. Also, Kandla port has 240.00 metre long barge handling jetty at Tuna. At Tekra, near Tuna, Dry bulk terminal has been commissioned in 2015 on BoT Basis. The permissible draught and sizes of vessels that can be docked along the 14 berths at Kandla Port are given below:

| Berth No. | Dead Weight Tonnage (DWT) | Draught (in metres) |
|---------------------|---------------------------|---------------------|
| I | 45000 | 9.8 |
| II | 45000 | 9.8 |
| III | 45000 | 9.8 |
| IV | 45000 | 9.8 |
| V | 35000 | 9.1 |
| VI | 35000 | 9.1 |
| VII | 55000 | 12 |
| VIII | 55000 | 12 |
| IX | 55000 | 12 |
| X | 55000 | 12 |
| XI | 65000 | 13 |
| XII | 65000 | 13 |
| XIII (Berth No. 13) | 75000 | 13 |
| XV (Berth No. 15) | 75000 | 13 |

3.2 Container Cargo

Presently, there are two container berths i.e. 11th and 12th Cargo berth to handle container cargo like manufactured items, wood, tiles, foodstuffs, textile, apparel, glass and building materials, etc. Maximum DWT of the vessels and the permissible draft at these jetties is shown in the table below:

| Container Cargo Berth | DWT | Draught (M) |
|-----------------------|-------|-------------|
| XI | 65000 | 13 |
| XII | 75000 | 13 |

3.3 Mooring Facilities

Kandla Port Trust has many offshore mooring facilities also for carrying out mid stream cargo handling by carrying out lighterage of cargo from mother vessel to daughter vessels i.e. Barges. The details of the moorings available together with their occupancy are given below:-

| Moorings | Maximum Length overall (in m) | Draught (in m) |
|--------------|-------------------------------|----------------|
| I & II | 167.5 | 7.9 |
| III | 183.93 | 8.2 |
| DDM | 255.55 | 12 |
| Salt Mooring | 160.00 | 8.5 |

3.4 Storage Capacity

Liquid Storage Capacity

The tank farms at Kandla for liquid bulk cargo (chemicals, edible oils, POL products, acids, etc.) storage have a total combined capacity of nearly 23.75Lakh kilo-litres. The tank farms are connected to the oil jetties through a number of pipelines facilitating easy and faster handling of liquid cargo ships. All tank farms are situated behind the port jetties.

| Sr. No. | Nature of Storage | No. of Tanks / Area | Capacity |
|---------|-------------------|----------------------------------|----------------|
| 1 | Oil & Liquid | PSU - 101 Nos. | 11.22 Lakh KLs |
| | | Private Installation 555 Nos. | 12.53 Lakh KLs |

Dry Storage Capacity (Covered & Open)

The Port has developed storage capacity for dry cargo inside the custom bounded area for storage of import and export cargo. RCC ramps have been constructed for all godowns, so that cargo can be loaded/unloaded directly from the godowns which reduce the loading/unloading time. The open storage and godown capacity is shown in the following table:

| | Nos. | Area(Sq. mtrs.) | Capacity(Lakh MT) |
|--------------|------|------------------------------|-------------------|
| | | Port Owned | |
| Godowns | 38 | 2.40 lakhs | 7.3 |
| Open storage | | 30.82 lakhs | 57.24 |
| | | Private and CWC owned | |
| Godowns | 38 | 74000 | 4.5 |

3.5 Other infrastructural facilities

Other infrastructural facilities at Kandla Port Trust include:

- Uninterrupted power supply from the national grid supplemented by diesel power, generator of 2000 KVA capacity.
- Barge handling facilities at Kandla.
- Storage facility for LPG to the tune of 30,000 m³.
- Two jetties for berthing Port Craft.
- One berthing jetty for Port Tugs.
- A floating steel dry dock for port craft. The floating dry dock can accommodate vessels having displacement upto 2,700 DWT and a maximum length of 95 meters, beam of 15 meters and draft of 4.5 meters. The floating dry dock is equipped with a 5 ton capacity of Leibherr crane.
- State of art Container Freight Station (CFS).

- 26 Nos of Flotilas including 6 Nos. of shipping tugs.
- 5 Nos. of shipping tugs on contract with Pvt. Parties.
- Online computerization of entire port operation and established connectivity with various business partners viz banks, custom, custom house agent, etc.
- There are twelve weighbridges at the port (including three private weighbridges) which are summarized as below:-
 - Two weighbridge of 60 MT capacity
 - Two weighbridges of 80 MT capacity
 - Three weighbridges of 100 MT capacity owned by Private Parties.
 - Five weighbridges of 100 MT capacity by the Port are on anvil.

Cargo handling Equipment

The port is equipped with a range of cargo handling equipments to handle different types of cargoes passing through the port. There are twelve numbers of high capacity Electrical Level Luffing cranes and two Harbour Mobile cranes working on the present cargo berths. The mobile cargo handling equipment includes cranes, forklift trucks, trailers etc. Details of the Cranes presently, held by the port are given as below: There are fourteen cranes:

- 2 of 12 Tons.
- 4 of 16 Tons.
- 6 of 25 Tons.
- 2 Nos. of Harbour Mobile Cranes – 63 ton capacity

The rated capacity of 16 tons capacity crane is 400 MT/hour and the rated capacity of 25 tons cap. Crane is 600 MT/hour. Stevedores have also placed four nos. of 120 ton Harbour Mobile Cranes on revenue sharing basis.

The Port has six shipping tugs, one harbour tug and 19 other flotillas. Ships are berthed / sailed round the clock. The Pilot embarks / disembarks inward and outward vessels at fair-weather Buoy located about 23 Kms from Kandla.

3.6 Water Supply

The Gujarat Water Supply and Sewerage Board is responsible for developing and managing various sources of water in the region. The important source of water is the 14.5 Million m³ capacity reservoir of Tapar Dam, besides a number of deep tube wells. Water is distributed to Kandla area from high service reservoir near Bhachau through 18" dia. CI mains, after chlorination. The capacities of the elevated water towers and underground reservoirs at Kandla are 1500 kl. and 14000 kl., respectively. The average daily consumption of water at Kandla area is estimated at around 2000 kl. The position is improved to a great extent by tapping the source of water from Sardar Sarovour Narmada Nigam Limited.

3.7 Electricity / Power Supply

The port receives Bulk power supply from PGVCL through its 66 kVA sub stations and has 11 KV substation giving power supply to the various other cranes and installations. Besides, the port has two diesel generating sets to meet with emergency needs. Kandla Port Trust is a distribution Licensee for power and distributes power to the various users of Kandla.

Uninterrupted good quality estimated power requirement of 900MW is expected to be supplied in the SEZ area by the Gujarat Government. However, master plan caters for setting up a dedicated power back up from an independent power producer (IPP) at a later stage, if required.

3.8 Berthing Policy Highlights

Kandla Port practices trade friendly, output oriented and progressive berthing policy. The berthing policy categorizes vessels into Export group, Import Group, Container Group.

The highlights of the policy are as follows:

Salient Features

For Dry Cargo Berths (Berth 1 to 10)

| | |
|--|----------|
| (i) Priority groups (24 hrs, 10,000 and 6000/ 4500 MTs) | 3 berths |
| (ii) Finished Fertilizers or any other Priority accorded by Government except coastal cargo vessels | 2 berths |
| (iii) Coastal cargo Vessels | 1 berth |
| (iv) Vessels carrying import cargo | 2 berths |
| (v) Vessels to load export cargo | 2 berths |

The four Oil Jetties i.e. Oil Jetty No. 1 to 4 shall be allotted on first come first serve basis.

3.9 Development at Kandla Port

The future infrastructural developments include capacity augmentation as well as construction of new facilities in the port vicinity.

The Port has already signed concession agreement with Kandla Oil Terminal Private Limited for "Development of Oil Jetty to Handle Liquid and Ship Bunkering Terminal at Old Kandla on BOT Basis". For construction of oil jetty NO 7. Through Internal resources, work order has been Issued. The Port has also planned to set up a Single Point Mooring system (SPM) and allied facilities in Gulf of Kutch for which KPT has concession Agreement to develop one SPM and product jetty on captive basis. Port has also planned to construct further more tow oil jetty viz OJ 8 &9 through Internal resources.

In order to meet the global demands of trade and to prove concessional and cost effective infrastructure to the entrepreneurs, the port has earmarked 3600 hectares for development of SEZ at Kandla and 1400 hectares at off Tekra near Tuna.

CHAPTER – 4 PAST PERFORMANCE AND TRAFFIC PROJECTIONS

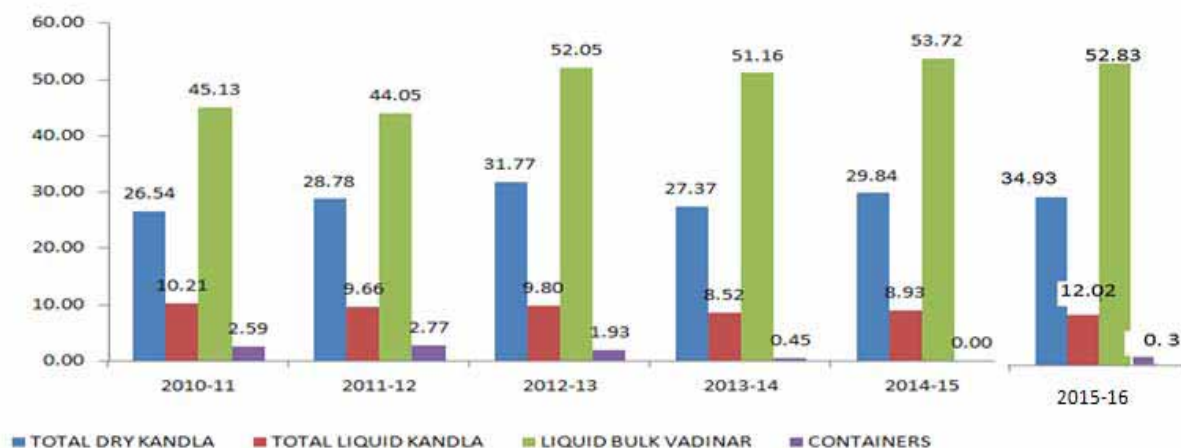
4.1 Vessels handled by the Port

In all 2165 Vessels serviced at Kandla Port during the year 2014-15. A total of 92.48 million metric ton cargo was handled during the year which comprised of dry cargo, liquid cargo at Kandla and at Vadinar. The number of vessels handled at each of the berths at Kandla and at Vadinar during the last 5 years is as follows

| Berth No. | Number of vessels handled | | | | | | |
|----------------------|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
| CARGO JETTIES | | | | | | | |
| I | 64 | 55 | 71 | 61 | 63 | 50 | 47 |
| II | 102 | 96 | 124 | 106 | 97 | 79 | 100 |
| III | 122 | 124 | 123 | 122 | 103 | 91 | 108 |
| IV | 115 | 118 | 101 | 108 | 84 | 90 | 87 |
| V | 107 | 116 | 126 | 130 | 78 | 51 | 40 |
| VI | 58 | 56 | 53 | 0 | 0 | 0 | 0 |
| VII | 114 | 108 | 82 | 113 | 113 | 88 | 120 |
| VIII | 106 | 119 | 118 | 125 | 125 | 79 | 80 |
| IX | 153 | 136 | 135 | 171 | 171 | 72 | 86 |
| X | 144 | 154 | 154 | 143 | 106 | 103 | 98 |
| XI | 121 | 118 | 130 | 160 | 48 | 56 | 106 |
| XII | 110 | 106 | 115 | 84 | 61 | 92 | 74 |
| XIII | | | | 03 | 03 | 34 | 30 |
| XV | | | | 0 | 01 | 9 | 06 |
| Total | 1316 | 1306 | 1332 | 1326 | 958 | 894 | 982 |
| OIL JETTIES | | | | | | | |
| I | 130 | 125 | 116 | 97 | 100 | 27 | 91 |
| II | 221 | 218 | 222 | 198 | 207 | 187 | 215 |
| III | 196 | 175 | 219 | 193 | 206 | 204 | 222 |
| IV | 181 | 202 | 187 | 157 | 149 | 150 | 186 |
| V (IFFCO) | 182 | 148 | 147 | 159 | 90 | 149 | 185 |
| VI (IOC) | 55 | 37 | 33 | 34 | 36 | 38 | 60 |
| Total | 965 | 905 | 924 | 838 | 788 | 755 | 959 |
| Total Kandla | 2281 | 2211 | 2256 | 2164 | 1746 | 1649 | 1941 |
| Vadinar | 448 | 441 | 394 | 530 | 511 | 516 | 483 |
| Overall Total | 2729 | 2652 | 2650 | 2694 | 2257 | 2165 | 2424 |

4.2 Commodity composition

Broad commodity composition of the traffic handled at Kandla and Vadinar for five years from 2010-11 to 2014-15 is given below :



As could be seen from the above graph, the maximum increase in traffic over the last five years has been witnessed for total Dry Cargo which is followed by Liquid traffic at Kandla and Vadinar.

4.3 Size of vessels for each type of cargo

Following table shows the number of vessels handled at Kandla Port for each type of cargo for the last five years and the average DWT per vessel for each type of cargo for the year 2014-2015

| Type of vessel | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2015-16 Average DWT |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------|
| Break Bulk Cargo | 437 | 431 | 456 | 452 | 305 | 371 | 454 | 25139.43 |
| Dry Bulk Cargo | 663 | 684 | 715 | 715 | 629 | 568 | 591 | 58455.72 |
| Tankers at Kandla | 971 | 912 | 923 | 841 | 798 | 761 | 973 | 28815.46 |
| Tankers at Vadinar | 450 | 439 | 395 | 531 | 513 | 516 | 483 | 130564.60 |
| Container | 255 | 226 | 225 | 195 | 59 | 0 | 12 | 19405.08 |
| All vessels | 2776 | 2692 | 2714 | 2734 | 2304 | 2216 | 2513 | 262380.30 |

Note : The no. of vessels mentioned above includes the vessels handled fully @ stream and at other service points.

As it could be seen from the above table, largest vessels are used for transportation of liquid cargo followed by vessels used for transporting dry bulk, break bulk and containers in that order.

4.4 Berth Occupancy at Kandla Port

Following table shows the berth occupancy of berths at Kandla Port for the last five years :

| Berth No. | Berth Occupancy in Percentage | | | | | |
|----------------------|-------------------------------|---------|---------|---------|---------|---------|
| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
| CARGO JETTIES | | | | | | |
| I | 92 | 92 | 93 | 93 | 83 | 92 |
| II | 93 | 92 | 94 | 90 | 79 | 88 |
| III | 92 | 91 | 95 | 91 | 87 | 89 |

| | | | | | | |
|-------------------|----|----|----|----|----|-----|
| IV | 92 | 88 | 93 | 92 | 83 | 84 |
| V | 89 | 89 | 94 | 93 | 80 | 90 |
| VI | 94 | 93 | 0 | 0 | 0 | 100 |
| VII | 95 | 92 | 93 | 94 | 93 | 95 |
| VIII | 94 | 94 | 81 | 76 | 65 | 70 |
| IX | 91 | 91 | 89 | 85 | 54 | 58 |
| X | 92 | 92 | 91 | 87 | 94 | 86 |
| XI | 40 | 52 | 48 | 50 | 41 | 53 |
| XII | 37 | 54 | 85 | 45 | 89 | 96 |
| XIII | - | - | 13 | 44 | 44 | 34 |
| XV | - | - | - | 3 | 17 | 3 |
| OIL JETTY | | | | | | |
| OJ-I | 81 | 78 | 83 | 87 | 86 | 87 |
| OJ-II | 81 | 79 | 84 | 90 | 97 | 95 |
| OJ-III | 88 | 81 | 81 | 92 | 97 | 97 |
| OJ-IV | 80 | 80 | 83 | 97 | 97 | 97 |
| OJ-V | 63 | 66 | 65 | 56 | 82 | 86 |
| OJ- VI | 20 | 20 | 20 | 30 | 38 | 47 |
| AT VADINAR | | | | | | |
| ESSAR C.JETTY-I | 57 | 48 | 73 | 90 | 93 | 84 |
| ESSAR C.JETTY-II | 44 | 50 | 74 | 88 | 86 | 85 |
| SBM – I | 29 | 35 | 28 | 37 | 46 | 51 |
| SBM – II | 29 | 27 | 31 | 41 | 50 | 52 |
| SBM – III | 36 | 32 | 48 | 68 | 76 | 67 |

4.5 Traffic Projections for Proposed Project

The Country's GDP is growing at present at an average growth rate of 5-6% and this growth rate is going to be accelerated to 7-8% in coming years. Traffic of Dry cargo has been projected in Maritime Agenda 2020 issued by Ministry of Shipping for future period based on the potential of traffic of dry cargos originating from Hinterland, industries coming up in the Kutch region, development of port infrastructure and country's Economy is as shown below:

Dry Cargo Traffic Projections at Kandla Port Trust as per Maritime Agenda – 2020

| Year | Traffic Projections MMT for Dry Cargo excluding containers |
|---------|--|
| 2012-13 | 31.65 |
| 2013-14 | 37.82 |
| 2014-15 | 43.26 |
| 2015-16 | 48.38 |
| 2016-17 | 55.52 |
| 2017-18 | 60.96 |
| 2018-19 | 65.25 |
| 2019-20 | 83.80 |

The present handling capacity of existing dry cargo berths to handle non container dry cargo including Barge Jetties, as assessed is 45 Million Tonnes. As against this, Dry cargo berths have handled a Dry cargo to the tune of 35 MMT (excluding containerized cargo), with berth occupancy 85% on almost all available days as against idle berth occupancy of 75%.

Further as per traffic projection as per Maritime agenda it is expected that about 84 MMTPA of Dry cargo will be handled by 2020. Further, based on CARG of 8.12% by 2020 (10 years after commission of proposed 16th cargo berth). The projected dry cargo is 96.35 MMTPA.

Thus, in view of the expected recovery in the economic growth of the country, steadily growing dry cargo traffic at Kandla and over-utilized dry cargo handling infrastructure at Kandla Port, it is felt that the additional facilities are required.

A gap of traffic projections and allocation to available facilities has been found as the indication of requirement of the capacity addition through proposed project.

4.5.1 Existing Dry Cargo Handling Facilities

Presently, multipurpose cargo (excluding container and liquid cargo) is handled at twelve general cargo berths at Kandla Port (10 Cargo Berths handled by KPT and 13th and 15th Cargo Berth by two BOT Operators) and at Barge jetty at Bunder Basin old kandla and Tuna, Dry bulk terminal off Tekra. The combined capacity of all facilities at Kandla Port for handling dry cargo (excluding container and liquid cargo) is shown below:

Existing Dry Cargo Facilities – Capacity at Kandla Port

| Dry Cargo Handling Facilities | Capacity in MMPTA |
|---|-------------------|
| 1 to 10 Cargo Berths | 19.54 |
| Tuna Barge Jetty | 1.2 |
| IFFCO Barge Jetty | 2 |
| Bunder Basin Barge Jetty | 5.11 |
| 13 th Multipurpose Cargo Berth | 1.5 |
| 15 th Multipurpose Cargo Berth | 1.5 |
| Dry bulk terminal at Tekra | 14.11 |
| Total Capacity | 44.96 |

Dry Cargo Traffic for the year 2015-16 stands at 35 MMT as against the capacity of 44.96 MMTPA, as mentioned above. However, as per the above cited Traffic projections by 2020, KPT will handle 83.8MMTPA cargo (as per Maritime Agenda) and by 2029 KPT will handle 96.35 MMTPA (as per cargo projected based on CAGR of 8.12%). Moreover, the capacity addition of 19.22(14.11- Dry bulk terminal and 5.11 – Bunder basin is made recently in Feb 2015 and Feb 2016 respective only).

The dry bulk terminal at Tekra, has started their operation with the capacity of 14.112 MMTPA. However, it will take some time to scale up the operations. AKBTP, in one of its submission, provided their view of cargo projections at the dry bulk terminal which are presented as given blow:

| Year | Yr 1 | Yr 2 | Yr 3 | Yr 4 | Yr 5 | Yr 6 | Yr 7 | Yr 8 | Yr 9 | Yr 10 |
|--------------|------|------|------|------|------|-------|-------|-------|-------|-------|
| MMTPA | 5.68 | 6.97 | 7.67 | 8.43 | 9.28 | 10.20 | 11.23 | 12.35 | 13.58 | 14.11 |

CHAPTER – 5 CAPITAL AND OPERATING COST ESTIMATE

5.1 Project Description

The proposed project site is situated near Multipurpose Cargo Berth No. 15 as per drawing enclosed at **Annexure B**.

It is proposed to construct a Jetty with wharf length of 350 m X 55 m from internal resources. The jetty shall be used for handling of cargo (other than liquid/ container). Further, cargo handled at the Jetty shall be stored in back up yard of 25.30 ha behind the proposed jetty. The following development activities shall be undertaken at the proposed project.

- Construction of wharf of 350 mts. x 55 mts. on pile foundation
- Construction of other civil structures on pile foundation such as high mast lighting tower, Office buildings
- Providing Temporary Custom fencing wall
- Providing Fire fighting line and fire hydrants
- Providing roads and rail network
- Electrification works
- Development of back up area
- Handling Equipments like Mobile Harbour Crane(100MT).

5.2 Capacity of the Terminal

Optimal capacity of the terminal has been assessed as given below :

| Particulars | Cargo Share |
|---|-------------|
| Cargo Share Expected | |
| Food grains and Fertilizers (Bulk) | 18.98% |
| Coal (Bulk) | 31.83% |
| Ores & Minerals (Bulk) | 7.00% |
| Steel Cargo (Steel coils, Plates & Slabs) | 1.79% |
| Project cargo (Break bulk) | 2.00% |
| Other Bagged cargo (Incl. foodgrain, other steel & scrap) | 4.93% |
| Other dry Bulk cargo | 23.86% |
| Timber logs (Bulk break) | 9.61% |
| Total | 100.00% |
| Handling Rate | |
| Food grains and Fertilisers (Bulk) | 20000 |
| Coal (Bulk) | 20000 |
| Ores & Minerals (Bulk) | 20000 |
| Steel Cargo (Steel coils, Plates & Slabs) | 11000 |
| Project cargo (Break bulk) | 929 |
| Other Bagged cargo (Incl. foodgrain, other steel & scrap) | 8000 |
| Other dry Bulk cargo | 20000 |
| Timber logs (Bulk break) | 7000 |
| Nos. of Days | 365.00 |

| | |
|-----------------------------------|--|
| Optimal Capacity (in MMTPA) | $= (365 \times 70\% \times (20000 \times 18.98\% + 20000 \times 31.83\% + 20000 \times 7.00\% + 11000 \times 1.79\% + 929 \times 2\% + 8000 \times 4.93\% + 20000 \times 23.86\% + 7000 \times 9.61\%)) / 10^6 = 4.50$ |
| Optimal Project Capacity in MMTPA | 4.50 |

BLOCK ESTIMATE

Name of work : Construction of 16th Berth for Multipurpose Cargo from Internal Resources

| Sr. No | Description | Qty | Rate | Unit | Amount in crores | Remarks |
|-------------------|---|--------|-------|------|------------------|--|
| PHASE - I | | | | | | |
| 1 | Quay & Transit Area (Marine Civil Work) | | | | | |
| a) | Pile Foundation | | | | 72.70 | As per Details Claculation |
| b) | Superstructure (1x350 x 54.45 m) with Mooring and berthing aids | | | | 64.68 | As per Details Claculation |
| 2 | Development of Backup area | | | | | |
| a) | Reclamation of OSG/Backup area (217000 X 1.20) | 520800 | 631 | M3 | 32.86 | SOR-2016 |
| 3 | Custom Fencing Wall | | | | | |
| a) | RCC Fencing Wall | 300 | | M | 0.54 | As per Details Claculation |
| b) | Temporary Fencing Wall | 900 | | M | 0.44 | As per Details Claculation |
| PHASE - II | | | | | | |
| 1 | Wharf Cranes | | | | | |
| a) | Mobile Harbour Cranes of (100T or above) | 2 | | | 60.00 | As emailed by SE (E) on 23.07.2016 |
| 2 | Water supply and Fire Fighting lines | | | | | |
| a) | Water supply line On wharf structure | | | | | |
| i) | 200 mm dia D.I. line | 278 | 3500 | RMT | 0.10 | Accepted Rate of SNA work |
| ii) | 100 mm dia D.I. line | 119 | 1153 | RMT | 0.01 | SOR 2016 |
| b) | FF line in back up area | | | | | |
| | (i) 200 dia DI line | 2250 | 3500 | RMT | 0.79 | Accepted Rate of SNA work |
| 3 | Storage godowns (100X44.10M) | 4410 | 10000 | Sq M | 4.41 | As per Completion of Construction of Godowns by M/s Dipesh Const. in the Year 2013 |

| | | | | | | |
|----|--|------|-------|------|------|------------------------------------|
| 4 | Office building | 500 | 33000 | Sq M | 1.65 | Accepted Rate of SNA work |
| 5 | Electrifications | | | | | |
| a) | High Mast Towers Lighting | | | | 4.00 | As emailed by SE (E) on 23.07.2016 |
| b) | Electric sub station and its connecting accessories. | | | | 3.00 | --do-- |
| 6 | Capital Dredging | | | | 5.60 | Actual work of DCI |
| 7 | Internal roads | 2400 | 5872 | RMT | 1.41 | As per Details Claculation |
| 8 | Internal railway | 700 | 40000 | RMT | 2.80 | As per KPT Tuna Railway Line |

Total Rs. 254.99

Add 5% Escalation charges 12.75

Total Rs. 267.74

Add 1.5% Contingency charges 4.02

Total Rs. 271.76

Add 2% Establishment charges 5.44

Total Rs. 277.20 Crores

Say Rs. 278.00 Crore

5.3 Capital Cost

The total completion time of the project is estimated at 24months from the date of award of concession to the successful bidder

5.4 Implementation Schedule

The Project is envisaged to be completed and brought into operation, by approximately **24 Months** from the date of award of concession.

5.5 Estimation of Tax component in the capital Cost

| Tax Element in Project Cost | |
|------------------------------------|---------------|
| Particulars | Rs. Crs. |
| Civil Construction Cost of Project | 187.99 |
| Contractors' Profit | 18.80 |
| Labour Cost | 62.04 |
| Material Cost | 125.95 |
| Tax Element in Project Cost | 15.00% |

5.6 Operating Cost requirements

Following table describes the total expenditure to be incurred by KPT for operations and maintenance of the Project. Following estimates have been estimated as of 2016.

Operation & Maintenance Cost

NAME OF WORK :- CONSTRUCTION OF 16TH MULTIPURPOSE CARGO BERTH AT KANDLA FROM INTERNAL RESOURCES

| | | | | | |
|--|--------------------------------|-------|---------------------------|----------------------|----------------------|
| Dry Cargo Handeled at Berth No. 1 to 12 during 2015-16 - 291.27 Lakh MT | 29127000.00 | MT | | | |
| Berth Capacity considered | 4500000.00 | MT | | | |
| Liquid Cargo handeled at Kandla | 12015792.00 | MT | | | |
| | Baerth Capacity 4.5 MMT | | Cost for O & M | Cost in Lakhs | |
| 1 Wharfages Expenditure | | | | | |
| Expenditure as per cost statement Cost 1 | 1478709291.00 | 50.77 | 228454417.19 | 228454417.19 | 2284.54 |
| 2 Berth Hire & Crane Expenditure | | | | | |
| Expenditure as per cost statement Cost 12 | 1127876405.00 | 27.41 | 123361677.12 | 93135611.12 | 931.36 |
| 3 Storage Expenditure | | | | | |
| For Covered Space : | | | | | |
| Expenditure as per cost statement Cost 2 | 54501741.00 | 1.87 | | 8420291.64 | 84.20 |
| 4 For Civil Structure @ 1% of Total Cost of Civil Works | | | | | 187.99 |
| 5 For Mechanical Structure @ 5% of Total cost of Mech. Works | | | | | 335.00 |
| Less for Office & Admin. Expenditure as per Statement Economic Viability Statement for the year 2015-16 | | | | | 1397.65 |
| Total O & M | | | | | 3823.09 |
| | | | | Say Rs. | 3823.09 Lakhs |

5.7 Return

Return

NAME OF WORK :- CONSTRUCTION OF 16TH MULTIPURPOSE CARGO BERTH AT KANDLA FROM INTERNAL RESOURCES

| | Actual Income | Rate per MT | Baerth Capacity 4.5 MMT | Increase as per Revised SOR | Income | Income in Lakhs |
|--|------------------|----------------|----------------------------|-----------------------------------|--------------|--------------------|
| Dry Cargo Handeled at Berth No. 1 to 12 duriong 2015-16 - 291.27 Lakh MT | | | | 29127000.00 | MT | |
| Berth Capacity considered | | | | 4500000.00 | MT | |
| Liquid Cargo handeled at Kandla | | | | 12015792.00 | MT | |
| 1 Wharfages Charges | | | | | | |
| Income as per cost statement Cost 1 | 728501809.00 | 25.01 | 112550490.63 | 50% | 168825735.94 | 1688.26 |
| 2 Port dues | | | | | | |
| Income as per cost statement Cost 13 | 963413373.00 | 23.42 | 105373504.51 | 25% | 131716880.64 | 1317.17 |
| 3 Berth Hire charges | | | | | | |
| Income as per cost statement Cost 12 | 812515564.00 | 19.75 | 88869030.52 | 0% | 88869030.52 | 888.69 |
| 4 Storage Charges | | | | | | |
| For Covered Space : | | | | | | |
| Income as per cost statement Cost 2 | 392581631 | 13.48 | 60652224.38 | 55% | 94010947.79 | 940.11 |
| 5 Income from Mobile harbor Crane - 100 MT Cap. | | | | | | |

Berth Capacity - 4500000 MT

For Dry Bulk :-

4500000 x 0.63 x Rs. 33.16

940.09

Food Gains & Fertilizer 30%

Coal Limestone, Minerals,

33%

Sugar, Salt, Salt, Ores, iron
Pellets & Other Dry Bulk,
etc.

63%

For Break Bulk(Steel & Bagged Cargo) :-

4500000 x 0.18 x Rs. 75.70

613.17

Steel pipe, plate, Bagged and
other break bulk cargo **18%**

For Break Bulk(Steel & Bagged Cargo) :-

4500000 x 0.19 x Rs. 120.93

1033.95

Project Cargo 4%

Steel, Coils & Slab 5%

Timber 10%

19%

Total Income for MHC 100 2587.21

Considering 50% Cargo Handling through Port Carne

1293.60

6 Income from Railway

Considering 30% Cargo Movement through Railway

6750000.00 67.50

4500000 x 0.30 x Rs. 5/- per MT

**Total
income = 6195.33 Lakhs**

CHAPTER- 6 FINANCIAL VIABILITY

FIRR

Name of Work : Construction of 16th Berth for Multipurpose Cargo from Internal Resources.
 COST 27,800.00

| YEAR | CAPITAL COST | O & M Cost | TOTAL COST | INFLOW | NET FLOW |
|------|--------------|------------|------------|---------|----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 11,120.00 | | 11120 | | 11120.00 |
| 2 | 16,680.00 | | 16680 | | 16680.00 |
| 3 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 4 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 5 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 6 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 7 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 8 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 9 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 10 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 11 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 12 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 13 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 14 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 15 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 16 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 17 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 18 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 19 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 20 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 21 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 22 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 23 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 24 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 25 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 26 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 27 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 28 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 29 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 30 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 31 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 32 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 33 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 34 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 35 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 36 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 37 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 38 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 39 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 40 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 41 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 42 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 43 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 44 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 45 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 46 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 47 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |

| | | | | | |
|----|--|---------------------------|---------|---------|--------------|
| 48 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 49 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| 50 | | 3823.09 | 3823.09 | 6195.33 | 2372.237 |
| | | F.I.R.R = IRR (F8:F57) | | | 8.07% |

EIRR

Name of Work : Construction of 16th Berth for Multipurpose Cargo from Internal Resources.

COST 27,800.00

less 15%

tax 4,170.00

23,630.00

| YEAR | CAPITAL COST | O & M Cost | TOTAL COST | INFLOW | NET FLOW |
|------|--------------|------------|------------|---------|----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 9,452.00 | | 9452 | | -9452 |
| 2 | 14,178.00 | | 14178 | | -14178 |
| 3 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 4 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 5 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 6 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 7 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 8 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 9 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 10 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 11 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 12 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 13 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 14 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 15 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 16 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 17 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 18 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 19 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 20 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 21 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 22 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 23 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 24 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 25 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 26 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 27 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 28 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 29 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 30 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |

| | | | | | |
|----|--|----------------------|---------|---------|--------------|
| 31 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 32 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 33 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 34 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 35 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 36 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 37 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 38 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 39 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 40 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 41 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 42 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 43 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 44 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 45 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 46 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 47 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 48 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 49 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| 50 | | 3823.09 | 3823.09 | 6195.33 | 2372.24 |
| | | E.I.R.R = IRR | | | |
| | | (F11:F60) | | | 9.55% |

