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Tariff Authority for Major Ports

G No. 29 **New Delhi, 15 February 2011**

NOTIFICATION

In exercise of the powers conferred by Section 48 of the Major Port Trusts Act, 1963 (38 of 1963), the Tariff Authority for Major Ports hereby disposes of the proposal received from the Kandla Port Trust for setting upfront tariff for SPM facility in Gulf of Kutch at Kandla Port in pursuance of the guidelines for upfront tariff setting at Major Port Trusts which was notified vide this Authority's Notification No.TAMP/52/2007-Misc. dated 26 February 2008 as in the Order appended hereto.

(Rani Jadhav)
Chairperson

Tariff Authority for Major Ports

Case No. TAMP/15/2010-KPT

Kandla Port Trust **- - - - -** **Applicant**

O R D E R

(Passed on this 18th day of January 2011)

This case relates to a proposal received from the Kandla Port Trust (KPT) for fixation of the upfront tariff for setting up Single Point Mooring (SPM) and allied facilities in Gulf of Kutch at the Kandla port.

2.1. The KPT had initially filed the proposal vide its letter dated 28 February 2010 for fixation of upfront tariff for setting up Single Point Mooring (SPM) by following the norms applicable for liquid bulk terminal.

2.2. However, the capacity of the SPM, which is one of the main components, was not assessed as per the norms prescribed for liquid terminal nor was the basis of capacity assessment explained in the proposal. In view of the gaps noticed in the proposal, the KPT was requested, vide our letter dated 19 March 2010, to furnish clarification on a few points and to justify all the other parameters such as productivity rate, capacity, power consumption, other cost, etc., adopted in the proposal with reference to actual operations of SPM at Vadinar in KPT and also with reference to SPM facility at Cochin by BPCL and other SPM facility at Paradip Port Trust for last three years.

3.1. The guidelines for upfront tariff setting for Public Private Participation (PPP) projects at Major Ports announced by the Ministry of Shipping, Road Transport and Highways (MSRTH) vide its communication No.PR-14019/25/2007-PG dated 12 February 2008 which was notified by this Authority vide Notification No.TAMP/52/2007-Misc. on 26 February 2008 do not contain any separate norms for SPM operations.

3.2. The matter was, therefore, referred to the Ministry of Shipping (MOS) vide our letter dated 19 March 2010 seeking advice whether in absence of norms, fixation of upfront tariff for SBM operations can be based on the parameters applicable for liquid bulk handling and with reference to the actual SBM operations carried out at the KPT and other Major Port Trusts viz. Cochin Port Trust and Paradip Port Trust

3.3. In response, the MOS vide letter dated 9 June 2010 has informed that Indian Maritime University (IMU) has been engaged to examine the proposal of KPT for fixation of upfront tariff for SPM operations and to furnish their recommendations. In the mean while, the MOS, as an interim measure, agreed to the suggestion made by TAMP and directed this Authority to undertake the fixation of upfront tariff for SPM based on the parameters applicable for liquid bulk handling with reference to SPM operation carried out at the KPT (Vadinar Division), Cochin Port and Paradip Port Trust till the guidelines for SPM terminals are finalised.

3.4. The decision of the MOS was conveyed to the KPT with an advise to furnish a comprehensive proposal for fixation of the upfront tariff for SPM facility vide our letter dated 22 June 2010 in line with the advise rendered by the MOS.

4.1. In this backdrop, the KPT under cover of its letter dated 26 October 2010, has filed a revised proposal along with clarifications sought by us on few points vide our letter dated 19 March 2010. It has also furnished a comparative statement showing parameters of the SPMs in operation at Vadinar Division of KPT and other SPMs in operation and the subject SPM.

4.2. The clarifications sought by us vide letter dated 19 March 2010 and the gist of the reply furnished by the KPT thereon is tabulated below:

Sl. No.	Clarification sought	Reply of the KPT
(i).	(1). The capacity of the SPM facility at 9 MMTPA is not assessed following the norms prescribed in the guidelines for liquid bulk terminal supposedly to be followed by the port. The handling rate	(a). The KPT at one place has stated the handling rate in case of this project is not the basis for assessing the capacity. However, in the capacity calculation

	adopted for capacity assessment may be indicated explicitly. (2). The guidelines prescribe 70% utilisation norm which works out to 255 days in a year. Justify the reasons for scaling down the working days to 120 for assessment of capacity as against the norm of 255 working days. (3). Also, furnish detail working of capacity assessment and deviation, if any, from the norms prescribed in the guidelines along with justification.	furnished by them, it has considered the handling rate of crude prescribed in the guidelines for liquid bulk terminal. (b). It has further stated that the typical size of modern refinery is around 9 MMTPA. Lack of precedence regarding use of SPM by more than one refinery and as a SPM is usually a captive facility, the optimal capacity of the SPM considered at 9 MTPA as assessed in the Feasibility Report. (c). With regard to the number of days for which the SPM would be operational, the port has clarified that considering the annul throughput of 9 MMTPA and handling rate of 5000 tonnes per hour, SPM would be operational for 120 days in a year. (d). Clause 2.7.1. of the Upfront tariff guidelines provides for review of tariff caps once in five years to adjust for any extraordinary events that could not have been foreseen by a prudent person. Citing this clause, the KPT has submitted that in case of variation in the actual traffic handled vis-à-vis the capacity assumed at 9 MTPA, correction in the tariff caps can be made later to neutralize the impact of variance in the projected capacity and actual traffic.
(ii).	The Feasibility Report relied upon by the port for estimation of power cost does not contain any basis or analysis done by the port for estimating this cost element. The estimation of power and fuel cost at Rs.465 lakhs may be justified with reference to detailed analysis of consumption of power and fuel with reference to the facility / service likely to be offered and also with reference to the actual power and fuel consumption at the SBM facility being operating at the Vadinar division in Kandla Port.	(a). As per the guidelines of TAMP for fixation of tariff for Liquid Bulk Terminal, the norm for power consumption is 2.4 lakhs units / annum / hectare. (b). As the Crude Oil Terminal (COT) would be outside the port limits, there would be no land based developments within port. Considering that the norms based on per hectare cannot be applied. In view of that for the SPM operation, cost assessed in the feasibility report which is inclusive of the power and fuel cost is considered. (c). It has submitted that it could not get the details of actual power and fuel consumption and cost details of the SBM facility at the Vadinar division in Kandla Port and from the Cochin Port.
(iii).	Justify all the parameters such as productivity rate, capacity, power consumption, other costs, etc., adopted in the upfront tariff setting proposal with reference to the actual operation of SPM at the Vadinar division in the KPT and also with reference to SPM facility at the Cochin Port Trust recently installed by the Bharat Petroleum Corporation Limited (BPCL-KRL) and at other SPM facility at Paradip Port Trust for last three years.	A statement giving comparative details of the technical and financial aspects of the SPM operation of the subject facility and the facility at Vadinar division of the KPT, Essar-Vadinar and COPT facility is furnished.

(iv).	Please clarify whether the water front royalty charges considered by KPT in the operating cost is akin to license fee. If so, explain whether the lease rent of waterfront area is approved by this Authority in its land schedule and whether the Government guidelines on land policy matters permit the port to levy charges for lease on waterfront area.	In the revised proposal, lease rent for water front is not considered.
(v).	The port has proposed to levy miscellaneous charges at Rs.8 per metric tonne. Please state explicitly the services for which the proposed miscellaneous charges would be levied.	Miscellaneous charges has been excluded and only the rate of handling charges of Rs.149 per tonne is proposed.

4.3. The synopsis of the comparative statement furnished by the KPT and the remarks of the port thereon are tabulated below for some of the main parameters:

Sl. No.	Details	Subject proposal	Vadinar division	Kochi	Essar-Vadinar	Remarks
(i).	Designed capacity	--	36.4 MMTPA	--	27 MMTPA	The subject SPM and the Kochi SPM are comparable.
(ii).	Crude handled at SPM	9 MMTPA as per the feasibility report	14.6 MMTPA (as per the designed capacity and utilization)	9 MMTPA	14 MMTPA (as per the information provided by the ESSAR)	
(iii).	Capacity utilisation	--	40%	30%	52%	The range of capacity utilization is 30% to 50% which may be considered as bench mark for estimating the days of operation of SPM.
(iv).	Handling rate per hour	5000 tonnes per hour	7500-9000 KLs/hr.	8250 m3/hr.	10,000m3/ hr or 10 kgf/cm2	---
(v).	Days of operation	120	150	110	225	For subject proposal, working days is assumed in line with the position obtained at SPM operated in COPT.

5. The main highlights of the revised proposal are as follows:

(i). The port has mainly relied upon the Feasibility Report prepared in March 2004 for proposing the subject upfront tariff.

(ii). The port has considered the estimated annual throughput of the proposed SPM at 9 MMTPA which is considered as the optimal capacity of the SPM. Assuming 9 MMTPA as the optimal capacity, the port has derived the other parameters and furnished the following calculation:

Sl. No.	Particulars	VLCC vessel	Suez vessel
(i).	Carrying capacity	285000 tonnes	152000 tonnes
(ii).	Turnaround time	66 hrs	40 hrs

(iii).	Discharge rate	5000 tonnes per hour	5000 tonnes per hour
(iv).	Total turnaround time	285000/66 = 4318 tonnes / hr	152000/40 = 3800 tonnes / hr
(v).	Daily discharge rate	4318 tonnes * 24 = 103636 tonnes	3800 tonnes * 24 = 91200 tonnes
(vi).	Annual discharge rate	103636 * 365)/10,00,000 = 37.52868 tonnes i.e. 37.83 MT	91200 * 365)/10,00,000 = 33.288 tonnes i.e. 33.3 MT
(vii).	70% optimal utilization	37.83 * 0.7 = 26.5 MT	33.3. * 0.7 = 23.3 MT
(viii).	Operation of berthing only during day. Effective time available is 18 hrs i.e. 75% of the total day since berthing can be done only from 0530 hrs to 1600 hrs. (Un-berthing can, however, be done during night hours also.	26.5 * 0.75 = 19.86 MT	23.3 * 0.75 = 17.48 MT
(ix).	Due to above constraints and because of monsoons, winds & navigational restrictions and due to higher down time for repairs & maintenance capacity utilization is in the range of 45% to 50% due to interruptions.	19.86 * 0.5 = 9.93 MT	17.48 * 0.5 = 8.74 MT

(iii). Capital Cost:

The total capital cost is estimated at Rs.43890 lakhs as estimated in the original proposal. The capital cost estimation primarily includes the SPM and the pipelines and the breakup is tabulated below:

(**Rs. in lakhs**)

Sr. No.	**Group**		**Amount**
(i).	Cargo handling equipment (as per feasibility report)		
	(a) SPM facility	14823	
	(b) On shore pipelines	26977	
	Sub-total		41800
(ii).	Miscellaneous (5% of above)		2090
	Total		**43890**

Civil structure is not envisaged for the proposed facility.

(iv). The Return on Capital Employed (ROCE) is computed at 16% on the estimated capital cost.

(v). Annual Operating Cost:

(a). Power and fuel:

- The COT would be outside the port limits. As no land allotment is envisaged for the proposed SPM terminal, hectare based norm for estimating power and fuel cost are not relevant.

- In this case only the SPM would require fuel and power. The power and fuel cost for the SPM is estimated at Rs.2.50 lakhs per day as per the feasibility report of March 2004 is taken as the base. Considering that the SPM would begin its commercial operations in the year 2014, the cost estimated in the feasibility report is escalated at 5% p.a. and the power and fuel cost is arrived at Rs.3.88 lakhs per day.

- Accordingly, the power and fuel cost for the SPM facility is estimated at Rs.465 lakhs considering 120 operational working days in a year.

(b). Repairs and Maintenance

Repairs and maintenance for civil works is not estimated as no civil structures are envisaged for the facility. Adopting the norms in the guidelines prescribed for liquid terminal, repairs and maintenance on mechanical and electrical equipments is estimated at 2% of total capital cost.

(c). Insurance cost, depreciation and other expenses are estimated adopting the norms prescribed for liquid bulk terminal.

(d). Based on our query raised vide letter dated 19 March 2010, the license fee for water front area earlier considered by the port in the annual operating cost is deleted in the revised proposal. The port has, however, included way leave charges in the revised proposal.

The way leave charges are estimated for 19000 meters length of pipeline from SPM facility to Land Fall Point (LFP) applying the rate of Rs.10.5 per sq. mtr. per month citing that it is as per the Scale of Rates of the KPT. (It is to state that the existing Scale of Rates of the KPT approved by this Authority does prescribe any way leave charges.) The way leave charges is estimated at Rs.47.9 lakhs per year.

(e). The total operating cost estimated by KPT is tabulated below:-

Sl. No.	Description	Basis	Rs in lakhs
(i).	Power and fuel consumption	As per feasibility report	465
(ii).	Repairs and Maintenance of cargo handling equipments	As per the norms (2% of Rs.438.90 crores)	878
(iii).	Insurance	As per norm (1% of Rs.438.90 crores)	439
(iv).	Depreciation	10% of Rs.438.90 crores	4389
(v).	Way leave charges	As per existing SOR	48
(vi).	Other expenses	As per norms 1% of Rs.438.90 crores	439
Total			**6658**

(vi). Estimated Annual Revenue Requirement (ARR) is as follows:

Sl. No.	Description	Rs. in lakhs
(i).	Total annual operating cost	6658
(ii).	16% Return on Capital Cost of Rs.43890 lakhs	7022
	Annual Revenue Requirement	**13680**

(vii). Considering the estimated ARR of Rs.13,680 lakhs and the optimal capacity at 9 MTPA, the composite tariff for handling crude at the SPM facility is arrived at Rs.152 per metric tonne.

The KPT has submitted that of the total length of the pipeline of 19.5 kms running from the SPM to the COT which is considered in the estimation, 0.5 km of the pipeline would be beyond the port limits. In other words, 98.3% of the total length of the pipeline would be within the port limits. In view of that the port has proportionately reduced the tariff to the extent pipeline falling beyond its jurisdiction and has finally proposed the composite handling rate of Rs.149 per metric tonne.

6. In accordance with the consultation process prescribed, the proposal received from the KPT was circulated to the users / prospective applicants (as forwarded by the KPT) for seeking their comments by 26 November 2010. No comments are received from the users / prospective applicants.

7. Based on the preliminary scrutiny of the proposal, the KPT was requested to furnish information/clarifications on various points vide our letter dated 18 November 2010. The KPT vide its e-mail dated 29 November 2010 has responded to our queries. A summary of the queries raised by us and the response of KOPT are tabulated below:

Sl. No.	Queries raised by us	Response from KPT
(i).	The port seems to have mainly relied upon the Feasibility Report prepared in March 2004 while filing its current proposal for determining the upfront tariff for SPM operations with reference to capacity and capital cost except for applying adhoc increase in the capital cost estimates of 2004. The feasibility report which was prepared nearly six years may be an outdated one considering the change in the technology, market conditions and the other factors. The port may explain why it has not updated feasibility study for the proposed facility but relied upon the study conducted in 2004.	The cost of project worked out in Feasibility Report has been updated by considering suitable provision for escalation. However, there has not been any significant change in the technology particularly for the proposed SPM.
(ii).	The feasibility report does not contain any study of the traffic forecast nor does it show any calculation for deriving the capacity at 9 Million Tonnes Per Annum (MTPA). It only assumes the capacity of the SPM at 9 Million Tonnes Per Annum which has been considered by the port in its current proposal. All the other parameters seem to have been derived to suit this figure of 9 MTPA. A detailed analysis of traffic projections for the SPM operations for the next 30 years may please be furnished.	The port has prepared a Comprehensive Business Plan in 2007 wherein projections of traffic for crude oil have been carried out. The capacity of the SPM facility is being limited to 9 MMTPA after deliberations and is consistent with the assumptions in the Feasibility Report. However, in forwarding letter to the draft Tariff Proposal submitted to the TAMP, it was proposed by the Port that the proposed tariff will be subject to review, in case, if actual cargo to be handled at the SPM exceeds the capacity of 9 MMTPA. This approach is also in line with the upfront tariff recently approved by TAMP for the work of "Dry Bulk Terminal off Tekra near Tuna on BOT basis".
(iii).	<u>Optimal Capacity</u>:	
	(a). Clause 3.3.2. of the upfront tariff guidelines clearly stipulates that upfront tariff is to be determined for the optimal capacity irrespective of traffic forecast. The proposal of the KPT in para 4.2. of Annex-II considering the optimal capacity at 9.00 MTPA at the level of annual throughput projections is not in line with the upfront tariff guidelines.	It is pertinent to mention here that the guidelines for upfront tariff for setting up of PPP projects – 2008 of TAMP does not cover any guide line for fixation of Tariff for SPM to handle crude oil. Further, it is seen that the 2008 guidelines do not provide for the capacity of liquid terminal to be limited by capacity of the downstream facility as in the case of container terminal/coal/iron ore terminal viz. storage facility or the capacity of the associated refinery being created. However, it is seen that capacity of all the SPMs operating the Major Ports are limited by the capacity of refinery. Further, it may please be noted that Ministry

		vide letter PD-11015/1/2010-KPT dated 9th June 2010 advised TAMP as well as the Port to frame tariff proposal of the subject work based on the parameters of existing operating SPM at other Ports.
	(b). The comparative statement giving the various parameters achieved at the other SPM operations furnished by the KPT indicates the discharge rate achieved for crude handled at the Vadinar operations of the KPT is 7500 to 9000 Kls/ hour (i.e. 6465 to 7758 tonnes/ hour applying the conversion factor of 1 tonne=1.16 kl). For the SPM operated by Essar at Vadinar the discharge rate achieved is 10,000 m3/ hour (i.e. 10000 kl/ hour) and at Cochin Port Trust (operated by BPCL), this parameter is reported at 8250 m3/ hour (i.e. 8250 kl/ hour). Though the KPT in para 4.3. (Annex-III) has stated that the handling rate is considered at 7500 tonnes/ hour, it has no where been applied in determination of the optimal capacity of the terminal.	The TAMP guidelines of 2008 indicate that the norms for handling crude in the liquid bulk terminal is 5000 tons/hr. The liquid bulk terminal is located in a tranquil berthing basin in the safety of a harbor with adequate safety provisions and therefore the ships can berth, unberth and discharge cargo at any time of the day upto to the maximum discharge rate permission by the ship subject only to stability considerations. The SPM however, is an offshore facility located at a distance in required depth of water at sea and is directly exposed to the conditions of the sea - winds and waves. There is increased risk of an accidental oil spill as well as a more significant environmental impact using SPM versus direct berthing in a bulk oil terminal. Looking to the comparative statement, it can be seem that the handling rate for crude at Cochin Port is 8250m3/hr (7000 tons/hr with specific gravity of 0.85). However, the port has considered the handling rate of 7500 tons/hr which is higher than the handling rate of Cochin Port handling a capacity of 9 MMTPA. As indicated earlier the proposed tariff is subjected to review, if actual cargo to be handled at the SPM exceeds the proposed capacity of 9 MMTPA.
	(c). As regards the reference made by the KPT that the SPM at Cochin Port Trust (COPT) handles 9 MTPA, it is notable that the 9 MTPA is the present volume of traffic handled by the SPM operated by the BPCL at Cochin Port Trust and it is not the capacity of the SPM.	It is already stated that proposed tariff for subject work may be reviewed by TAMP, if actual cargo to be handled at the SPM exceeds the proposed capacity of 9 MMTPA.
	(d). (i). While furnishing reply to our query about reckoning 120 days, the port has explained that the optimal capacity being 9 MTPA and considering the handling rate of 5,000 tonnes/ hours, the SPM is expected to be operational for 120 days. In fact, the number of days is one of the factors for determining the optimal capacity as per the formula prescribed in the guidelines and it is not the other way around. As already stated earlier, assuming the capacity at 9 MTPA the other parameters are reworked by the KPT. (ii). As per the comparative statement furnished by the port, the SPM operations at its own port at Vadinar works for 150 days in a year and the SPM operations at	Earlier tariff proposal was based on the guide line for liquid bulk terminal in Annex 4 of TAMP as such there is no specific guide line for fixation of Tariff for SPM to handle crude oil. Hence, as advised by the Ministry vide letter dated 09.06.2010, the present tariff proposal of the subject work is based on the parameters of existing operating SPM at other ports. Accordingly, the capacity of 9MMTPA of the SPM is kept as per the feasibility Report, which is also in line with the present handling capacity of existing operating SPM at Cochin Port. Looking to the comparative statement showing various parameters of existing operating SPMs at other ports, it can be seen that the SPM at Cochin Port is operated for 120 days for handling crude oil to the tune of

	Essar operates for 225 working days in a year. When the working days best achieved in the vicinity of the port i.e. in the Gulf of Kutch is 225 days in a year then justify and explain the extraordinary circumstances why the same parameters cannot applied to determine the capacity of the proposed SPM.	9 MMTPA. However, in the present Tariff proposal, SPM is considered operative for 110 days which is almost at par with the SPM at Cochin Port. The present handling capacity is considered as 9 MMTPA which is also subjected to review by TAMP in case, if actual cargo to be handled at the SPM exceeds the proposed capacity of 9 MMTPA.
	(e). The port has stated that both VLCC and Suez Max Tanker are expected to call at the proposed SPM. The share of each categories of vessels may be indicated for assessing the optimal capacity. While doing so the KPT may keep in mind that the proposed tariff is for 30 years horizon. The basis adopted for projecting the share of each categories of the vessels may also be explained along with detailed study/ analysis done by the port in this regard.	As per the Draft Concession Agreement of the subject work, the concessionaire can handle vessels upto 3,00,000 DWT having water depth of 28.90 m. In other words, it is to state that the concessionaire will primarily handle VLCC and Suezmax tankers at the proposed SPM. The share of 50:50 is considered
	(f). If the discharge rate of crude from the VLCC and the Suez Max tanker are expected to be different then the same may be reckoned with in the capacity calculation. If so, the differential discharge rate may also be justified with parameters achieved by such categories of vessels handled at the SPM KPT (Vadinar Division), Cochin Port Trust, etc.	
	(g). (i). The details of oil vessels/ tankers handled at the SPM operations at Vadinar, average the number of hours taken only for discharge of cargo after the mooring operation in the last three years 2007-08 to 2009-10 may be furnished for each categories of vessels handled. (ii). Average time taken only for mooring/ unmooring vessels at the SPM operations of the Vadinar division may also be furnished for the last three years. (iii). Furnish the instances and the number of hours the vessel had to wait for day light hours for mooring operations even though the SPM was vacant for each of the years 2007-08 to 2009-10. Since the KPT already handles crude at the SPM operations in the Vadinar division it should be in a position to furnish the requisite details.	All the SPM operating at Vadinar Division of KPT are the captive user facility of Vadinar Oil Terminal Ltd and Indian Oil Corporation. In other words, all three SPMs at Vadinar are not being operated by KPT itself. However, the concerned parties are being requested to provide such details.
	(h). In the light of the above gaps observed, the KPT is advised to reassess the optimal capacity for the SPM operations taking into consideration parameters of handling rate, number of working hours, etc., best achieved in the SPM operations.	It is pertinent to mention here that no specific formula has been laid down in the TAMP guidelines for working out the optimal capacity of SPM, which should be based on handling rate, no of working hours etc. as suggested by TAMP in the subject observation. Hence as per the advice of the Ministry, the optimal capacity of the SPM in the Tariff proposal is based on the parameters of existing operating

		SPM at other port.
(iv).	<u>Capital Cost</u>:	
	(a). The feasibility report prepared in March 2004 included the storage facility at the Crude Oil Terminal as an integral part of the project and envisaged comprehensive service including transfer of oil from SPM through the pipelines and the storage at COT. Whereas in the current proposal, the KPT has stated that though the Concessionaire would be required to provide the COT connectivity, but the capital cost relating to storage and COT is not included as it is located outside the port limits. In this regard the following points may be clarified: (i). The reasons for changing the scope of work may please be furnished. (ii). The scope of work to be specified in the License Agreement proposed to be signed for the SPM operations may be stated. (iii). The KPT also admits that the COT is an integral part for the proposed SPM operations. If the licence to be granted by KPT does not include the facility of COT, then the enabling provisions to be included in the licence to require the concessionaire to provide the COT may be explained.	As per the Feasibility Report as well as the present tariff proposal of the project, the COT is to be located outside the CRZ boundary and Port has got no land within the CRZ boundary. Hence, the concessionaire will have to develop the COT only out side the port limit, boundary. Considering this, the proposed tariff has been apportioned appropriately with respect to the cost of pipeline from Port boundary to COT i.e. the pipeline to be laid outside the Port boundary.
	(b). The capital cost estimated in the Feasibility report of March 2004 is increased adhoc @ 5% per annum by the KPT to estimate the capital cost for the proposed SPM operation. In this regard, the following points need to be clarified/ examined: (i). As per the upfront tariff guidelines, the estimate for civil works should be given by the Port Trust for achieving the maximum capacity and capital cost of equipment (as per the norms prescribed) should be updated while fixing the tariff caps in order to capture the prevailing market rate. The capital cost estimated by the KPT considering adhoc increase of 5% per annum on the estimates made six years before may not correctly reflect the market price. The KPT has not furnished any documentary evidence in form of budgetary quotations, rate analysis, etc. The KPT is advised to estimate the capital cost based on the prevailing market rate and substantiate it with a copy of the budgetary quotations, rate analysis, if any, done by the port. (ii). No correlation can be drawn from	As per Feasibility Report, the proposed SPM does not envisage any cost towards Civil Works. Hence, the estimated cost considered in the tariff proposal for SPM does not include any cost for the civil work. The estimated cost of the SPM along with the

	the estimates furnished in the feasibility report with the estimates furnished by the KPT in the current proposal. The port has not given the break up the various items included in the capital cost estimation. Please furnish detailed break up of the capital cost of the SPM and pipelines indicating the unit rate, size of pipelines, number of other equipment, etc.	break up for various component for the year 2004 (prior to the escalation) in the proposed tariff is absolutely as per table – 2 meant for estimated cost of case-I of Feasibility Report framed by EIL.
	(c). The KPT has stated that no civil cost is included as it does not anticipate any civil work. In this context, port may confirm that no administration building, office, etc., is envisaged for the SPM facility.	The proposed tariff is based on the estimated cost of Feasibility Report which does not cover any civil cost for the SPM.
	(d). With reference to the pipe line of 0.5 km length stated to be falling outside the port limits the following points may be clarified: (i). If the pipeline falls outside the port area, it is not clear how KPT will have the jurisdiction to grant license for the same. It is not clear why the capital cost for the said pipe line is included in the capital estimates? (ii). The provision proposed to be included in the License Agreement (to be) entered with the Concessionaire with regard to the pipe line falling outside the port limit but at the same time integral part of the SPM operations may be explained.	As mentioned in the earlier reply, the COT will be located outside the Port boundary and Port will not license out any land for COT or provide ROW pipelines to be laid by the concessionaire outside the Port boundary. Moreover, the in the proposed Tariff the cost of COT is not considered at all. Only the cost of pipeline of 500 m outside the Port boundary is considered. However, as stated earlier, the proposed tariff has been apportioned appropriately with respect to the cost of pipeline from Port boundary to COT i.e. the pipeline to be laid outside the Port boundary.
(v).	<u>Operating Cost</u>:	
	(a). Power and fuel cost: (i). The upfront tariff guidelines of 2008 stipulates norms for the consumption of power and fuel for estimating the operating cost. The approach adopted by KPT applying adhoc annual escalation of 5% to the estimate of 2004 is not in line with the methodology prescribed in the guidelines for estimating this cost item. (ii). Neither the feasibility report nor the proposal of the port contain any analysis of power and fuel consumption relevant to the SPM operation. The KPT was vide our letter dated 19 March 2010 advised to justify the estimation of power cost with reference to the detailed analysis of consumption of power and fuel with reference to the facility/ services likely to be offered and also with reference to the actual power and fuel consumed at SPM being operated at the Vadinar Division of Kandla Port and SPM operation and Cochin Port initially by BPCL and at Paradip Port Trust. It is difficult to accept the argument of the port that it does have the power and fuel consumption details even in respect of the	As there is no specific guideline of TAMP for fixation of Tariff for SPM to handle crude oil, Ministry advised TAMP and the Port to prepare the tariff proposal of the subject work based on the parameters of existing operating SPM at other port. Even with great persuasion with the other Ports they were not in position to give a separate operating cost towards power and fuel for their existing operative SPMs. Hence, in the present tariff proposal, cost for power and fuel from Feasibility Report is taken after its indexation by escalation.

	SPM operations carried at the Vadinar Division, which falls under the control of KPT. The port is advised to furnish consumption of power and fuel at its SPM operations (Vadinar Division). The power and fuel cost estimated by the port may be justified with reference to consumption and current rate of fuel and power.	
	(b). From paragraph 7.3. of the Annex - II it is understood that the power and fuel cost estimated in the feasibility report is escalated by 5% per annum till the year 2014. Recognising that as per clause 2.8. of the tariff guidelines, the tariff caps (to be) determined by the Authority are subject to annual escalation, please confirm and certify that the estimation of capital cost as well as the unit rate of power and fuel cost are updated to the rate prevailing in the year 2010.	It is confirmed that both the capital cost and cost towards power and fuel considered in the tariff proposal is as per the feasibility report and also updated by considering escalation thereon.
	(c). **Depreciation**: Clause 3.5.3. of the tariff guidelines of 2008 stipulates that the depreciation should be calculated following the Straight Line Method (SLM) as per the rates prescribed in the Companies Act 1956. The depreciation estimated by the KPT uniformly @ 10% for all assets is not found to be in line with the deprecation rate prescribed in Companies Act 1956. The depreciation on pipeline considered while determining the upfront tariff for liquid terminal at the COPT and VPT is 13.91% as per the rate prescribed in the Companies Act. For plant and machinery rate of depreciation adopted is 10.34% at the Major Port Trusts. The estimation of depreciation may be modified applying the deprecation rate as per Companies Act. Please furnish detailed working of such calculation.	The component of depreciation in tariff proposal is modified and resubmitted.
	(d). **Way leave charge**: The port has estimated way leave charge on 19 km pipelines from SPM facility in port water to Land Fall Point (LPP) applying the rate of Rs.10.5 per sq. mtr. per month stating that it is as per the Scale of Rates of the KPT. The existing Scale of Rates of the KPT approved by the Authority does prescribe any way leave charges. The basis adopted by the KPT for estimating this item may be indicated giving the reference in the SOR of the KPT approved by the Authority.	The proposed way leave charges considered in the tariff proposal at the rate of Rs.10.5/m2/month is with reference to para 2.5.A of approved Scale of Rates of Kandla Port.
B	**<u>Scale of Rates</u>:**	
(i).	<u>1.1. Definitions - General</u>: The port area as defined in relevant act will apply and hence need not be defined separately.	The Scale of Rates enclosed with subject tariff proposal is the Scale of Rates of KPT duly approved by TAMP and not a part of submitted tariff proposal. The Scale of Rates is Annexed with proposed tariff proposal as a
(ii).	<u>1.2. General Terms and Conditions</u>:	

	(a). As the vessel related charges are not proposed to be collected by the Operator and there are no dollar denominated tariff to be prescribed, it may not be relevant to include the general conditions proposed at note (i), (ii), (iii) and (iv) about criteria for classifying vessel into foreign/ coastal, conversion of dollar denominated rate into rupee, review of exchange rate, etc. Hence the said notes may be deleted from the proposed Scale of Rates.	reference to the way leave charges considered in the proposal for land for pipelines. A reference of same is mentioned under reply of (v) (d).
	(b). Since the proposal is for upfront tariff fixation, the provision relating to interest on delayed payment by the user and delayed refund by the operator proposed at note (vi) may be modified to state that the penal interest rate will be as 2% above the Prime Lending Rate declared by the State Bank of India from time to time.	
	(c). The last sentence in the proposed note (vii) (b) stating that the revenue share would be calculated as per the rates prescribed in the Scale of Rates is not in line with the clause 2.16.1 and 2.16.2. of the tariff guidelines of 2005 and the condition prescribed in the Scale of Rates of other ports as well in the upfront tariff schedule approved for various facilities at other Major Port Trusts.	
(iii).	Chapter 2:	
	(a). The upfront tariff proposed is for consolidated service for handling crude at SPM. The proposed note 1 may be elaborated to cover all services included in the consolidated handling charge. It may also be stated that the consolidated rate covers charges for all miscellaneous services not separately prescribed in the Scale of Rates.	
	(b). As no miscellaneous charge is proposed, Schedule 2 is not relevant and hence may be deleted.	

8. On examining the reply furnished by KPT, it is observed that some of the queries raised by us are not satisfactorily addressed by the port. The KPT vide our letter dated 13 December 2010 was, therefore, requested to furnish further additional information/ clarifications on the main points.

9.1. As the MOS has informed that IMU has been engaged to give its recommendations/ report on the proposal of the KPT for determining the upfront tariff for SPM operations, the proposal of the KPT was also forwarded to Indian Maritime University (IMU) vide our letter dated 11 November 2010 with a request to furnish their views/ comments.

9.2. The IMU vide email message dated 22 November 2010 has furnished its views which are summarised below:

(i). (a). In the case of liquid bulk terminal, the norm for handling rate of different type of liquid bulk to be handled at the terminal is specified to estimate the capacity based on the cargo mix percentage of the liquid bulk to be handled. Whereas the KPT has determined the capacity based on the traffic (or demand) requirement. This is a major deviation.

(b). IMU is examining whether the approach adopted for liquid terminal can be extended for SPM terminal also with due changes for estimation of capacity or a totally new approach is to be adopted.

(c). Nevertheless, the traffic (or demand) cannot be taken as the capacity, when a generic approach is made to estimate the SPM capacity.

(ii). The guidelines prescribe the optimal capacity is 70% of the maximum capacity. The KPT has considered the throughput as the optimal capacity. In that case the value of the maximum capacity is not known. In other words, the ratio between the maximum and optimum capacities is not known.

(iii). The KPT proposed to include the cost of way leave charges for the area occupied by the running sub sea pipeline from SPM to LFP. It is to be examined whether the area occupied by SPM and the tanker operational area is to be considered. Similarly, the calculation of area for the way leave for the pipeline also needs to be examined.

(iv). For estimating the cost, the base year considered is the year when the facility will be commencing the operation instead of taking the current year cost.

(v). The conditionalities in application of the wharfage prescribed has not been spelt out.

10.1. In the meanwhile, a letter was also addressed to the MOS on 6 December 2010 bringing out the following position with reference to the proposal filed by the KPT:

(i). Clause 3.3.2. of the upfront tariff guidelines stipulates that upfront tariff is to be determined for the optimal capacity irrespective of traffic forecast. For determining the optimal (quay) capacity, the guidelines specifies different handling rate norms for different type of cargo / vessel size and based on the cargo mix percentage optimal capacity is to be determined.

As against the above position, the KPT in its proposal has considered the optimal capacity at 9.00 MTPA at the level of annual throughput projections for arriving at the upfront tariff. This is not found to be in line with the upfront tariff guidelines. The Indian Maritime University (IMU) vide their letter dated 11 March 2010 has also made this observation on the proposal of the KPT.

(ii). When the port was advised to reassess the capacity based on parameters best achieved at other SPM operations, the KPT has vide its letter dated 29 November 2010 justified its proposal stating that a comprehensive Business Plan was prepared by the port in 2007 wherein projections of traffic for crude oil was carried out. It has submitted that based on deliberations, the capacity of the SPM facility is limited to 9 MMTPA at the level anticipated to be handled at the SPM. The port has explained that the calculations and assumptions made in the Feasibility Report are also based on 9 MTPA. For the reasons cited, the KPT has request to accept the optimal capacity of SPM at 9 MTPA and has agreed for review by TAMP if actual cargo to be handled at the SPM exceeds the proposed capacity of 9 MMTPA.

(iii). It has to be recognised that if optimal capacity as per the general formula prescribed in the guidelines is considered, then upfront tariff will turn out to be on the lower side, which may not be attractive to investors. On the other hand if the upfront tariff is determined for the 9 MTPA as considered by the KPT, unintended benefit will accrue to the operator, if at a later stage the volumes exceed 9 million tonnes per annum. It is noteworthy that such benefit, if arises, may not be due to the efficiency of the operator alone but due to the fact that the initial tariff is set with huge underutilisation of the optimal capacity.

(iv). Reference was drawn to our letter No.TAMP/52/2007-Misc dated 17 May 2010 wherein it was suggested to amend the upfront tariff guidelines allowing for mid term review if significant improvement is observed in the actual capacity due to change in the various factors other wise presumed in the upfront tariff determination by the Authority, and the subsequent discussion in this regard on 18 August 2010.

10.2. Bringing out the above position, the MOS was requested to examine the deviation from the guidelines proposed by the KPT with reference to the capacity determination and advise us at the earliest. This was followed by a reminder dated 29 December 2010. The reply of the MOS is still awaited.

11.1. A joint hearing in this case was held on 21 December 2010 at the Kandla Port Trust. The KPT made a power point presentation of its proposal. At the joint hearing, KPT and the concerned users/ organisation bodies/ prospective applicants have made the following submissions:

Kandla Port Trust

(i). COT will be outside the port limits and will not form part of the Licence to be granted by the Port. Pipeline will be 19 km within port and 0.5 km outside the port.

(ii). The existing pipelines at different SPMs in Vadinar are 48".

(iii). We have considered vessels of VLCC and Panamax at 50:50.

(iv). Designed capacity of SPM is difficult to assess. It cannot be taken as the technical capacity declared by OEM or capacity of pipelines or capacity of refinery. Various other factors influence the capacity.

(v). Berthing at SPM cannot take place after sunset. But, unberthing can happen at any time. This is the position at all SPMs. Berthing also depends on tide and wind. This places a limitation on the capacity. However, once the berthing has taken place, operations can be carried out round the clock.

(vi). The experience at other SPMs at Vadinar indicates that routine annual maintenance takes 1 month to 1.5 months a year.

(vii). Essar confirms that their average handling rate is around 8000T/hours. IOCL says, their average handling rate is around 10000T/hours. However, the handling rate reduces if the pipeline length increases.

(viii). Explained the parameters relating to ESSAR Vadinar. Essar says, generally 0.5 days per vessel is needed to berth a ship before discharging begins.

(ix). Capital cost is based on 2004 year price with escalation. We will support our estimates with analysis. The capital cost is reasonable.

(x). We will have a relook at capital estimates and rework capacity.

(xi). There will be no power and fuel cost. Our proposal stands revised to this extend.

HPCL - Mittal Pipelines Ltd.

(i). Capital cost is low. The estimates cover only material cost. Cost of installation is not considered. We will furnish supply order copy of capital cost.

Adani

(i). We generally agree with costing. We will furnish capital cost details relevant for the SPM installed at Mundra.

ESSAR & Indian Oil Corporation Limited

(i). Capital estimate does not appear to be realistic.

11.2. At the joint hearing, the KPT was advised to review its proposal and file a revised proposal by 27 December 2010. While revising the proposal, the port was advised to address the following points:

(i). The theoretical capacity of the proposed SPM should be assessed with reference to the designed parameters and suitable allowances should be provided for the various factors which may impact the capacity. For this purpose, the average of the working results for the last three years at the SPMs of Essar and IOCL at Vadinar may be relied upon, since the port pleads its inability to obtain detailed information in respect of the SPMs operating at different Major Ports.

In this regard, Essar and IOCL have assured at the joint hearing to provide necessary data support and analysis to the Port. Adani Groups, one of the prospective bidders have also assured to provide the details of relevant capital cost based on the expenditure incurred in installing a SPM facility at Mundra Port recently.

(ii). The apportionment of the projected traffic of 60.29 Million Tonnes by the year 2015 to the various crude handling facility already developed / to be developed may be furnished.

(iii). Reply to the queries raised by us vide our letter dated 13 December 2010 may be furnished in the light of the revised proposal (to be) filed by the KPT.

12.1. The port has furnished its response with reference to the decisions taken at the joint hearing vide its letter dated 12 January 2011.

12.2. The KPT has furnished its reply to the queries raised by us vide letter dated 13 December 2010. A summary of the queries raised by us and the clarifications furnished by the KPT on 12 January 2011 are tabulated below:

<table>
<tr><th>Sl. No.</th><th>Queries raised by us</th><th>Reply furnished by KPT</th></tr>
<tr><td>(i).</td><td>Confirm whether the traffic projection made three years back in 2007 at 9 MTPA capture the present demand for crude handling at Gulf of Kutch. A copy of the comprehensive Business plan reportedly prepared in 2007 which includes the traffic projection for crude oil may please be furnished.</td><td>(a). The traffic projection made in 2006 captures the present demand for crude handling at Kandla Port. The Crude oil traffic from KPT is now essentially from Vadinar. The traffic throughput projected in the business plan is at 60.29 MTPA in 2015.

(b). IOCL has two SBMs installed in Vadinar which feeds the Panipat, Mathura and Koyali refineries. The details of the current feed stock and expansion plans along with the supply sources of the refineries is shown in the table.

<table>
<tr><th colspan="4">IOCL</th></tr>
<tr><th></th><th>Refinery</th><th>Present MMTPA</th><th>Future MMTPA</th></tr>
<tr><td>Capacity</td><td>Koyali</td><td>13.7</td><td>18</td></tr>
<tr><td></td><td>Mathura</td><td>8</td><td>11</td></tr>
<tr><td></td><td>Panipat</td><td>15</td><td>21</td></tr>
<tr><td colspan="2">Capacity Total</td><td>36.7</td><td>50</td></tr>
<tr><td>Supply</td><td>GAPL</td><td>6</td><td>9</td></tr>
<tr><td></td><td>Vadinar</td><td>20.5</td><td>34</td></tr>
<tr><td></td><td>Ankleshwar</td><td>6</td><td>6</td></tr>
<tr><td colspan="2">Supply Total</td><td>32.5</td><td>49</td></tr>
</table>

It is seen that the capacity expansion being planned in the refineries is from 36.5 to 50 MMTPA (at 100% capacity) or</td></tr>
</table>

<table>
<tr>
<td></td>
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<td>
about 35% growth. It is also seen that Vadinar and GAPL both have expansion plans to meet the enhanced capacity of the refineries. Other upcoming SBMs/terminals in minor ports in the vicinity could also feed these refineries.
(c). Essar has its refinery which is around 8 Km from Vadinar. The refinery capacity is around 10.5 MTPA which is around 14 MTPA with expansion plans upto 32 MTPA. In view of the planned increase in refinery capacity ESSAR Vadinar is considering an additional SPM in Vadinar along with two berths. Essar oil crude oil requirements are 14 MTPA by 2010 and 32 MTPA by 2015. This includes grass root refinery planned in SEZ.
(d). Hence based on the capacity expansion plans of IOCL and future capacity expansion and green field projects planned by Essar, the crude oil traffic projections of KPT in the business plan is given in the table below:
<table>
<tr><th>Year</th><th>Projections MMTPA</th></tr>
<tr><td>2010</td><td>38</td></tr>
<tr><td>2015</td><td>56</td></tr>
</table>
KPT will be in competition with the existing and upcoming minor ports in the vicinity to supply the crude for the refineries. These minor ports have a considerable flexibility in customizing a concession agreement for the operators.
KPT has contacted various Oil companies including the PSUs for their response for SPM on BOT basis and the RFQ attracted only 2 bidders.
</td>
</tr>
<tr>
<td>(ii).</td>
<td>The handling rate furnished by the KPT in the comparative statement are based on different units of measurement such as kl, m3, tonnes. For a like to like comparison, the KPT is requested to furnish the handling rate achieved by other SPM operators on the tonne / hour basis after applying the applicable conversion factor and specific gravity, if any. Please also send the working in this regard.</td>
<td>
(a). The SPM is being considered on BOT basis. In the absence of a captive user for the facility, generic crude characteristics have been considered. The details along with specific gravity are as follows.

Arab crude

light -0.85,
medium - 0.87
heavy - 0.88)

Nigerian Crude -0.84)
Bombay High Crude (0.82)

The discharge rates obtained from the operators in respect of their SPM were on different formats, units and degree of detail. For the sake of simplicity the average value of specific gravity has been taken at 0.85.
(b). The details of handling rate achieved in the SPMs from the various SPM operators are as under
<table>
<tr><th>Vessel</th><th>SPM</th><th>Unloading</th><th>Unit</th><th>Conversion</th><th>Tons/ Hour</th></tr>
<tr><td>Panamax</td><td>Essar_Vadinar</td><td>6000</td><td>M3</td><td>0.85</td><td>5100</td></tr>
<tr><td>VLCC</td><td>Essar_Vadinar</td><td>7200</td><td>M3</td><td>0.85</td><td>6120</td></tr>
<tr><td>Aframax</td><td>Essar_Vadinar</td><td>5200</td><td>M3</td><td>0.85</td><td>4420</td></tr>
<tr><td>Panamax</td><td>BPCL_kochi</td><td>6000</td><td>M3</td><td>0.85</td><td>5100</td></tr>
<tr><td>VLCC</td><td>BPCL_kochi</td><td>8250</td><td>M3</td><td>0.85</td><td>7013</td></tr>
<tr><td>Coastal</td><td>IOC_Vadinar</td><td>2000</td><td>M3</td><td>0.85</td><td>1700</td></tr>
<tr><td>VLCC</td><td>IOC_Vadinar</td><td>7500</td><td>M3</td><td>0.85</td><td>6375</td></tr>
</table>
(c). The discharge rates of Essar Vadinar have been reviewed at their end and it is seen the values are consistent with other operators. The discharge rated obtained from Essar Vadinar
</td>
</tr>
</table>

<table>
<tr><td></td><td></td><td>SPM is considered most reliable as the same has been reviewed and provided by their Head (Marine).

<table>
<tr><th></th><th>Aframax</th><th>Coastal</th><th>Panamax</th><th>VLCC</th><th>Average Tons/ Hour</th></tr>
<tr><td>BPCL_kochi</td><td></td><td></td><td>5100</td><td>7013</td><td>6056</td></tr>
<tr><td>Essar_Vadinar</td><td>4420</td><td></td><td>5100</td><td>6120</td><td>5213</td></tr>
<tr><td>IOC_Vadinar</td><td></td><td>1700</td><td></td><td>6375</td><td>4038</td></tr>
<tr><td>Average Tons/ Hour</td><td>4420</td><td>1700</td><td>5100</td><td>6503</td><td>5118</td></tr>
</table>

KPT has therefore revised downwards the handling rate at the SPM from 7500 tons per hour to 5500 tons per hour.</td></tr>
<tr><td>(iii).</td><td>The feasibility report prepared in 2004 estimates the SPM cost and offshore pipeline cost at Rs.103.28 crores and Rs.187.96 crores respectively under Table 2 Case-I Option II referred by the KPT. Following the approach adopted by KPT of applying the annual escalation at 5% per annum, the capital cost of these two items in the year 2010 will be Rs.138.41 crores for SPM and Rs.251.88 crores which does not match with the capital cost estimated by KPT at Rs.148.23 crores and Rs.269.77 crores respectively. Kindly reconcile the difference.

Confirm the approach adopted by the KPT in arriving at the capital cost applying 5% annual escalation to the estimates of 2004 would reflect the current market price for these items.</td><td>(a). The feasibility report estimates for cost in 2004 and capital costs are estimated for 2010 with 5% escalation.

The port had initially calculated the capital cost considering the phasing of the project in the year 2011 and 2012 according the corresponding escalated costs using 5% annual escalation were Rs.148.23 crores for SPM and Rs.269.77 crores for offshore pipeline.

(b). KPT has since revised upwards the annual escalation rates at 5.3% per annum. This new rate was arrived at by including 2009 inflation rates also to calculate the average (previously average calculated upto 2008 only).

(c). The port has subsequently also studied the cost and capacity details of some of the existing and upcoming SPM/ Pipelines projects. These details were advised by the SPM operators who were requested for the same in TAMP hearing on 22 December 2010.

(d). The estimates of SPM/ offshore pipeline have been revised. The escalated costs have been arrived at applying 5.3% annual inflation. The pipeline costs have also been adjusted using a heuristic to be more reflective of the current market prices considering the estimates of the ongoing and upcoming projects in the vicinity. The revised capital cost is tabulated below:
<table>
<tr><td>SPM</td><td>Rs.148.26 crores</td></tr>
<tr><td>Offshore pipeline</td><td>Rs.443.68 crores</td></tr>
</table></td></tr>
<tr><td>(iv).</td><td>The port has not furnished reply to the query raised about the provision proposed to be included in the licence agreement (to be) entered with the concessionaire with regard to the pipeline falling outside the port limit but at the same time integral part of the SPM operations.</td><td>The port is not entering into any licensing agreement about the pipeline or COT falling outside the port limit with the concessionaire. The port has excluded the cost of the pipeline & COT falling outside in its estimation for the tariff proposal.</td></tr>
<tr><td>(v).</td><td>(a). The port has not explained as to why the power and fuel consumption details in respect of the SPM operations carried at the Vadinar Division, which falls under the control of KPT could not be obtained and furnished to justify the estimates of power consumption. The port is again advised to furnish consumption of power and fuel at its SPM operations (Vadinar Division). The power and fuel cost estimated by the port may be justified with reference to</td><td>The details sought relating to SPMs at Vadinar is furnished.

It shows that there is negligible fuel consumed by the SPM. The SPM has self contained power (solar).</td></tr>
</table>

	consumption and current rate of fuel and power.	
	(b). The port is in its proposal dated 26 October 2010 at para 7.3. has explained that the daily power and fuel cost is Rs.2.50 lakhs per day in F.Y. 2005 and applying the annual escalation @ 5% per annum it works out to Rs.3.88 lakhs per day in F.Y. 2014 which is reckoned for estimating the power cost. Chapter 8, Section 8.12 of the Feasibility Report, however, reveals that the estimation of Rs.2.50 lakhs/ day pertains to the total operating cost of SPM and not exclusively for power and fuel. It is suggested that the estimation of power and fuel cost may be reviewed and, if required, modified based on the actual consumption figures obtained at Vadinar division for similar operations.	The port had carried out a study and it is ascertained that there are no power or fuel costs associated with the SPM. The power and fuel costs which are attributable to the COT have been erroneously considered for SPM in the tariff proposal and the same is rectified. It is further stated that there are no daily costs in respect of fuel or power by the SPM. Such costs are also attributable to COT. In this project the COT being envisaged outside the port limits and hence is not considered as part of the present project. Therefore power and fuel costs not considered for this project.
	(c). The port has made a general statement that the power and fuel cost are considered as per the feasibility report and escalated thereon. The unit cost of power reported by KPT in its original proposal dated 20 February 2010 is Rs.7.98 i.e. (as per December 2009 electricity bill). Whereas applying 5% annual escalation to the unit cost of power estimated at Rs.4.50 in the Feasibility Report of the year 2004, the unit cost of power in 2010 works out to Rs.6.03 which does capture the prevailing unit cost of power.	The power and fuel costs are not attributable to this project as COT is not part of this project, the same are not being considered.
(vi).	The query raised at item B (iii) need to be addressed by the port. The KPT is again advised that proposed note 1 may be elaborated to cover all services included in the consolidated handling charge.	Consolidated service charge is for all activities related to handing crude. No further charges are envisaged to be charged by the operator. However, charges related to COT & related services are not included in the scope of the proposal.

12.3. The other points clarified by the KPT are summarised below:

(i). (a). The theoretical capacity of the SPM has been arrived at considering the inputs from SPM operators regarding traffic and their views on the theoretical and maximum capacity and considering the time available at SPM.

(b). The port had carried out a survey of the SPMs operating in major ports. The inputs received from Essar Vadinar, IOC Vadinar and BPCL Cochin and considered for arriving at the capacity are given below:

			2007-2008	**2008-2009**	**2009-2010**	**Remarks**
ESSAR	Capacity of SBM	**MMTPA**	26	26	26	14.5 MMTPA is considered the safe maximum capacity.

	Traffic at SBM	**MMTPA**	10.5	14.3	14.3	Crude
	Capacity utilization	**%**			55%	However, the Capacity is limited by refinery Capacity.
	Days of operation	**Days**			210	Operations round the year. Downtime due to maintenance 35 days. No berthing after 4 pm.
	Capacity of the refinery	**MMTPA**	14	14	14	Essar Vadinar 14 MMTPA Being enhanced to 16 Million in 2011
IOC VADINAR (Both SPMs are used together)	Capacity of SBM (both)	**MMTPA**	25 (12.5 each)	25 (12.5 each)	25 (12.5 each)	Two SPM are used interchangeably hence data is available only together. It was theorized that in the scenario using only VLCC (then) with about 55% utilization (considered maximum) the capacity of both SPMs could be 40 MMTPA.
	Traffic at SBM	**MMTPA**	22 (both)	22 (both)	22 (both)	Crude
	Capacity utilization	**%**			40%	Expected to be 55%. (40% utilization is calculated from Pilot on board to cast off).
	Days of operation	**Days**	146	146	150	This is for both the SPM. 10% of days (35 days) are removed for maintenance. 35% time is not available due to navigational constraints.
	Capacity of the refinery	**MMTPA**				Koyali – 13.7 MMTPA, Panipat – 15 MMTPA, Mathura – 8 MMTPA
BPCL Cochin	Capacity of SBM	**MMTPA**	25	25	25	12.5 MMTPA @ 50% utilization considered as the Capacity by BPCL for all practical purposes.
	Traffic at SBM	**MMTPA**	2.3	7.3	7.75	Planned 8.8 MMTPA in 2010-11
	Capacity utilization	**%**			30%	• The utilization of the SPM is calculated with respect to the number of days the SPM is operational – 110 days or 30% • As maximum traffic is considered capacity has not been reached. This data is not relevant.
	Days of operation	**Days**	-	-	110	• There are 8-9 vessels a month. The turnaround time of a VLCC vessel is about 2 days

						• The vessels are allowed to berth from 0630 hours to 4 PM only. • Maintenance operation is also done during the above times • The monsoon is for 6 months. During this time vessel operations window is limited.

(c). Essar is operating 14.3 MMTPA which is 55% of the theoretical capacity envisaged at 26 MMTPA. However, Essar has categorically stated that 14.5 million tons is considered the safe maximum capacity.

(d). It has furnished a table showing the activity and waiting times at Essar SPM to show extraordinarily long waiting periods by the vessels for SPM. As per the table furnished by KPT, the total time taken is in the range of 74 hours to 89 hours for different types of vessels handled at SPM.

(ii). (a). Based on the capacity expansion plans of IOCL and expansion and green field projects planned by Essar, the crude oil traffic projections of KPT in the business plan is given in the table below:

Year	Projections (MMTPA)
2010	38
2015	56

(b). KPT is of view that the upcoming SPM will be able to service a part of the project traffic. The feasibility report has also projected demand for the SPM at 9 MMTPA. The Kandla Batinda pipeline (KBPL) is not being (presently) put to use, this pipeline is being proposed to be utilized for transportation of crude to existing refineries as well as the others being planned.

(c). It is stated that the business plan projections were made in 2006. The projected traffic of 60.29 Million tonnes is only projection of traffic and actual traffic is dependant on the dynamics of supply and demand along with the operations and marketing strategies employed. KPT is in direct competition with the existing and upcoming minor ports in the vicinity to supply the crude for the refineries. The minor ports have considerable flexibility in customizing a concession agreement for the operators. Hence it is not feasible to apportion this traffic.

13. Based on the above, the KPT has furnished revised proposal modifying the optimal capacity of SPM, capacity cost of pipelines and

consequently the operating cost and the upfront tariff proposed. The highlights of the revised proposal alongwith the submissions made by the KPT are given below:

(i). Handling rate of the SPM:

(a). The handling rate for the SPM was arrived at by studying the "effective handling rate" achieved by the operators of SPMs in Vadinar and Cochin. It is stated that the "effective handling rate" (discharge rate) is considerably less than the discharge rates the vessels are capable off. This is in view of limitations due to cargo type and in view of stoppages due to various operational, nautical and safety considerations during the discharge operation.

(b). The handling rates achieved by the different vessel types as reported by Essar Vadinar are tabulated below:

Tanker Type	Average rate (tonnes/ hr)
Aframax	4420
Suezmax	5100
VLCC	6120

(c). From the above table it is seen that average handling rate for Suezmax and VLCC is 5610 tons/hr. KPT has therefore considered 5500 tons /hour as the discharge rate for the tariff calculation.

(ii). Optimal Capacity of the SPM:

(a). The feasibility report has assumed a capacity of SPM at 9 MMTPA. This was based on the forecasted traffic to be handled in the planned SPM. The feasibility has also reported that the maximum throughput to be transported in the cross country pipeline at 12 MMTPA taking into account any future expansion plans. The traffic handled in the SPMs is to feed a single refinery generally a captive facility. As such theoretical and optimal capacity of the SPM are not a relevant issue.

(b). TAMP guidelines 2008 envisages that the capacity of the facility be estimated using a generic approach.

KPT has, therefore, carried out an exercise to estimate the capacity of the upcoming facility. The upcoming facility is for handling liquid cargo, specifically crude only. The TAMP guidelines of 2008 for liquid terminals inter alia recommends that the optimal capacity of a liquid terminal should be determined taking into consideration the following elements.

(i). Type of cargo to be handled
(ii). Size of vessels to be handled

The above two elements were considered relevant to SPMs also. In addition to these two elements, KPT has also considered the following two elements to be relevant to the issue.

(iii). Capacity of refinery
(iv). Time available for operation

- The type of cargo is an important element particularly considering the safety issue - combustion, viscosity, pollution etc. the discharge rates for crude and products traffic are considerably different. Hence, it was realized that the discharge rates of vessel could not be used to calculate the handling rate of the SPM.

- Large vessels tend to have higher discharge rates. Some of the newer VLCCs are reported to have discharge rates in the range of 9000-10,000 tons/hr. However, as stated in the preceding section the effective handling rates were not significantly higher and were found to be in the range of about 5600 tons per hour for VLCCs also.

- It is seen that the TAMP 2008 guidelines do not provide for the capacity of liquid terminal to be limited by capacity of the storage facility or any downstream facility. However, it is seen that capacity of all the SPMs operating the Major Ports are limited by the capacity of refinery.

  KPT is also of the view that the upcoming SPM facility can feed only one refinery. There is an increasing trend to integrate crude handling facilities in the energy supply chain, hence an existing /upcoming refinery would in all likelihood provide for/acquire such assets as a forward integration strategy.

  Further, the length of the pipeline is 19.5 Kms. The pipeline would itself contain a large volume of crude (about 20,000 tons) of a specific quality between vessel visits. Hence, on a routine basis it would be operationally and economically unviable to prepare the pipeline for another variety of cargo with different specific gravity, viscosity, etc.

- Cargo handling operations from an SPM is more complex. The berthing, un-berthing, maintenance operations are constrained due to availability of support services, safety services due to monsoons, visibility, weather, waves, winds, etc.

  All the SPM operators permit the vessel to berth only from 6 AM to 4 PM. This effectively reduces the time available in each day to 17 hours from 24 hours or 70% of the day.

The SPM operators have reported about 35 days is involved routine for maintenance. The maintenance of SPMs are also undertaken only during the fair weather and during the day. Hence downtime due to maintenance/repair is lost for handling cargo.

(c). The KPT is of the view that the utilization in the norms for calculation of optimal capacity of Liquid Bulk terminal which is reckoned at 70% of the maximum capacity is not practical and cannot be applied to the SPM facility. The KPT has suggested that the optimal utilization rate may be considered at 50% and each day be considered at 17 hours.

The theoretical capacity of the proposed SPM is arrived by KPT at 24 MMTPA. The optimal capacity is arrived at using 50% utilization at 12 MMTPA.

The details of the capacity assessment by KPT is tabulated hereunder:

SHIP TYPE	**Suez Max**	**VLCC**
DWT	160000	300000
Parcel size (tons)	136000	255000
Average Discharge rate (m3/hr)	5500	
Time to discharge (hours)	25.0	47
Peripheral time (hours)	9	9
Turn around period for each ship (hours)	34	56
Mix of Vessels	50%	50%
Parcel size of hypothetical ship with above mix (tons)	195500	
Turnaround Time of the above vessel (hours)	45	
Total days in a year	365	
Maintenance days	35	
Net days available	330	
Time available for SPM operations per day (0600 hrs to 1600 hrs = 10 hours for berthing) remaining time counted half as only discharge & unberthing can be undertaken 14 hours = 7.0 hours	17	
Time available for SPM operations per day approx 17 hours (out of 24 hrs)	70%	
Total days available for SPM operations (at 70% of the net days available)	231	
Total (in Hrs)	5544	
No. of trips possible	123.0	
Maximum Capacity of SPM – 100% (MTPA)	24.0	
Optimal Capacity Utilization	50%	
Optimal Capacity (MTPA)	12.00	

(iii). Capital Cost Estimation:

(a). There are no civil structures envisaged to be developed with regard to the proposed SPM terminal and pipeline facilities development.

(b). The cost estimates had been estimated in March 2004 by Engineers India Limited (EIL). These estimates were interpolated by Kandla Port Trust (KPT) by applying an escalation for inflation. The inflation rates used for escalation is 5.30% per annum in the revised proposal as against 5% assumed in the original proposal.

(c). The capital cost of pipeline has been revised as the estimates in the original proposal did not reflect current market prices. The cost estimates of pipeline is taken based on the expansion project for Vadinar Oil Terminal by Essar Engineering in 2008 which is found to be most reliable and relevant. The unit cost of pipeline so obtained at Rs.20 crores per km or Rs.380 crores based on 2008 prices is escalated applying 5.3% inflation per annum to arrive at the capital cost for the year 2011 which comes to Rs.443.68 crores for the pipeline. For SPM, adopting the Essar cost of 2008 and applying annual escalation comes to Rs.140 crores in the year 2011.

(d). The cost estimate of the SPM as per the feasibility report is Rs.103.28 crores. This is escalated using the inflation rate of 5.3% per annum to arrive at 2011 cost of Rs.148.26 crores which is considered in the revised proposal.

(e). The cost estimates obtained above were compared with estimates using inputs of Cochin, Mundra and Essar Vadinar. The capital cost could vary significantly depending upon the source; age of equipments, duty structure etc and the reliability of the source was also an issue. The estimates of Essar Vadinar was found to be most reliable. The KPT has revised the capital cost estimates of SPM and the pipeline upwards to be more reflective of the current market prices. The revised capital cost estimated by KPT is presented in the following table:

(**Rs. in crores**)

Sl. No.	**Particulars**	**Estimated capital cost**
(i).	SPM	148.26
(ii).	Pipeline	443.68
(iii).	Miscellaneous charges – [5% of (i). + (ii).] i.e. 5% * (148.26 +443.68)	**29.59**
	Total Capital Cost of the Project [(i) + (ii) + (iii)]	**621.53**

(iv). Estimation of Operating Cost:

(a). The operating cost for assessing the Annual Revenue Requirement (ARR) of the SPM has been estimated based on the norms specified in guidelines for liquid terminal and has also been compared with the cost of SPMs operational at Vadinar and Cochin.

(b). Power and fuel cost are not applicable to the proposed SPM terminal as SPM uses self contained power using solar cells. The fuel requirement is negligible which cannot be estimated on per hectare basis. Power and fuel cost is, therefore, not considered in the estimation of operating cost.

(c). Repairs and maintenance for civil works is not estimated as no civil structures are envisaged for the facility. Adopting the norms in the guidelines prescribed for liquid terminal, repairs and maintenance on mechanical and electrical equipments is estimated at 2% of total capital cost.

(d). Insurance cost and other expenses are estimated adopting the norms prescribed for liquid bulk terminal.

(e). Since there are no civil structures being built, depreciation rate has been taken as 10.34% per annum for the SPM facility and pipeline.

(f). The KPT has stated that as per the Scale of Rates (SOR) of Kandla Port, way leave charges to be paid by the operator is Rs.0.75 per sqm per month. Accordingly, the way leave charges for the pipeline of 19 kms. length and 2 mtrs. width is estimated at Rs.3.42 lakhs per year.

(v). Assessment of Annual Revenue Requirement (ARR):

(a). The total pipeline length is 19.5 kms. The entire pipeline from the LFP to COT measuring about 0.5 km is outside the port limits. Hence, only 19 kms pipeline is considered for estimation of the project costs for upfront tariff fixation.

(b). The revised Annual Revenue Requirement estimated by the KPT is as follows:

Sr. No.	Particulars	Rs. in lakhs
1.	Total annual operating cost	8917
2.	**CAPITAL EMPLOYED**	**62153**
3.	16% Return on capital employed	9944.48
Total Annual Revenue Requirement		**18861**

(vi). The KPT has stated that as seen in SPMs operational at Cochin and Vadinar, handling charge is the only amount proposed to be collected from the users. Hence, the entire revenue requirement is considered for deriving the composite handling charge. It has, therefore, not proposed any miscellaneous charge.

(vii). The per tonne handling rate proposed by the KPT for optimal capacity of 12 Million Tonnes Per Annum to meet the estimated annual revenue requirement of Rs.18,861 lakhs is Rs.157 per tonne.

14. With reference to the totality of the information collected during the processing of this case, the following position emerges:

(i). The tariff guidelines of 2008 for upfront tariff fixation prescribe norms/ guidelines for dedicated facilities such as coal, iron ore, container, liquid handling terminal and multipurpose cargo terminal. The guidelines of 2008 for upfront tariff fixation do not prescribe any exclusive norms / guidelines for handling liquid cargo at Single Point Mooring as a stand alone facility.

As brought out in the factual note, in the absence of any norms prescribed in the guidelines for determining upfront tariff for SPM facility, the matter was referred to the Ministry of Shipping (MOS) seeking their recommendations. The MOS vide letter No.PD-11015/1/2010-KPT dated 9 June 2010 directed this Authority to undertake the fixation of upfront tariff for SPM at KPT based on the parameters applicable for liquid bulk handling with reference to SPM operations carried out at the KPT (Vadinar Division), Cochin Port and Paradip Port Trust as an interim measure till the guidelines for SPM terminals are finalised.

(ii). The proposal filed by the KPT mainly relies upon the feasibility report prepared nearly six years back in the year 2004. The KPT was advised to update the feasibility report for the proposed SPM terminal in order to capture the change in the technology, market conditions, prevailing capital cost, etc. The port has clarified that there has not been significant change in the technology particularly for the proposed SPM since the preparation of feasibility report and the estimates of capital cost has been reviewed and modified in the revised proposal to reflect the current market rate.

(iii). The KPT had considered the capacity of the SPM at 9 MTPA in the original proposal as per the feasibility report and stated that it was based on the throughput projections. Neither the proposal of the KPT nor the feasibility report provided the calculation and its basis for assessing the capacity at 9 Million Tonnes Per Annum (MTPA). There were objections from prospective bidders on the estimation of capital cost. In view of the shortcomings observed in the proposal, the port was advised to review and modify its proposal based on the parameters achieved at other SPM operations including the SPM operated in the Vadinar division in line with directions of the MOS.

In the revised proposal, the KPT has considered the optimal capacity at 12 MTPA as against 9 MTPA assumed originally. Based on the input of capital cost obtained from Essar one of the SPM operators in Vadinar, the port has revised the capital cost to Rs.621.53 crores as against Rs.438.90 crores estimated in its original proposal. The power cost estimated at Rs.465 lakhs is excluded in the revised proposal citing that the proposed SPM will not consume any power and fuel. The final revised proposal of the KPT dated 12 January 2011 along with the information /

clarifications furnished by the port during the processing of the case is considered in the analysis.

(iv). Optimal Capacity:

As stated in the narration of the factual note, the KPT has mainly relied on the traffic forecast to consider the optimal capacity of the terminal. The optimal capacity of the SPM has been increased to 12 MTPA in the revised proposal. The port has confirmed that the 9 MTPA captures the present demand of crude handling at the proposed SPM and as per the feasibility report the maximum transfer of liquid can be 12 MTPA for the proposed SPM even after considering the future expansion plans which is finally considered as the optimal capacity in the revised proposal.

Clause 3.3.2. of the upfront tariff guidelines of 2008 stipulates that upfront tariff is to be determined for the optimal capacity irrespective of traffic forecast. For determining the optimal (quay) capacity, the guidelines specifies different handling rate norms for different type of cargo / vessel size. A norm of 70% of the maximum capacity is prescribed as the optimal capacity of the terminal. When a generic approach is available to the estimate capacity in the guidelines, the proposal of the KPT to reckon the traffic projection/ demand as the optimal capacity is a deviation from the guidelines of 2008. Bringing out the above position, the port was advised on several occasions to review its proposal and reassess the optimal capacity taking into consideration parameters of handling rate, number of working hours, etc., best achieved in the SPM operations following the generic approach prescribed in the guidelines.

The Kandla Port Trust has clarified that it is difficult to assess designed capacity of SPM as there are various factors which influence the capacity determination. It has argued that the traffic handled in the SPMs is to feed refinery and hence is restricted to the capacity of the refinery. The proposed SPM is to feed a single refinery and, therefore, optimal capacity of the SPM is not a relevant issue as per the KPT. The port has however attempted to furnish the capacity calculation which is explained here under:

(a). In the revised proposal, the KPT has considered the effective discharge rate of VLCC at 6120 tonnes/ hour and suezmax vessel at 5100 tonnes/ hour and the average discharge rate at 5500 tonnes/ hour. The handling rate achieved by Essar and IOCL are 8000 and 10000 tonnes / hour for their respective SPM operations. Even the KPT had earlier stated the average discharge rate at SPM would be 7500 tonnes / hour which is scaled down to 5500 tonnes/ hour in the revised proposal. The KPT has stated that the revised average discharge rate of 5500 tonnes/ hour is based on the most reliable dates obtained from Essar Vadinar. Since the upfront tariff is fixed for 30 year time horizon, the reason for not considering the best discharge rate parameters achieved is not explained by the port.

(b). It is notable that even if the average discharge rate of 5500 tonnes / hour as indicated by the KPT is considered, the optimal capacity will be 33.72 MTPA (i.e. 5500T/hour *365*24 hours *70%) as per the general formula prescribed in the guidelines for estimating the capacity. As against the above, the KPT in the revised proposal filed on 12 January 2011 has assessed the theoretical capacity of the SPM at 24 MTPA which is further pegged at 50% capacity utilisation i.e. at 12 MTPA for arriving at the upfront tariff. The capacity calculation furnished by the KPT shows that the port has provided allowance in various parameters, viz. number of working days, number of hours available for SPM operations citing routine maintenance and restriction in berthing vessels during night time at SPM. The optimal capacity of the SPM is pegged at 50% of the theoretical capacity i.e. 12 MTPA. The KPT has stated that various factors influence the determination of the capacity of SPM and has highlighted the following points in support of its argument:

- The operations of berthing vessels/ tankers at the SPM is possible only during the day time from 6 AM to 4 PM which effectively reduces the time available in each day to 17 hours from 24 hours.

- The routine maintenance of SPM facility which is possible only during day time consumes one to one and half month in a year as per position obtained at other SPMs in Vadinar.

- There are limitations due to cargo type and in view of stoppages due to various operational, nautical and safety considerations during the discharge operation.

The KPT has, therefore, argued that 70% utilization norms and 365 days x 24 hours of working prescribed in the guidelines for calculation of optimal capacity cannot be applied to the SPM facility. At all the SPM operations the capacity is in the range of 40% to 50% of the designed capacity.

- Further, SPMs operating the Major Ports are limited by the capacity of refinery. It has cited the examples of the SPMs operated by Essar at Vadinar, IOCL and the BPCL at Cochin Port Trust in support of its claim. KPT is of the view that the upcoming SPM facility can feed only one refinery.

- The pipeline of 19 Kms length would itself contain a large volume of crude of specific quality. It has stated that operationally and economically it may not be unviable to prepare the pipeline for another variety of cargo. Even the Essar has confirmed that average handling rate will reduce if the length of the pipe line increases.

The port has pegged the optimal capacity at 12 MTPA but has proposed to review the tariff, if and when the actual traffic handled exceeds the capacity assumed in the upfront tariff calculation tariff caps.

(c). The optimal capacity is a critical factor in determination of the upfront tariff and if the various parameters assumed in determining the upfront rate based on which the tariff is fixed is improved at a later stage it may result in unintended gain to the operator. In view of the above position and in the absence of any separate norms for SPM operations, the MOS was requested vide our letter dated 6 December 2010 to examine the deviation from the guidelines proposed by the KPT with reference to the capacity determination in view of the constraints explained by the port. The proposal of the port to review the upfront tariff if the actual cargo at SPM exceeds the capacity considered for determination of tariff was also highlighted. We have not received any specific advice or any adverse remarks from the Ministry on the deviation proposed by the KPT from the guidelines with reference to the assessment of the capacity. In a separate meeting to review the PPP projects, the Ministry has, however, pointed out that SPM facility at Gulf of Kutch is one of the prestigious projects, which should be expedited. In this backdrop, upfront tariff for SPM at KPT is processed considering the optimal capacity at 12 MTPA as assessed by the KPT subject to review when actual traffic handled exceeds the optimal capacity considered in this exercise. The port has undertaken to file a proposal for review of tariff at that time. The port is advised to incorporate an appropriate clause to this effect in the RFP documents to be issued and in the BOT agreement to be signed with the successful bidder. It is relevant to state that a similar approach was adopted in case of upfront tariff for dry bulk terminal off Tekra near Tuna at port of Kandla.

(v). <u>Capital costs</u>:

(a). The upfront tariff guidelines broadly indicate civil works and list of equipment for various cargo handling facilities. There are no separate norms prescribed for SPM operations.

The KPT has clarified that civil works, storage of the crude, etc. are not envisaged for the proposed SPM. The storage facility at Crude Oil Terminal (COT) is proposed to be located outside the jurisdiction of the port. That being so, the capital cost does not include the civil cost, cost of COT, etc.

(b). As regards equipment, the port envisages investment for SPM terminal and pipelines.

The prospective bidders observed that the capital cost estimated by the KPT in the original proposal is on the lower side. The KPT has revisited the estimates of capital cost and has revised the estimates of pipeline cost reportedly based on the unit rate obtained for one of the projects of Essar. The port has confirmed that the capital cost pertaining to the portion of pipeline falling outside the port limits which was considered in the original proposal is excluded in the revised capital cost. Since the base rate for estimation pertains to the year 2008, escalation of 5.3% p.a. is applied to update the capital cost to reflect the current market price. For cost of the SPM, the estimates furnished in Feasibility Report is taken as the base and annual escalation of 5.3% per annum is provided to arrive at the updated capital cost.

Despite specific request, the KPT has not furnished supporting documents in form of budgetary quotations', rate analysis, etc. to validate the estimates of capital cost. The capital cost estimated by the KPT is relied upon.

(c). This miscellaneous cost is estimated at 5% of equipment cost adopting the norms prescribed in the guidelines for liquid handling terminal.

(d). Return on capital employed is estimated at 16% of the estimated capital cost as per the norms prescribed in the guidelines.

(vi). Operating cost:

(a). The port had initially estimated power cost which was not supported with any calculation relating to consumption of power. The port was advised to justify the estimation of power cost with reference to actual power consumption at other SPM operation and particularly with reference to SPM operated by the KPT at Vadinar Division. On our insistence, the port has revisited this estimate and confirmed that power and fuel cost are not applicable to the proposed SPM as it will be using self contained power using solar cells.

(b). The repairs and maintenance cost is estimated at 2% on the mechanical and electrical equipment, insurance cost and other expenses are estimated at 1% each of the gross fixed assets as per the norms prescribed in the guidelines.

(c). Clause 3.5.3. of the tariff guidelines of 2008 stipulates that the depreciation should be calculated following the Straight Line Method (SLM) as per the rates prescribed in the Companies Act 1956. The KPT has in the revised proposal adopted depreciation rate of 10.34% stating that it is as per the guidelines.

(d). The upfront tariff guidelines require estimation of license fee for port assets based on the rates prescribed in the Scale of Rates of the respective port trusts. The KPT does not propose to allot any land to the concessionaire as it does not anticipate any land based developments within port jurisdiction. The Kandla Port Trust has, however, estimated way leave charges on 19 kms. length of pipe line i.e. from the SPM in the port waters to the Land fall Point falling in the port area. For estimating the way leave charges, the KPT had originally adopted the license fee prescribed in its existing Scale of Rates for open space for kutcha plots at Rs.10.50 per sq. metre per month. The KPT in the revised proposal has modified the estimate and scaled it down adopting the unit rate of Rs.0.75 per sq. mtr. per month. It is understood that the revised unit rate of license fee applied by the KPT is based on the unit rates for open space at Tuna prescribed in the Scale of Rates of the KPT which was considered in the case of upfront tariff determination for dry bulk cargo off Tekra at Tune in Kandla Port.

It is to relevant to state that the existing Scale of Rates of the KPT approved by this Authority does not prescribe any way leave charges for water area. The Land Policy guidelines issued by the Government in the year 2004 are not explicit about the rate to be adopted for water area of the port which is licenced for use of any private party. There is no uniformity in application of rates for water area amongst different Major Port Trusts. The matter has been referred to the Ministry of Shipping vide our letter No.TAMP/57/2008-MOPT dated 9 June 2010 and the response of the Ministry is awaited. For the purpose of this analysis the revised way leave charges estimated by the KPT is considered.

(e). The total operating cost for handling crude at SPM estimated by the KPT is Rs.8917 lakhs which is considered in determining the upfront tariff.

(vii). (a). The total annual revenue requirement from SPM operations is estimated at Rs.18861 lakhs which is an aggregate of 16% return on the capital cost estimated at Rs.9944 lakhs and operating cost of Rs.8917 lakhs.

(b). The entire estimated revenue requirement is proposed to be recovered from the handling charge. Accordingly, to meet the estimated annual revenue of Rs.18861 lakhs over the optimal capacity of 12 MTPA, the consolidated handling charge of Rs.157 per tonne is prescribed as proposed by the KPT.

The port has not listed down the services included in the composite handling rate despite specific advice. A note is introduced to state that the handling charge of Rs.157 per tonne for handling crude at SPM is a composite rate for unloading the cargo from vessels / tanker, transportation through pipeline (within the limits of the port), wharfage and all other associated services provided by the SPM operator.

(viii). As per the coastal concession policy of the Government which is prescribed in clause 4.3. of the tariff guidelines notified on 31 March 2005, handling of crude including POL is not entitled for any coastal concession. The port has also therefore rightly not any proposed any concessional tariff in the handling charge for coastal category.

(ix). As the levy of the vessel related charges are not within the scope of the concessionaire, it is not found relevant to include the conditions proposed at note (i), (ii), (iii) and (iv) about reckoning the status of the vessel for the purpose of vessel related charges, criteria for conversion of foreign to coastal vessel, review of exchange rate, conversion of dollar into rupees terms. Since no coastal concession is envisaged for coastal vessel and since all the vessel related charges will be collected by the KPT, definitions of 'foreign-going' and 'coastal' vessels and 60% concession in vessel related charges to coastal vessel proposed by KPT is not found relevant and hence not incorporated in the Scale of Rates. The definition of port area will be as per the relevant Act. Hence the above mentioned definition and conditions proposed by KPT are not included in the Scale of Rates for the SPM facility.

(x). Some of the common conditions stipulated in the guidelines of 2005 and uniformly prescribed in the Scale of Rates of other major ports / private terminals such as users should not be required to pay charges for delays beyond reasonable level attributable to the private terminal operator are incorporated in the upfront tariff schedule for SPM facility.

(xi). The conditionalities proposed by the port specifying the interest on delayed payments / refunds at 14.75% is partially modified to state that the penal rate of interest will be at 2% above the prime lending rate declared by the State Bank of India as prescribed in the upfront tariff schedule of other major port trusts. The other conditions about rounding off the grand total of bill, rates prescribed in Scale of Rates are at ceiling levels and rebates at floor levels, enabling port to rationalise Scale of Rates so as to give relief to users, notifying the lower rates and rationalisation of conditions are approved by this Authority in the other upfront cases and hence approved in this case also.

(xii). As per Clause 2.2. of the guidelines of February 2008 for upfront tariff setting for PPP Projects at the major ports, the upfront tariff caps to be prescribed would be applicable to all the projects to be bid out for identical handling facilities at the Kandla Port Trust during the next five years. It has to be recognised that the upfront tariff set in the instant case is mainly relying on the parameters and the capital cost furnished by the KPT in the absence of any norms available for SPM operations. The norms for SPM terminal are being formulated by the Ministry. If the KPT envisages any other project to be bid out for identical handling facilities in its port during the next five years, it is advised to approach this Authority for determining upfront tariff based on the norms / guidelines (to be) prescribed by the Ministry in this regard.

15.1. As per clause 2.8 of the Guidelines, the tariff caps will be indexed to inflation but only to an extent of 60% of the variation in Wholesale Price Index (WPI) occurring between 1 January 2008 and 1 January of the relevant year. Such automatic adjustment of tariff caps will be made every year and the adjusted tariff caps will come into force from 1 April of the relevant year to 31 March of the following year. In the instant case, since the estimation of capital cost and unit rate of operating cost considered in the upfront tariff calculation pertain to the year 2011 as reported by the KPT, it may be appropriate and relevant to prescribe the base WPI to be considered for automatic adjustment every year as 1 January 2011.

15.2. As specified in clauses 2.9.1. and 2.9.2. of the guidelines, before commencement of commercial operations, the private operator shall approach this Authority for notification of Scale of Rates containing the approved ceiling rates and the statement of conditions, as required under Section 48 of the Major Port Trusts Act, 1963.

15.3. As per clause 3.8.5 of the guidelines, if any question arises requiring clarifications or interpretation of the Scale of Rates and the statement of conditionalities, the matter shall be referred to this Authority and its decision in this regard will be binding on the operator.

15.4. The performance norms for the projects should be clearly brought out in the bid documents. The private operator is expected to perform at least at the performance norms brought out in the bid document/concession agreement. As stated earlier, the KPT should clearly bring out in the bid document as well as in the Concession Agreement that the private operator will be permitted to deploy one ship loader only.

15.5. The actual performance of the private operators will be monitored by this Authority. If any complaint regarding quality of service is received, this Authority will enquire into such allegation and forward its findings to the Kandla Port Trust. If any action is to be taken against the private operators, the Kandla Port Trust shall initiate appropriate action in accordance with the provisions of the relevant Concession Agreement.

15.6. During the commercial operation at the terminal, within 15 days from the end of every quarter, the private operator shall submit to this Authority through the Kandla Port Trust a report containing the terminal's physical and financial performance during the preceding three months.

15.7. The upfront tariff fixation has been carried out relying the optimal capacity of the SPM terminal as assessed by the KPT at 12 MTPA for the reasons explained earlier. This Authority makes it clear once again that the upfront tariff caps fixed now will be subject to review any time during the concession period, if it is found that the actual traffic handled exceeds the optimal capacity determined in this exercise and accordingly advises KPT to monitor the position and file a suitable proposal for resetting the tariff at the appropriate time.

16. In the result, and for the reasons given above and based on a collective application of mind, this Authority approves the tariff caps for SPM facility in Gulf of Kutch at Kandla Port Trust attached as **Annex - I**.

(Rani Jadhav)
Chairperson

Tariff Authority for Major Ports

<u>Case No.TAMP/15/2010-KPT</u>

Kandla Port Trust - - - - - **Applicant**

O R D E R

(Passed on this 18th day of January 2011)

This case relates to a proposal received from the Kandla Port Trust (KPT) for fixation of the upfront tariff for setting up Single Point Mooring (SPM) and allied facilities in Gulf of Kutch at the Kandla port.

2.1. The KPT had initially filed the proposal vide its letter dated 28 February 2010 for fixation of upfront tariff for setting up Single Point Mooring (SPM) by following the norms applicable for liquid bulk terminal.

2.2. However, the capacity of the SPM, which is one of the main components, was not assessed as per the norms prescribed for liquid terminal nor was the basis of capacity assessment explained in the proposal. In view of the gaps noticed in the proposal, the KPT was requested, vide our letter dated 19 March 2010, to furnish clarification on a few points and to justify all the other parameters such as productivity rate, capacity, power consumption, other cost, etc., adopted in the proposal with reference to actual operations of SPM at Vadinar in KPT and also with reference to SPM facility at Cochin by BPCL and other SPM facility at Paradip Port Trust for last three years.

3.1. The guidelines for upfront tariff setting for Public Private Participation (PPP) projects at Major Ports announced by the Ministry of Shipping, Road Transport and Highways (MSRTH) vide its communication No.PR-14019/25/2007-PG dated 12 February 2008 which was notified by this Authority vide Notification No.TAMP/52/2007-Misc. on 26 February 2008 do not contain any separate norms for SPM operations.

3.2. The matter was, therefore, referred to the Ministry of Shipping (MOS) vide our letter dated 19 March 2010 seeking advice whether in absence of norms, fixation of upfront tariff for SBM operations can be based on the parameters applicable for liquid bulk handling and with reference to the actual SBM operations carried out at the KPT and other Major Port Trusts viz. Cochin Port Trust and Paradip Port Trust

3.3. In response, the MOS vide letter dated 9 June 2010 has informed that Indian Maritime University (IMU) has been engaged to examine the proposal of KPT for fixation of upfront tariff for SPM operations and to furnish their recommendations. In the mean while, the MOS, as an interim measure, agreed to the suggestion made by TAMP and directed this Authority to undertake the fixation of upfront tariff for SPM based on the parameters applicable for liquid bulk handling with reference to SPM operation carried out at the KPT (Vadinar Division), Cochin Port and Paradip Port Trust till the guidelines for SPM terminals are finalised.

3.4. The decision of the MOS was conveyed to the KPT with an advise to furnish a comprehensive proposal for fixation of the upfront tariff for SPM facility vide our letter dated June 2010 in line with the advise rendered by the MOS.

4.1. In this backdrop, the KPT under cover of its letter dated 26 October 2010, has filed a revised proposal along with clarifications sought by us on few points vide our letter dated 19 March 2010. It has also furnished a comparative statement showing parameters of the SPMs in operation at Vadinar Division of KPT and other SPMs in operation and the subject SPM.

4.2. The clarifications sought by us vide letter dated 19 March 2010 and the gist of the reply furnished by the KPT thereon is tabulated below:

Sl. No.	Clarification sought	Reply of the KPT
(i).	(1). The capacity of the SPM facility at 9 MMTPA is not assessed following the norms prescribed in the guidelines for liquid bulk terminal supposedly to be	(a). The KPT at one place has stated the handling rate in case of this project is not the basis for assessing the capacity. However, in the capacity calculation

	followed by the port. The handling rate adopted for capacity assessment may be indicated explicitly. (2). The guidelines prescribe 70% utilisation norm which works out to 255 days in a year. Justify the reasons for scaling down the working days to 120 for assessment of capacity as against the norm of 255 working days. (3). Also, furnish detail working of capacity assessment and deviation, if any, from the norms prescribed in the guidelines along with justification.	furnished by them, it has considered the handling rate of crude prescribed in the guidelines for liquid bulk terminal. (b). It has further stated that the typical size of modern refinery is around 9 MMTPA. Lack of precedence regarding use of SPM by more than one refinery and as a SPM is usually a captive facility, the optimal capacity of the SPM considered at 9 MTPA as assessed in the Feasibility Report. (c). With regard to the number of days for which the SPM would be operational, the port has clarified that considering the annul throughput of 9 MMTPA and handling rate of 5000 tonnes per hour, SPM would be operational for 120 days in a year. (d). Clause 2.7.1. of the Upfront tariff guidelines provides for review of tariff caps once in five years to adjust for any extraordinary events that could not have been foreseen by a prudent person. Citing this clause, the KPT has submitted that in case of variation in the actual traffic handled vis-à-vis the capacity assumed at 9 MTPA, correction in the tariff caps can be made later to neutralize the impact of variance in the projected capacity and actual traffic.
(ii).	The Feasibility Report relied upon by the port for estimation of power cost does not contain any basis or analysis done by the port for estimating this cost element. The estimation of power and fuel cost at Rs.465 lakhs may be justified with reference to detailed analysis of consumption of power and fuel with reference to the facility / service likely to be offered and also with reference to the actual power and fuel consumption at the SBM facility being operating at the Vadinar division in Kandla Port.	(a). As per the guidelines of TAMP for fixation of tariff for Liquid Bulk Terminal, the norm for power consumption is 2.4 lakhs units / annum / hectare. (b). As the Crude Oil Terminal (COT) would be outside the port limits, there would be no land based developments within port. Considering that the norms based on per hectare cannot be applied. In view of that for the SPM operation, cost assessed in the feasibility report which is inclusive of the power and fuel cost is considered. (c). It has submitted that it could not get the details of actual power and fuel consumption and cost details of the SBM facility at the Vadinar division in Kandla Port and from the Cochin Port.
(iii).	Justify all the parameters such as productivity rate, capacity, power consumption, other costs, etc., adopted in the upfront tariff setting proposal with reference to the actual operation of SPM at the Vadinar division in the KPT and also with reference to SPM facility at the Cochin Port Trust recently installed by the Bharat Petroleum Corporation Limited (BPCL-KRL) and at other SPM facility at Paradip Port Trust for last three years.	A statement giving comparative details of the technical and financial aspects of the SPM operation of the subject facility and the facility at Vadinar division of the KPT, Essar-Vadinar and COPT facility is furnished.

(iv).	Please clarify whether the water front royalty charges considered by KPT in the operating cost is akin to license fee. If so, explain whether the lease rent of waterfront area is approved by this Authority in its land schedule and whether the Government guidelines on land policy matters permit the port to levy charges for lease on waterfront area.	In the revised proposal, lease rent for water front is not considered.
(v).	The port has proposed to levy miscellaneous charges at Rs.8 per metric tonne. Please state explicitly the services for which the proposed miscellaneous charges would be levied.	Miscellaneous charges has been excluded and only the rate of handling charges of Rs.149 per tonne is proposed.

4.3. The synopsis of the comparative statement furnished by the KPT and the remarks of the port thereon are tabulated below for some of the main parameters:

Sl. No.	Details	Subject proposal	Vadinar division	Kochi	Essar-Vadinar	Remarks
(i).	Designed capacity	--	36.4 MMTPA	--	27 MMTPA	The subject SPM and the Kochi SPM are comparable.
(ii).	Crude handled at SPM	9 MMTPA as per the feasibility report	14.6 MMTPA (as per the designed capacity and utilization)	9 MMTPA	14 MMTPA (as per the information provided by the ESSAR)	
(iii).	Capacity utilisation	--	40%	30%	52%	The range of capacity utilization is 30% to 50% which may be considered as bench mark for estimating the days of operation of SPM.
(iv).	Handling rate per hour	5000 tonnes per hour	7500-9000 KLs/hr.	8250 m3/hr.	10,000m3/ hr or 10 kgf/cm2	---
(v).	Days of operation	120	150	110	225	For subject proposal, working days is assumed in line with the position obtained at SPM operated in COPT.

5. The main highlights of the revised proposal are as follows:

(i). The port has mainly relied upon the Feasibility Report prepared in March 2004 for proposing the subject upfront tariff.

(ii). The port has considered the estimated annual throughput of the proposed SPM at 9 MMTPA which is considered as the optimal capacity of the SPM. Assuming 9 MMTPA as the optimal capacity, the port has derived the other parameters and furnished the following calculation:

Sl. No.	Particulars	VLCC vessel	Suez vessel
(i).	Carrying capacity	285000 tonnes	152000 tonnes
(ii).	Turnaround time	66 hrs	40 hrs
(iii).	Discharge rate	5000 tonnes per hour	5000 tonnes per hour

(iv).	Total turnaround time	285000/66 = 4318 tonnes / hr	152000/40 = 3800 tonnes / hr
(v).	Daily discharge rate	4318 tonnes * 24 = 103636 tonnes	3800 tonnes * 24 = 91200 tonnes
(vi).	Annual discharge rate	103636 * 365)/10,00,000 = 37.52868 tonnes i.e. 37.83 MT	91200 * 365)/10,00,000 = 33.288 tonnes i.e. 33.3 MT
(vii).	70% optimal utilization	37.83 * 0.7 = 26.5 MT	33.3. * 0.7 = 23.3 MT
(viii).	Operation of berthing only during day. Effective time available is 18 hrs i.e. 75% of the total day since berthing can be done only from 0530 hrs to 1600 hrs. (Un-berthing can, however, be done during night hours also.	26.5 * 0.75 = 19.86 MT	23.3 * 0.75 = 17.48 MT
(ix).	Due to above constraints and because of monsoons, winds & navigational restrictions and due to higher down time for repairs & maintenance capacity utilization is in the range of 45% to 50% due to interruptions.	19.86 * 0.5 = 9.93 MT	17.48 * 0.5 = 8.74 MT

(iii). Capital Cost:

The total capital cost is estimated at Rs.43890 lakhs as estimated in the original proposal. The capital cost estimation primarily includes the SPM and the pipelines and the breakup is tabulated below:

(**Rs. in lakhs**)

Sr. No.	**Group**		**Amount**
(i).	Cargo handling equipment (as per feasibility report)		
	(a) SPM facility	14823	
	(b) On shore pipelines	26977	
	Sub-total		41800
(ii).	Miscellaneous (5% of above)		2090
	Total		**43890**

Civil structure is not envisaged for the proposed facility.

(iv). The Return on Capital Employed (ROCE) is computed at 16% on the estimated capital cost.

(v). Annual Operating Cost:

(a). Power and fuel:

- The COT would be outside the port limits. As no land allotment is envisaged for the proposed SPM terminal, hectare based norm for estimating power and fuel cost are not relevant.

- In this case only the SPM would require fuel and power. The power and fuel cost for the SPM is estimated at Rs.2.50 lakhs per day as per the feasibility report of March 2004 is taken as the base. Considering that the SPM would begin its commercial operations in the year 2014, the cost estimated in the feasibility report is escalated at 5% p.a. and the power and fuel cost is arrived at Rs.3.88 lakhs per day.

- Accordingly, the power and fuel cost for the SPM facility is estimated at Rs.465 lakhs considering 120 operational working days in a year.

(b). Repairs and Maintenance

Repairs and maintenance for civil works is not estimated as no civil structures are envisaged for the facility. Adopting the norms in the guidelines prescribed for liquid terminal, repairs and maintenance on mechanical and electrical equipments is estimated at 2% of total capital cost.

(c). Insurance cost, depreciation and other expenses are estimated adopting the norms prescribed for liquid bulk terminal.

(d). Based on our query raised vide letter dated 19 March 2010, the license fee for water front area earlier considered by the port in the annual operating cost is deleted in the revised proposal. The port has, however, included way leave charges in the revised proposal.

The way leave charges are estimated for 19000 meters length of pipeline from SPM facility to Land Fall Point (LFP) applying the rate of Rs.10.5 per sq. mtr. per month citing that it is as per the Scale of Rates of the KPT. (It is to state that the existing Scale of Rates of the KPT approved by this Authority does prescribe any way leave charges.) The way leave charges is estimated at Rs.47.9 lakhs per year.

(e). The total operating cost estimated by KPT is tabulated below:-

Sl. No.	Description	Basis	Rs. in lakhs
(i).	Power and fuel consumption	As per feasibility report	465
(ii).	Repairs and Maintenance of cargo handling equipments	As per the norms (2% of Rs.438.90 crores)	878
(iii).	Insurance	As per norm (1% of Rs.438.90 crores)	439
(iv).	Depreciation	10% of Rs.438.90 crores	4389
(v).	Way leave charges	As per existing SOR	48
(vi).	Other expenses	As per norms 1% of Rs.438.90 crores	439
Total			**6658**

(vi). Estimated Annual Revenue Requirement (ARR) is as follows:

Sl. No.	Description	Rs. in lakhs
(i).	Total annual operating cost	6658
(ii).	16% Return on Capital Cost of Rs.43890 lakhs	7022
	Annual Revenue Requirement	**13680**

(vii). Considering the estimated ARR of Rs.13,680 lakhs and the optimal capacity at 9 MTPA, the composite tariff for handling crude at the SPM facility is arrived at Rs.152 per metric tonne.

The KPT has submitted that of the total length of the pipeline of 19.5 kms running from the SPM to the COT which is considered in the estimation, 0.5 km of the pipeline would be beyond the port limits. In other words, 98.3% of the total length of the pipeline would be within the port limits. In view of that the port has proportionately reduced the tariff to the extent pipeline falling beyond its jurisdiction and has finally proposed the composite handling rate of Rs.149 per metric tonne.

6. In accordance with the consultation process prescribed, the proposal received from the KPT was circulated to the users / prospective applicants (as forwarded by the KPT) for seeking their comments by 26 November 2010. No comments are received from the users/ prospective applicants.

7. Based on the preliminary scrutiny of the proposal, the KPT was requested to furnish information/clarifications on various points vide our letter dated 18 November 2010. The KPT vide its e-mail dated 29 November 2010 has responded to our queries. A summary of the queries raised by us and the response of KOPT are tabulated below:

Sl. No.	Queries raised by us	Response from KPT
(i).	The port seems to have mainly relied upon the Feasibility Report prepared in March 2004 while filing its current proposal for determining the upfront tariff for SPM operations with reference to capacity and capital cost except for applying adhoc increase in the capital cost estimates of 2004. The feasibility report which was prepared nearly six years may be an outdated one considering the change in the technology, market conditions and the other factors. The port may explain why it has not updated feasibility study for the proposed facility but relied upon the study conducted in 2004.	The cost of project worked out in Feasibility Report has been updated by considering suitable provision for escalation. However, there has not been any significant change in the technology particularly for the proposed SPM.
(ii).	The feasibility report does not contain any study of the traffic forecast nor does it show any calculation for deriving the capacity at 9 Million Tonnes Per Annum (MTPA). It only assumes the capacity of the SPM at 9 Million Tonnes Per Annum which has been considered by the port in its current proposal. All the other parameters seem to have been derived to suit this figure of 9 MTPA. A detailed analysis of traffic projections for the SPM operations for the next 30 years may please be furnished.	The port has prepared a Comprehensive Business Plan in 2007 wherein projections of traffic for crude oil have been carried out. The capacity of the SPM facility is being limited to 9 MMTPA after deliberations and is consistent with the assumptions in the Feasibility Report. However, in forwarding letter to the draft Tariff Proposal submitted to the TAMP, it was proposed by the Port that the proposed tariff will be subject to review, in case, if actual cargo to be handled at the SPM exceeds the capacity of 9 MMTPA. This approach is also in line with the upfront tariff recently approved by TAMP for the work of "Dry Bulk Terminal off Tekra near Tuna on BOT basis".
(iii).	Optimal Capacity:	
	(a). Clause 3.3.2. of the upfront tariff guidelines clearly stipulates that upfront tariff is to be determined for the optimal capacity irrespective of traffic forecast. The proposal of the KPT in para 4.2. of Annex-II considering the optimal capacity at 9.00 MTPA at the level of annual throughput projections is not in line with the upfront tariff guidelines.	It is pertinent to mention here that the guidelines for upfront tariff for setting up of PPP projects – 2008 of TAMP does not cover any guide line for fixation of Tariff for SPM to handle crude oil. Further, it is seen that the 2008 guidelines do not provide for the capacity of liquid terminal to be limited by capacity of the downstream facility as in the case of container terminal/coal/iron ore terminal viz. storage facility or the capacity of the associated refinery being created. However, it is seen that capacity of all the SPMs operating the Major Ports are limited by the capacity of refinery. Further, it may please be noted that Ministry vide letter PD-11015/1/2010-KPT dated 9th

		June 2010 advised TAMP as well as the Port to frame tariff proposal of the subject work based on the parameters of existing operating SPM at other Ports.
	(b). The comparative statement giving the various parameters achieved at the other SPM operations furnished by the KPT indicates the discharge rate achieved for crude handled at the Vadinar operations of the KPT is 7500 to 9000 Kls/ hour (i.e. 6465 to 7758 tonnes/ hour applying the conversion factor of 1 tonne=1.16 kl). For the SPM operated by Essar at Vadinar the discharge rate achieved is 10,000 m3/ hour (i.e. 10000 kl/ hour) and at Cochin Port Trust (operated by BPCL), this parameter is reported at 8250 m3/ hour (i.e. 8250 kl/ hour). Though the KPT in para 4.3. (Annex-III) has stated that the handling rate is considered at 7500 tonnes/ hour, it has no where been applied in determination of the optimal capacity of the terminal.	The TAMP guidelines of 2008 indicate that the norms for handling crude in the liquid bulk terminal is 5000 tons/hr. The liquid bulk terminal is located in a tranquil berthing basin in the safety of a harbor with adequate safety provisions and therefore the ships can berth, unberth and discharge cargo at any time of the day upto to the maximum discharge rate permission by the ship subject only to stability considerations. The SPM however, is an offshore facility located at a distance in required depth of water at sea and is directly exposed to the conditions of the sea - winds and waves. There is increased risk of an accidental oil spill as well as a more significant environmental impact using SPM versus direct berthing in a bulk oil terminal. Looking to the comparative statement, it can be seem that the handling rate for crude at Cochin Port is 8250m3/hr (7000 tons/hr with specific gravity of 0.85). However, the port has considered the handling rate of 7500 tons/hr which is higher than the handling rate of Cochin Port handling a capacity of 9 MMTPA. As indicated earlier the proposed tariff is subjected to review, if actual cargo to be handled at the SPM exceeds the proposed capacity of 9 MMTPA.
	(c). As regards the reference made by the KPT that the SPM at Cochin Port Trust (COPT) handles 9 MTPA, it is notable that the 9 MTPA is the present volume of traffic handled by the SPM operated by the BPCL at Cochin Port Trust and it is not the capacity of the SPM.	It is already stated that proposed tariff for subject work may be reviewed by TAMP, if actual cargo to be handled at the SPM exceeds the proposed capacity of 9 MMTPA.
	(d). (i). While furnishing reply to our query about reckoning 120 days, the port has explained that the optimal capacity being 9 MTPA and considering the handling rate of 5,000 tonnes/ hours, the SPM is expected to be operational for 120 days. In fact, the number of days is one of the factors for determining the optimal capacity as per the formula prescribed in the guidelines and it is not the other way around. As already stated earlier, assuming the capacity at 9 MTPA the other parameters are reworked by the KPT. (ii). As per the comparative statement furnished by the port, the SPM operations at its own port at Vadinar works for 150 days in a year and the SPM operations at Essar operates for 225 working days in a	Earlier tariff proposal was based on the guide line for liquid bulk terminal in Annex 4 of TAMP as such there is no specific guide line for fixation of Tariff for SPM to handle crude oil. Hence, as advised by the Ministry vide letter dated 09.06.2010, the present tariff proposal of the subject work is based on the parameters of existing operating SPM at other ports. Accordingly, the capacity of 9MMTPA of the SPM is kept as per the feasibility Report, which is also in line with the present handling capacity of existing operating SPM at Cochin Port. Looking to the comparative statement showing various parameters of existing operating SPMs at other ports, it can be seen that the SPM at Cochin Port is operated for 120 days for handling crude oil to the tune of 9 MMTPA. However, in the present Tariff

	year. When the working days best achieved in the vicinity of the port i.e. in the Gulf of Kutch is 225 days in a year then justify and explain the extraordinary circumstances why the same parameters cannot applied to determine the capacity of the proposed SPM.	proposal, SPM is considered operative for 110 days which is almost at par with the SPM at Cochin Port. The present handling capacity is considered as 9 MMTPA which is also subjected to review by TAMP in case, if actual cargo to be handled at the SPM exceeds the proposed capacity of 9 MMTPA.
	(e). The port has stated that both VLCC and Suez Max Tanker are expected to call at the proposed SPM. The share of each categories of vessels may be indicated for assessing the optimal capacity. While doing so the KPT may keep in mind that the proposed tariff is for 30 years horizon. The basis adopted for projecting the share of each categories of the vessels may also be explained along with detailed study/ analysis done by the port in this regard.	As per the Draft Concession Agreement of the subject work, the concessionaire can handle vessels upto 3,00,000 DWT having water depth of 28.90 m. In other words, it is to state that the concessionaire will primarily handle VLCC and Suezmax tankers at the proposed SPM. The share of 50:50 is considered
	(f). If the discharge rate of crude from the VLCC and the Suez Max tanker are expected to be different then the same may be reckoned with in the capacity calculation. If so, the differential discharge rate may also be justified with parameters achieved by such categories of vessels handled at the SPM KPT (Vadinar Division), Cochin Port Trust, etc.	
	(g). (i). The details of oil vessels/ tankers handled at the SPM operations at Vadinar, average the number of hours taken only for discharge of cargo after the mooring operation in the last three years 2007-08 to 2009-10 may be furnished for each categories of vessels handled. (ii). Average time taken only for mooring/ unmooring vessels at the SPM operations of the Vadinar division may also be furnished for the last three years. (iii). Furnish the instances and the number of hours the vessel had to wait for day light hours for mooring operations even though the SPM was vacant for each of the years 2007-08 to 2009-10. Since the KPT already handles crude at the SPM operations in the Vadinar division it should be in a position to furnish the requisite details.	All the SPM operating at Vadinar Division of KPT are the captive user facility of Vadinar Oil Terminal Ltd and Indian Oil Corporation. In other words, all three SPMs at Vadinar are not being operated by KPT itself. However, the concerned parties are being requested to provide such details.
	(h). In the light of the above gaps observed, the KPT is advised to reassess the optimal capacity for the SPM operations taking into consideration parameters of handling rate, number of working hours, etc., best achieved in the SPM operations.	It is pertinent to mention here that no specific formula has been laid down in the TAMP guidelines for working out the optimal capacity of SPM, which should be based on handling rate, no of working hours etc. as suggested by TAMP in the subject observation. Hence as per the advice of the Ministry, the optimal capacity of the SPM in the Tariff proposal is based on the parameters of existing operating SPM at other port.

(iv).	<u>Capital Cost</u>:	
	(a). The feasibility report prepared in March 2004 included the storage facility at the Crude Oil Terminal as an integral part of the project and envisaged comprehensive service including transfer of oil from SPM through the pipelines and the storage at COT. Whereas in the current proposal, the KPT has stated that though the Concessionaire would be required to provide the COT connectivity, but the capital cost relating to storage and COT is not included as it is located outside the port limits. In this regard the following points may be clarified: (i). The reasons for changing the scope of work may please be furnished. (ii). The scope of work to be specified in the License Agreement proposed to be signed for the SPM operations may be stated. (iii). The KPT also admits that the COT is an integral part for the proposed SPM operations. If the licence to be granted by KPT does not include the facility of COT, then the enabling provisions to be included in the licence to require the concessionaire to provide the COT may be explained.	As per the Feasibility Report as well as the present tariff proposal of the project, the COT is to be located outside the CRZ boundary and Port has got no land within the CRZ boundary. Hence, the concessionaire will have to develop the COT only out side the port limit, boundary. Considering this, the proposed tariff has been apportioned appropriately with respect to the cost of pipeline from Port boundary to COT i.e. the pipeline to be laid outside the Port boundary.
	(b). The capital cost estimated in the Feasibility report of March 2004 is increased adhoc @ 5% per annum by the KPT to estimate the capital cost for the proposed SPM operation. In this regard, the following points need to be clarified/ examined: (i). As per the upfront tariff guidelines, the estimate for civil works should be given by the Port Trust for achieving the maximum capacity and capital cost of equipment (as per the norms prescribed) should be updated while fixing the tariff caps in order to capture the prevailing market rate. The capital cost estimated by the KPT considering adhoc increase of 5% per annum on the estimates made six years before may not correctly reflect the market price. The KPT has not furnished any documentary evidence in form of budgetary quotations, rate analysis, etc. The KPT is advised to estimate the capital cost based on the prevailing market rate and substantiate it with a copy of the budgetary quotations, rate analysis, if any, done by the port. (ii). No correlation can be drawn from the estimates furnished in the feasibility report with the estimates furnished by the	As per Feasibility Report, the proposed SPM does not envisage any cost towards Civil Works. Hence, the estimated cost considered in the tariff proposal for SPM does not include any cost for the civil work. The estimated cost of the SPM along with the break up for various component for the year

	KPT in the current proposal. The port has not given the break up the various items included in the capital cost estimation. Please furnish detailed break up of the capital cost of the SPM and pipelines indicating the unit rate, size of pipelines, number of other equipment, etc.	2004 (prior to the escalation) in the proposed tariff is absolutely as per table – 2 meant for estimated cost of case-I of Feasibility Report framed by EIL.
	(c). The KPT has stated that no civil cost is included as it does not anticipate any civil work. In this context, port may confirm that no administration building, office, etc., is envisaged for the SPM facility.	The proposed tariff is based on the estimated cost of Feasibility Report which does not cover any civil cost for the SPM.
	(d). With reference to the pipe line of 0.5 km length stated to be falling outside the port limits the following points may be clarified: (i). If the pipeline falls outside the port area, it is not clear how KPT will have the jurisdiction to grant license for the same. It is not clear why the capital cost for the said pipe line is included in the capital estimates? (ii). The provision proposed to be included in the License Agreement (to be) entered with the Concessionaire with regard to the pipe line falling outside the port limit but at the same time integral part of the SPM operations may be explained.	As mentioned in the earlier reply, the COT will be located outside the Port boundary and Port will not license out any land for COT or provide ROW pipelines to be laid by the concessionaire outside the Port boundary. Moreover, the in the proposed Tariff the cost of COT is not considered at all. Only the cost of pipeline of 500 m outside the Port boundary is considered. However, as stated earlier, the proposed tariff has been apportioned appropriately with respect to the cost of pipeline from Port boundary to COT i.e. the pipeline to be laid outside the Port boundary.
(v).	<u>Operating Cost</u>:	
	(a). Power and fuel cost: (i). The upfront tariff guidelines of 2008 stipulates norms for the consumption of power and fuel for estimating the operating cost. The approach adopted by KPT applying adhoc annual escalation of 5% to the estimate of 2004 is not in line with the methodology prescribed in the guidelines for estimating this cost item. (ii). Neither the feasibility report nor the proposal of the port contain any analysis of power and fuel consumption relevant to the SPM operation. The KPT was vide our letter dated 19 March 2010 advised to justify the estimation of power cost with reference to the detailed analysis of consumption of power and fuel with reference to the facility/ services likely to be offered and also with reference to the actual power and fuel consumed at SPM being operated at the Vadinar Division of Kandla Port and SPM operation and Cochin Port initially by BPCL and at Paradip Port Trust. It is difficult to accept the argument of the port that it does have the power and fuel consumption details even in respect of the SPM operations carried at the Vadinar Division, which falls under the control of KPT.	As there is no specific guideline of TAMP for fixation of Tariff for SPM to handle crude oil, Ministry advised TAMP and the Port to prepare the tariff proposal of the subject work based on the parameters of existing operating SPM at other port. Even with great persuasion with the other Ports they were not in position to give a separate operating cost towards power and fuel for their existing operative SPMs. Hence, in the present tariff proposal, cost for power and fuel from Feasibility Report is taken after its indexation by escalation.

	The port is advised to furnish consumption of power and fuel at its SPM operations (Vadinar Division). The power and fuel cost estimated by the port may be justified with reference to consumption and current rate of fuel and power.	
	(b). From paragraph 7.3. of the Annex - II it is understood that the power and fuel cost estimated in the feasibility report is escalated by 5% per annum till the year 2014. Recognising that as per clause 2.8. of the tariff guidelines, the tariff caps (to be) determined by the Authority are subject to annual escalation, please confirm and certify that the estimation of capital cost as well as the unit rate of power and fuel cost are updated to the rate prevailing in the year 2010.	It is confirmed that both the capital cost and cost towards power and fuel considered in the tariff proposal is as per the feasibility report and also updated by considering escalation thereon.
	(c). **Depreciation**: Clause 3.5.3. of the tariff guidelines of 2008 stipulates that the depreciation should be calculated following the Straight Line Method (SLM) as per the rates prescribed in the Companies Act 1956. The depreciation estimated by the KPT uniformly @ 10% for all assets is not found to be in line with the deprecation rate prescribed in Companies Act 1956. The depreciation on pipeline considered while determining the upfront tariff for liquid terminal at the COPT and VPT is 13.91% as per the rate prescribed in the Companies Act. For plant and machinery rate of depreciation adopted is 10.34% at the Major Port Trusts. The estimation of depreciation may be modified applying the deprecation rate as per Companies Act. Please furnish detailed working of such calculation.	The component of depreciation in tariff proposal is modified and resubmitted.
	(d). **Way leave charge**: The port has estimated way leave charge on 19 km pipelines from SPM facility in port water to Land Fall Point (LPP) applying the rate of Rs.10.5 per sq. mtr. per month stating that it is as per the Scale of Rates of the KPT. The existing Scale of Rates of the KPT approved by the Authority does prescribe any way leave charges. The basis adopted by the KPT for estimating this item may be indicated giving the reference in the SOR of the KPT approved by the Authority.	The proposed way leave charges considered in the tariff proposal at the rate of Rs.10.5/m2/month is with reference to para 2.5.A of approved Scale of Rates of Kandla Port.
B	**Scale of Rates:**	
(i).	1.1. Definitions - General: The port area as defined in relevant act will apply and hence need not be defined separately.	The Scale of Rates enclosed with subject tariff proposal is the Scale of Rates of KPT duly approved by TAMP and not a part of submitted tariff proposal. The Scale of Rates is Annexed with proposed tariff proposal as a reference to the way leave charges considered in the proposal for land for pipelines. A reference of same is mentioned under reply of (v) (d).
(ii).	1.2. General Terms and Conditions: (a). As the vessel related charges are not proposed to be collected by the Operator and there are no dollar denominated tariff to be prescribed, it may	

	not be relevant to include the general conditions proposed at note (i), (ii), (iii) and (iv) about criteria for classifying vessel into foreign/ coastal, conversion of dollar denominated rate into rupee, review of exchange rate, etc. Hence the said notes may be deleted from the proposed Scale of Rates.	
	(b). Since the proposal is for upfront tariff fixation, the provision relating to interest on delayed payment by the user and delayed refund by the operator proposed at note (vi) may be modified to state that the penal interest rate will be as 2% above the Prime Lending Rate declared by the State Bank of India from time to time.	
	(c). The last sentence in the proposed note (vii) (b) stating that the revenue share would be calculated as per the rates prescribed in the Scale of Rates is not in line with the clause 2.16.1 and 2.16.2. of the tariff guidelines of 2005 and the condition prescribed in the Scale of Rates of other ports as well in the upfront tariff schedule approved for various facilities at other Major Port Trusts.	
(iii).	Chapter 2:	
	(a). The upfront tariff proposed is for consolidated service for handling crude at SPM. The proposed note 1 may be elaborated to cover all services included in the consolidated handling charge. It may also be stated that the consolidated rate covers charges for all miscellaneous services not separately prescribed in the Scale of Rates.	
	(b). As no miscellaneous charge is proposed, Schedule 2 is not relevant and hence may be deleted.	

8. On examining the reply furnished by KPT, it is observed that some of the queries raised by us are not satisfactorily addressed by the port. The KPT vide our letter dated 13 December 2010 was, therefore, requested to furnish further additional information/ clarifications on the main points.

9.1. As the MOS has informed that IMU has been engaged to give its recommendations/ report on the proposal of the KPT for determining the upfront tariff for SPM operations, the proposal of the KPT was also forwarded to Indian Maritime University (IMU) vide our letter dated 11 November 2010 with a request to furnish their views/ comments.

9.2. The IMU vide email message dated 22 November 2010 has furnished its views which are summarised below:

(i). (a). In the case of liquid bulk terminal, the norm for handling rate of different type of liquid bulk to be handled at the terminal is specified to estimate the capacity based on the cargo mix percentage of the liquid bulk to be handled. Whereas the KPT has determined the capacity based on the traffic (or demand) requirement. This is a major deviation.

(b). IMU is examining whether the approach adopted for liquid terminal can be extended for SPM terminal also with due changes for estimation of capacity or a totally new approach is to be adopted.

(c). Nevertheless, the traffic (or demand) cannot be taken as the capacity, when a generic approach is made to estimate the SPM capacity.

(ii). The guidelines prescribe the optimal capacity is 70% of the maximum capacity. The KPT has considered the throughput as the optimal capacity. In that case the value of the maximum capacity is not known. In other words, the ratio between the maximum and optimum capacities is not known.

(iii). The KPT proposed to include the cost of way leave charges for the area occupied by the running sub sea pipeline from SPM to LFP. It is to be examined whether the area occupied by SPM and the tanker operational area is to be considered. Similarly, the calculation of area for the way leave for the pipeline also needs to be examined.

(iv). For estimating the cost, the base year considered is the year when the facility will be commencing the operation instead of taking the current year cost.

(v). The conditionalities in application of the wharfage prescribed has not been spelt out.

10.1. In the meanwhile, a letter was also addressed to the MOS on 6 December 2010 bringing out the following position with reference to the proposal filed by the KPT:

(i). Clause 3.3.2. of the upfront tariff guidelines stipulates that upfront tariff is to be determined for the optimal capacity irrespective of traffic forecast. For determining the optimal (quay) capacity, the guidelines specifies different handling rate norms for different type of cargo / vessel size and based on the cargo mix percentage optimal capacity is to be determined.

As against the above position, the KPT in its proposal has considered the optimal capacity at 9.00 MTPA at the level of annual throughput projections for arriving at the upfront tariff. This is not found to be in line with the upfront tariff guidelines. The Indian Maritime University (IMU) vide their letter dated 11 March 2010 has also made this observation on the proposal of the KPT.

(ii). When the port was advised to reassess the capacity based on parameters best achieved at other SPM operations, the KPT has vide its letter dated 29 November 2010 justified its proposal stating that a comprehensive Business Plan was prepared by the port in 2007 wherein projections of traffic for crude oil was carried out. It has submitted that based on deliberations, the capacity of the SPM facility is limited to 9 MMTPA at the level anticipated to be handled at the SPM. The port has explained that the calculations and assumptions made in the Feasibility Report are also based on 9 MTPA. For the reasons cited, the KPT has request to accept the optimal capacity of SPM at 9 MTPA and has agreed for review by TAMP if actual cargo to be handled at the SPM exceeds the proposed capacity of 9 MMTPA.

(iii). It has to be recognised that if optimal capacity as per the general formula prescribed in the guidelines is considered, then upfront tariff will turn out to be on the lower side, which may not be attractive to investors. On the other hand if the upfront tariff is determined for the 9 MTPA as considered by the KPT, unintended benefit will accrue to the operator, if at a later stage the volumes exceed 9 million tonnes per annum. It is noteworthy that such benefit, if arises, may not be due to the efficiency of the operator alone but due to the fact that the initial tariff is set with huge underutilisation of the optimal capacity.

(iv). Reference was drawn to our letter No.TAMP/52/2007-Misc dated 17 May 2010 wherein it was suggested to amend the upfront tariff guidelines allowing for mid term review if significant improvement is observed in the actual capacity due to change in the various factors other wise presumed in the upfront tariff determination by the Authority, and the subsequent discussion in this regard on 18 August 2010.

10.2. Bringing out the above position, the MOS was requested to examine the deviation from the guidelines proposed by the KPT with reference to the capacity determination and advise us at the earliest. This was followed by a reminder dated 29 December 2010. The reply of the MOS is still awaited.

11.1. A joint hearing in this case was held on 21 December 2010 at the Kandla Port Trust. The KPT made a power point presentation of its proposal. At the joint hearing, KPT and the concerned users/ organisation bodies/ prospective applicants have made the following submissions:

Kandla Port Trust

(i). COT will be outside the port limits and will not form part of the Licence to be granted by the Port. Pipeline will be 19 km within port and 0.5 km outside the port.

(ii). The existing pipelines at different SPMs in Vadinar are 48".

(iii). We have considered vessels of VLCC and Panamax at 50:50.

(iv). Designed capacity of SPM is difficult to assess. It cannot be taken as the technical capacity declared by OEM or capacity of pipelines or capacity of refinery. Various other factors influence the capacity.

(v). Berthing at SPM cannot take place after sunset. But, unberthing can happen at any time. This is the position at all SPMs. Berthing also depends on tide and wind. This places a limitation on the capacity. However, once the berthing has taken place, operations can be carried out round the clock.

(vi). The experience at other SPMs at Vadinar indicates that routine annual maintenance takes 1 month to 1.5 months a year.

(vii). Essar confirms that their average handling rate is around 8000T/hours. IOCL says, their average handling rate is around 10000T/hours. However, the handling rate reduces if the pipeline length increases.

(viii). Explained the parameters relating to ESSAR Vadinar. Essar says, generally 0.5 days per vessel is needed to berth a ship before discharging begins.

(ix). Capital cost is based on 2004 year price with escalation. We will support our estimates with analysis. The capital cost is reasonable.

(x). We will have a relook at capital estimates and rework capacity.

(xi). There will be no power and fuel cost. Our proposal stands revised to this extend.

HPCL - Mittal Pipelines Ltd.

(i). Capital cost is low. The estimates cover only material cost. Cost of installation is not considered. We will furnish supply order copy of capital cost.

Adani

(i). We generally agree with costing. We will furnish capital cost details relevant for the SPM installed at Mundra.

ESSAR & Indian Oil Corporation Limited

(i). Capital estimate does not appear to be realistic.

11.2. At the joint hearing, the KPT was advised to review its proposal and file a revised proposal by 27 December 2010. While revising the proposal, the port was advised to address the following points:

(i). The theoretical capacity of the proposed SPM should be assessed with reference to the designed parameters and suitable allowances should be provided for the various factors which may impact the capacity. For this purpose, the average of the working results for the last three years at the SPMs of Essar and IOCL at Vadinar may be relied upon, since the port pleads its inability to obtain detailed information in respect of the SPMs operating at different Major Ports.

In this regard, Essar and IOCL have assured at the joint hearing to provide necessary data support and analysis to the Port. Adani Groups, one of the prospective bidders have also assured to provide the details of relevant capital cost based on the expenditure incurred in installing a SPM facility at Mundra Port recently.

(ii). The apportionment of the projected traffic of 60.29 Million Tonnes by the year 2015 to the various crude handling facility already developed / to be developed may be furnished.

(iii). Reply to the queries raised by us vide our letter dated 13 December 2010 may be furnished in the light of the revised proposal (to be) filed by the KPT.

12.1. The port has furnished its response with reference to the decisions taken at the joint hearing vide its letter dated 12 January 2011.

12.2. The KPT has furnished its reply to the queries raised by us vide letter dated 13 December 2010. A summary of the queries raised by us and the clarifications furnished by the KPT on 12 January 2011 are tabulated below:

<table>
<tr><th>Sl. No.</th><th>Queries raised by us</th><th>Reply furnished by KPT</th></tr>
<tr><td>(i).</td><td>Confirm whether the traffic projection made three years back in 2007 at 9 MTPA capture the present demand for crude handling at Gulf of Kutch. A copy of the comprehensive Business plan reportedly prepared in 2007 which includes the traffic projection for crude oil may please be furnished.</td><td>(a). The traffic projection made in 2006 captures the present demand for crude handling at Kandla Port. The Crude oil traffic from KPT is now essentially from Vadinar. The traffic throughput projected in the business plan is at 60.29 MTPA in 2015.

(b). IOCL has two SBMs installed in Vadinar which feeds the Panipat, Mathura and Koyali refineries. The details of the current feed stock and expansion plans along with the supply sources of the refineries is shown in the table.

<table>
<tr><th colspan="4">IOCL</th></tr>
<tr><th></th><th>Refinery</th><th>Present MMTPA</th><th>Future MMTPA</th></tr>
<tr><td>Capacity</td><td>Koyali</td><td>13.7</td><td>18</td></tr>
<tr><td></td><td>Mathura</td><td>8</td><td>11</td></tr>
<tr><td></td><td>Panipat</td><td>15</td><td>21</td></tr>
<tr><td colspan="2">Capacity Total</td><td>36.7</td><td>50</td></tr>
<tr><td>Supply</td><td>GAPL</td><td>6</td><td>9</td></tr>
<tr><td></td><td>Vadinar</td><td>20.5</td><td>34</td></tr>
<tr><td></td><td>Ankleshwar</td><td>6</td><td>6</td></tr>
<tr><td colspan="2">Supply Total</td><td>32.5</td><td>49</td></tr>
</table>

It is seen that the capacity expansion being planned in the refineries is from 36.5 to 50 MMTPA (at 100% capacity) or about 35% growth. It is also seen that Vadinar and GAPL both have expansion plans to meet the enhanced capacity of the refineries. Other upcoming SBMs/terminals in minor ports in the vicinity could also feed these refineries.</td></tr>
</table>

<table>
<tr>
<td></td>
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<td>
(c). Essar has its refinery which is around 8 Km from Vadinar. The refinery capacity is around 10.5 MTPA which is around 14 MTPA with expansion plans upto 32 MTPA. In view of the planned increase in refinery capacity ESSAR Vadinar is considering an additional SPM in Vadinar along with two berths. Essar oil crude oil requirements are 14 MTPA by 2010 and 32 MTPA by 2015. This includes grass root refinery planned in SEZ.
(d). Hence based on the capacity expansion plans of IOCL and future capacity expansion and green field projects planned by Essar, the crude oil traffic projections of KPT in the business plan is given in the table below:
<table>
<tr><th>Year</th><th>Projections MMTPA</th></tr>
<tr><td>2010</td><td>38</td></tr>
<tr><td>2015</td><td>56</td></tr>
</table>
KPT will be in competition with the existing and upcoming minor ports in the vicinity to supply the crude for the refineries. These minor ports have a considerable flexibility in customizing a concession agreement for the operators.
KPT has contacted various Oil companies including the PSUs for their response for SPM on BOT basis and the RFQ attracted only 2 bidders.
</td>
</tr>
<tr>
<td>(ii).</td>
<td>The handling rate furnished by the KPT in the comparative statement are based on different units of measurement such as kl, m3, tonnes. For a like to like comparison, the KPT is requested to furnish the handling rate achieved by other SPM operators on the tonne / hour basis after applying the applicable conversion factor and specific gravity, if any. Please also send the working in this regard.</td>
<td>
(a). The SPM is being considered on BOT basis. In the absence of a captive user for the facility, generic crude characteristics have been considered. The details along with specific gravity are as follows.

Arab crude

light -0.85,
medium - 0.87
heavy - 0.88)

Nigerian Crude -0.84)
Bombay High Crude (0.82)

The discharge rates obtained from the operators in respect of their SPM were on different formats, units and degree of detail. For the sake of simplicity the average value of specific gravity has been taken at 0.85.
(b). The details of handling rate achieved in the SPMs from the various SPM operators are as under
<table>
<tr><th>Vessel</th><th>SPM</th><th>Unloading</th><th>Unit</th><th>Conversion</th><th>Tons/ Hour</th></tr>
<tr><td>Panamax</td><td>Essar_Vadinar</td><td>6000</td><td>M3</td><td>0.85</td><td>5100</td></tr>
<tr><td>VLCC</td><td>Essar_Vadinar</td><td>7200</td><td>M3</td><td>0.85</td><td>6120</td></tr>
<tr><td>Aframax</td><td>Essar_Vadinar</td><td>5200</td><td>M3</td><td>0.85</td><td>4420</td></tr>
<tr><td>Panamax</td><td>BPCL_kochi</td><td>6000</td><td>M3</td><td>0.85</td><td>5100</td></tr>
<tr><td>VLCC</td><td>BPCL_kochi</td><td>8250</td><td>M3</td><td>0.85</td><td>7013</td></tr>
<tr><td>Coastal</td><td>IOC_Vadinar</td><td>2000</td><td>M3</td><td>0.85</td><td>1700</td></tr>
<tr><td>VLCC</td><td>IOC_Vadinar</td><td>7500</td><td>M3</td><td>0.85</td><td>6375</td></tr>
</table>
(c). The discharge rates of Essar Vadinar have been reviewed at their end and it is seen the values are consistent with other operators. The discharge rated obtained from Essar Vadinar SPM is considered most reliable as the same has been reviewed and provided by their Head (Marine).
</td>
</tr>
</table>

<table>
<tr>
<td></td>
<td></td>
<td>
<table>
<tr><th></th><th>Aframax</th><th>Coastal</th><th>Panamax</th><th>VLCC</th><th>Average Tons/ Hour</th></tr>
<tr><td>BPCL_kochi</td><td></td><td></td><td>5100</td><td>7013</td><td>6056</td></tr>
<tr><td>Essar_Vadinar</td><td>4420</td><td></td><td>5100</td><td>6120</td><td>5213</td></tr>
<tr><td>IOC_Vadinar</td><td></td><td>1700</td><td></td><td>6375</td><td>4038</td></tr>
<tr><td>Average Tons/ Hour</td><td>4420</td><td>1700</td><td>5100</td><td>6503</td><td>5118</td></tr>
</table>

KPT has therefore revised downwards the handling rate at the SPM from 7500 tons per hour to 5500 tons per hour.
</td>
</tr>
<tr>
<td>(iii).</td>
<td>The feasibility report prepared in 2004 estimates the SPM cost and offshore pipeline cost at Rs.103.28 crores and Rs.187.96 crores respectively under Table 2 Case-I Option II referred by the KPT. Following the approach adopted by KPT of applying the annual escalation at 5% per annum, the capital cost of these two items in the year 2010 will be Rs.138.41 crores for SPM and Rs.251.88 crores which does not match with the capital cost estimated by KPT at Rs.148.23 crores and Rs.269.77 crores respectively. Kindly reconcile the difference.

Confirm the approach adopted by the KPT in arriving at the capital cost applying 5% annual escalation to the estimates of 2004 would reflect the current market price for these items.</td>
<td>(a). The feasibility report estimates for cost in 2004 and capital costs are estimated for 2010 with 5% escalation.

The port had initially calculated the capital cost considering the phasing of the project in the year 2011 and 2012 according the corresponding escalated costs using 5% annual escalation were Rs.148.23 crores for SPM and Rs.269.77 crores for offshore pipeline.

(b). KPT has since revised upwards the annual escalation rates at 5.3% per annum. This new rate was arrived at by including 2009 inflation rates also to calculate the average (previously average calculated upto 2008 only).

(c). The port has subsequently also studied the cost and capacity details of some of the existing and upcoming SPM/ Pipelines projects. These details were advised by the SPM operators who were requested for the same in TAMP hearing on 22 December 2010.

(d). The estimates of SPM/ offshore pipeline have been revised. The escalated costs have been arrived at applying 5.3% annual inflation. The pipeline costs have also been adjusted using a heuristic to be more reflective of the current market prices considering the estimates of the ongoing and upcoming projects in the vicinity. The revised capital cost is tabulated below:
<table>
<tr><td>SPM</td><td>Rs.148.26 crores</td></tr>
<tr><td>Offshore pipeline</td><td>Rs.443.68 crores</td></tr>
</table>
</td>
</tr>
<tr>
<td>(iv).</td>
<td>The port has not furnished reply to the query raised about the provision proposed to be included in the licence agreement (to be) entered with the concessionaire with regard to the pipeline falling outside the port limit but at the same time integral part of the SPM operations.</td>
<td>The port is not entering into any licensing agreement about the pipeline or COT falling outside the port limit with the concessionaire. The port has excluded the cost of the pipeline & COT falling outside in its estimation for the tariff proposal.</td>
</tr>
<tr>
<td>(v).</td>
<td>(a). The port has not explained as to why the power and fuel consumption details in respect of the SPM operations carried at the Vadinar Division, which falls under the control of KPT could not be obtained and furnished to justify the estimates of power consumption. The port is again advised to furnish consumption of power and fuel at its SPM operations (Vadinar Division). The power and fuel cost estimated by the port may be justified with reference to consumption and current rate of fuel and power.</td>
<td>The details sought relating to SPMs at Vadinar is furnished.

It shows that there is negligible fuel consumed by the SPM. The SPM has self contained power (solar).</td>
</tr>
</table>

	(b). The port is in its proposal dated 26 October 2010 at para 7.3. has explained that the daily power and fuel cost is Rs.2.50 lakhs per day in F.Y. 2005 and applying the annual escalation @ 5% per annum it works out to Rs.3.88 lakhs per day in F.Y. 2014 which is reckoned for estimating the power cost. Chapter 8, Section 8.12 of the Feasibility Report, however, reveals that the estimation of Rs.2.50 lakhs/ day pertains to the total operating cost of SPM and not exclusively for power and fuel. It is suggested that the estimation of power and fuel cost may be reviewed and, if required, modified based on the actual consumption figures obtained at Vadinar division for similar operations.	The port had carried out a study and it is ascertained that there are no power or fuel costs associated with the SPM. The power and fuel costs which are attributable to the COT have been erroneously considered for SPM in the tariff proposal and the same is rectified. It is further stated that there are no daily costs in respect of fuel or power by the SPM. Such costs are also attributable to COT. In this project the COT being envisaged outside the port limits and hence is not considered as part of the present project. Therefore power and fuel costs not considered for this project.
	(c). The port has made a general statement that the power and fuel cost are considered as per the feasibility report and escalated thereon. The unit cost of power reported by KPT in its original proposal dated 20 February 2010 is Rs.7.98 i.e. (as per December 2009 electricity bill). Whereas applying 5% annual escalation to the unit cost of power estimated at Rs.4.50 in the Feasibility Report of the year 2004, the unit cost of power in 2010 works out to Rs.6.03 which does capture the prevailing unit cost of power.	The power and fuel costs are not attributable to this project as COT is not part of this project, the same are not being considered.
(vi).	The query raised at item B (iii) need to be addressed by the port. The KPT is again advised that proposed note 1 may be elaborated to cover all services included in the consolidated handling charge.	Consolidated service charge is for all activities related to handing crude. No further charges are envisaged to be charged by the operator. However, charges related to COT & related services are not included in the scope of the proposal.

12.3. The other points clarified by the KPT are summarised below:

(i). (a). The theoretical capacity of the SPM has been arrived at considering the inputs from SPM operators regarding traffic and their views on the theoretical and maximum capacity and considering the time available at SPM.

(b). The port had carried out a survey of the SPMs operating in major ports. The inputs received from Essar Vadinar, IOC Vadinar and BPCL Cochin and considered for arriving at the capacity are given below:

			2007-2008	**2008-2009**	**2009-2010**	**Remarks**
ESSAR	Capacity of SBM	**MMTPA**	26	26	26	14.5 MMTPA is considered the safe maximum capacity.
	Traffic at SBM	**MMTPA**	10.5	14.3	14.3	Crude
	Capacity utilization	**%**			55%	However, the Capacity is limited by refinery Capacity.

	Days of operation	**Days**			210	Operations round the year. Downtime due to maintenance 35 days. No berthing after 4 pm.
	Capacity of the refinery	**MMTPA**	14	14	14	Essar Vadinar 14 MMTPA Being enhanced to 16 Million in 2011
IOC VADINAR (Both SPMs are used together)	Capacity of SBM (both)	**MMTPA**	25 (12.5 each)	25 (12.5 each)	25 (12.5 each)	Two SPM are used interchangeably hence data is available only together. It was theorized that in the scenario using only VLCC (then) with about 55% utilization (considered maximum) the capacity of both SPMs could be 40 MMTPA.
	Traffic at SBM	**MMTPA**	22 (both)	22 (both)	22 (both)	Crude
	Capacity utilization	**%**			40%	Expected to be 55%. (40% utilization is calculated from Pilot on board to cast off).
	Days of operation	**Days**	146	146	150	This is for both the SPM. 10% of days (35 days) are removed for maintenance. 35% time is not available due to navigational constraints.
	Capacity of the refinery	**MMTPA**				Koyali – 13.7 MMTPA, Panipat – 15 MMTPA, Mathura – 8 MMTPA
BPCL Cochin	Capacity of SBM	**MMTPA**	25	25	25	12.5 MMTPA @ 50% utilization considered as the Capacity by BPCL for all practical purposes.
	Traffic at SBM	**MMTPA**	2.3	7.3	7.75	Planned 8.8 MMTPA in 2010-11
	Capacity utilization	**%**			30%	• The utilization of the SPM is calculated with respect to the number of days the SPM is operational – 110 days or 30% • As maximum traffic is considered capacity has not been reached. This data is not relevant.
	Days of operation	**Days**	-	-	110	• There are 8-9 vessels a month. The turnaround time of a VLCC vessel is about 2 days • The vessels are allowed to berth from 0630 hours to 4 PM only.

						• Maintenance operation is also done during the above times • The monsoon is for 6 months. During this time vessel operations window is limited.

(c). Essar is operating 14.3 MMTPA which is 55% of the theoretical capacity envisaged at 26 MMTPA. However, Essar has categorically stated that 14.5 million tons is considered the safe maximum capacity.

(d). It has furnished a table showing the activity and waiting times at Essar SPM to show extraordinarily long waiting periods by the vessels for SPM. As per the table furnished by KPT, the total time taken is in the range of 74 hours to 89 hours for different types of vessels handled at SPM.

(ii). (a). Based on the capacity expansion plans of IOCL and expansion and green field projects planned by Essar, the crude oil traffic projections of KPT in the business plan is given in the table below:

Year	**Projections (MMTPA)**
2010	38
2015	56

(b). KPT is of view that the upcoming SPM will be able to service a part of the project traffic. The feasibility report has also projected demand for the SPM at 9 MMTPA. The Kandla Batinda pipeline (KBPL) is not being (presently) put to use, this pipeline is being proposed to be utilized for transportation of crude to existing refineries as well as the others being planned.

(c). It is stated that the business plan projections were made in 2006. The projected traffic of 60.29 Million tonnes is only projection of traffic and actual traffic is dependant on the dynamics of supply and demand along with the operations and marketing strategies employed. KPT is in direct competition with the existing and upcoming minor ports in the vicinity to supply the crude for the refineries. The minor ports have considerable flexibility in customizing a concession agreement for the operators. Hence it is not feasible to apportion this traffic.

13. Based on the above, the KPT has furnished revised proposal modifying the optimal capacity of SPM, capacity cost of pipelines and consequently the operating cost and the upfront tariff proposed. The highlights of the revised proposal alongwith the submissions made by the KPT are given below:

(i). Handling rate of the SPM:

(a). The handling rate for the SPM was arrived at by studying the “effective handling rate” achieved by the operators of SPMs in Vadinar and Cochin. It is stated that the “effective handling rate” (discharge rate) is considerably less than the discharge rates the vessels are capable off. This is in view of limitations due to cargo type and in view of stoppages due to various operational, nautical and safety considerations during the discharge operation.

(b). The handling rates achieved by the different vessel types as reported by Essar Vadinar are tabulated below:

Tanker Type	Average rate (tonnes/ hr)
Aframax	4420
Suezmax	5100
VLCC	6120

(c). From the above table it is seen that average handling rate for Suezmax and VLCC is 5610 tons/hr. KPT has therefore considered 5500 tons /hour as the discharge rate for the tariff calculation.

(ii). Optimal Capacity of the SPM:

(a). The feasibility report has assumed a capacity of SPM at 9 MMTPA. This was based on the forecasted traffic to be handled in the planned SPM. The feasibility has also reported that the maximum throughput to be transported in the cross country pipeline at 12 MMTPA taking into account any future expansion plans. The traffic handled in the SPMs is to feed a single refinery generally a captive facility. As such theoretical and optimal capacity of the SPM are not a relevant issue.

(b). TAMP guidelines 2008 envisages that the capacity of the facility be estimated using a generic approach.

KPT has, therefore, carried out an exercise to estimate the capacity of the upcoming facility. The upcoming facility is for handling liquid cargo, specifically crude only. The TAMP guidelines of 2008 for liquid terminals inter alia recommends that the optimal capacity of a liquid terminal should be determined taking into consideration the following elements.

(i). Type of cargo to be handled
(ii). Size of vessels to be handled

The above two elements were considered relevant to SPMs also. In addition to these two elements, KPT has also considered the following two elements to be relevant to the issue.

(iii). Capacity of refinery
(iv). Time available for operation

- The type of cargo is an important element particularly considering the safety issue - combustion, viscosity, pollution etc. the discharge rates for crude and products traffic are considerably different. Hence, it was realized that the discharge rates of vessel could not be used to calculate the handling rate of the SPM.

- Large vessels tend to have higher discharge rates. Some of the newer VLCCs are reported to have discharge rates in the range of 9000-10,000 tons/hr. However, as stated in the preceding section the effective handling rates were not significantly higher and were found to be in the range of about 5600 tons per hour for VLCCs also.

- It is seen that the TAMP 2008 guidelines do not provide for the capacity of liquid terminal to be limited by capacity of the storage facility or any downstream facility. However, it is seen that capacity of all the SPMs operating the Major Ports are limited by the capacity of refinery.

  KPT is also of the view that the upcoming SPM facility can feed only one refinery. There is an increasing trend to integrate crude handling facilities in the energy supply chain, hence an existing

/upcoming refinery would in all likelihood provide for/acquire such assets as a forward integration strategy.

Further, the length of the pipeline is 19.5 Kms. The pipeline would itself contain a large volume of crude (about 20,000 tons) of a specific quality between vessel visits. Hence, on a routine basis it would be operationally and economically unviable to prepare the pipeline for another variety of cargo with different specific gravity, viscosity, etc.

- Cargo handling operations from an SPM is more complex. The berthing, un-berthing, maintenance operations are constrained due to availability of support services, safety services due to monsoons, visibility, weather, waves, winds, etc.

  All the SPM operators permit the vessel to berth only from 6 AM to 4 PM. This effectively reduces the time available in each day to 17 hours from 24 hours or 70% of the day.

  The SPM operators have reported about 35 days is involved routine for maintenance. The maintenance of SPMs are also undertaken only during the fair weather and during the day. Hence downtime due to maintenance/repair is lost for handling cargo.

(c). The KPT is of the view that the utilization in the norms for calculation of optimal capacity of Liquid Bulk terminal which is reckoned at 70% of the maximum capacity is not practical and cannot be applied to the SPM facility. The KPT has suggested that the optimal utilization rate may be considered at 50% and each day be considered at 17 hours.

The theoretical capacity of the proposed SPM is arrived by KPT at 24 MMTPA. The optimal capacity is arrived at using 50% utilization at 12 MMTPA.

The details of the capacity assessment by KPT is tabulated hereunder:

SHIP TYPE	**Suez Max**	**VLCC**
DWT	160000	300000
Parcel size (tons)	136000	255000
Average Discharge rate (m3/hr)	5500	
Time to discharge (hours)	25.0	47
Peripheral time (hours)	9	9
Turn around period for each ship (hours)	34	56
Mix of Vessels	50%	50%
Parcel size of hypothetical ship with above mix (tons)	195500	
Turnaround Time of the above vessel (hours)	45	
Total days in a year	365	
Maintenance days	35	
Net days available	330	
Time available for SPM operations per day (0600 hrs to 1600 hrs = 10 hours for berthing) remaining time counted half as only discharge & unberthing can be undertaken 14 hours = 7.0 hours	17	
Time available for SPM operations per day approx 17 hours (out of 24 hrs)	70%	
Total days available for SPM operations (at 70% of the net days available)	231	
Total (in Hrs)	5544	

No. of trips possible	123.0
Maximum Capacity of SPM – 100% (MTPA)	24.0
Optimal Capacity Utilization	50%
Optimal Capacity (MTPA)	12.00

(iii). Capital Cost Estimation:

(a). There are no civil structures envisaged to be developed with regard to the proposed SPM terminal and pipeline facilities development.

(b). The cost estimates had been estimated in March 2004 by Engineers India Limited (EIL). These estimates were interpolated by Kandla Port Trust (KPT) by applying an escalation for inflation. The inflation rates used for escalation is 5.30% per annum in the revised proposal as against 5% assumed in the original proposal.

(c). The capital cost of pipeline has been revised as the estimates in the original proposal did not reflect current market prices. The cost estimates of pipeline is taken based on the expansion project for Vadinar Oil Terminal by Essar Engineering in 2008 which is found to be most reliable and relevant. The unit cost of pipeline so obtained at Rs.20 crores per km or Rs.380 crores based on 2008 prices is escalated applying 5.3% inflation per annum to arrive at the capital cost for the year 2011 which comes to Rs.443.68 crores for the pipeline. For SPM, adopting the Essar cost of 2008 and applying annual escalation comes to Rs.140 crores in the year 2011.

(d). The cost estimate of the SPM as per the feasibility report is Rs.103.28 crores. This is escalated using the inflation rate of 5.3% per annum to arrive at 2011 cost of Rs.148.26 crores which is considered in the revised proposal.

(e). The cost estimates obtained above were compared with estimates using inputs of Cochin, Mundra and Essar Vadinar. The capital cost could vary significantly depending upon the source; age of equipments, duty structure etc and the reliability of the source was also an issue. The estimates of Essar Vadinar was found to be most reliable. The KPT has revised the capital cost estimates of SPM and the pipeline upwards to be more reflective of the current market prices. The revised capital cost estimated by KPT is presented in the following table:

(**Rs. in crores**)

Sl. No.	**Particulars**	**Estimated capital cost**
(i).	SPM	148.26
(ii).	Pipeline	443.68
(iii).	Miscellaneous charges – [5% of (i). + (ii).] i.e. 5% * (148.26 +443.68)	**29.59**
	Total Capital Cost of the Project [(i) + (ii) + (iii)]	**621.53**

(iv). Estimation of Operating Cost:

(a). The operating cost for assessing the Annual Revenue Requirement (ARR) of the SPM has been estimated based on the norms specified in guidelines for liquid terminal and has also been compared with the cost of SPMs operational at Vadinar and Cochin.

(b). Power and fuel cost are not applicable to the proposed SPM terminal as SPM uses self contained power using solar cells. The fuel requirement is negligible which cannot be estimated on per hectare basis. Power and fuel cost is, therefore, not considered in the estimation of operating cost.

(c). Repairs and maintenance for civil works is not estimated as no civil structures are envisaged for the facility. Adopting the norms in the guidelines prescribed for liquid terminal, repairs and maintenance on mechanical and electrical equipments is estimated at 2% of total capital cost.

(d). Insurance cost and other expenses are estimated adopting the norms prescribed for liquid bulk terminal.

(e). Since there are no civil structures being built, depreciation rate has been taken as 10.34% per annum for the SPM facility and pipeline.

(f). The KPT has stated that as per the Scale of Rates (SOR) of Kandla Port, way leave charges to be paid by the operator is Rs.0.75 per sqm per month. Accordingly, the way leave charges for the pipeline of 19 kms. length and 2 mtrs. width is estimated at Rs.3.42 lakhs per year.

(v). Assessment of Annual Revenue Requirement (ARR):

(a). The total pipeline length is 19.5 kms. The entire pipeline from the LFP to COT measuring about 0.5 km is outside the port limits. Hence, only 19 kms pipeline is considered for estimation of the project costs for upfront tariff fixation.

(b). The revised Annual Revenue Requirement estimated by the KPT is as follows:

Sr. No.	Particulars	Rs. in lakhs
1.	Total annual operating cost	8917
2.	**CAPITAL EMPLOYED**	**62153**
3.	16% Return on capital employed	9944.48
Total Annual Revenue Requirement		**18861**

(vi). The KPT has stated that as seen in SPMs operational at Cochin and Vadinar, handling charge is the only amount proposed to be collected from the users. Hence, the entire revenue requirement is considered for deriving the composite handling charge. It has, therefore, not proposed any miscellaneous charge.

(vii). The per tonne handling rate proposed by the KPT for optimal capacity of 12 Million Tonnes Per Annum to meet the estimated annual revenue requirement of Rs.18,861 lakhs is Rs.157 per tonne.

14. With reference to the totality of the information collected during the processing of this case, the following position emerges:

(i). The tariff guidelines of 2008 for upfront tariff fixation prescribe norms/ guidelines for dedicated facilities such as coal, iron ore, container, liquid handling terminal and multipurpose cargo terminal. The guidelines of 2008 for upfront tariff fixation do not prescribe any exclusive norms / guidelines for handling liquid cargo at Single Point Mooring as a stand alone facility.

As brought out in the factual note, in the absence of any norms prescribed in the guidelines for determining upfront tariff for SPM facility, the matter was referred to the Ministry of Shipping (MOS) seeking their recommendations. The MOS vide letter No.PD-11015/1/2010-KPT dated 9 June 2010 directed this Authority to undertake the fixation of upfront tariff for SPM at KPT based on the parameters applicable for liquid bulk handling with reference to SPM operations carried out at the KPT (Vadinar Division), Cochin Port and Paradip Port Trust as an interim measure till the guidelines for SPM terminals are finalised.

(ii). The proposal filed by the KPT mainly relies upon the feasibility report prepared nearly six years back in the year 2004. The KPT was advised to update the feasibility report for the proposed SPM terminal in order to capture the change in the technology, market conditions, prevailing capital cost, etc. The port has clarified that there has not been significant change in the technology particularly for the proposed SPM since the preparation of feasibility report and the estimates of capital cost has been reviewed and modified in the revised proposal to reflect the current market rate.

(iii). The KPT had considered the capacity of the SPM at 9 MTPA in the original proposal as per the feasibility report and stated that it was based on the throughput projections. Neither the proposal of the KPT nor the feasibility report provided the calculation and its basis for assessing the capacity at 9 Million Tonnes Per Annum (MTPA). There were objections from prospective bidders on the estimation of capital cost. In view of the shortcomings observed in the proposal, the port was advised to review and modify its proposal based on the parameters achieved at other SPM operations including the SPM operated in the Vadinar division in line with directions of the MOS.

In the revised proposal, the KPT has considered the optimal capacity at 12 MTPA as against 9 MTPA assumed originally. Based on the input of capital cost obtained from Essar one of the SPM operators in Vadinar, the port has revised the capital cost to Rs.621.53 crores as against Rs.438.90 crores estimated in its original proposal. The power cost estimated at Rs.465 lakhs is excluded in the revised proposal citing that the proposed SPM will not consume any power and fuel. The final revised proposal of the KPT dated 12 January 2011 along with the information / clarifications furnished by the port during the processing of the case is considered in the analysis.

(iv). Optimal Capacity:

As stated in the narration of the factual note, the KPT has mainly relied on the traffic forecast to consider the optimal capacity of the terminal. The optimal capacity of the SPM has been increased to 12 MTPA in the revised proposal. The port has confirmed that the 9 MTPA captures the present demand of crude handling at the proposed SPM and as per the feasibility report the maximum transfer of liquid can be 12 MTPA for the proposed SPM even after considering the future expansion plans which is finally considered as the optimal capacity in the revised proposal.

Clause 3.3.2. of the upfront tariff guidelines of 2008 stipulates that upfront tariff is to be determined for the optimal capacity irrespective of traffic forecast. For determining the optimal (quay) capacity, the guidelines specifies different handling rate norms for different type of cargo / vessel size. A norm of 70% of the maximum capacity is prescribed as the optimal capacity of the terminal. When a generic approach is available to the estimate capacity in the guidelines, the proposal of the KPT to reckon the traffic projection/ demand as the optimal capacity is a deviation from the guidelines of 2008. Bringing out the above position, the port was advised on several occasions to review its proposal and reassess the optimal capacity taking into consideration parameters of handling rate, number of working hours, etc., best achieved in the SPM operations following the generic approach prescribed in the guidelines.

The Kandla Port Trust has clarified that it is difficult to assess designed capacity of SPM as there are various factors which influence the capacity determination. It has argued that the traffic handled in the SPMs is to feed refinery and hence is restricted to the capacity of the refinery. The proposed SPM is to feed a single refinery and, therefore, optimal capacity of the SPM is not a relevant issue as per the KPT. The port has however attempted to furnish the capacity calculation which is explained here under:

(a). In the revised proposal, the KPT has considered the effective discharge rate of VLCC at 6120 tonnes/ hour and suezmax vessel at 5100 tonnes/ hour and the average discharge rate at 5500 tonnes/ hour. The handling rate achieved by Essar and IOCL are 8000 and 10000 tonnes / hour for their respective SPM operations. Even the KPT had earlier stated the average discharge rate at SPM would be 7500 tonnes / hour which is scaled down to 5500 tonnes/ hour in the revised proposal. The KPT has stated that the revised average discharge rate of 5500 tonnes/ hour is based on the most reliable dates obtained from Essar Vadinar. Since the upfront tariff is fixed for 30 year time horizon, the reason for not considering the best discharge rate parameters achieved is not explained by the port.

(b). It is notable that even if the average discharge rate of 5500 tonnes / hour as indicated by the KPT is considered, the optimal capacity will be 33.72 MTPA (i.e. 5500T/hour *365*24 hours *70%) as per the general formula prescribed in the guidelines for estimating the capacity. As against the above, the KPT in the revised proposal filed on 12 January 2011 has assessed the theoretical capacity of the SPM at 24 MTPA which is further pegged at 50% capacity utilisation i.e. at 12 MTPA for arriving at the upfront tariff. The capacity calculation furnished by the KPT shows that the port has provided allowance in various parameters, viz. number of working days, number of hours available for SPM operations citing routine maintenance and restriction in berthing vessels during night time at SPM. The optimal capacity of the SPM is pegged at 50% of the theoretical capacity i.e. 12 MTPA. The KPT has stated that various factors influence the determination of the capacity of SPM and has highlighted the following points in support of its argument:

- The operations of berthing vessels/ tankers at the SPM is possible only during the day time from 6 AM to 4 PM which effectively reduces the time available in each day to 17 hours from 24 hours.

- The routine maintenance of SPM facility which is possible only during day time consumes one to one and half month in a year as per position obtained at other SPMs in Vadinar.

- There are limitations due to cargo type and in view of stoppages due to various operational, nautical and safety considerations during the discharge operation.

The KPT has, therefore, argued that 70% utilization norms and 365 days x 24 hours of working prescribed in the guidelines for calculation of optimal capacity cannot be applied to the SPM facility. At all the SPM operations the capacity is in the range of 40% to 50% of the designed capacity.

- Further, SPMs operating the Major Ports are limited by the capacity of refinery. It has cited the examples of the SPMs operated by Essar at Vadinar, IOCL and the BPCL at Cochin Port Trust in support of its claim. KPT is of the view that the upcoming SPM facility can feed only one refinery.

- The pipeline of 19 Kms length would itself contain a large volume of crude of specific quality. It has stated that operationally and economically it may not be unviable to prepare the pipeline for another variety of cargo. Even the Essar has confirmed that average handling rate will reduce if the length of the pipe line increases.

The port has pegged the optimal capacity at 12 MTPA but has proposed to review the tariff, if and when the actual traffic handled exceeds the capacity assumed in the upfront tariff calculation tariff caps.

(c). The optimal capacity is a critical factor in determination of the upfront tariff and if the various parameters assumed in determining the upfront rate based on which the tariff is fixed is improved at a later stage it may result in unintended gain to the operator. In view of the above position and in the absence of any separate norms for SPM operations, the MOS was requested vide our letter dated 6 December 2010 to examine the deviation from the guidelines proposed by the KPT with reference to the capacity determination in view of the constraints explained by the port. The proposal of the port to review the upfront tariff if the actual cargo at SPM exceeds the capacity considered for determination of tariff was also highlighted. We have not received any specific advice or any adverse remarks from the Ministry on the deviation proposed by the KPT from the guidelines with reference to the assessment of the capacity. In a separate meeting to review the PPP projects, the Ministry has, however, pointed out that SPM facility at Gulf of Kutch is one of the prestigious projects, which should be expedited. In this backdrop, upfront tariff for SPM at KPT is processed considering the optimal capacity at 12 MTPA as assessed by the KPT subject to review when actual traffic handled exceeds the optimal capacity considered in this exercise. The port has undertaken to file a proposal for review of tariff at that time. The port is advised to incorporate an appropriate clause to this effect in the RFP documents to be issued and in the BOT agreement to be signed with the successful bidder. It is relevant to state that a similar approach was adopted in case of upfront tariff for dry bulk terminal off Tekra near Tuna at port of Kandla.

(v). <u>Capital costs</u>:

(a). The upfront tariff guidelines broadly indicate civil works and list of equipment for various cargo handling facilities. There are no separate norms prescribed for SPM operations.

The KPT has clarified that civil works, storage of the crude, etc. are not envisaged for the proposed SPM. The storage facility at Crude Oil Terminal (COT) is proposed to be located outside the jurisdiction of the port. That being so, the capital cost does not include the civil cost, cost of COT, etc.

(b). As regards equipment, the port envisages investment for SPM terminal and pipelines.

The prospective bidders observed that the capital cost estimated by the KPT in the original proposal is on the lower side. The KPT has revisited the estimates of capital cost and has revised the estimates of pipeline cost reportedly based on the unit rate obtained for one of the projects of Essar. The port has confirmed that the capital cost pertaining to the portion of pipeline falling outside the port limits which was considered in the original proposal is excluded in the revised capital cost. Since the base rate for estimation pertains to the year 2008, escalation of 5.3% p.a. is applied to update the capital cost to reflect the current market price. For cost of the SPM, the estimates furnished in Feasibility Report is taken as the base and annual escalation of 5.3% per annum is provided to arrive at the updated capital cost.

Despite specific request, the KPT has not furnished supporting documents in form of budgetary quotations', rate analysis, etc. to validate the estimates of capital cost. The capital cost estimated by the KPT is relied upon.

(c). This miscellaneous cost is estimated at 5% of equipment cost adopting the norms prescribed in the guidelines for liquid handling terminal.

(d). Return on capital employed is estimated at 16% of the estimated capital cost as per the norms prescribed in the guidelines.

(vi). Operating cost:

(a). The port had initially estimated power cost which was not supported with any calculation relating to consumption of power. The port was advised to justify the estimation of power cost with reference to actual power consumption at other SPM operation and particularly with reference to SPM operated by the KPT at Vadinar Division. On our insistence, the port has revisited this estimate and confirmed that power and fuel cost are not applicable to the proposed SPM as it will be using self contained power using solar cells.

(b). The repairs and maintenance cost is estimated at 2% on the mechanical and electrical equipment, insurance cost and other expenses are estimated at 1% each of the gross fixed assets as per the norms prescribed in the guidelines.

(c). Clause 3.5.3. of the tariff guidelines of 2008 stipulates that the depreciation should be calculated following the Straight Line Method (SLM) as per the rates prescribed in the Companies Act 1956. The KPT has in the revised proposal adopted depreciation rate of 10.34% stating that it is as per the guidelines.

(d). The upfront tariff guidelines require estimation of license fee for port assets based on the rates prescribed in the Scale of Rates of the respective port trusts. The KPT does not propose to allot any land to the concessionaire as it does not anticipate any land based developments within port jurisdiction. The Kandla Port Trust has, however, estimated way leave charges on 19 kms. length of pipe line i.e. from the SPM in the port waters to the Land fall Point falling in the port area. For estimating the way leave charges, the KPT had originally adopted the license fee prescribed in its existing Scale of Rates for open space for kutcha plots at Rs.10.50 per sq. metre per month. The KPT in the revised proposal has modified the estimate and scaled it down adopting the unit rate of Rs.0.75 per sq. mtr. per month. It is understood that the revised unit rate of license fee applied by the KPT is based on the unit rates for open space at Tuna prescribed in the Scale of Rates of the KPT which was considered in the case of upfront tariff determination for dry bulk cargo off Tekra at Tune in Kandla Port.

It is to relevant to state that the existing Scale of Rates of the KPT approved by this Authority does not prescribe any way leave charges for water area. The Land Policy guidelines issued by the Government in the year 2004 are not explicit about the rate to be adopted for water area of the port which is licenced for use of any private party. There is no uniformity in application of rates for water area amongst different Major Port Trusts. The matter has been referred to the Ministry of Shipping vide our letter No.TAMP/57/2008-MOPT dated 9 June 2010 and the response of the Ministry is awaited. For the purpose of this analysis the revised way leave charges estimated by the KPT is considered.

(e). The total operating cost for handling crude at SPM estimated by the KPT is Rs.8917 lakhs which is considered in determining the upfront tariff.

(vii). (a). The total annual revenue requirement from SPM operations is estimated at Rs.18861 lakhs which is an aggregate of 16% return on the capital cost estimated at Rs.9944 lakhs and operating cost of Rs.8917 lakhs.

(b). The entire estimated revenue requirement is proposed to be recovered from the handling charge. Accordingly, to meet the estimated annual revenue of Rs.18861 lakhs over the optimal capacity of 12 MTPA, the consolidated handling charge of Rs.157 per tonne is prescribed as proposed by the KPT.

The port has not listed down the services included in the composite handling rate despite specific advice. A note is introduced to state that the handling charge of Rs.157 per tonne for handling crude at SPM is a composite rate for unloading the cargo from vessels / tanker, transportation through pipeline (within the limits of the port), wharfage and all other associated services provided by the SPM operator.

(viii). As per the coastal concession policy of the Government which is prescribed in clause 4.3. of the tariff guidelines notified on 31 March 2005, handling of crude including POL is not entitled for any coastal concession. The port has also therefore rightly not any proposed any concessional tariff in the handling charge for coastal category.

(ix). As the levy of the vessel related charges are not within the scope of the concessionaire, it is not found relevant to include the conditions proposed at note (i), (ii), (iii) and (iv) about reckoning the status of the vessel for the purpose of vessel related charges, criteria for conversion of foreign to coastal vessel, review of exchange rate, conversion of dollar into rupees terms. Since no coastal concession is envisaged for coastal vessel and since all the vessel related charges will be collected by the KPT, definitions of ‘foreign-going’ and ‘coastal’ vessels and 60% concession in vessel related charges to coastal vessel proposed by KPT is not found relevant and hence not incorporated in the Scale of Rates. The definition of port area will be as per the relevant Act. Hence the above mentioned definition and conditions proposed by KPT are not included in the Scale of Rates for the SPM facility.

(x). Some of the common conditions stipulated in the guidelines of 2005 and uniformly prescribed in the Scale of Rates of other major ports / private terminals such as users should not be required to pay charges for delays beyond reasonable level attributable to the private terminal operator are incorporated in the upfront tariff schedule for SPM facility.

(xi). The conditionalities proposed by the port specifying the interest on delayed payments / refunds at 14.75% is partially modified to state that the penal rate of interest will be at 2% above the prime lending rate declared by the State Bank of India as prescribed in the upfront tariff schedule of other major port trusts. The other conditions about rounding off the grand total of bill, rates prescribed in Scale of Rates are at ceiling levels and rebates at floor levels, enabling port to rationalise Scale of Rates so as to give relief to users, notifying the lower rates and rationalisation of conditions are approved by this Authority in the other upfront cases and hence approved in this case also.

(xii). As per Clause 2.2. of the guidelines of February 2008 for upfront tariff setting for PPP Projects at the major ports, the upfront tariff caps to be prescribed would be applicable to all the projects to be bid out for identical handling facilities at the Kandla Port Trust during the next five years. It has to be recognised that the upfront tariff set in the instant case is mainly relying on the parameters and the capital cost furnished by the KPT in the absence of any norms available for SPM operations. The norms for SPM terminal are being formulated by the Ministry. If the KPT envisages any other project to be bid out for identical handling facilities in its port during the next five years, it is advised to approach this Authority for determining upfront tariff based on the norms / guidelines (to be) prescribed by the Ministry in this regard.

15.1. As per clause 2.8 of the Guidelines, the tariff caps will be indexed to inflation but only to an extent of 60% of the variation in Wholesale Price Index (WPI) occurring between 1 January 2008 and 1 January of the relevant year. Such automatic adjustment of tariff caps will be made every year and the adjusted tariff caps will come into force from 1 April of the relevant year to 31 March of the following year. In the instant case, since the estimation of capital cost and unit rate of operating cost considered in the upfront tariff calculation pertain to the year 2011 as reported by the KPT, it may be appropriate and relevant to prescribe the base WPI to be considered for automatic adjustment every year as 1 January 2011.

15.2. As specified in clauses 2.9.1. and 2.9.2. of the guidelines, before commencement of commercial operations, the private operator shall approach this Authority for notification of Scale of Rates containing the approved ceiling rates and the statement of conditions, as required under Section 48 of the Major Port Trusts Act, 1963.

15.3. As per clause 3.8.5 of the guidelines, if any question arises requiring clarifications or interpretation of the Scale of Rates and the statement of conditionalities, the matter shall be referred to this Authority and its decision in this regard will be binding on the operator.

15.4. The performance norms for the projects should be clearly brought out in the bid documents. The private operator is expected to perform at least at the performance norms brought out in the bid document/concession agreement. As stated earlier, the KPT should clearly bring out in the bid document as well as in the Concession Agreement that the private operator will be permitted to deploy one ship loader only.

15.5. The actual performance of the private operators will be monitored by this Authority. If any complaint regarding quality of service is received, this Authority will enquire into such allegation and forward its findings to the Kandla Port Trust. If any action is to be taken against the private operators, the Kandla Port Trust shall initiate appropriate action in accordance with the provisions of the relevant Concession Agreement.

15.6. During the commercial operation at the terminal, within 15 days from the end of every quarter, the private operator shall submit to this Authority through the Kandla Port Trust a report containing the terminal's physical and financial performance during the preceding three months.

15.7. The upfront tariff fixation has been carried out relying the optimal capacity of the SPM terminal as assessed by the KPT at 12 MTPA for the reasons explained earlier. This Authority makes it clear once again that the upfront tariff caps fixed now will be subject to review any time during the concession period, if it is found that the actual traffic handled exceeds the optimal capacity determined in this exercise and accordingly advises KPT to monitor the position and file a suitable proposal for resetting the tariff at the appropriate time.

16. In the result, and for the reasons given above and based on a collective application of mind, this Authority approves the tariff caps for SPM facility in Gulf of Kutch at Kandla Port Trust attached as **Annex - I**.

(Rani Jadhav)
Chairperson

ANNEX - I

KANDLA PORT TRUST

UPFRONT TARIFF SCHEDULE FOR SINGLE POINT MOORING FACILITY OFF VEERA AT GULF OF KUTCH

1. GENERAL TERMS & CONDITIONS:

(i). Interest on delayed payments / refunds:

(a). The user shall pay penal interest on delayed payments. Likewise, the terminal operator shall pay interest on delayed refunds.

(b). The rate of interest will be 2% above the Prime Lending Rate of the State Bank of India.

(c). The delay in refunds will be counted beyond 20 days from the date of completion of services or on production of all the documents required from the user, whichever is later.

(d). The delay in payments by the users will be counted beyond 10 days after the date of raising the bills by the Operator. This provision shall, however, not apply to the cases where payment is to be made before availing the services as stipulated in the Major Port Trust Act, 1963 and / or prescribed as a condition in the Scale of Rates.

(ii). All charges worked out shall be rounded off to the next higher rupee on the grand total of each bill.

(iii). For the purpose of calculating the dues the unit by weight shall be 1 tonne or 1,000 kilograms, the unit by volume measurement shall be 1 cubic metre and the unit by capacity measurement for liquids in bulk shall be 1,000 litres.

(iv). (a). Rates prescribed in this Scale of Rates are ceiling levels; likewise, rebates and discounts are floor levels. The operator may, if he so desires, charge lower rates and/ or allow higher rebates and discounts.

(b). The Operator may also, if it so desires, rationalize the prescribed conditionalities governing the application of rates prescribed in the Scale of Rates if such rationalization gives relief to the user in rate per unit and the unit rates prescribed in the Scale of Rates do not exceed the ceiling levels. Provided that the operator should notify the public such lower rates and / or rationalization of the conditionalities governing the application of such rates / or provided the new rates fixed shall not exceed the rates notified by the TAMP.

(v). In calculating the gross weight or measurement by volume or capacity of any individual item, fractions upto 0.5 shall be taken as 0.5 unit and fractions of 0.5 and above shall be treated as one unit, except where otherwise specified.

(vi). The users will not be required to pay charges for delays beyond a reasonable level attributable to the operator.

2. CONSOLIDATED HANDLING CHARGES

Description	Rate per metric Ton (₹)
Composite handling charge	157.00

Notes:

(i). The handling charge prescribed above is a composite rate for handling the crude from vessels / tanker, transportation through pipeline (within the limits of the port), wharfage and all other associated services provided by the operator.

(ii). Composite handling charge shall be levied on the actual tonnage of crude handled at the SPM.

(iii). The following vessel related charges shall be levied by the KPT as per the rates prescribed in the Scale of Rates of KPT from time to time for vessel related services provided by the port:

- Port dues
- Pilotage fees
- Pilot attendance fees
- Mooring charges
- Anchorage charges
- Tug Hire charges

(iv). The tariff caps will be indexed to inflation but only to an extent of 60% of the variation in Wholesale Price Index (WPI) occurring between 1 January 2011 and 1 January of the relevant year. Such automatic adjustment of tariff caps will be made every year and the adjusted tariff caps will come into force from 1 April of the relevant year to 31 March of the following year.

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