CHAPTER VI

Indian Oil Corporation Limited

Marketing of petroleum products to bulk consumers

Highlights

- Indian Oil Corporation Limited (Company) lost market share in the bulk market of naphtha (from 28 *per cent* to 23.8 *per cent*), Furnace Oil (FO)/Low Sulphur Heavy Stock (LSHS) (from 59.8 *per cent* to 56.8 *per cent*) and bitumen (from 61.2 *per cent* to 60 *per cent*) during 2002-03 to 2006-07.

  (Para 6.7.1(ii))

- During 2002-03 to 2006-07, the Company lost 131 bulk consumers and sales volume of 516919 MT to other oil marketing companies like Bharat Petroleum Corporation Limited and Hindustan Petroleum Corporation Limited. The Company also lost business aggregating to 1.86 million metric tons due to shifting of customers to alternate fuels.

  (Paras 6.7.2.1 and 6.7.2.2)

- Non-inclusion of bulk products in performance parameters in Memorandum of Understanding (MOU) with the Government resulted in incomplete evaluation and rating of performance of marketing activities of the Company.

  (Para No. 6.7.3(i))

- There had been continuous increase in discount expenses by 423.11 *per cent* from Rs.269.59 crore in 2002-03 to Rs.1,410.26 crore in 2006-07, though there was only three *per cent* increase in the total bulk consumer sales of the Company from 20401.1 thousand metric tons to 21022.4 thousand metric tons during the same period. In case of FO/LSHS and naphtha there was a decline in sales volume after 2004-05 despite enhancement in discounts offered by the Company.

  (Para No. 6.7.5(i))

- The Company extended discount of Rs.1,336.63 crore on sale of High Speed Diesel and Rs.352.11 crore on sale of Aviation Turbine Fuel during the period 2002-03 to 2006-07 without any structured discount policy for the products.

  (Para No. 6.7.5.1(i))

- Frequent revisions in terms of agreement with Rajasthan State Road Transport Corporation Limited resulted in a loss of Rs.13.78 crore to the Company.

  (Para No. 6.7.5.1 (iii))

- In Punjab, Maharashtra and Rajasthan State offices the sales targets for certain products like FO, LSHS, light diesel oil (LDO), and bitumen could not be achieved even after extension of discount beyond cap.

  (Para No. 6.7.5.1 (iv))

- At three State offices of the Company in Northern Region, discount of Rs.9.02 crore beyond marketing margin was allowed during the period 2002-03 to 2006-07.

(Para No. 6.7.5.1(v))

- As on 31 March 2007, out of the total dues of Rs.3,859 crore outstanding from non-DGS&D customers, dues amounting to Rs.963 crore (25 *per cent*) were outstanding beyond the credit period. Of these dues, Rs.238 crore or 25 *per cent* had been classified as 'doubtful' by the Company.

(Para No. 6.7.6.2)

- Kerala State Road Transport Corporation was extended credit beyond its approved limit and that for the State office resulting in a total outstanding of Rs.109.85 crore from the Corporation, as on 31 March 2007.

(Para No. 6.7.6.2 (i))

- Three hundred and eighty nine consumer pumps valuing Rs.6.80 crore and nine Railway consumer depots valuing Rs.2.44 crore were idle and 950 consumer pumps valuing Rs.16.62 crore were underutilised thereby making a total investment of Rs.25.86 crore wasteful.

(Para No. 6.7.9)

- The Company suffered under recoveries of Rs.212.73 crore on account of transportation charges of LDO and naphtha and Rs.145.54 crore on transportation of high speed diesel and motor spirit during 2005-06 and 2006-07.

(Para No. 6.7.10)

Summary of recommendations

1. ***The Company should consider including all its major products for evaluation as per the set performance parameters and targets in MOU with the Government of India.***
2. ***The State Offices should be strongly advised to adhere to discount caps and the sales target. Discounts above the caps should be fully justified in a transparent manner and reviewed periodically by next appropriate authority and should be closely monitored at Head office.***
3. ***The Company should formulate a formal policy for extension of credit for aviation turbine fuel supplies to airlines and monitor adherence to it.***
4. ***The Company should ensure that the Management information System for monitoring the cost of credit beyond permitted limits is put in place to assist the Management in taking conscious decisions and the monitoring of outstanding dues beyond credit period is made more rigorous.***
5. ***The Company should streamline its internal systems to ensure billing and follow up with the DGS&D consumers for timely issue of bills and collection of payment.***
6. ***The Company should strengthen its system of periodical review of infrastructural facilities to the customers in order to ensure optimum return on its investment.***

7. The Company should review its policy on recovery of transportation costs for sales to bulk consumers to safeguard its interests.

6.1 Introduction

Indian Oil Corporation Limited (Company) was incorporated in 1964 with the merger of Indian Oil Company Limited and Indian Refineries Limited. It is currently India's largest Oil Marketing Company (OMC) by sales with a turnover of Rs.2,20,779 crore and profit of Rs.7,499 crore for year 2006-07. The Company and its subsidiaries account for 47 *per cent* of the market share of petroleum products.

The Company has its marketing network spread throughout the country. The Marketing Division, with Headquarters at Mumbai is headed by Director (Marketing). It has four Regional Offices located at Mumbai, Delhi, Kolkata and Chennai, each headed by a General Manager. The Company is marketing its products to retail customers through retail outlets, Servo Shops, LPG dealers, SKO dealers and supplies directly to its bulk consumers. The bulk consumers are categorised into

(a) DG&SD consumers *i.e.*, paramilitary forces, railways, army, air force and navy and

(b) Non-DG&SD consumers consist of various other sections mainly airlines, thermal and power companies and fertilizers companies.

As per the statistics of March 2007, the Company had 48164 bulk consumers which included 339 DGS&D consumers and the remaining 47825 consumers were non-DGS&D consumers.

The total share of sales to bulk consumers was 41.42 *per cent* of the total sales in 2006-07. An analysis of the data relating to total quantity of bulk sales of petroleum products by the Company during the period 2002-03 to 2006-07 revealed that most significant bulk products were High Speed Diesel and Furnace Oil/Low Sulphur Heavy Stock, constituting 33.36 *per cent* and 32.99 *per cent*, respectively of the quantities sold to bulk consumers in 2006-07.

6.2 Scope of Audit

A review of the performance of the marketing activities related to the bulk consumers sales in respect of major products *viz.*, naphtha, Aviation Turbine Fuel (ATF), High Speed Diesel (HSD), Furnace Oil (FO), Low Sulphur Heavy Stock (LSHS) and bitumen was taken up with a view to assess the efficiency, economy and effectiveness of these activities. Records relating to the receipt, storage and distribution of petroleum products for the last five years ending 31 March 2007 were test checked in audit. The marketing activities were reviewed based on the records and information available in the Head Office and 16 State offices under the four Regional offices.

6.3 Audit objectives

Performance audit was carried out to assess the effectiveness of

(i) formulation and implementation of the marketing strategy involving credit policy, discount policy, policy for allowing customers to make payments by cheques, to retain and increase market share and sale volumes;

(ii) systems established for achievement of bulk sales targets as envisaged in the

Memorandum of Understanding (MOU) entered with the Government of India (GOI);

(iii) the infrastructure facilities created by the Company for supply/transportation of petroleum products to bulk customers and mechanism established for recovery of costs; and

(iv) policy to manage competition from other oil marketing companies (OMCs) and alternate fuels.

6.4 Audit criteria

The following criteria were adopted for assessing the performance:

- Sales data pertaining to the period 2002-03 to 2006-07 including sales targets and MOU targets.
- The policies and guidelines on marketing activities and sales promotion issued by the Management.
- The credit policies, discount policies and cheque facility policy followed by the Company.
- Various schemes introduced by the Marketing Division to boost sales performance.
- Policies regarding providing infrastructure facilities to bulk consumers.

6.5 Audit methodology

Audit methodology involved review of relevant and available documents, analysis of statistical information and discussions with the Management. The Management was apprised of the objectives of the Audit through an entry conference held on 30 April 2007 and meetings during the audit. The Management's replies received in October 2007 and November 2007 were considered while preparing the report.

The sample was selected on judgment basis. All high volume bulk consumers (*i.e.*, 339 DGS&D consumers), contributing more than 70 *per cent* of total sales in each segment of petroleum product, were selected. Of the remaining, a sample size of 250 non-DGS&D bulk consumers representing 0.5 *per cent* of total non-DGS&D consumers were covered in audit.

6.6 Acknowledgement

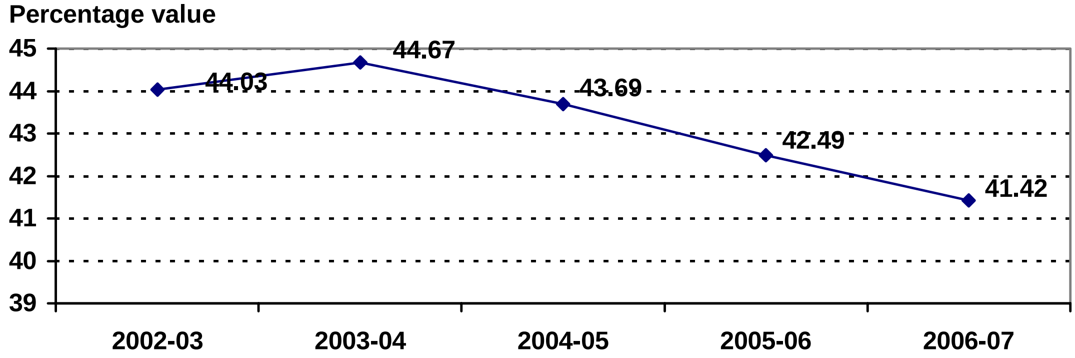
Audit takes this opportunity to thank the Management and the staff of the Company for their co-operation and assistance in the conduct of this Performance audit.

6.7 Audit findings

6.7.1 Market share of bulk sales.

(i) During the period from 2003-04 to 2006-07 the quantity of bulk sales to total sales of the Company declined from 44.67 *per cent* to 41.42 *per cent* as shown below:

Chart 6.1: Percentage of Bulk Sales to Total Sales



Considering 2002-03 as a base year the bulk sales increased by three *per cent*, upto 2006-07 which was not commensurable with growth of total turnover of the Company which grew by 10 *per cent* during the same period as shown below:

Table-6.1: Comparison of bulk sales to total sales

Year	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**
Total sales (in TMTs)	46336.2	46795.6	48797.2	47700.7	50751.5
Bulk sales (in TMTs)	20401.1	20904.1	21319.5	20266.0	21022.4
per cent growth in total sales quantity*	100	101	105	103	110
per cent growth in bulk sales quantity*	100	102	105	99	103

Considering 2002-03 as a base year

(ii) Company's market share *vis a vis* other OMCs.

The position of market share of the Company in comparison to other major competitors in the industry during the period 2003-04 to 2006-07 in various products was as below:

Table 6.2: Market share of major players of oil industry (*per cent*)

Naphtha					
Year	**IOCL**	**BPCL**[1]	**HPCL**[2]	**RIL**[3]	**Others**
2003-04	28.0	10.4	11.2	44.3	6.1
2004-05	46.4	14.5	20.2	9.4	9.5
2005-06	21.8	12.1	9.8	52.4	3.9
2006-07	23.8	11.1	10.3	50.0	4.8
FO/LSHS					
Year	**IOCL**	**BPCL**	**HPCL**	**RIL**	**Others**
2003-04	59.8	16.9	15.9	3.6	3.8
2004-05	61.4	19.1	15.8	1.2	2.5
2005-06	58.7	22.1	16.4	1.0	1.8
2006-07	56.8	21.3	17.8	1.8	2.3
Bitumen					
Year	**IOCL**	**BPCL**	**HPCL**	**RIL**	**Others**
2003-04	61.2	11.8	18.9	--	8.1
2004-05	63.3	13.1	15.9	--	7.7
2005-06	62.8	14.6	14.9	--	7.7
2006-07	60.0	13.5	18.8	--	7.7

In three products given in the table above, the Company lost market share in the bulk market. In naphtha segment, RIL emerged as the major competitor having captured the largest share of market which increased from 44.3 *per cent* in 2003-04 to 50 *per cent* in 2006-07. In FO/LSHS segment BPCL and HPCL increased their market share during the period 2003-04 to 2006-07.

The main reasons of decline in the market share of the Company were: -

- Competition amongst the OMCs both in public and private sector, after dismantling of Administered Price Mechanism (APM) in April 2002;
- Shifting of some consumers like fertilizer companies to alternate fuel like gas which resulted in shrinking of the market for naphtha.

6.7.2 Shift of business

6.7.2.1 Competition among OMCs

Consequent to deregulation of the APM with effect from 1 April 2002, the Company faced stiff competition from other OMCs. Audit examined the trend of shifting of customers from the Company to other OMCs and consequential loss of business to the Company.

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[1] ***Bharat Petroleum Corporation Limited***
[2] ***Hindustan Petroleum Corporation Limited***
[3] ***Reliance Industries Limited***

The year wise movement of customers and business from the Company in the last five years ended March 2007 to other OMCs is given below:-

Table 6.3: Movement of customers with quantity from Company to other OMCs

	2002-03		2003-04		2004-05		2005-06		2006-07		Net loss	
	Figures in brackets show net gain to the Company											
Product	**No. of customers**	**Qty MTs**	**No. of customers**	**Qty MTs**	**No. of customers**	**Qty MTs**	**No. of customers**	**Qty MTs**	**No. of customers**	**Qty MTs**	**No. of customers**	**Qty MTs**
FO/LSHS	25	94626	8	40859	5	(35532)	104	295406	(6)	(29664)	136	365695
HSD	3	(4870)	7	(12017)	(14)	(15940)	(7)	155597	(28)	(41958)	(39)	80811
Naphtha	0	0	0	0	0	0	0	0	2	28000	2	28000
LDO	6	21850	1	3705	(3)	7620.2	14	(5327)	(7)	(3759)	11	24089
Bitumen	7	11050	6	14	4	11800	3	(1800)	(3)	(11150)	17	9914
SKO	0	0	0	0	1	7200	2	359	0	0	3	7559
HPS	1	850	0	0	0	0	0	0	0	0	1	850
Total	**42**	**123506**	**22**	**32561**	**(7)**	**(24852)**	**116**	**444235**	**(42)**	**(58531)**	**131**	**516919**

All figures have been worked out after reducing the customers/business gained by the Company from the customers/business lost.

Audit analysed that during 2002-03 to 2006-07, the Company lost a total of 131 bulk consumers and sales volume of 516919 MT to other OMCs.

The Management stated that competition among the PSU Companies and with the Private Sector was bound to have a bearing on swinging volumes and percentage of market shares. It also stated that other OMCs had been able to increase their market share by offering more discounts than those offered by the Company.

The Management's reply is not acceptable because the amount of discounts offered by the Company also increased during the period under review as discussed in para 6.7.5 (i) without resulting in commensurate increase/retention of market share.

6.7.2.2 Switching over of consumers to alternate fuels

Due to a rising trend in crude prices, petroleum products became costlier over the years resulting in switching over of bulk consumers to other sources of fuels like electricity, coal and gas. Consequently petroleum products like naphtha, FO and LSHS became surplus.

Table-6.4 below indicates the product wise loss of business by the Company during 2002-03 to 2006-07 due to customers shifting to alternate fuels.

Table-6.4: Loss of business due to shifting of customers to alternate fuels

(in MTs)

Products	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**Total**
Naphtha	0	103915	131707	609961	14638	860221
FO	48580	24950	83602	168363	203322	528817
LSHS	30000	0	205127	400	11800	247327
HSD	56260	1352	13882	8241	42648	122383
LDO	10860	21420	18113	29883	6628	86904
HPS	0	0	0	16228	1772	18000
Total	**145700**	**151637**	**452431**	**833076**	**280808**	**1863652**

During the period 2002-03 to 2006-07, it was noticed that the major business loss was in case of naphtha, FO and LSHS which accounted for 5.41 *per cent*, 2.48 *per cent* and 1.66 *per cent*, respectively of the total sales of these products during the period under review.

The Management stated that drop in naphtha sales was due to customers switching over to gas. To utilise surplus naphtha, installation of naphtha cracker and Coker units at refineries was under consideration and till such time as the units are commissioned, the surplus naphtha was being exported.

The reply was not tenable because in the similar market conditions the market share of BPCL did not fall and Reliance Industries Limited was able to increase its market share. The naphtha cracker unit that was scheduled to be commissioned in February 2008, had been delayed to November 2009. The export of naphtha was not a very viable alternative as the Company had incurred a loss of Rs.598.99 crore on export of naphtha during 2005-06 and 2006-07.

6.7.3 Targets for marketing activity

The Company enters into a MOU with the GOI every year fixing the performance evaluation parameters and targets for its various activities including marketing. The deficiencies observed in this system of performance evaluation and fixing targets were as follows: -

(i) Non-inclusion of bulk products in MOU targets

Till 2004-05, the Company did not include sales of bulk products for fixing performance evaluation parameters and targets in the MOU signed with the Government, though this segment constituted more than 40 *per cent* of the total sales of the Company. From 2005-06 onwards sales of MS and HSD to bulk consumers were included in the performance evaluation parameters and targets but other bulk sale products like FO/LSHS, naphtha, bitumen and ATF, which constituted 27.6 *per cent* of the total sales of the Company in 2006-07 still remained excluded from the MOU.

The Management stated that MOU parameters were decided by an independent task force constituted by DPE under the Ministry of Heavy Industries, in which the Company was not represented. The Management added that black oils and bitumen were not proposed to be included in MOU due to constraints in its availability on account of crude mix and refinery upgradation projects and in case of naphtha more and more customers were switching over to natural gas and the excess naphtha was exported which is not considered for market share calculations.

The reply was not tenable because MOU parameters were decided by the task force on the basis of proposals made by the Company. The Company did not propose targets for bulk marketing of these products because of its constraints and thereby completely excluded these items, which constituted 27.6 *per cent* of the total turnover, from the MOU.

Exclusion of these bulk products resulted in incomplete evaluation and incomplete rating of the performance of the Company as decline in the quantities of products like FO/LSHS and naphtha sold during the period 2002-03 to 2006-07 was not considered when evaluating the performance of the Company by the Ministry.

(ii) Revisions and downsizing of sales targets fixed in internal MOUs.

The Company set its own State office and product wise annual sale targets for bulk sale of products including FO/LSHS, bitumen, and naphtha but excluding ATF. Audit noticed that the Company revised its annual internal targets and downsized these to adjust for deviations in their achievement on requests from State Offices. Further, Audit analysed that such revision generally took place in respect of those consumer products (FO/LSHS, bitumen and naphtha), which were not included in performance parameters in MOU with the Government. Thus the very purpose of setting targets was defeated.

A test check for records of 2005-06 at 13 state offices disclosed that there was downward revision of targets in 25 cases of which, four cases pertained to products covered in MOU and remaining 21 related to non-MOU products. While the downward revision in MOU products ranged from 1.51 *per cen*t to 7.11 *per cent*, the downward revisions in non-MOU products ranged from 3.43 *per cent* to 59.41 *per cent*.

The Management stated that targets were downsized whenever the potential itself came down due to factors beyond the control of the Company such as substitution of naphtha by gas and/or in cases of reduced availability of the product, *viz.*, LSHS/LDO due to processing of economically advantageous high sulphur crude. Targets are not revised due to any loss of sales to the competitor. In respect of HSD (bulk sale) the targets and the achievement have been consistently going up which proves that the target setting process and monitoring of sales are institutionalised processes duly incorporating mid-course correction in the Company.

The reply is not tenable because internal targets were generally downsized in respect of those consumer products (FO/LSHS, bitumen and naphtha), which are not included in performance parameters in MOU with the Government. This indicated that the marketing activity did not adequately focus on non-MOU products, despite constituting a major portion of the bulk product trade as discussed above.

Recommendation No. 6.1

The Company should consider including all its major products for evaluation as per the set performance parameters and targets in MOU with the Government of India.

6.7.4 Marketing Strategy

As part of the marketing strategy, annual strategy meets were conducted at corporate level to take account of the changing business scenario and evolve suitable strategies on discounts, credit, and cheque facility for different products and segments of consumers.

Audit reviewed the formulation process of the Marketing strategy and its implementation and arising observations are discussed below:

6.7.5 Discount policy

The discount policy empowering the Heads of State offices to offer discounts on FO, LSHS, LDO and other free trade products was approved by Director (Marketing) in January 2002 in order to combat the competition arising out of imports by traders, direct import by customers and also from other OMCs including standalone Refineries. Discount caps fixed in respect of four products *viz.*, FO, LSHS, LDO and bitumen were approved annually and communicated to the Heads of the State offices.

Audit conducted the cost benefit analysis of implementation of discount policy during the period from 2002-03 to 2006-07 and noticed that:

(i) Increasing discounts without commensurate increase in consumer sales

The position of the discount allowed by the Company in respect of six bulk products *vis a vis* total bulk consumer sales during the five years ended March 2007 was as given in Table-6.5 below:

Table-6.5: Statement of total discount and sales

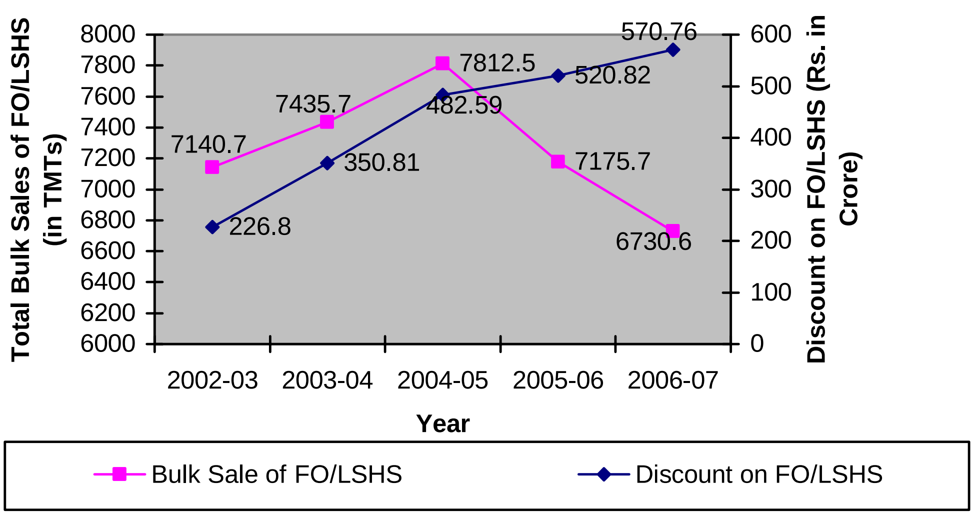
Year	**Total bulk consumer sales volume (TMT)**	**Total discount (Rs. in crore)**	**Discount per MT of sale**
2002-03	20401	270	132
2003-04	20904	520	249
2004-05	21320	902	423
2005-06	20266	1115	550
2006-07	21022	1410	671

Though there was 3.05 *per cent* increase in the total bulk consumer sales of the Company from 20401 TMT in 2002-03 to 21022 TMT in 2006-07 the discount increased by 423 *per cent* from Rs.270 crore in 2002-03 to Rs.1,410 crore in 2006-07.

In case of FO/LSHS and naphtha the Company suffered a decline in sales volume after 2004-05 despite enhancement in discounts as indicated in Graph 2 below:

Chart 6.2:

Comparative trend of discounts offered and sales achieved



The Management stated that the competition had further worsened with the entry of private players. The market determined discounts were required to be offered for timely evacuation of the products. The market share of FO was decreasing basically due to high discount levels of other OMCs who had export surplus.

The reply indicated that though the Company held the major share in petroleum market of the country yet it was finding difficult to withstand competition from OMCs and could not retain its market share in FO/LSHS, naphtha and bitumen as brought out in para 6.7.1(ii) above.

6.7.5.1 Deficiencies in the implementation of the discount policy

The discount policy of the Company was intended to retain as well as increase its market share in the bulk consumer segment. However, the Management was required to implement the discount policy prudently and monitor its results closely. Test check in audit revealed deficiencies in the implementation of the discount policy as follows:

(i) Extension of discount on products not covered under the discount policy

The discount policy of the Company did not cover HSD and ATF. Audit observed that the Company extended discount of Rs.1,336.63 crore on sale of 31757 TMTs of HSD in all the regions, during the period 2002-03 to 2006-07. Similarly, a discount of Rs.352.11 crore was allowed on case to case basis on ATF against a sale of 9641 TMTs, during the period 2002-03 to 2006-07. A further analysis revealed that these discounts, which were not covered under a structured discount policy and allowed on a case to case basis, constituted 28.7 *per cent* of the total discount allowed to bulk consumers during the said period. In the absence of a structured policy for offering discounts it was observed that the rates of discount were not commensurate with the sale volume of the customers as given in ***Annexure XVI.***

The Management stated that in general discount on products like HSD was not extended. Wherever the necessity of discount arose, the same was extended with conscious approvals. In case of ATF, HPCL started discount war in 2003-04 by offering heavy discount to new international airlines by violating the industry understanding in vogue. This led to demand for higher discounts by other foreign international airlines, which were Company's customers. The discount beyond margin on HSD gets compensated under the mechanism of sharing of under realisation instituted by GOI.

The reply that in general discounts were not extended on above products was not tenable as the Company had given discount of Rs.1,336.61 crore in all the four regions on HSD sale of 31757 TMTs and Rs.352.11 crore on ATF during the period 2002-03 to 2006-07. Further the margins on HSD had turned negative during 2002 to 2004. The under recoveries sharing mechanism of the GOI compensated only part of the under recoveries.

Extension of large quantities of discounts on products not covered under a structured discount policy carry an inherent risk of inconsistencies and irregularities in dealing with cases on stand alone basis.

(ii) Extension of additional discount to settle old dues

Uttar Pradesh State Office had been supplying HSD to UP State Road Transport Corporation (UPSRTC) under an agreement signed with them from 1 December 2003 to 30 November 2005 which was subsequently extended up to 11 September 2008. A discount of Rs.600 *per* KL (enhanced to Rs.810 *per* KL with effect from 12 September 2005) was allowed to UPSRTC under the agreements. Out of the total discount allowed, an amount of Rs.150 (enhanced to Rs.310 *per* KL with effect from 12 September 2005) was to be adjusted against the old outstanding dues of Rs.10.04 crore as on 31 March 2002 of UPSRTC. During December 2003 to June 2007 the State Office adjusted the discount of Rs.11.81 crore for settlement of outstanding dues and interest thereon. The amount of dues including interest aggregating to Rs.3.38 crore could not be adjusted so far (June 2007).

The Management stated that the discount was increased from Rs.150 *per* KL to Rs.310 *per* KL as Reliance Industries Limited (RIL) was a competitor. It was a business decision to adjust old outstanding of Rs.10.04 crore and to waive interest. Volume was now tied upto September 2008.

The reply is not acceptable as settlement of old debts of the customers by way of offering additional discount tantamounts to waiver of bad debts and therefore, required the approval of the Board of Directors. This was against the financial discipline and delegation of financial powers.

(iii) Frequent revisions and violation of the terms of agreement

As per agreement for sale of HSD to Rajasthan State Road Transport Corporation Limited. (RSRTC) signed in February 2004, the Company allowed a discount of Rs.450 *per* KL. Though the agreement was for a period of three years, the Company increased the discount to Rs.650 *per* KL in July 2004, with effect from February 2004 and again to Rs.850 *per* KL in July 2005 on the justification of competition from RIL. The Company also converted Rs.50 *per* KL prompt payment discount as per agreement into regular discount from July 2005 thereby increasing the total discount to Rs.900 *per* KL. Frequent revisions in terms of agreement resulted in a loss of Rs.13.78 crore (Rs.2.59 crore on account of change in credit terms, Rs.10.24 crore on account of increase in discount and Rs.95 lakh on account of converting Prompt Payment Discount into trade discount). In addition to increased discount, the Company also revised the payment terms of the agreement allowing the customer to pay in three fixed instalments in a month instead of payments for actual supplies thrice a month. The relaxation of the commercial terms was to be viewed in the light of the fact that the Company already had a negative marketing margin on the sale of HSD to the customer which increased to Rs.17.83 crore after the above financial concessions.

The Management stated that commercial terms for RSRTC had been revised from time to time to protect volumes of 10000 KL *per month* due to threat from entry of Reliance Industries Limited during 2004. During February 2007 Rajasthan State Office was the first state to reduce discount from Rs.900 *per* KL to Rs.500 *per* KL.

The reply is not tenable because frequent revisions in the terms of agreement defeated the very purpose of entering into a long term agreement.

(iv) Extension of discount beyond the discount cap

In a test check of records of Northern and Western Regions (sample spread over Punjab and Rajasthan State offices in the Northern region and Maharashtra State offices in the Western region), it was noticed that a discount of Rs.197.33 crore was extended against the discount cap of Rs.148.82 crore by these three state offices during the period 2004-05 to 2006-07. The excess discount was granted mainly on FO, LDO, LSHS and bitumen. Despite extension of discount beyond cap the actual sales of these products (2129.19 TMT) fell short of the target of 2519 TMT as detailed in ***Annexure XVII***.

(v) Extension of discount beyond the marketing margin

In test check of records in Rajasthan, Delhi and Punjab State Offices in Northern Region, it was noticed that *per* KL discount beyond marketing margin was extended to various customers for FO and LSHS during 2005-06 and 2006-07 amounting to Rs.9.02 crore (details given in ***Annexure XVIII***). In the Rajasthan state, the market margin was exceeded despite overall discount cap being exhausted resulting in total financial outgo of Rs.8.53 crore.

(vi) Non-implementation of controls envisaged in the discount policy

Following deficiencies in the implementation of the controls envisaged in the discount policy were noticed:

- As per guidelines issued by the Company, proposal for extension of discount to a customer was to be supported by documentary evidence such as request letters from customers, copies of invoice of competitors or minutes of negotiations with the customers. In the Western Regional office of the Company, audit scrutiny of 278 discount cases revealed that in 112 cases (*i.e.*, 40 *per cent* of the cases reviewed) the proposal was processed by the Company without any supporting documentary evidence as required under the guidelines.

The Management stated that it was not possible to collect such documentary evidence as customers were not ready to give this information in writing.

The reply is not tenable because the Company did not follow its own guidelines and in such cases did not even record the minutes of negotiations with the customer.

- The Company policy required that proposals for extending discounts should be considered on a case to case basis, giving full justification and circumstances leading to offer of discount. In Uttar Pradesh State office (UPSO) renewal and enhancement of discount for existing customers was processed for a group of customers which was not in consonance with the policy.

- As per the delegation of powers, State heads could not further delegate their delegated powers to officers down the line. In UPSO it was observed that in the cases of 254 of 2100 customers, discount bearing a financial implication of Rs.33.75 crore was approved by the DGM, UPSO instead of the GM, UPSO who was the competent authority. Hence, the approvals given for extension of discount for the year 2006-07 having financial implication of Rs.33.75 crore were irregular. Also, at Jamshedpur Divisional Office, it was noticed that discount of Rs.7.96 lakh was extended to a customer pending approval from Head Office, which was subsequently not approved.

In case discount extended by DGM, UPSO, the Management stated that the State office had been advised to get the discount proposal ratified from the State head.

Recommendation No. 6.2

The State Offices should be strongly advised to adhere to discount caps and the sales target. Discounts above the caps should be fully justified in a transparent manner and reviewed periodically by next appropriate authority and should be closely monitored at Head office.

6.7.6 Credit policy

The credit policy of the Company approved in February 2001 in respect of all products other than MS, HSD, ATF, superior kerosene oil (PDS) and LPG (Domestic), was extended from time to time. In April 2006, MS and HSD were also brought into its ambit. The policy empowered the State Heads to extend credit facility to all the customers based on the credit worthiness and the security available.

6.7.6.1 Extension of credit without policy

Though there was no formal credit policy for ATF it was observed that Company had extended credit to various airlines on case to case basis during last three years ended March 2007. However, dues beyond credit to various airlines increased from Rs.38.03 crore as of 31 March 2005 to Rs.355.67 crore as of 31 March 2007 (details in ***Annexure XIX***). Audit review disclosed that out of these outstanding dues major amounts of Rs.271.53 crore and Rs.24.53 crore were due from Indian Airlines and Alliance Air, respectively, as of March 2007. The Company had also not entered into any formal agreement with Indian Airlines or Alliance Air and had allowed these airlines to make *ad hoc* fortnightly payments on the 15th and the 30th of each month and cover the shortfall by 10th of next month. However, settlement and reconciliation of dues with these airlines was delayed and the outstanding dues of these airlines started accumulating over the period.

The Management stated that outstanding dues and collections from airlines were monitored continuously at apex level and efforts were made to minimise the outstanding.

The reply was not tenable because the outstanding dues of Indian Airlines and Alliance Air increased from Rs.82.71 crore as on 31 March 2003 to Rs.296.06 crore as on 31 March 2007 and was not covered under any formal policy or agreement.

Recommendation No. 6.3

The Company should formulate a formal policy for extension of credit for ATF supplies to airlines and monitor adherence to it.

6.7.6.2 Lack of controls in the implementation of credit policy

In accordance with the credit policy, the State Office is responsible for monitoring the outstanding amounts and ensuring that the credit is contained within the credit cap. It reports the status of monthly outstanding, the approved credit terms for each customer, number of days equivalent for the outstanding shown as within credit and reasons for beyond credit to Regional Office. The credit shall be extended only with interest. However, the approving authority can consider interest-free credit in exceptional cases taking into account the market conditions and with proper justification. In case of any default by any customer, the credit facility shall be withdrawn immediately.

Audit examined the implementation of credit policy and observed that total outstanding dues of non-DGS&D customers indicated substantial outstanding dues beyond credit[4] for the period 2002-03 to 2006-07 as detailed below:

[4] Beyond credit period or limits

Table-6.6: Outstanding dues of non-DGS&D customers

(Rs. in crore)

Particulars	2003-04	*per cent* of total	2004-05	*per cent* of total	2005-06	*per cent* of total	2006-07	*per cent* of total
Beyond credit	711	26.7	605	19.4	673	16.2	963	25
Within credit period and limit	1948	73.3	2517	80.6	3475	83.8	2896	75.0
Total outstanding dues	2659	100.0	3122	100.0	4148	100.0	3859	100.0
Doubtful balance	228	8.6	251	8.0	242	5.8	238	6.2

It was observed that despite a small reduction in total outstanding dues in 2006-07 as compared to previous year, there was a substantial increase in the dues beyond credit. As on 31 March 2007, out of the total outstanding dues of Rs.3,859 crore, dues amounting to Rs.963 crore (25 *per cent*) were beyond credit. Out of outstanding dues beyond credit Rs.238 crore or around 25 *per cent* thereof had been classified as 'doubtful' by the Company.

It was also observed that out of total (47825) non-DGS&D customers, 12 major bulk customers (***Annexure XX***) alone accounted for 82 *per cent* (Rs.593.66 crore) of dues beyond credit resulting in blockade of funds of the Company. Nine of these 12 customers related to aviation sector.

The Management stated that the sales were monitored through different trade categories *viz.*, state transport undertakings, fertilizers, power plants, aviation, marine, private and LPG, *etc*., and in each category, the market condition and competition was varied. The situation of outstanding dues in respect of certain customers was due to acute financial constraints experienced at certain points of time. However, in order to keep a continued business relationship with these customers, it was essential to maintain the supply of products.

The reply was not tenable because dues beyond credit and doubtful debts that came down during 2004-05 and 2005-06 again increased to 25 *per cent* and 6.2 *per cent* respectively of the total dues during 2006-07. This indicated that the recovery system in the Company was deficient.

In addition to above, audit of the Regional and State Offices of the Company revealed the following cases:

(i) The credit limit for Kerala State Road Transport Corporation (KSRTC) in 2006-07 was Rs.20.20 crore and for the State office as a whole was Rs.30 crore. In view of the financial position of KSRTC and build up of huge outstanding amounts from KSRTC the State office of the Company requested (July 2006) the Head office to increase the limit of KSRTC to Rs.100 crore which was not accepted by Head office (January 2007). The customer was, however, extended credit beyond limit resulting in a total outstanding of Rs.109.85 crore from KSRTC as on 31 March 2007.

(ii) In Eastern Regional office of the Company it was observed that Fertilizer Corporation of India, Sindri (FCI) was a major customer of the Company for FO/LSHS and had a credit limit of Rs.36 crore during 2001-02. Outstanding dues from FCI as on 1

July 2001 towards such supply were Rs.35.04 crore. The Company could not recover the dues from FCI despite follow up and decided to recover the same in phased manner. Despite the FCI being sick since November 1992 and facing financial crunch the Company continued further supplies after July 2001 against post dated cheques. The credit limit of the customer was also increased to Rs.55 crore (March 2002). The post dated cheques given by FCI could not be realised. Subsequently, Government decided to close FCI in September 2002. The dues were not recovered and accordingly an amount of Rs.80.89 crore (including interest of Rs.35.63 crore upto December 2006) remained unrealised from FCI.

The Management stated that FCI, Sindri was a BIFR unit with the total outstanding of Rs.80.89 crore of which the Company had offered to settle 28.92 *per cent* of the principal amount of Rs.45.26 crore, which was still under consideration.

Thus, without ensuring settlement of old outstanding dues, the Company continued to supply products to a sick and financially strained customer, resulting in non-recovery of dues of Rs.80.89 crore.

(iii) During the year 1992, to mitigate the hardship faced by Orissa Road Transport Corporation (OSRTC) and to help them tide over their financial crunch, the Company made supplies of HSD on credit amounting to Rs.1.29 crore of which Rs.1.22 crore could not be realised. OSRTC offered to settle the amount of Rs.55 lakh, which, although accepted by the Company did not translate into actual payment. Hence, due to supplies to the customer in financial crisis the Company blocked its own dues to the extent of Rs.1.22 crore.

The Management stated that follow up was on with OSRTC for recovery, failing which necessary approval would be taken from competent authority for absorption of this loss.

6.7.6.3 Deficiencies in the implementation and monitoring of the credit policy

The following deficiencies in the implementation and monitoring of credit policy came to the notice of audit:

(i) As per Head Office instructions of January 2003, statement of interest loss due to delayed payment beyond approved credit period had to be prepared customer-wise and put up to Head Office on quarterly basis. Though major customers like State Transport Undertakings and Power Plants under State sector delayed payments beyond approved credit period neither any interest was charged thereon nor statements of interest loss were prepared.

The Management stated that in all these cases, considering the huge volume of business, the credit was allowed interest free and to that effect documentation was also being done.

The reply does not hold good in view of fact that statement of interest loss due to delayed payment beyond approved credit were not being prepared customer-wise and put up to Head Office on quarterly basis. In the absence of this important information, the cost of credit given to the major customers was not available with the Management, and to that extent curtailed effective monitoring and decision-making.

(ii) There was no provision in ERP (SAP) system to monitor recoveries within the approved credit period usually of 35 or 45 days, to assess the amount of outstanding beyond credit period and its financial burden on the Company. The control inputs in SAP system regarding credit limits (days and amount) prescribed in the credit policy were overridden for major customers like Indian Airlines, State Transport Undertakings and Power Plants to allow invoicing resulting in compromise of the credit control features of the ERP system.

The Management stated that after introduction of SAP system, the erstwhile manual controls and credit limits were brought into SAP system. As market conditions are dynamic, occasions do arise to enhance the credit limit to accommodate the customers in maintaining continuous flow of supplies. Conscious decisions were taken to effect supplies beyond authorised credit limits. However, extensive monitoring process was in place through various MIS, review meetings at different levels and the status of outstanding are completely known at different management levels.

The reply is not tenable because once the ERP system is implemented, to (i) maintain manual processes and (ii) deliberately override the built-in system controls in the ERP can lead to manipulation and selective disregard of the credit policy. Even after an extensive monitoring process being in place as claimed by the Management the dues beyond credit increased from Rs.711 crore in 2003-04 to Rs.963 crore in 2006-07 as discussed in para 6.7.6.2.

Recommendation No. 6.4

The Company should ensure that

(i) ***the MIS for monitoring the cost of credit beyond permitted limits is put in place to assist the Management in taking conscious decisions; and***

(ii) ***monitoring of outstanding dues beyond credit period is made more rigorous.***

6.7.7 Cheque facility

The Company provides cheque facility as per its policy formulated in 1995 and revised subsequently in October 2001. As per policy, cheque facility was to be granted either against the security or based on credit worthiness of the customer assessed through CRISIL module. In case of dishonour of cheque, Company was to recover incidental charges and interest from the consumer.

Audit reviewed the implementation of this cheque facility and noticed the following:

- The Company had different rates of incidental charges for technical default and non-technical default. The rate of penalty for technical default was as low as Rs.100. The customer could manipulate this by willingly making incomplete or incorrect cheque to avail more credit period at a minimal cost of Rs.100. It was noticed that M/s Baroda Road Corporation Limited made two consecutive incidences of defaults due to technical reasons during May 2006.
- At Karnataka State Office, three cheques valuing Rs.3.76 crore were dishonoured in September 2002. The customer repaid the amount in December 2002. The Regional office adjusted interest of Rs.40.69 lakh due from the customer for delayed payment on account of dishonoured cheques against Rs.51.09 1akh considered payable to them on account of savings on unavailed credit as the party was generally making payment before due dates as per the credit terms.

The Management stated that cheques for Rs.3.76 crore were dishonoured which was subsequently collected alongwith interest at the prime lending rate of Canara Bank.

The reply was not tenable as the Company adjusted interest dues against a notional savings due to the customer for not availing credit which was not envisaged in its credit policy and was against the financial propriety and financial discipline.

6.7.8 Outstanding dues of Director General of Supplies and Disposal customers

All supplies to the Director General of Supplies and Disposal (DGS&D) customers were governed by the terms of contract between the Company and the respective customer. There was no specific credit period in respect of these customers.

The payments were being made by the customers after certification of delivery of products at the receiving locations which involved a long processing time due to administrative clearances and procedural formalities. Audit noticed that 40 bills pertaining to the period 2001-02 to 2006-07 in the Northern Regional office of the Company aggregating to Rs.97.90 lakh were still outstanding as of December 2006.

The Internal Audit department of the Company reported (January 2003) inordinate delays in issue of bills to customers by the Company. The position did not improve and it was observed that in Northern Regional office of the Company, 117 bills aggregating to Rs.3.36 crore were pending issuance to the customers as on 31 March 2007 for a period ranging from 1 day to 84 days of which 16 bills were pending for a period ranging from 10 days to 30 days, two bills for 31 to 60 days and three bills for 51 to 84 days. This resulted in allowing interest free credit to the purchasers without any specific clause in the agreement.

The Management stated that as regards DGS&D consumers, the procedures involved in receiving the product and documentation were very elaborate and cumbersome and the delay was in-built.

While it is accepted that delays in processing of bills at the customers' end is largely beyond the control of the Company, delays in raising invoices could be avoided, however.

Recommendation No 6.5

The Company should streamline its internal systems to ensure billing and follow up with the DGS&D consumers for timely issue of bills and collection of payment.

6.7.9 Infrastructure facilities dedicated to bulk customers

The Company had a policy to provide infrastructural facilities to bulk consumers. Consumer Pumps (CPs) having storage tanks and dispensing pumps were installed at the premises of the customers where the customer's requirement was minimum 20 KL of product *per month*. Similar infrastructure facilities were also provided to the Railways as Railway Consumer Depots (RCD). As on 31 March 2007, the Company had provided in all 6600 CPs, 176 RCDs and 47 other infrastructural facilities and as on 31 March 2007, valued at Rs.259.62 crore.

Audit observed that though, the Company does periodical review to decide whether or not to continue the infrastructure facility to the customer, out of a total of 6600 CPs, 389 CPs (valuing Rs.6.80 crore) were having 'nil sales' including 203 which were 'nil selling' either since inception or for more than three years. Further 950 CPs (Rs.16.62 crore) were 'low selling' (selling below 20 KL *per month*) out of which 500 CPs were 'low selling' for more than three years or since inception. Similarly, out of 176 RCDs, nine RCDs valuing Rs.2.44 crore were non-operational since 2002-03. Thus, there was an idle investment of Rs.25.86 crore (approximately) on unutilised or underutilised CPs and RCDs.

The Management stated that CPs were being provided to meet the MS/HSD demand of their customers including STUs and Railways and the volumes from these CPs were monitored on monthly basis. In view of closure of certain units or completion of certain infrastructural projects, a few CPs come under the category of ‘nil/low selling’ and corrective action was taken as per policy for review and decommissioning or re-sitement of such CPs.

The reply was not tenable as the CPs were lying idle or were ‘low selling’ for more than three years or even since inception which indicated deficiencies in the review conducted by the Management.

6.7.9.1 Underutilisation of facilities

The Company created a bulk lubes storage facility at Diesel Loco shed, Angul, in 1999-2000 at a cost of Rs.65 lakh for the Railways. As per the terms of the quotation, the Railways reserved the right to procure oil from any of the oil companies and to fill the tanks with the products of any of the oil companies. The RCD received only 21.46 KL of lubes from the Company once in November 1999 and the facility was not used thereafter. Subsequently in August 2004, Railway Board requested the Company to dismantle the storage tank after clearance of lube oil lying in storage tank as it was decided to convert the Loco shed into Electric Loco shed. Accordingly, tank and other facilities of RCD were dismantled by the Company in January 2007 at a cost of Rs.3.93 lakh.

Thus, the Company provided the facility to Railways without any assurance of a sustained business and eventually, resulted in a wasteful expenditure of Rs.68.93 lakh.

The Management stated that the delay in dismantling the facility was because of non-clearance by the Railways.

6.7.9.2 Idling of facilities

The Company constructed a naphtha transfer pipeline of about five kms from Reliance ‘T’ joint to Hazira Terminal in October 2000 at a cost of Rs.3.91 crore for supplying directly into the tanks of large volume customers like Essar, Kribhco, Gujarat Torrent Energy Corporation Limited, *etc*. However, the pipeline was not used since its construction as no business from the targeted consumers could be secured.

The Management stated that for naphtha transfer pipeline at Hazira, a Committee had been formed to ascertain the physical condition of the pipeline and recommend alternate use. The reply confirms that the Company failed to make judicious decision for alternative utilisation of the pipelines even after seven years.

Recommendation No. 6.6

The Company should strengthen its system of periodical review of infrastructural facilities to the customers in order to ensure optimum return on its investment.

6.7.10 Under recoveries on account of transportation costs

The Company supplies petroleum products to bulk consumers on agreed terms and conditions of contracts with each consumer which includes supply at customer's destination and recovery of the cost of transport from the customer through the price build-up. For transporting the product to customer's destination, the Company enters into transportation contracts with the transporters.

Audit noticed that the transportation cost incurred by the Company was more than the transportation cost recovered by it from customers through price build-up. This resulted in under recovery of the transportation cost and a loss to the Company as indicated in the Table-6.7 given below.

Table 6.7: Under recoveries on account of transportation costs

(Rs. in crore)

Year	**2005-06**	**2006-07**
LDO	12.50	16.37
Naphtha	83.27	155.59
Total	95.77	171.96

Total under recoveries for both the years on account of transportation cost aggregated to Rs.267.73 crore which had to be absorbed by the Company.

In addition to the under recoveries indicated above, the Audit of some State offices revealed the under recoveries in transportation costs of MS and HSD also as detailed below:

In Northern Region at Punjab State Office (PSO), under recovery was attributable to charging 84 paisa per KL *per* km on MS and HSD in the price build-up whereas actual transportation rates were much higher ranging from Rs.1.25 to Rs.1.50 *per* KL *per* km in the plain areas and Rs.1.75 to Rs.3.50 *per* KL *per* km for hilly locations. The PSO stated that under recovery during the years 2005-06 to 2006-07 amounted to Rs.40 crore and Rs.54 crore, respectively. At UPSO, the under recovery on account of transportation of HSD and MS was Rs 59.78 crore during 2003-04 to 2006-07.

Similarly, in Eastern Region as a whole the total net under recovery on account of transportation cost of MS and HSD for stocks transfer from dispatching locations to receiving locations by road and railways for the year 2006-07 worked out to Rs.49.78 crore.

The Management stated that pricing of products like naphtha was based on the nearest producing refinery on industry basis. In case the nearest refinery belongs to other OMC the Company was bound to incur additional logistics cost. To compensate under recoveries on account of naphtha a recovery of Rs.300 per MT was included in the price build-up through which an amount of Rs.22 crore and Rs.33 crore was recovered during 2005-06 and 2006-07. In case of MS and HSD under recovery was incorporated in the gross margin at the rate of Rs.66 *per* KL to arrive at the desired price which was reimbursed to the Company through sharing mechanism of under realisation by GOI. Under recovery on this account therefore, did not exist.

The reply was not tenable because even after recovery of additional transportation costs for naphtha at the rate of Rs.300 *per* MT the under recoveries to the extent of Rs.212.73 crore could not be recouped during 2005-06 and 2006-07. Similarly for MS and HSD also the Company suffered under recovery of Rs.145.54 crore approximately even after considering the additional recovery based on Rs.66 *per* KL stated to have been made through gross margin.

Recommendation No.6.7
The Company should review its policy on recovery of transportation costs for sales to bulk consumers to safeguard its interests.

6.8 Conclusion

With the dismantling of Administered Price Mechanism (APM) in April 2002, the market environment became liberal and more competitive. However, while other OMCs were able to maintain or increase their market share during the period reviewed in audit the Company's market share in products like naphtha, FO/LSHS and bitumen declined. There was a shift of customers to other OMCs and also to other alternative fuels. The Company did not have a well-formulated strategy to arrest its declining market share arising from these market developments.

The sale of bulk products (except MS and HSD from 2004-05) was not being monitored through performance parameters in the MOU entered with the Government. The discounts in case of HSD were extended without any structured policy linking discounts with sales. Discounts were extended beyond the caps fixed without achieving sales targets. There were instances where the Company sold regulated petroleum products like HSD and MS below cost to bulk consumers by extending discounts beyond marketing margins.

Infrastructural facilities provided by the Company to bulk consumers were idle or underutilised for more than three years or even since inception in certain cases indicated deficiencies in the Management's review of optimum use of the investments made.

The Company overlooked the credit limits fixed for the consumers; 25 *per cent* of the outstanding dues, as of March 2007, were beyond the approved credit ceiling.

The matter was reported to the Ministry in January 2008; reply was awaited.

CHAPTER VII

Oil and Natural Gas Corporation Limited

Deep water exploration

Highlights

- The Company provided for less number of wells in the 10th Five Year Plan (FYP) than what it committed to the Government of India/Directorate General of Hydrocarbons which resulted in payment of Rs.124.15 crore of penalty and an expenditure of Rs.368.89 crore that was rendered unfruitful.

  (Para 7.7.1.1(i))

- The Company drilled six of the 16 wells committed in the original grant period of four years in nine nomination blocks. Repeated extension of time was allowed by paying PEL fees of Rs.15.08 crore. Despite extensions, the Company could not drill the committed number of wells in two blocks. In March 2007, the Company surrendered one of the two blocks after incurring an expenditure of Rs.111.38 crore.

(Para 7.7.1.2)

- Scrutiny of 10 contracts awarded for seismic surveys revealed that due to lack of foresight in chartering and mobilising the vessels for seismic survey, the Company lost a significant portion of the field seasons leading to delays in acquisition, processing and interpretation (API) of seismic data in six contracts apart from paying remobilisation charges in one case. In addition, award of contract to a financially unsound party led to slippages in its minimum work programme (MWP) commitments.

(Para 7.7.2.1)

- Delay in finalisation of rig hiring contracts resulted in the Company not able to have required number of rigs. Consequently, it did not meet the commitment of drilling deep water wells leading to postponement of drilling of eight wells during 10^{th} FYP. Not availing the option of hiring two additional rigs led to drilling backlog of 15 wells and an estimated extra expenditure of Rs.739.01 crore. Delay in finalisation of renewal contract in respect of one rig resulted in a committed liability of extra expenditure of Rs.311.42 crore from 2008 onwards.

(Para 7.7.3.1)

- The Company failed to monitor the actual cost of drilling activities against their estimates. Analysis of 35 wells by audit revealed that actual time and actual cost exceeded their respective estimates significantly in a number of cases. The actual cost of drilling the wells was Rs.3,286.57 crore against estimates of Rs.2,482.55 crore partly because the Company had not established norms and benchmarks for completion of activities involved in the drilling process. Though the Company was using hired rigs since November 2003, it had not taken any step till the year 2007 to utilise its experience for fixation of norms for better control on drilling related activities.

(Para 7.7.3.2(i))

- In the absence of a remedial provision in the contract for recovery of loss to the Company due to supply of defective equipment and services by the rig contractor, the Company's interest could not be safeguarded and it had to abandon a well after incurring an expenditure of Rs.48.01 crore.

(Para 7.7.3.2 (ii))

- The Company diverted its own rig meant for deep water drilling to shallow water locations and consequently had to forego a saving of Rs.27.75 crore.

(Para 7.7.3.2 (iii))

- As a result of failure to make standby well head available by a contractor as per contractual provisions, the Company had to pay extra charges of Rs.11.05 crore for rig and services.

(Para 7.7.3.3 (i))

- Lack of coordination among various Divisions of the Company to arrive at a final decision for abandonment or continuation of drilling of a well resulted in extra expenditure of Rs.11.06 crore in placing and removing of the abandonment plug.

(Para 7.7.3.3(ii))

- The Company failed to estimate a firm reserve accretion from deep water blocks for which it spent Rs.5,769.12 crore during 10th FYP period (2002-03 to 2006-07). The Company could accrete only 172.17 MMTOE till March 2007, of which 73.70 *per cent* was from a block acquired from another party in March 2005. The Company's accretion till March 2007 from the NELP blocks awarded to it directly by the Government of India was Nil and the balance accretion of 26.30 per cent was exclusively from the nomination blocks.

(Para 7.7.4.1)

- As a result of testing two hydrocarbon objects with conventional production testing method instead of Modular Dynamic Tester during the course of drilling a well, the Company had to incur an avoidable expenditure of Rs.9.13 crore.

(Para 7.7.4.3)

- In deep water drilling operations, several incidents of equipment damage, major and minor injuries and in subsequent years many 'near misses' were reported. One fatal accident was also reported in February 2006. These incidences indicated that the 'goal zero' of corporate environmental management which includes zero accidents, lost man days and facilities was not fulfilled.

(Para 7.7.5.1)

- Time taken for pre-drilling EIA studies ranged from 20 to 56 months from the date of signing respective PSC whereas the exploration activities in the NELP blocks were to be undertaken within six months of the award of the blocks as per provisions of the production sharing contracts.

(Para 7.7.5.2(i))

- Production Sharing Contracts signed for the deep water blocks prescribed time period for completion of MWP of each phase. Audit observed that the Company had not prescribed policy guidelines for completion of each activity in order to achieve the MWP targets. The Company also did not prepare separate budget for deep water exploration in their annual corporate plans so as to monitor the physical and financial progress of the project.

(Para 7.7.6.1)

- Though the Company had decided in June 2005 to engage a technical auditor for conducting technical audit of exploration process within a period of 12 days, the work was assigned to a party only in July 2007 to commence the work from 20 August 2007 to be completed by 4 September 2007. Thus, the advantage of taking corrective actions to avoid cost and time overruns during the two year period was lost.

(Para 7.7.6.2)

Summary of recommendations

The Company should:

1. ***Prepare its FYPs taking into account its MWP commitments, backlogs and future acreages to avoid payment of penalty and surrender of blocks.***

2. ***Ensure that Letters of Award for seismic survey are issued prior to the onset of the field season and specify a firm date for vessel mobilisation for seismic survey. Procedures should be established to ensure that the financial capability of the contractor is evaluated/assessed before award of contract.***

3. ***Finalise the tenders for hiring rigs within the period prescribed in its Materials Management Manual and consider the prevailing market rate/trends while finalising/extending the contracts for hiring rigs so as to establish the reasonability of the rates offered. It should fix norms for time required to execute various activities of drilling while hiring rigs on integrated well completion basis so as to have an effective control on the performance of the contractors. The Company should incorporate clauses in the contract to protect its interest in the event of idling of services due to breakdown in one or more equipment supplied by a contractor under an integrated well completion contract.***

4. ***Expedite acquisition, processing and interpretation of seismic data, plan drilling of sufficient number of wells and test the wells as per procedures prescribed by the DGH. It should fix norms for testing of wells in terms of number of days per object by giving due weightage to the subsurface conditions of various Basins.***

5. ***Initiate environment impact assessment studies in time so as to avoid delays in the MWP and consequential penalties. It should strengthen the mechanism of monitoring by HSE as stipulated in environmental clearances and establish systems and strengthen procedures to ensure incident free operations for its Total Productivity Management Programme.***

6. ***Prescribe policy guidelines for planning activities in deep water exploration to ensure completion of each activity as per MWP targets. It should prepare activity-wise separate budget for deep water exploration project in their annual corporate plans for monitoring the physical and financial progress of the project.***

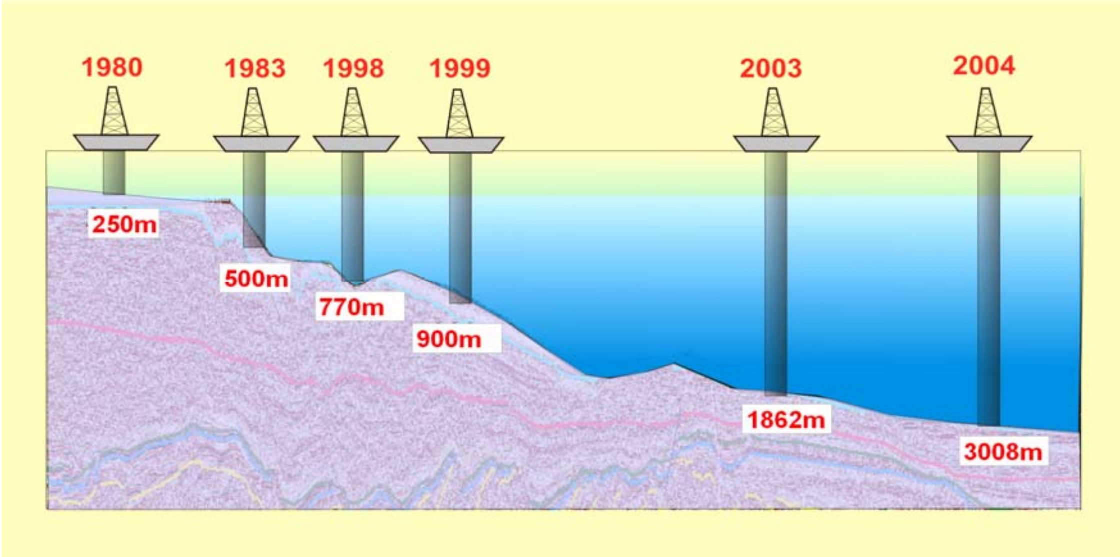
7. ***Ensure that technical audit of exploration process of each block under deep water is conducted timely.***

7.1 Introduction

7.1.1 With the discovery of Bombay High field during 1974, Oil and Natural Gas Corporation Limited (Company) focused more on exploration in offshore areas on the western coast of the country. Exploratory drilling activities were limited to shallow water areas till 1979 and were extended to deep waters[1] from 1980 onwards as depicted below:

[1] Deep water refers to a water depth of 400 meters and more at present.

Chart 7.1



7.1.2 Deep waters of Indian offshore, divided into eight[2] sedimentary Basins[3], are seaward extension of the continental shelf.

7.1.3 Between 1994 to 1998, National Oil Companies (NOCs) were offered exploratory blocks with a water depth of more than 400 meters on 'nomination basis' and were allowed to apply to the Government of India (GOI) for grant of Petroleum Exploration License (PEL) for these blocks. The Company acquired ten such deep water nomination blocks during the period 1994 to 1998, of which one block was surrendered in December 2003. The details of the nine nomination blocks are given in the ***Annexure XXI***.

7.1.4 From 1980 onwards till the introduction of New Exploration Licensing Policy (NELP) in 1999, other than the blocks allotted under nomination basis, the GOI offered blocks to private as well as joint venture companies under Production Sharing Contracts (PSC). Such blocks were called 'Pre-NELP blocks'. The Company was not offered any such deep water blocks under Pre-NELP scheme.

7.1.5 The Directorate General of Hydrocarbon (DGH) formulated and implemented the Government of India's NELP, 1999. The procedure for bidding in NELP is given in ***Annexure XXII***. Under the NELP, between 1999 to 2006 the GOI offered exploration of deep water blocks through six rounds. The Company acquired 34 deep water blocks in these rounds as indicated in Table-7.1:

[2] Andaman, Cauvery, Kerala-Konkan, Krishna-Godavari, Kutch, Mahanadi, Mumbai offshore and Saurashtra.

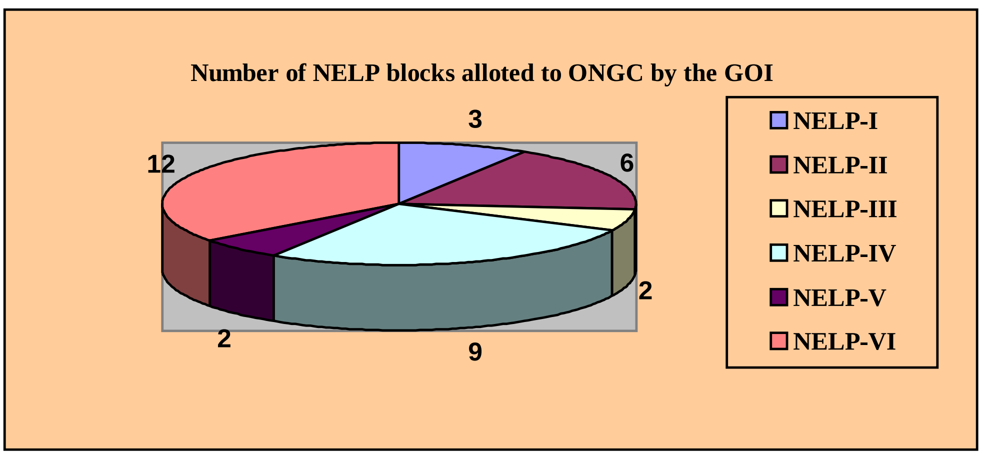
[3] Sedimentary Basins are depressions in the earth's crust where organic matter are deposited.

Table-7.1: Blocks awarded to the Company (ONGC) under NELP

NELP Round	Date of inviting bids	Date of award	Deep water blocks offered	Deep water blocks bid by ONGC	Deep water blocks awarded by the GOI	Deep water blocks awarded to ONGC	No. of wells drilled by the ONGC	ONGC's wells with hydro-carbon discoveries (As of August 2007)*	Other parties' wells with hydrocarbon discoveries (As of March 2007)*
I	08.01.99	12.04.00	12	6	7	3	3	1	21
II	15.12.00	17.07.01	8	6	8	6	4	-	-
III	27.03.02	04.02.03	9	9	9	2	-	-	-
IV	08.05.03	06.02.04	12	11	10	9	1	-	-
V	03.01.05	23.09.05	6	9	6	2	-	-	-
VI	23.02.06	08.02.07	24	21	21	12	-	-	-
Total			**71**	**62**	**61**	**34**	**8**	**1**	**21**

- ***As recognised by the DGH.***

Chart 7.2



One block *viz.*, KG-DWN-98/2, was acquired from Cairn Energy India Limited (CEIL) in March 2005 with 90 per cent participating interest (PI) of the Company. CEIL had drilled six wells of which four were hydrocarbon bearing. After acquisition of the block, the Company drilled seven wells of which six were found hydrocarbon bearing.

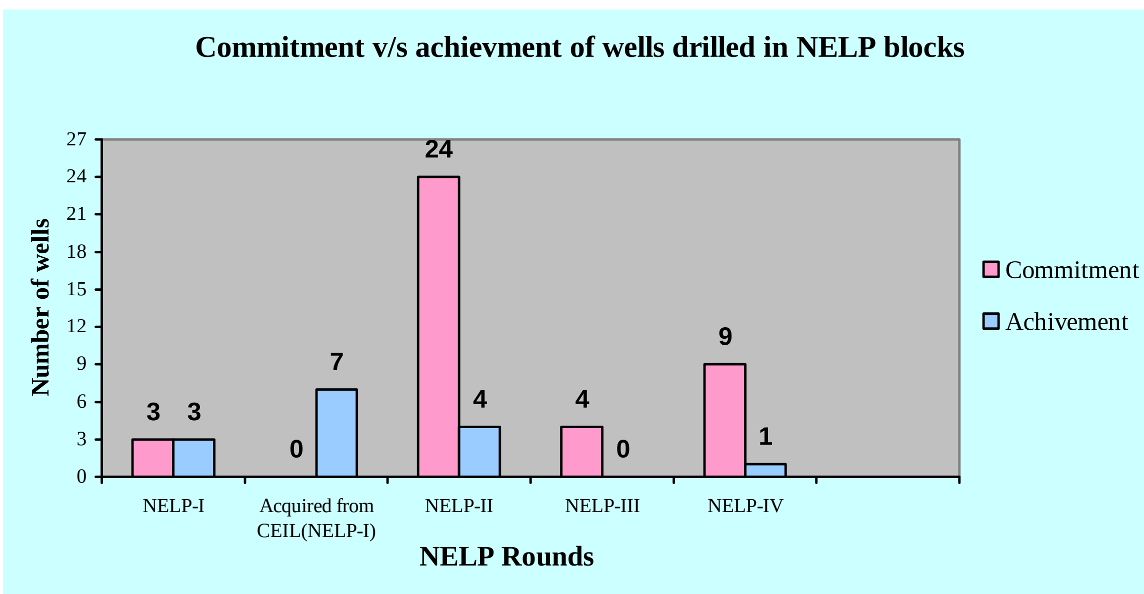
7.1.6 From 9th Five Year Plan (1997-2002) onwards, the Company started preparing Five Year Plans (FYP) incorporating therein its deep water exploration and production targets. The Company also entered into Memorandum of Understanding (MOU) with the Ministry of Petroleum and Natural Gas (MOP&NG) to achieve overall targets of reserve accretion and production depicted in the FYP.

7.1.7 Though the Company had been engaged in deep water exploration[4] activity since 1970, it gained momentum with the introduction of project 'Sagar Samriddhi' in August 2003-04 which envisaged deep water exploration of 37 deep water wells and 10 delineation wells[5] in the Company's nominated as well as NELP blocks. The project was expected to be completed in 2006-07 which coincided with the end of the 10th FYP. The Company incurred an expenditure of Rs.5,769.12 crore on deep water exploration activities during this period. The phase wise Minimum Work Programme (MWP) commitments, actual work completed, cost incurred etc., up to March 2007 for 35 NELP blocks acquired by the Company, including that acquired from CEIL, is given in the ***Annexure XXIII***. The achievement in terms of wells drilled in NELP blocks till March 2007 against the commitment within this period is given in Table-7.2 below:

Table-7.2: Shortfall in drilling of wells till the end of 10th FYP in NELP rounds 1 to IV

Particulars	NELP Rounds					Total
	I		II	III	IV	
	For all the three phases of the blocks awarded by the GOI	For 3rd phase of one block acquired from CEIL in March 2005	(For 1st and 2nd phase)	(For 1st phase)	(For 1st phase)	
Commitment	3	Nil	24	4	9	40
Actual	3	7	4	0	1	15
Shortfall	0	0	20	4	8	32

Chart 7.3



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[4] ***Exploration involves conducting seismic surveys followed by drilling of wells.***
[5] ***Delineation well refers to the well drilled in unproved area to determine the boundaries or the extent of reservoir.***

In the nomination blocks, the Company could drill 6 wells in the original grant period against the commitment of 16 wells. However, in the extended grant period, the Company drilled 18 additional wells as shown in ***Annexure XXI***.

7.2 Scope of audit

Audit covered the review of the Company's transactions relating to deep water blocks; health, safety and environment (HSE) controls; internal controls and monitoring. The records and documents in the offices of the Company and of DGH, etc. from 2002-03 to 2006-07 were test checked. The review also covered the exploratory activities of nine nomination blocks and 35 NELP blocks in different Basins held by the Company in its individual capacity or with consortium partners.

7.3 Audit objectives

Performance Audit of deep water exploration was conducted to assess that:

- the Company had established systems and procedures for optimal data collection and its timely processing;
- the rig deployment plan was inclusive of the inputs provided by different Basins; was sufficient and met the MWP/Corporate targets;
- production testing, well completion and reserve estimation were in compliance with the prescribed procedure and schedules;
- all environmental clearances and statutory permissions were secured in time and were in compliance with procedural/statutory requirements;
- the measures taken to ensure safe and healthy working conditions of the employees and adherence to environmental safeguards involved in drilling were adequate; and
- monitoring was adequate and effective.

7.4 Audit criteria

The following criteria were used for the Performance Audit:

i. Bidding for NELP and obtaining PEL: MWP committed in the PSCs and assessment of resources required to achieve corporate objectives of reserve accretion of hydrocarbon.

ii. Survey, processing and interpretation of data: Applicable provisions of Material Management (MM) Manual/Corporate directions, last purchase price (LPP), market trend and cost of execution, planned period for data acquisition, processing and interpretation and conditions of contract.

iii. Hiring of rigs and drilling: Minimum Work Programme, Bid Evaluation Criteria (BEC) for hiring rigs, MM Manual, the rig hiring contracts, well objectives, geological and geophysical data.

iv. Production testing, well completion and reserve estimation: Five Year Plans, production test programmes.

v. Safety, Health and Environment Management: Statutory requirements and international norms in this regard.

vi. Monitoring and internal control: Prescribed monitoring mechanism and controls.

7.5 Audit methodology

Audit reviewed the records relating to acquisition of the blocks under nomination and NELP regime, contracts and payments for survey and interpretation of data, performance/interpretation reports of the blocks, hiring and deployment of rigs, production testing, well completion and reserve estimation, HSE management and internal control/monitoring, etc. Audit also checked as part of the current review records relating to similar aspects in deep water blocks awarded to the Company in earlier years.

Entry conference with the Management was held on 1 May 2006 wherein the audit objectives, scope and methodology were explained. Mid term review meetings were held during April 2007 and exit conference was held on 10 September 2007.

7.6 Acknowledgement

Audit is thankful for the co-operation received from the top and middle Management of the Company, Office of the DGH and MOP&NG in providing information, records and clarifications from time to time and for arranging discussions with the concerned officers as and when required. Their co-operation facilitated the conduct of the review within the given time frame.

7.7 Audit findings

7.7.1. Planning for exploratory activities

The Minimum Work Programme (MWP) in case of deep water exploration consisted of commitments made by the Company for each block in terms of extent of surveys to be conducted and wells to be drilled within an overall period of eight years divided into three phases. In the event of non-fulfilment of the MWP commitments for any phase as per schedule, the Company could be granted extension in the time schedule of a phase by the Managing Committee of the block or the GOI, for a period not exceeding six months subject to provisions of the PSC. Further extensions were as per the policy of the DGH which envisaged furnishing of a bank guarantee equal to the value of shortfall in achievement of MWP commitments besides payment of liquidated damages ranging from 10 to 30 per cent. In the event of non extension of the schedule of completion, the Company could offer the block for surrender or the GOI could also direct the Company to do the same.

The Company prepared FYPs and annual corporate plans for exploratory activities such as API of seismic data and drilling of wells to meet its obligations under the MWP and to achieve the overall objective of reserve accretion. As per the commitment made to MOP&NG in respect of the nominated blocks and to the DGH under MWP for the NELP blocks, total 51 wells (***Annexure XXIV*** and ***Annexure XXV***) were to be drilled during the 10th FYP period (11 wells in the nomination blocks and 40 wells under NELP blocks).

7.7.1.1 Planning for exploration in NELP blocks

(i) Deficiency in planning targets for the 10th Five Year Plan

In the 10th FYP, the Company envisaged drilling of 35 wells (including 11 wells of nomination blocks) and one well for 'future acreage'[6] ***(Annexure XXVI)*** to provide a cushion for additional drilling commitments in any block to be acquired in NELP rounds within the 10th FYP period. Audit observed that in respect of PSCs signed by the Company before commencement of 10th FYP it had committed to drill 27 wells under NELP blocks besides 11 wells under nomination blocks within the 10th FYP period. While four wells already committed to be drilled were not planned for, even the future acreage cushion of one well proved to be inadequate as the Company committed to drill 13 wells under the NELP rounds bid for during the 10th FYP period. Thus, planning for lesser number of wells than those committed under the PSCs and additional commitments made during the plan period resulted in non-completion of MWPs. Five blocks under NELP-II on which the Company had incurred an expenditure of Rs.368.89 crore till March 2007 had to be surrendered for non-completion of MWP of Phase-I after paying Rs.114.13 crore as penalty to DGH. In addition, the Company paid an amount of Rs.10.02 crore to MOP&NG (November 2006) as penalty in respect of Phase-II of MN-DWN-98/3 block (acquired under NELP-I) for non-completion of the MWP of drilling one well. The shortfall in drilling of wells in respect of which the Company had to pay penalty is depicted in Table-7.3 below:

Table-7.3: Shortfall in drilling (number of wells) in NELP blocks

Blocks	NELP-I	NELP-II Surrendered blocks					Total
	MN-DWN-98/3	MB-DWN-2000/1	MB-DWN-2000/2	GS-DWN-2000/1	GS-DWN-2000/2	KK-DWN-2000/4	
Commitments	1	3	3	3	3	1	14
Actual	0	0	1	2	1	0	4
Shortfall	1	3	2	1	2	1	10

The Management replied (December 2007) that they had considered the commitment upto NELP-II, which was only 19 wells besides 11 wells in Nomination blocks making the total commitment during 10th FYP period to 30 wells. The wells committed in NELP block in a particular year were not due for planning in the same year. At the time of 10th FYP formulation only those wells in the already awarded NELP blocks could be considered which were likely to come during the plan period. As such only the wells committed up to NELP-II round were accommodated in the 10th FYP.

The reply is not tenable in view of the fact that there were 11 wells committed in MWP of Phase-II of NELP-II which was to terminate in August 2007 and were not considered. As such, the Management needed to plan for drilling of these wells during the 10th FYP. In fact, the Company had to surrender the NELP-II blocks in May 2006 due to non-completion of MWP. This indicated that the plans did not consider the commitments existing at the time of preparing the plan and also lacked sufficient provision for future acreages. Audit also examined the 11th FYP beginning from the year 2007-08 and noted

[6] Future acreage refers to the acreage that the Company was expected to acquire in future for exploration.

that the wells planned to be drilled were 52 as against commitment of 66 wells (47 wells committed and 19 wells for future acreages). Further, the drilling of four wells[7] in the Andaman block is anticipated to commence only in 2009-10, as against the commitments expiring between 2007 and 2009 as per the MWP.

(ii) Delays in commencing the exploratory activities due to not setting a time line

Article 5 of the PSC for NELP blocks provided that the contractor shall commence petroleum operations not later than six months from the effective date. Audit observed that the Company had not framed any time frame or guideline for initiating and completion of each activity required to achieve the MWP targets. As a result, there were delays ranging from 12 to 25 months in commencing the exploratory activities in four blocks as detailed in Table-7.4 below:

Table-7.4: Delay in commencing exploratory activities

Sl. No	Block	Date of signing the contract (1)	Date of obtaining PEL (Effective date.) (2)	Month of start of exploration (3)	Time lag months (2)-(3)
1.	CY-DWN-2001/1	04.02.03	12.03.03	Mar 04	12
2.	NEC-DWN-2002/2	06.02.04	17.03.04	April 05	13
3.	AN-DWN-2002/1	06.02.04	17.03.04	April 06	25
4.	AN-DWN-2002/2	06.02.04	17.03.04	April 06	25

The Management stated (June 2007) that the exploratory activities commenced within six months from the effective date of granting PEL by way of Environment Impact Assessments (EIA), reprocessing and interpretation of the available data, initiating correspondence with DGH for furnishing field seismic data acquired by DGH, etc. Commencement of MWP for acquisition of two dimensional (2D) data of 2000 LKM[8] in block NEC-DWN-2002/2 could not be done in 2004-05 due to bad weather but three dimensional (3D) data for 988.1 sq. km. was acquired by the Company between March 2005 and February 2006.

The reply is not tenable as the commencement of EIA, reprocessing, correspondence with DGH, etc. do not constitute exploration activity as defined in the PSC. Though EIA is a pre-condition to commence the work committed, prudence and good planning dictates that it should have been conducted as soon as the blocks were awarded. The delays in commencement have a cascading effect on the work schedule and complying with MWP.

The Management further replied (December 2007) that the data acquisition started but had to be suspended for clearances from the Ministry of Defence. Moreover, the tendering process took time while fair weather window restricted operations from November to May end. Moreover, interpreting the existing seismic data is a pre requisite for planning future survey and that commenced immediately after the block was awarded. The Management further stated that EIA studies for seismic survey were also carried out immediately upon the grant of PEL in NEC-DWN-2002/1.

[7] ***One well committed to be drilled in Phase–I of NELP-IV ending 2007-08; two wells of Phase II NELP-IV and one well of Phase-I of NELP-V committed to be drilled by 2008-09.***

[8] ***Line Kilometre***

The reply is not tenable as the factors cited are already known and should have been catered for and controlled through proper planning and monitoring, especially as the Company had commitments to adhere to. The interpretation of existing seismic data should also have been done within six months of the effective date of the block.

7.7.1.2 Planning for exploration under Nomination blocks

The Company drilled 6 of the16 wells (***Annexure XXI***) committed in the original grant period of four years in nine nomination blocks. As a result, it had to apply for extension of time by paying PEL fees of Rs.15.08 crore. Despite taking repetitive extensions, the Company could not drill the committed number of wells in two blocks. In March 2007, the Company surrendered one of the two blocks after having incurred an expenditure of Rs.111.38 crore. As late as September 2007, the Company had not made any concrete plan for further exploration or surrender of the other block where there was backlog of wells drilled with reference to commitment. The extended period of the PELs for this block was due to expire by December 2009. The Management replied that due to inter block prospectivity, it was under achieving in certain blocks and over achieving in others. The Management's reply is not tenable as it should plan and monitor to avoid incurring unnecessary PEL fees and drilling expenditure.

Recommendation No.7.1

The Company should prepare its FYPs taking into account its MWP commitments, backlogs and future acreages to avoid payment of penalty and surrender of blocks.

7.7.2 Acquisition, processing and interpretation (API) of seismic data

Geophysical survey, the prime activity in exploration of hydrocarbons is carried out in the first phase of exploration: 2D and 3D seismic data is acquired, processed and interpreted for analysing hydrocarbon accumulations. Prospects are thereby generated for release of locations for drilling of wells. MWP for the NELP blocks stipulated targets for API of seismic data generally in the first phase of the contract.

The Company started exploration activities in Krishna-Godavari, Mumbai offshore, Kerala-Konkan and Kutch-Saurashtra Basins as early as 1964-65 and had already acquired 2D data in various blocks of western offshore during the period from 1994 to 1999. The Company was further required to acquire seismic data as stipulated by the MWP of various phases of NELP contracts. Performance of the Company as regards API of data in various deep water blocks against the MWP targets is given in ***Annexure XXIII***. As can be seen from ***Annexure XXIII***, though the Company achieved the targets of areas to be surveyed during a Phase, there were delays in completing individual surveys with consequent delays in commencement of drilling activities that were to follow.

Audit noted delays by the Company in achievement of MWP targets on acquisition, processing and interpretation of seismic data in various deep water blocks as detailed below:

7.7.2.1 Delays due to late mobilisation of vessels and onset of monsoon

The acquisition of seismic data in offshore area is possible in a window of seven months in a year commencing from mid October of a year and ending in mid May of the following year due to onset of monsoon. This period is a field season (FS). As such, the

Letters of award (LsOA) asking the contractors for mobilisation of the vessels deployed for acquisition of seismic data are to be issued, to the extent possible, one to two months before the commencement of the field season so that it can be utilised optimally for acquisition of seismic data.

A review of the LsOA issued and contracts awarded by the Company to various contractors revealed loss of field period and delays in the cases noted below:

(i) Letters of awards were issued to the parties in the middle/at the fag end of the field season. As per the Management's assessment a 45 days' period was required by the contractor from the date of issue of an LOA for mobilisation of vessel. No latest date for mobilisation of the vessel was specified in the contracts. The Company awarded 10 contracts during the period from October 2001 to March 2007 for chartering vessels for seismic surveys in deep waters. Audit reviewed all the 10 contracts and noticed lack of foresight in chartering and mobilising the vessels which resulted in loss of limited field period and consequent delays in conducting API of data as given in Table-7.5 below:

Table-7.5: Field Season wasted due to late issue of LOA and delay in mobilisation

Contract Number	Date of LOA	Vessel No.	Mobilisation date	No. of days from the Field Season (FS) of 211 days wasted due to issue of LOA within the FS by ONGC and late mobilisation of vessel by the contractor
EB-2041	4.10.2001	2nd vessel	26.01.2002	101
EB-2055	9.10.2002	Ist vessel	20.02.2003	134
		2nd vessel	22.02.2003	136
		3rd vessel	15.09.2003	All 211
EB-2068	1.10.2003	Only vessel	06.03.2004	157
EB-2077	25.8.2004	1st vessel	13.11.2004	28
		2nd vessel	28.11.2004	43
		3rd vessel	14.12.2004	59
EB-2094	16.9.2005	2nd vessel	29.12.2005	74
		3rd vessel	15.01.2006	91
EB-2088	18.10.2005	Only vessel	24.01.2006	100

(ii) As per the terms of the LsOA contractors were allowed to accomplish the data acquisition job till the end of 15 June, *i.e.*, one month beyond the field season. This resulted in extra expenditure due to withdrawal of vessels prior to 15 June due to onset of monsoons and their remobilisation in the next field season.

Illustrative cases of avoidable extra expenditure and slippages in exploration activities as a result of the above practice adopted by the Company, as noticed by audit, are given below:

a) In two deep water blocks awarded (March 2003) under NELP-III, LOA for acquisition of 2D data was placed (October 2003) on M/s. LARGE, Russia, without specifying the mobilisation date in the contract (EB-2068). Since the vessel was contracted out to another organisation, the contractor mobilised the vessel on 6 March 2004 when only 71 days of the field season were left. Acquisition of data could be completed in June 2004 i.e., after nine months from the date of issue of LOA. In the meantime, the contract was extended by the Company without levy of liquidated damages.

b) In August 2004, the Company awarded a contract (EB-2077) to M/s. CGG Marine for acquisition of 3D data with completion by 15 June 2005 *i.e.*, beyond the normal date of closure of the field season. The contractor could not complete acquisition of data in block NEC-DWN-2002/2 of NELP-IV due to onset of monsoon. For completion of the work in the subsequent field season, the Company extended the contract and advised the contractor to complete the contract within 35 days by remobilising the vessel by the end of November 2005. The acquisition of data in the block could be completed only on 14 February 2006 *i.e.* one year and five months after the award of contract and a delay of eight months from the target set for the contractor. For completion of work in the next field season, the Company had to pay remobilisation charges of Rs.52.36 lakh (US$ 116357) to the contractor.

c) Similarly under contract EB-2094, the acquisition of data in two blocks (KG-DWN-98/2 and MN-DWN-98/3) of NELP-I and one block (MN-DWN-2002/1) of NELP-IV was planned till 15 June. However due to onset of monsoons, the surveys had to be suspended and could be taken up again in the following field season resulting in delays of seven months in conducting the survey in one block and five months in two blocks. Consequently, there were delays in undertaking interpretation of data collected, identifying and release of locations and drilling. This delay should be viewed in the context that the four years period of Phase-I of MWP of the two NELP-IV blocks (NEC-DWN-2002/2 & MN-DWN-2002/1) was to expire during March 2008 whereas drilling of six wells in the area was still pending (September 2007).

The Management stated (September 2007) that most of the vessels under different contracts were mobilised in the month of November which was normal. The Management further stated (December 2007) that 45 days were an estimated average time by which time clearance from the Ministry of Defence (MOD) was available. It was not possible to mobilise vessels before 15 November since in some parts of the offshore area, weather/sea conditions often did not permit acquisition of good quality seismic data. Mobilisation of vessels was dependant upon the completion of their earlier engagement elsewhere. The contractors may load the price by the likely amount of liquidated damages (LD) on account of expected delay in mobilisation of the vessels due to earlier engagement elsewhere. Specifying date of mobilisation may result in restricted competition, no participation by the reputed geophysical contractors, besides higher pricing and could lead to re-tendering. However, the Management assured that based on the recommendations of audit, specifying date of mobilisation in the tenders was under their active consideration.

The Management's reply is not acceptable. As seen from Table-7.5 above, LsOA were not issued with proper planning to ensure that the 45 days period of mobilisation ended before 16 October and the field season be utilised optimally. Due to non-specification of the date of mobilisation, the contractors were not under obligation to make the vessel available in a time bound manner. There were delays in mobilisation of the vessels even in some cases[9] where the LsOA were issued before beginning of the field season. The Management's contention that specification of mobilisation date would restrict competition was not based on any experience of the Company. In fact, the Company had been specifying the date of mobilisation in contracts awarded for charter hiring of rigs and had not experienced lack of competition.

7.7.2.2 Delay in API process due to award of contract to a financially unsound party

The terms and conditions of the Notice inviting tender for charter hiring vessels for deep water seismic surveys did not require the bidder to disclose his financial position. Absence of such a condition led to the award of two of the ten contracts awarded during the period of review to a financially unsound party resulting in termination of the contract before completion of work as described below:

Blocks (NEC-DWN-2002/2 and MN-DWN-2002/2) under NELP-IV were awarded to the Company by the GOI in March 2004 for deep water exploration. The first phase was to be completed in three years. The Company awarded (March 2004 and July 2004) two different contracts to M/s. LARGE, Russia for acquisition of 2D data in Mahanadi and Andaman blocks. The contractor after acquisition of data in three blocks under one contract, failed to mobilise vessels and subsequently went into liquidation (3 December 2004) without completing the job. The acquisition of data in the second contract could not be undertaken. The Company terminated both the contracts in March 2005. Fresh indent for the abandoned work was initiated in May 2005. The work was awarded to another party in October 2005 and completed in June 2006. As such the field season ending mid-May of 2005 was lost. Audit observed that at the time of awarding the two contracts to M/s .LARGE, the Company was aware that during the course of execution of one of the Company's other contracts, M/s. LARGE had suffered huge loss due to sinking of streamers in January 2004. Thus, award of the contract to a party in disregard of its financial position led to a delay of more than two years in acquisition of 2D data. Consequently, till September 2007, the Company could not drill any well in the first phase (March 2004 to March 2008) of block MN-DWN-2002/2 against the commitment of two wells. Similarly, under block NEC-DWN-2002/2, the Company could drill one against commitment of four wells.

The Management stated (September 2007 and December 2007) that the performance of M/s. LARGE in previous two contracts was satisfactory and at the time of award of the contracts it could not be anticipated that M/s LARGE would go into liquidation and added that subsequent to the award of the contracts, the Company came to know in June 2005 that the contractor had been placed in creditors voluntary liquidation on 29 November 2004.

The reply is not tenable. The Company was aware of the huge financial losses sustained by the contractor in January 2004 and hence, it should have kept the financial condition of the contractor into consideration at the time of award of contract to M/s. LARGE in March and July 2004. Moreover, considering the narrow window of time (from mid October to mid May) available for conducting survey, the Company could have initiated steps for alternate arrangements under the fast track route which it had adopted in some other cases and awarded the contract within a month to avoid slippages in MWP

[9] Contract No. EB-2077 and EB-2094

commitments. The indent, however, was raised only in May 2005 for fresh award of the work.

Recommendation No.7.2

The Company should

(i) ***ensure that Letters of Award for seismic survey are issued prior to the onset of the field season and specify a firm date for vessel mobilisation for seismic survey; and***

(ii) ***establish procedures to ensure that the financial capability of the contractor is evaluated/assessed before award of contract.***

7.7.3 Hiring and deployment of rigs for drilling of wells

7.7.3.1 Charter hiring of rigs

(i) Availability of rigs to meet the drilling commitments

Under the NELP, exploration blocks were awarded to those bidders who offered the most competitive physical programme in the form of MWP apart from the fiscal and other parameters. In MWP, phase-wise targets were committed for acquisition of seismic data and drilling of wells, which in turn was dependant on the availability of suitable rigs during the committed phase. Thus, the Company was to ensure availability of rigs to meet its commitments. The details of the rigs available with the Company and wells committed at each NELP bidding round are given in Table-7.6:

Table-7.6: Number of wells committed for drilling vis-à-vis rigs available

Sl. No.	Commitments			Previous backlog (No. of wells)		Number of rig(s) available for fulfilling the commitments alongwith the backlog
	NELP	Commitment Period	No. of wells committed	For Nomination blocks	For NELP blocks	
1	NELP-I, Phase-I	May 2000 to May 2003	0	12	0	One own rig viz. 'Sagar Vijay'(SV). The rig could drill one to two wells per year.
2	NELP-II, Phase-I	August 2001 to August 2005	13	14*	0	In addition to SV, two hired rigs viz. 'Belford Dolphin' (BD) and 'Discover Seven Seas', became available in November 2003 and February 2004.
3	NELP-III Phase-I	March 2003 to March 2007	4	13	0	No additional rig other than those stated above.
	NELP-I, Phase-II	May 2003 to May/Nov. 2006	3			
	Total		7			
4	NELP-IV Phase-I	March 2004 to March 2007	16	9	0	As above.
5	NELP-V Phase-I	December 2005 to December 2009	1	7	7	As above.
	NELP-II, Phase-II	August 2005 to August 2007	10			
	NELP-I, Phase-III	May/Nov. 2006 to May 2008	3			
	Total		*14*			
6	NELP-VI Phase-I	May 2007 to May 2012	4	2	11	SV and DSS were available. Rig BD was dehired in April 2007.
	NELP-III, Phase-II	March 2007 to March 2009	2			
	NELP-II, Phase-III	August 2007 to August 2009	11			
	Total		*17*			

**** The backlog of wells in NELP has been calculated on a conservative basis by evenly distributing committed number of wells over the ongoing phase period, excluding first two years of the 1st Phase for data API.***

The Company failed to ensure sufficient number of rigs in time to meet its commitments of drilling deep water wells. Audit observed that the main reasons were delay in finalisation of rig hiring contracts, non-availing of options to hire two additional rigs and delay in finalisation of renewal contract in respect of one rig (BD). These cases are discussed in the following paragraphs:

(ii) Inordinate delay in finalisation of tender for charter hiring of Rigs

The Company entered into two new contracts for charter hiring of deep water rigs during the five years from 2002-03 to 2006-07. Audit reviewed the contracting process and found that the Company took 522 days in finalising the contracts indented in February 2002: The Materials Management (MM) Manual of the Company provided a period of 222 days from the date of indent upto the date of award of the contract. The extra 300 days taken to finalise the contract were mainly taken in firming up the Bid Evaluation Criteria (BEC) and specifications of the rigs. The Company had envisaged engaging consultants to assist the Company to finalise the tender documents and utilise their services for drilling. The consultants, however, were appointed on 7 August 2003 only after the contract for hiring of rigs had been awarded on 1 August 2003. Hence, the Company could not avail of the services of the consultant in finalisation of tender document and firming up of BEC and thereby save time. The inordinate delay in finalisation of contract for charter hiring of rigs resulted in postponement of drilling of eight wells[10] during the 10th FYP.

The Management replied (August/December 2007) that since the hiring of deep-water rigs on an integrated basis was being done for the first time by the Company, firming up of the specifications/scope of work, etc., took time. It took the Company a period of 296 days between receipt of indent and NIT to finalise the manner of hiring of the services (integrated or stand alone) and finalisation of all different physical inputs and services for the various categories. These factors needed careful consideration and deliberations. The actual tendering process *i.e.* from NIT to LOA thereafter took 227 days only.

The reply is not tenable as the Management has calculated the days from NIT, where as audit has calculated the same from the date of receipt of indent from the user department as provided in the MM manual. Moreover, the proposal for hiring rigs (integrated services vis-à-vis stand alone basis) was first put up in tender committee on 27 May 2002 and approved by Executive Purchase Committee on 19 July 2002 or after 53 days and does not justify the delay of 300 days. Moreover, the Company was aware of its technical limitations in this area and had planned to engage a consultant to assist them, the appointment of which was however delayed and the Company had to grapple with the complexities on its own.

(iii) Non-achievement of drilling targets due to not hiring of additional rigs

The Company decided (March 2003) to hire four rigs of different capacities and in August 2003 hired two rigs with an option to hire two more in next six months. Audit observed that the option of hiring additional two rigs was not considered till the expiry (November 2006 and February 2007) of the existing contracts though there was a backlog of wells drilled *vis a vis* wells to be drilled under NELP and nominated wells. Excluding the backlog of 20 wells in respect of five NELP blocks that had to be surrendered by the Company due to not meeting the commitments, there was a backlog of 15 wells (13 in NELP and two in nomination blocks) at the end of 2006-07. Had all the four rigs been hired in April 2004 as envisaged, the additional two rigs could have drilled 40 wells till March 2007 at the rate of 54 days per well[11] and possibly, the backlog could have been cleared and the eventuality of forced surrendering of five NELP block could have been averted. As the Service Day Rates for the rig DSS under the renewed contract (2007-08 to 2009-10) increased to US$ 357,000 from the earlier rate of US$ 153,348, drilling the

[10] Calculated based on the number of wells that were to be drilled each year by the rigs and o the period of delay.

[11] Average days per well in case of BD and DSS rigs.

backlog of 15 wells would require incurring of an additional expenditure of Rs.739.01 crore.

The Management replied (December 2007) that the option of hiring two additional rigs was kept for drilling of appraisal wells in case of early hydrocarbon discovery.

The reply is not tenable as it was decided in April 2003 in the meeting of Executive Purchase Committee (EPC) that the Company shall exercise the option to hire additional two rigs within a period of six months plus six weeks (to review the data generated during the six months period) from the date of commencement of rig operations. However, the option to enable the completion of MWP was not exercised.

(iv) Non availability of the rigs due to delay in awarding the contract

The Company hired the rig BD on a three years contract to expire in November 2006. In June 2005 the Company asked the contractor (M/s. Dolphin Drilling Limited) to submit a quote for further extension of three years. The contractor submitted his proposals on 4 July 2005 and after negotiations, offered the rig at the rate of US$ 426,800 per day with validity for acceptance of the offer up to 2 September 2005. The consultant, M/s. Fearnley Offshore, also advised (July 2005) the Company that the availability of rigs was critical and if the Company decided to wait, rigs would not be available till first quarter of 2007. Despite the advice, the Company placed order on 5 October 2005 after the expiry of the offer. M/s. Dolphin Drilling Limited. declined (6 October 2005) the offer as the rig had been marketed elsewhere. Audit observed that the rates for deep water rigs quoted by the contractor were at par with the rates prevailing in October 2005. After the Company failed to avail of the offer of the contractor in September 2005, it initiated the process of re-tendering in February 2007 by which time the rig hire rates had gone up to US$ 520,500 per day (January 2007) and the period of hire of BD rig had expired (November 2006). After sale of tender documents during February and March 2007 and holding pre-bid conference on 30 April 2007, the Company was contemplating (13 August 2007) certain changes to the tender condition, scope of work and specifications, etc. Even if the NIT is re-published in October 2007, and considering a period of 215 days for award of the contract from the date of publication of NIT (as per the MM Manual of the Company), and also allowing a period of six months for the contractor to mobilise the rig, the new rig would be available not earlier than end of 2008. Hence, seven wells of more than 1800m water depth in four blocks[12] required to be drilled before expiry of NELP phases of these blocks (March 2008) would not be drilled within the committed period and will have to be drilled at a higher cost. Further, had the Company finalised the contract for extension of the rig BD for a period of three years within the validity of the offer, it could have saved an amount of Rs.311.42 crore[13] likely to be incurred in future.

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[12] NELP-I: One Block viz. KG-DWN-98/4, One well; NELP-IV: Three Blocks viz. KG-DWN-2002/1, One well; MN-DWN-2002/1, Three wells; MN-DWN-2002/2, Two wells.

[13] Based on the rates available for similar rig in 'Rig Locator' during January 2007 (Mediterranean Africa rates US$ 490000-Negotiated rates US$ 426800 = US$ 63200 x 3 years = US$ 69,204,000 x 45/US$.

The Management stated (December 2007) that though the rates quoted by the contractor were close to October 2005 rates, the award of the contract required due diligence and negotiation with the contractor in view of the increase in the rates compared to ongoing contract.

The Management reply is not tenable as it ignored the advice of the consultant indicating criticality of rigs availability worldwide. The Management was also aware that volatility of oil prices in international market and demand /supply situation of the rigs had become critical during the year 2005 due to hurricane RITA and KATRINA in the Gulf of Mexico. The negotiation with the contractor were unduly prolonged in disregard of the time of validity of the offer. Negotiations could not fetch much advantage also in terms of reduction of rates. Considering the key factors, the Company should have acted well within time and taken proper action to keep the contractor under obligation to honour his offer.

7.7.3.2 Deployment of Rigs

(i) Non-fixation of norm for drilling activities

The Company hired deep water drilling rig BD and DSS on Integrated Well Completion (IWC) basis, wherein the rig contractor was to provide the rig alongwith the services at the rates, terms and conditions agreed by him with his service contractors. However, while entering into contracts, no time norms for completion of various activities of drilling were fixed.

Analysis by audit of actual time taken vis-à-vis estimated time as well as actual cost vis-à-vis estimated cost of drilling 35 wells revealed that time taken for drilling was 1.5 times and above the estimated time in case of 15 wells. The time taken was more than twice of the estimated time in case of five wells. The actual cost was 1.5 times the estimates in 13 wells, more than twice in five wells and more than three times in one well (***Annexure XXVII***). As against, the estimated cost of Rs.2,482.55 crore for drilling 35 wells, the actual cost was Rs.3,286.57 crore. Since the rates quoted by the rig/service provider were day rates, the absence of time norms for completion of activities weakened the internal control to monitor the time taken in completion and cost of drilling activities against pre-established benchmarks.

The Management stated (July 2007) that the deep water drilling was in an infancy stage in 2003 and the estimated time for each operation was very tentative and the operational speed mainly depends on the actual hole conditions. The Company further stated that cutting short the operation could lead to complications.

The reply is not tenable, as non-comparison and analysis of actual time with estimated time defeated the purpose of fixation of estimates and in the absence of norms for completion of drilling activities, the Company could not exercise effective control.

Management further replied (December 2007) that prior anticipation of all surprises was not possible since 'offset well'[14] data was mostly scarce/absent in deep waters.

Audit noted that though the Company was using hired rigs since November 2003, it had not taken any step till the year 2007 to utilise its experience for fixation of performance norms to monitor drilling related activities.

[14] An existing well bore close to a proposed well.

(ii) Loss due to inadequate contractual provision

Within a span of 22 months of hiring of rig DSS in February 2004, six major failures of Dynamic Positioning System (DPS) of the rig took place. Well KG-DWN-D-1 had to be abandoned on 13 September 2005 without carrying out production testing due to power failure on the rig resulting in abandonment of gas bearing well after spending Rs.48.01 crore. The Company could neither fix responsibility nor recover the amount from the contractor in the absence of any specific clause in the contract for recovery of loss due to defective equipments or services supplied by the rig contractor.

The Management while accepting (May 2007) non-existence of a provision in the contract for cost recovery on account of DPS related shutdown, stated that the Company was actively considering to include a 'Temporary Suspension' clause in the new contracts to ensure that no payment is made for idling of services beyond 72 hours in case of a break-down. The Management further replied (December 2007) that DPS failure was extremely rare and any equipment was prone to failure.

While that may be so, however, the flaw lay in the non inclusion of a suitable clause which in the event of abnormal suspension of operations due to equipment failure would safeguard the Company's interest in such situations.

(iii) Shortfall in deep water drilling due to deployment of Rig SV

During the period from 15 August 2005 to 25 November 2005 a hired rig (DSS) capable of drilling upto a water depth of 1800 m was deployed on two deep water locations (98/2D1 and 98/4 A1) requiring drilling in water depth upto a maximum of 778 m a depth which could have been drilled by the Company owned rig SV. On the other hand, SV upgraded in 1998 for a specific objective to drill upto a water depth of 900m was diverted to shallow water drilling during the same period. Diversion of an owned rig equipped to drill in deep water to drilling in shallow waters and deploying a hired rig to drill in the deep water resulted in extra expenditure of Rs.41.37 crore[15]. Instead of deploying SV in these two shallow locations, the Company could have deployed a shallow water hired rig by incurring an additional expenditure of Rs.13.62 crore[16] which was a more economical option. The net saving forgone by the Company in diverting SV to shallow water locations instead of deploying a shallow water rig and utilising DSS on the locations where SV could have been deployed worked out to Rs.27.75 crore[17].

The Management replied (December 2007) that rig deployment plan was envisaged by the Basin group, based on the priority and available locations and the locations 98/2D1 and 98/4A1 were never planned for drilling by the rig SV.

The reply is indicative of weak planning in the deployment of resources. The rigs equipped for drilling in deep waters are specialised vessels which come with a high charter cost. The Company had upgraded its own rig SV for the specific purpose of

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[15] The extra expenditure of Rs.41.37 crore is the incremental expenditure of deploying hired rig DSS over the operating expenditure of owned rig SV.

[16] The extra expenditure of Rs.13.62 crore is the incremental expenditure of deploying a hired shallow water rig after setting off the savings that would be made by releasing rig SV. The charter rate of shallow water rig is based on the rig locator rate for similar rig for the month of August 2005.

[17] Lower the rate of hiring a shallow water rig more is the saving foregone. Audit has taken a higher rate for hired shallow water rig to be conservative to project the saving foregone.

deployment in deep water drilling. Rig DSS was also hired along with ancillary services under integrated well completion contract for drilling in locations upto a water depth of 1800 m. Its deployment at locations where rig SV could have served the purpose, was not appropriate. The economics of deployment of available resources should be an important consideration in the preparation, review and implementation of resource deployment plans.

7.7.3.3 Miscellaneous observations

(i) Loss due to non-availability of standby wellhead on the rig

As per clause 4.5 of the contract for the rig DSS, the contractor was required to ensure availability of a minimum of two well-heads[18]on the rig. On 15 January 2005 a complication due to parting of 20" casing in well VA-1 developed and drilling of a new well could not be taken up for want of another well head. The well (VA-1) was abandoned on 23 January 2005 when another well head became available. The intervening period from 15 January 2005 to 23 January 2005 was spent by the Company in unsuccessful attempts to resolve the complication. The rig and services charges attributable to these nine days when the rig remained idle were Rs.11.05 crore.

The Management stated (December 2007) that the root cause behind going for a new well was casing parting and the availability or non-availability of a spare well head had possibly no bearing on this decision, since the existing well head was retrievable and re-usable for the fresh drilling. Availability or non-availability of a **s**pare well head would have also nothing to do with the parting of casing.

The reply is not tenable. Though well head availability may have had nothing to do with casing parting but the Electrolog data in Well Completion Report (WCR) showed that casing had parted on 15 January 2005. Hence, decision to drill another well could have been taken on that day itself if the spare well head was available. WCR also indicated that attempt to liquidate the problem was made because no substitute well head was available. Drilling of a new well was taken up only on availability of a spare well head which the contractor was contractually obliged to keep available.

(ii) Extra expenditure due to lack of inter-discipline coordination

Deep water wells are drilled by Drilling Services (DS) group of the Company, which is a service provider to the Geological and Geophysical (G&G) group of the Basins, based on the parameters set by the G&G group. The decision to abandon a well either prematurely or after completion of the entire drilling schedule it taken by DS after the approval of G&G group. Audit observed that well GD-6-1 in the block KG-OS- DW- III drilled by the rig BD was terminated without the consent of G&G group by DS after placing three abandonment plugs. Since the decision to terminate drilling was not acceptable to the G&G group the plugs had to be drilled out and drilling resumed as instructed by G&G group. In the process of placing and removing three abandonment plugs, 187 rig hours were lost resulting in an unfruitful expenditure of Rs.11.06 crore.

The Management replied (December 2007) that even if G&G group had not agreed to the abandonment of the well, the plugs were necessary to be placed for safety reasons. The next course of action was to be decided subsequent to placement of plug. The action of

[18] A wellhead is that part of an oil well which terminates at the surface, whether on land or offshore, where petroleum or gas hydrocarbons can be withdrawn.

placing the plugs did not necessarily imply permanent abandonment, but meeting a well security requirement.

The reply is not tenable since the activities among various services needed to be well coordinated to arrive at a final decision for abandonment or continuation of drilling to avoid extra expenditure in placing and removing of the plug. In the instant case, the same was not done despite there being a well established practice in this regard and a representative of the G&G group dedicated to the team drilling the well.

Recommendation No.7.3

The Company should

(i) finalise the tenders for hiring rigs within the period prescribed in the Materials Management Manual;

(ii) consider the prevailing market rate/trends while finalising/extending the contracts for hiring rigs so as to establish the reasonability of the rates offered;

(iii) fix norms for time required to execute various activities of drilling while hiring rigs on integrated well completion basis so as to have an effective control on the performance of the contractors; and

(iv) incorporate clauses in the contract to protect its interest in the event of idling of services due to breakdown in one or more equipment supplied by a contractor under an integrated well completion contract.

7.7.4. Production testing, well completion and reserve estimation

7.7.4.1 Non-achievement of reserve accretion targets

Since the introduction of NELP in 1999, the Company had been awarded 34 deep water blocks in which eight wells were drilled and in the block KG-DWN-98/2[19] seven wells were drilled till March 2007. In Nomination blocks, 24 wells were drilled by that date. Unlike shallow water blocks, the Company had not fixed any firm target for reserve accretion for deep water blocks. Only an indicative target for Initial-in-Place (IIP) Hydrocarbon of 500 MMTOE from deep water was mentioned in 10th FYP without any year-wise breakup.

Audit observed that the Company had not made any estimate of firm reserve accretion for such a critical activity on which it spent Rs.5,769.12 crore during 10th FYP period (2002-03 to 2006-07). During this period, the Company was able to accrete only 172.17 MMTOE till March 2007, of which 73.70 *per cent* was from block KG-DWN-98/2 acquired from CEIL in March 2005 and the nomination blocks as detailed in the table below.

[19] The block acquired from CEIL.

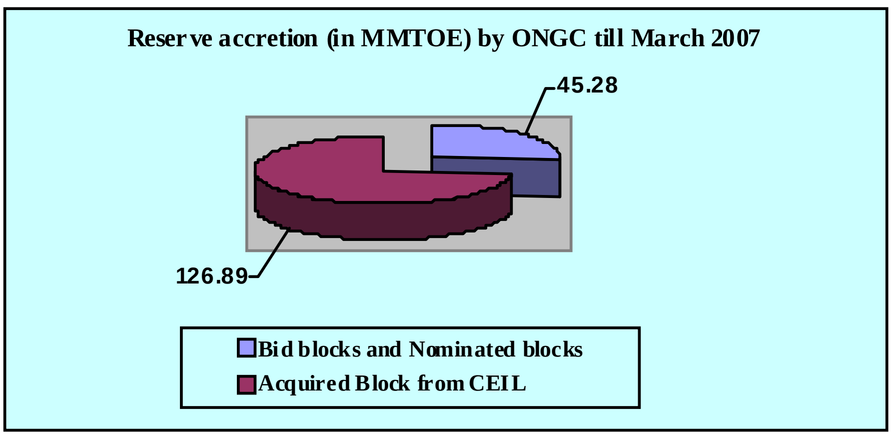
Table-7.7: Accretion to hydrocarbon reserves - Initial in place (IIP)

Particulars	Total	2002-03	2003-04	2004-05	2005-06	2006-07
Exploratory expenditure including API and drilling (Rs. crore)	5769.12	173.95	494.99	2111.37	1221.95	1766.86
Actual reserve accretion from the Company bid blocks and nominated blocks (MMT-OE)	45.28	2.98	22.02	9.98	9.00	1.30
Actual from KG-DWN-98/2 acquired by the Company from CEIL. (MMT-OE)	126.89	NA*	NA*	34.18	28.26	64.45

Not Applicable as the block KG-DWN-98/2 was acquired by the Company in March 2005.

There was no significant accretion from the blocks acquired by the Company through NELP bidding. In fact, the eight wells drilled in the NELP blocks turned out to be dry.

Chart 7.4



The Management stated (September 2007) that the reserve accretion was an outcome of physical inputs which had a normal lag time. It could not be expected to achieve desired accretion in the first two years of 10th FYP. The upward trend from the third year onwards proved that the planning was in place and was proper.

The reply is not tenable as the Company commenced exploration in deep water from 1970 onwards and started drilling deep water wells having water depth more than 400 metres with the rig SV from 1998-99. The time lag has, therefore, to be counted from 1998-99 and not from the beginning of the 10th FYP. Further, the increase in accretion from 2004-05 onwards was also not due to exploration efforts of the Company in the Company bid blocks.

The Management further stated (December 2007) that the Company had planned the needed physical inputs required to meet the set target but no firm commitment of reserves accretion was made in the deep water sector. Only an indicative target of 500 MMTOE was set for the deep water sector and other frontier sectors combined. The Management also contended that after the initial set back in the west coast, the Company deliberately enhanced its exploratory inputs in the east coast mainly in the block KG-DWN-98/2 which had an estimated volume of 32.51 MMTOE of hydrocarbon, purely based on its prospectivity and the returns offered by the block.

The reply is not tenable as accretion of 500 MMTOE in the 10th FYP was envisaged mainly from deep water exploration. At the time of formulation of 10th FYP, the block KG-DWN-98/2 was not with the Company. Fixing of indicative targets showed that the Company had not properly planned for the returns expected of its huge investment.

7.7.4.2 Non-fixation of norms for testing wells

To arrive at the Initial in Place (IIP) reserve, the hydrocarbon indicative wells are tested to establish presence of hydrocarbon. Under the IWC contracts for the rigs BD and DSS, the Company did not prescribe any norms for tests in terms of number of days to be spent per object of testing.

Audit observed that the testing days per object varied from five to seventeen days during the period from 2002-03 to 2006-07 as indicated in Table-7.8 below:

Table-7.8: Deepwater wells tested conventionally

Sl. No.	Well Name	RIG	Block: NELP or Nomination	Water depth (meters)	No. of Objects tested	Actual days taken for testing	Actual days per object
1.	KD-2-1	DSS	Nomination	1464	4	22	5.5
2.	VA-1	DSS	Nomination	553	1	17	17
3.	VA-2	DSS	Nomination	689	2	10	5
4.	GD-2-1	SV	Nomination	653	1	24	24
5.	G-4-2	SV	Nomination	429	1	14	14
6.	G-4-3	SV	Nomination	525	1	15	15
7.	G-4-4	SV	Nomination	335	2	30	15
8.	98/2-W-1	BD	Nomination	1263	1	10	10
9.	98/2 A-1	DSS	NELP	706	1	08	8
10.	98/2-U-1	BD	NELP	1265	1	12	12

The Management stated (December 2007) that there was no way to prescribe norms for testing days in deep water wells by the Company as deep water testing had been undertaken by it for the first time, comparable figures were not available, different operators had been using different types of equipments in testing and the pattern of production testing days also varied with water depth.

The reply is not tenable as the Company had been in deep water drilling since 1999. The Company could have benchmarked the testing time on the basis of past experience, as the norms had been set in case of shallow water wells. Further, as contended by the Management, no pattern or relationship could be noticed from the data given in Table-7.8 between water depth and production testing days taken.

7.7.4.3 Avoidable production testing in the well interpreted to be devoid of hydrocarbon

Deep water wells are tested for presence of hydrocarbons through Modular Dynamic Tester (MDT) or conventional testing. The conventional method of production testing being longer one in terms of number of days, MDT is generally resorted to, before conducting production testing.

The Company while testing well GD-2-1A carried out conventional production testing of two objects[20] at a cost of Rs.9.13 crore without carrying out MDT despite the drilling logs indicating that the entire section was devoid of hydrocarbons. Both the objects proved to be water bearing. Audit observed that by adopting the interpretation of the recorded logs and MDT, which required only a few hours to conduct, the conventional test and resultant expenditure could have been avoided.

The Management accepted (December 2007) that the recorded logs were not interesting from the hydrocarbon point of view and carrying out of MDT could have avoided conventional testing but justified the same to rule out possibility of missing any kind of potential zone. Further Management stated that caved hole precluded the feasibility of carrying out a valid MDT.

The reply is not tenable as recorded logs suggested that the well was devoid of hydrocarbon and the Company could have confirmed this at the most by carrying out MDT being economical compared to conventional testing.

7.7.4.4 Discovery claimed by the Company not acknowledged by MOP&NG /DGH

i) As per the conditions for allotment of nominated blocks, the Company had to issue a strike note on discovery of hydrocarbon in the nominated blocks to the MOP&NG, for the discovery to be considered and recorded by MOP&NG. Audit observed that out of five discoveries made by the Company in the nominated blocks (***Annexure XXVIII***), only two appeared in the records of DGH. The Management contention that remaining three wells were delineation wells was not available on record.

ii) As per Article 10.2 of the PSC, if the contractor determines to conduct a drill stem for production test in open hole or through perforated casing with regard to any exploration well, it shall notify the Government of the time of such test at least 48 hours prior to the proposed test, and the Government shall have the right to have representative present during such test. Audit observed that in NELP blocks, out of six discoveries claimed by the Company as at the end of March 2007, only four were acknowledged as discoveries by the DGH. In the remaining two cases (D-1 and DWN-E-1), the wells were tested only by MDT whereas PSC required it to be tested through Drill Stem Test (DST).

The Management replied (December 2007) that in case of D-1 well, testing was done through MDT and conventional testing (DST) was planned to be notified to DGH but the well was abandoned due to technical problems. In case of DWN-E-1, an interim discovery report was issued to DGH based on the MDT. In this case also, the DGH desired carrying out of DST for notifying discovery. The DGH also clarified that the MDT could be considered for future discoveries, if notified. The matter regarding the two wells was still pending with the DGH (August 2007).

The reply is not tenable as the Company did not inform DGH about MDT and its inability to conduct conventional test due to well collapse. In case of DWN-E-1, the Company neither conducted conventional testing as required in Article-10.2 of PSC, nor invited DGH representatives. Even after the DGH insisted, the Company did not carry out conventional testing whereas in the four cases acknowledged by DGH, the Company had

[20] Object is an interval or section of a well which indicates a likely presence of oil/gas through drilling data as well as study of logs. This section is generally a reservoir under different sedimentary environments and holds hydrocarbon pools.

conducted conventional production test. As a result, both these discoveries had not been accepted by the DGH. Non recognition of discovery in the NELP blocks may delay further development plan of the field under Article 10 of PSC.

Recommendation No. 7.4

(i) ***The Company should expedite API of seismic data, plan drilling of sufficient number of wells and test the wells as per procedures prescribed by the DGH.***

(ii) ***The Company should fix norms for testing of wells in terms of number of days per object by giving due weightage to the subsurface conditions of various Basins.***

7.7.5 Health, Safety and Environment

7.7.5.1 Health and Safety - Occurrence of accidents

Audit observed that in respect of deep water drilling rigs, one incidence of equipment damage in September 2002, one incidence of major injury in March 2005 and three incidences of minor injury between February and October 2005 were reported at the Company owned deep water drilling rig SV. Further, one major incidence occurred at rig BD in March 2005 and one fatal accident was reported in February 2006 at rig DSS.

Apart from the above, fifty cases of 'near misses' were reported in annual report of Drilling Services for 2005-06 only, at SV covering almost every month of the year. This indicated the high possibility of 'near misses' converting into high risk incidences. Non-reporting of 'near misses' in earlier years deprived the Management from taking precautionary measures on safety aspect.

In the 5th HSE sub-committee meeting of the Company's Board held in December 2005, major accidents involving contract workers during 2004-05 were discussed, wherein it was observed from investigated incidences that the contract workers were not aware of hazards associated with oil industry. Therefore, a 'Total Productivity Management Program' to ensure incident free operations was advised.

The Management stated (December 2007) the reporting of accidents/incidents or near misses had started in the Company on daily basis. The clauses regarding reporting have been incorporated in the contract.

However, the above incidences of accidents indicate that the 'goal zero' of corporate environmental management which includes zero accidents, lost man days and facilities was not fulfilled.

7.7.5.2 Environment

(i) Delay in carrying out Environmental Impact Assessment studies

According to Article 14.5 of the PSC, the Company was required to carry out environment impact studies through persons having special knowledge on environment matters in order to determine the prevailing environment, human beings and local communities situation at the time of studies and establish the likely effect exploration activities on the same. The time taken for completion of Environment Impact Assessment (EIA) studies are given in ***Annexure XXIX***.

Audit noticed that the time taken for pre-drilling EIA studies ranged from 20 to 56 months from the date of signing respective PSC. In respect of NELP- I and II blocks, three to four years were taken for completion of pre-drilling EIA studies from date of signing the PSC, whereas Phase I of NELP-I block itself was for four years.

The Management stated (December 2007) that one block was not found to be prospective after exploratory survey and was being relinquished without entering drilling phase. So no pre drill EIA studies had been conducted for this block. Pre-drill EIA studies were initiated after establishing prospectivity of the blocks and finalisation of tentative drilling plans. In the blocks KK-DWN-2002/2 and KK-DWN-2002/3, under NELP-IV, there was no drilling in MWP of Phase I. The drilling had been planned in phase II of these blocks from the year 2009-10 and last quarter of 2008-2009 respectively. Therefore, the process for pre-drill EIA studies and environmental clearance had been initiated just then.

The reply of the Management is not factual since in respect of NELP I, III and IV the pre-drill EIA studies were conducted and environmental clearances (ECs) obtained prior to data processing. In NELP-IV, for two blocks in possession, though phase-I had been completed by March 2007, pre-drilling EIA studies were initiated in December 2007. The Management, however, did not clarify reasons for not initiating process of EIA studies and EC for other two blocks.

ii) Non-establishment of Environment Management Cell

The Company had a separate Corporate Health, Safety and Environment set up headed by in-charge HSE in each Basin, Asset and Services. However, the monitoring of adherence to EC conditions was not carried out by in-charge HSE and its functions were limited to obtaining environmental clearance and reporting on accidents, safety drills, coordinating in revalidation of certificates, *etc*. One of the general conditions of EC was establishment of 'a separate Environment Management Cell with full fledged laboratory facilities to carry out various environmental management and monitoring functions under the control of a senior executive'. However, there was no mechanism in place to obtain compliance and test reports regularly from implementing sections by HSE to verify the compliance.

The Management stated (December 2007) that ONGC's Regional Laboratories can take up the analysis of samples and for specialised analysis, it has MOU with expertise agencies like NEERI and NIO.

The reply of the Management indicates the absence of monitoring mechanism in HSE group. Therefore, compliance to the various requirements/agencies was diluted. The Management did not offer any comments on the aspect of separate Environment Management Cell.

Recommendation No.7.5

The Company should

(i) initiate environment impact assessment studies in time so as to avoid delays in the MWP and consequential penalties;

(ii) strengthen the mechanism of monitoring by HSE as stipulated in environmental clearances; and

(iii) establish systems and strengthen procedures to ensure incident free operations for its Total Productivity Management Programme.

7.7.6 Internal Control and Monitoring System

7.7.6.1 Absence of guidelines/procedures for planning activities in deep water blocks

Production Sharing Contracts signed for the deep water blocks prescribed time period for completion of MWP of each phase. Audit observed that the Company had not prescribed policy guidelines for completion of each activity in order to achieve the MWP targets. The Company also did not prepare separate budget for deep water exploration in their annual corporate plans so as to monitor the physical and financial progress of the project.

The Management stated (December 2007) that Operating Committee and Management Committee resolutions involving budgetary approvals in NELP blocks of all physical programmes for a given year as well as MOUs with MOP&NG for the acreage to be explored besides the review during Quarterly Progress Review Meetings and bi-annual reviews were multi-faceted control elements for the organisation in terms of both guidelines and monitoring.

The reply is not tenable as the wells planned in the 10th plan were only 35 instead of commitments to the extent of 51 wells. DGH imposed penalty in respect of five blocks and the blocks had to be relinquished. If the monitoring system as stated were in place then such situations could have been avoided.

Recommendation No.7.6

The Company should

(i) prescribe policy guidelines for planning activities in deep water exploration to ensure completion of each activity as per MWP targets; and

(ii) prepare activity-wise separate budget for deep water exploration project in their annual corporate plans for monitoring the physical and financial progress of the project.

7.7.6.2 Delay in assigning technical audit of exploration process

The exploration process followed by the Company is explained in ***Annexure XXX***. To facilitate in taking stock of existing practices, making improvements for mitigation of exploration risk, improving the overall success ratio and adding value to investment, the Company decided (June 2005) to engage a technical auditor for conducting technical audit of exploration process within a period of 12 days. The work to be commenced from 20 August 2007 and completed by 4 September 2007 was, however, assigned to a party on 14 July 2007. Thus, the advantage of taking corrective actions to avoid cost and time overruns during the two year period was lost.

Management stated (December 2007) that Exploration Process Auditing has no direct relationship with project 'Sagar Samriddhi' because the objective of the audit process was to understand whether the Company had adopted the optimal acquisition, processing and interpretation process for generation of prospects or not. This was applicable to onland areas, shallow water areas and also for deep water areas.

The reply is contradictory. Once it was accepted that the EPA was applicable to deep water exploration, its inapplicability to Sagar Samriddhi project was a logical conclusion as it is a project for deep water exploration.

Recommendation No.7.7

The Company should ensure that technical audit of exploration process of each block under deep water is conducted timely.

7.8. Conclusion

- The Company envisaged (2003) four billion tons of hydrocarbon reserve from deep water prospects in its 20 -year perspective plan and decided to pursue aggressive exploration campaign in deep waters. The Company has been in deep water exploration since 1970. However, it had not set any firm reserve accretion target from deep water blocks. During 10th FYP, and even after spending over Rs.5,769.12 crore in deep water exploration, the Company could add only 172.17 MMTOE to IIP reserve out of which nearly 74 *per cent* was from one block acquired by it from CEIL.
- Five year plan and annual plans did not cover adequately the number of wells to be drilled as committed for nomination blocks and in MWP of various NELP PSCs. In the 10th FYP, the Company planned only 35 wells against the commitment of 51 wells, resulting in non-achievement of MWP targets. As a result the progress of deep water exploration was slow and the Company had to relinquish five blocks after paying penalty to GOI for unfinished work.
- Non-consideration of the financial condition of the contractor at the time of award of contract, non specifying date of mobilisation of vessels and consequently, non completion of data acquisition due to onset of monsoon had resulted in delays in completion of MWP targets.
- Delay in finalisation of contracts as well as non-consideration of scarcity of deep water rigs in the market resulted in non acquisition of rigs for drilling of committed number of wells in four blocks.
- Pre drilling EIA studies took very long time ranging from 21 to 56 months. In some cases EIA studies were not completed even after completion of Phase-I of MWP.
- Monitoring of planning, the tender process, drilling operations and HSE policy implementation was weak.

The matter was reported to the Ministry in February 2008; reply was awaited.

MINISTRY OF SHIPPING ROAD TRANSPORT AND HIGHWAYS

CHAPTER VIII

Inland Waterways Authority of India

Working of the Authority

Highlights

- Inland Waterways Authority of India (Authority) was not able to fully utilise the funds sanctioned by the Government for development of National waterways. It did not prepare a time bound and an integrated plan for development of each National waterway so that performance against targets could be monitored at each stage.

(Paras 8.2.1, 8.2.2 and 8.2.3)

- The Authority could not dredge the assessed quantities in the three National waterways which was crucial to the development of navigational channels. As a result the least available depth of two metre could not be consistently and contiguously maintained on all the stretches in the three National waterways. The dredgers procured by the Authority at a cost of Rs.44.02 crore were underutilised. The underutilisation ranged from 84 *per cent* to 99 *per cent* in respect of four cutter suction dredgers and 84 *per cent* to 94 *per cent* in the case two hydraulic surface dredgers during 2006-07.

(Para 8.3.1.1)

- The night navigational aids provided by the Authority at a cost of Rs.4.92 crore were unreliable. Moreover, there was no movement of vessels on the channels at night due to problem in providing contiguous channel of navigable depth thereby rendering the expenditure unfruitful.

(Para 8.3.2)

- The provision of infrastructural facilities on the three National waterways was not linked with the development of navigational channels, availability of cargo and movement of vessels. As a result, the benefits of terminals constructed/under construction at the cost of Rs.133.87 crore could not be availed of.

(Para 8.4)

- Mechanical handling equipment and hydraulic cranes costing Rs.13.34 crore procured in some cases before construction of terminals and development of navigational channel were lying unused since 2005-06.

(Paras 8.4.1.2, 8.4.4.1 and 8.4.5.1)

- The procurement of cargo vessels at a cost of Rs.19.79 crore was in contravention of the objectives of the Authority. The vessels procured were underutilised and there was under recovery of Rs.67.93 lakh (fuel and crew salary) during 2006-07 in addition to indirect and overhead costs.

(Para 8.5.1)

- The Authority failed to capitalise on the Government's directive reserving five *per cent* of annual cargo moved by public sector undertakings during 1998-99 and 1999-2000 for transportation by inland waterways as the Authority could not provide waterways for consistent and smooth vessel operations. NTPC Limited expressed interest in transporting the coal and furnace oil procured by it via the National waterways but did not formalise the arrangements as it doubted the Authority's ability to maintain sufficient water depth round the year.

(Paras 8.5.2.2 and 8.5.2.3)

- Despite the Inland Water Transport Policy of Government of India, the Authority failed to identify projects for public private participation in development of waterways, water based recreational facilities, or tourism related activities.

(Para 8.6.1)

- The Authority had not prepared works manual, manuals on accounting system and internal audit. The Authority had not established a robust Management Information System for monitoring and review purposes.

(Para 8.7)

Summary of Recommendations

1. ***The Authority should define staff accountabilities for appropriate and timely utilisation of funds allotted and received for development of waterways against a well formulated long and short term integrated plan for overall development of the waterways. It should rigorously conduct periodical review on the creation of infrastructure and its optimum usage. (If considered necessary an independent agency may be contracted to conduct survey on the potential and usage of facilities created/built by the Authority).***

2. ***The Authority should formulate an annual and a rolling plan with benchmarks and milestones to ensure that permanent/semi permanent measures are adopted for river conservancy to reduce recurring annual expenditure on bandalling, channel marking, dredging, etc., and the plan should be reviewed and monitored at the highest level in the Authority. It should be ensured that capital dredging is achieved and maintained at the required dimension of the navigational channels. Modern, dependable and permanent night navigation systems are installed in a time bound phased manner.***

3. ***The Authority should ensure that all the project activities are synchronised so that there is no idling of facilities created due to non-completion of related activities. Permanent jetties should be constructed only at terminals where it is systematically assessed that there is/would be in an estimated time span, sufficient cargo for optimum utilisation. In other places the option of floating jetties should be considered.***

4. ***The Authority should identify and assess the potential for projects for private sector participation for development and utilisation of facilities on the National waterways for water based recreation activities. It should identify specific items or cargo which could be targeted for being transported through National waterways and establish procedures and facilities to operationalise the handling of the identified cargo/loads.***

5. ***The Authority should ensure that the Internal Audit functions independently and reports its findings directly to the chief executive and Accounting /Auditing manual are prepared early and systems are established and staff accountabilities defined for a comprehensive Management Information System and monitoring of selected performance and status reports at appropriate management levels..***

6. ***The Authority should ensure that mobilisation advance are interest bearing as per guidelines of Central Vigilance Commission and the obsolete inventories are reviewed and segregated for appropriate disposal.***

8.1.1 Introduction

Inland Water Transport (IWT) is a cost effective, fuel-efficient and a more environment friendly mode of transport. The share of inland water transport in the total cargo split as per the 2007 data[1] was one billion ton km (btkm) constituting 0.28 *per cent* of the total cargo in India as compared to 15 *per cent* each in France, USA and 9 *per cent* in China. While the share of cargo transported by road increased ten fold from 58.5 btkm in 1966 to 567 btkm in 1991, and that by rail from 117 btkm to 250 btkm during the same period, the share of IWT remained almost stagnant at about one btkm. Since inception of the Five Year Plan commencing from 1951-56, the expenditure incurred on the IWT sector was as under:

Table-8.1

(Rs. in crore)

Five Year Plan	Outlay for Transport Sector	Outlay for IWT	Expenditure for IWT
1st 1951-56	504	0	0
2nd 1956-61	1,299	0	0
3rd 1961-66	1,395	6	NA
4th 1969-74	2,571	12	11
5th 1974-79	5,420	32	16
6th 1980-85	12,080	72	63
7th 1985-90	22,644	226	188
8th 1992-97	56,090	331	152
9th 1997-02	1,24,188	308	147
10th 2002-07	1,48,351	903	384 (IWAI only)

8.1.2 Formation of the Authority

On the recommendation of the National Transport Policy Committee (NTPC) in 1980, the Inland Waterways Authority of India (Authority) was formed on 27 October 1986 under the IWAI Act, 1985 to regulate and develop the inland waterways in the country for shipping and navigation. The Authority took over assets and liabilities of the erstwhile

[1] Source: Report of the Working Group constituted by the Planning Commission on Inland Water Transport for 11th five year plan.

Inland Water Transport Directorate. It is working under the administrative control of the Ministry of Shipping, Road Transport and Highways.

Based on hydrographic surveys, techno-economic feasibility studies and the principles recommended by NTPC, the following three waterways were declared as National Waterways (NW).

Table-8.2

Sl. No.	NW	Name of the river	Date of declaration as NW	No. of stretches
1.	NW1	Ganga-Bhagirathi-Hooghly river between Sagar island and Allahabad - 1620 Km	October 1986	36
2.	NW2	River Brahmaputra between Dhubri and Sadiya - 891 Km	September 1988	33
3.	NW3	Kollam-Kottapuram stretch of West Coast Canal and Champakkara and Udyogmandal canals – 205 Km	February 1993	11

8.1.3 Functions of the Authority

The main functions of the Authority are to:

- carry out surveys and investigations and prepare schemes for the development, maintenance and better utilisation of the National waterways and appurtenant land for shipping and navigation;
- provide or permit setting up of infrastructure facilities for National waterways;
- carry out conservancy measures and training works and do all other acts necessary for the safety and convenience of shipping, navigation and improvement of the National waterways;
- study the transport requirement with a view to co-ordinate inland water transport with other modes of transport;
- lay down standards for classification of inland waterways; and
- conduct research in matters relating to IWT and arrange training for IWT personnel.

8.1.4 Audit objectives

The performance audit was carried out to assess:

- the adequacy of development and maintenance of inland waterways;
- the adequacy of infrastructure facilities provided in inland waterways;
- the utilisation of various assets procured by the Authority; and
- effectiveness of the internal control and accountability mechanisms in safeguarding the financial interests of the Authority.

8.1.5 Scope of Audit

The performance audit of the Authority covered the period from 2002-03 to 2006-07. The records of the Authority were examined at Head Office and Regional offices at Kochi, Patna and Kolkata.

8.1.6 Audit criteria

The targets laid down in the respective Detailed Project Reports (DPRs), recommendations of the various working groups set up for the Five Year Plans, techno-economic studies and research papers were taken into account for evaluation of the performance and achievements of the Authority.

8.1.7 Audit methodology

The audit programme and objectives were discussed at the entry conference held with the Authority on 15 May 2007. Audit was conducted during the period from May 2007 to September 2007. The Authority's replies to the audit observations were received during October 2007 and November 2007. Exit conference was held on 11 January 2008.

8.1.8 Acknowledgement

The cooperation of the Authority in the course of audit and during the meeting is thankfully acknowledged.

8.2. Planning and utilisation of funds allotted

8.2.1 Planning for utilisation of grants

At present the Authority does not have its own source of revenue generation and is dependent on annual budgetary grants received from the Government of India.

The projections, allocations, budget estimates and utilisation of the funds during the last three Five Year Plans were as under:-

Table-8.3

(Rs. in crore)

Plan	Projections as per Working Group	Allocations approved by Planning Commission	Budget allotted by Government	Grants received by the Authority (Plan and non-Plan)	Actual expenditure by the Authority	Average expenditure per annum	Percentage of budget allotted to allocation by the Planning Commission	Percentage of Grants received by the Authority to budget allocation
8th Plan (1992 - 1997)	492.69	139.35	53.80	38.47	34.69	7	39	71
9th Plan (1997 - 2002)	1701.00	308.00	205.38	164.59	151.01	30	67	80
10th Plan 2002-2007)	5447.70	626.73	559.14	390.67	383.54	77	89	70

The Authority was required to submit proposals to the Ministry for release of budget allotted by the Government. Audit observed that the Authority could draw only between

70 to 80 *per cent* of the grants budgeted by the Ministry during the 8th, 9th and 10th five year plans. The budgets allotted by the Ministry were always less than the allocations approved by the Planning Commission for the Authority. The gap between the allocations approved by the Planning Commission and the budget allotted by the Ministry increased from 39 *per cent* in the 8th five year plan to 89 *per cent* in the 10th plan.

8.2.2 Preparation of Detailed Project Reports (DPR)

Preparation of DPRs is the primary requirement to ensure a time bound and systematic development of a project. It was observed in audit that there was no DPR prepared for the Ganga-Bhaghirathi-Hooghly river system when it was declared as NW1 earlier by the Inland Water Transport Directorate or subsequently by the Authority. This omission should be viewed in the light of the fact that of the three National waterways, NW1 had the maximum potential as the waterway, is the longest, passes through highly populous and industrialised regions in the country, and there was greater connectivity of the waterway with rail and road networks. DPRs for NW2 and NW3 were prepared by the Authority in 1990 and 1992, respectively.

Audit observed that the Authority did not prepare an integrated plan for development of each National waterway incorporating all aspects with milestones and fitted into a target based time frame so that performance against the targets could be measured at each stage. It did not follow a logical sequence of development and instead formulated individual development projects for sanction of the Board of Directors and the Ministry. No review was conducted by the Ministry on the creation and usage of infrastructure and the performance of the Authority was measured by the utilisation of the grants which resulted in an unbalanced development of the waterways as discussed in the succeeding paragraphs.

8.2.3 Spending pattern

Audit observed that in the first 10 years (from 1986-87 to 1995-96) there was no significant activity in development of waterways. Out of the total expenditure of Rs.67.61 crore incurred in the first 10 years of the Authority, Rs.45.81 crore was spent as revenue expenditure. Of Rs.21.80 crore spent on acquiring fixed assets, except for one dredger unit procured in 1988-89 for Rs.7.98 crore for NW1 at Patna, all other assets like vehicles, furniture and other office equipment were establishment related. There was no significant developmental activity on any National waterway during these 10 years.

Out of the total expenditure of Rs.615.95 crore incurred upto 31 March 2007, Rs.335.81 crore (54.52 *per cent*) was spent on acquisition of assets[2] and Rs.280.14 crore (45.48 *per cent*) on pay and allowances, administrative expenses and other recurring river conservancy works such as bandalling and dredging. The major components of capital expenditure were construction of terminals including cost of land (Rs.169.50 crore), vessels (Rs.31.25 crore), dredgers (Rs.48.63 crore), barges (Rs.17.54 crore), cranes (Rs.8.98 crore) and survey equipments (Rs.6.62 crore). Audit analysis revealed that except for a small amount of Rs.7.35 crore spent on bank protection in NW3, minimal capital works on bank protection, river training and reduction of silt carried by the water were undertaken for permanent development of navigational channels. Of Rs.169.50 crore spent on terminals, the benefit of terminals constructed/under construction at

[2] includes Rs.84.56 crore for capital work-in-progress and Rs.78.38 crore as advances for capital works.

Rs.133.87 crore (excluding cost of land) could not be availed due to non-development of National waterways as discussed in para 8.4.

Recommendation No. 8.1

The Authority should

(i) ***define staff accountabilities for appropriate and timely utilisation of funds allotted and received for development of waterways against a well formulated long and short term integrated plan for overall development of the waterways; and***

(ii) ***rigorously conduct periodical review on the creation of infrastructure and its optimum usage. (If considered necessary an independent agency may be contracted to conduct survey on the potential and usage of facilities created/built by the Authority).***

8.3 Development of waterways

The basic requirements for development of waterways were to:

(a) prepare fairway or navigational channel with desired width and depth; and

(b) provide navigational aids for safe day and night navigation.

The minimum dimensions to be achieved for the three waterways were as under:-

Table-8.4

Sl No	Name of the waterway	Length (in km)	No. of stretches	Minimum Dimensions (in metres)[3]	
				Width	Depth
1.	NW 1	1620	36	45	2
2.	NW2	891	33		
3.	NW 3	205	11	32/38	2

8.3.1 Development of navigational channels

NW1 and 2 are typical alluvial rivers with characteristics of braiding, meandering and high barge level fluctuation (both horizontal and vertical) between summer and monsoon months. On these rivers, several shallow areas (shoals) come up during low water season and the Authority was undertaking river conservancy works every year without finding any permanent solution. NW3 on the other hand is a tidal canal with predictable and uniform tidal variation. On this waterway once the desired depth is provided by capital dredging it can be maintained for number of years by undertaking nominal maintenance dredging.

As against the assessments made by the Authority, Audit observed that the progress of work was either very slow or non-existent as discussed below:

8.3.1.1 Achievement of dredging targets

The Authority assessed (year 2000) that 15 lakh cubic metres and 14 lakh cubic metres had to be dredged in NW1 and NW2 waterways, respectively and as per DPR of NW3,

[3] ***Based on National Transport Policy Committee criteria.***

37.30 lakh cubic metres was required to be dredged to make the three waterways operational, apart from periodic dredging required to maintain the desired depths. As against these targets, 1.56 lakh cubic metres, 0.54 lakh cubic metres and 22.20 lakh cubic metres were dredged in NW1, NW2 and NW3, respectively by March 2007.

Reasons for slow progress of dredging analysed in audit were as under:

(i) Delay in procurement of dredging equipment and under utilisation of available equipment

The Authority was to undertake departmentally the dredging work on NW1 and NW2 as it received no suitable response to the tenders floated by it. For this purpose, the Authority assessed (2000) requirement for 20 Cutter Suction Dredgers (CSDs) and four Hydraulic Suction Dredgers (HSDs), in addition to four CSDs and two HSDs available with it for departmental dredging in NW1 and NW2. The Authority took six years to finalise the proposal (September 2006) for procurement of six CSDs (against a requirement of 20 CSDs) at a cost of Rs.113.44 crore for approval of Ministry. Between 2000 and 2006, the cost of the six dredgers increased by 56.08 *per cent*. The Ministry's approval was still awaited (October 2007). No proposal for procurement of HSDs was initiated by the Authority till date (October 2007). Consequently, the work of dredging could not be completed to any significant extent.

The capacity utilisation[4] of two HSDs available with the Authority, one each at Patna[5] and Guwahati[6] was 8.40 and 15.50 *per cent* and 1.51 and 5.62 *per cent* during 2005-06 and 2006-07, respectively. The capacity utilisation in respect of four CSDs ranged between 1.25 to 15.83 *per cent* in these two years. The Authority failed to fully utilise the dredgers on which it spent Rs.44.02 crore. As per the DPR (1990) for NW2, the first and second phase of fairway development were to be completed by May 1997, but the Authority did not carry out any work in this regard. No dredging was done during the period September 1988 to March 2000 due to non-availability of dredgers. Dredging in this waterway was started only in 2001-02 by diverting dredgers from NW1.

(ii) Delay in award of dredging contracts

In the case of NW3, though the State Government had already completed the fairway development of Udyogmandal and Chamapakkara canals alongwith bank protection before its declaration as National waterway, Audit observed that the Authority did not initiate the procedure for award of contracts for dredging in time to meet the targets set in the DPR for the remaining stretches of the west coast canal. As per the DPR, the section between Kochi port and Kollam (138 km) involving a dredging quantity of 28.90 lakh cubic metres was to be completed in first phase in 1994-95. The section between Kottapuram and Kochi port with a length of 30 km and involving a dredging quantity of about 8.40 lakh cubic metres was to be completed in second phase in 1999-2000. However, there was no capital dredging for the development of NW3 from February 1993 to February 1998. The Authority awarded contracts for capital dredging between Kochi port and Kollam only in March 1998 and Kottapuram and Kochi port in September 2002. The contract for widening of canal (5.58 lakh cubic metres) was yet to be awarded (March 2007).

[4] The utilisation statistics are combined for NW1 and NW2.
[5] NW1
[6] NW2

As per contracts for five stretches[7] between Kochi Port and Kottapuram awarded in March 1998, the capital dredging was to be completed between September 1998 and June 2003. However, dredging in only one stretch (Kochi-Allaphuza) was completed in June 2000 and no dredging has been completed thereafter as the contractors left the works on one pretext or the other. The Authority plans to re-award the works at an additional cost of Rs.7.48 crore at the risk and cost of the original contractors. The cases were under arbitration (September 2007).

8.3.1.2 Ensuring least available depth

To ensure navigability in the channels, a least available depth (LAD) of 2 metres was to be provided round the year. It was observed in Audit that even after spending Rs.60.36 crore[8] on bandalling, dredging and channel marking from 1986-87 to 2006-07, the Authority was not able to maintain the LAD of two metre consistently and contiguously in 2006-07 on all the stretches of three NWs as detailed below:-

Table-8.5

Waterway No	Total no. of stretches in Waterway	No. of days in 2006-07 on which two metre LAD was available			
		0-90 days	91 to 210 days	211 -329 days	330-360 days*
NW1	36	10	4	3	19 (53)
NW2	33	4	1	2	26 (79)
NW3	11	8	0	1	2 (18)

Figures in brackets give percentage of all year round availability.

Due to inconsistent depths, lack of contiguity and poor channel marking, the Authority had to provide piloting facilities to the cargo vessels moving in the channels.

8.3.1.3 River conservancy works in NW1 and NW2

While the Authority incurred Rs.40.47 crore during 1986-87 to 2006-07 (Rs.26.25 crore in NW1 and Rs.14.22 crore in NW2) on bandalling, channel marking and dredging which were temporary measures, no expenditure was incurred on permanent measures like bank protection, river training and prevention of shoals/secondary channels formation. As a result the recurring expenditure on bandalling and dredging remained unproductive.

8.3.1.4 Safety of navigation in the channels

The movement of vessels in the river channels was slow and not safe due to presence of bridges (20 on NW1, 3 on NW2 and 34 on NW3), overhead electric and telephone lines, fishing nets, sharp bends and secondary channels. The Authority had not initiated any action to address the problems.

8.3.1.5 Development of features associated with creation of channels

(i) The DPR for NW2 envisaged creation of storage reservoirs and tributaries in order to stabilise the river channels to reduce erosion and check the formation of shifting shoals and sandbars which were hampering river transport. However, no storage reservoirs were created by the Authority to improve the flow and minimise costly

[7] (Kochi-Allaphuzha(62 Km), Allaphuzha-Kayamkullam (38 Km), Kayamkulam-Edapallikotta (21 Km), Edapallikotta-Kollam (17 Km) and Kochi-Kottapuram (30 Km))

[8] Comprises Rs.26.25 crore on NW1, Rs.14.22 crore on NW2 and Rs.19.89 crore on NW3.

dredging and other conservancy works. The DPR also envisaged construction of a dam at Dihang for achieving the objective for inland navigation. There was no evidence on record to show that the Authority took up the matter relating to construction of dam at Dihang with the concerned authorities as suggested in the report.

(ii) As per the recommendations of RITES Limited (December 2001), stretches in Udyogmandal canal (10.90 km), Champakara canal (14.12 km) and west coast canal (2.85 km) on NW3 were to be protected on priority basis and completed by July 2005. However, as against the target date of July 2005, the Authority could complete only 8.45 km by August 2007.

From the above discussion it is evident that the Authority did not systematically deploy its resources on permanent development of the navigational channels. The targets set for capital dredging were not achieved in any year or any of the Plan periods. Consequently, not a single waterway had been made fully operational for day and night movement of vessels to attract prospective IWT operators. The dredging work taken up departmentally in all the three waterways with the Authority's own available six dredgers would take a long time to complete the required dredging crucial to the development of waterways.

The Authority while confirming the facts replied that the waterways could not be made operational due to shortage of dredgers. The balance-dredging work would be awarded after obtaining Government sanction for revised scheme.

As such due to an unsystematic approach to development of National waterways, even after more than 20 years of formation of the Authority not a single waterway was fully operational.

8.3.2 Navigation system in National waterways.

The Authority provided a combination of lighted buoys and manned country boats fitted with light emitting diode (LED) lights on NW1 and NW2 and lighted buoys on NW3 for navigation at a cost of Rs.4.92 crore besides incurring a recurring expenditure of Rs.2.55 crore per annum (2006-07) on its maintenance.

However, none of the National waterways had fully developed navigational channels (as discussed in para 8.3.1) and there was no movement of vessels in these waterways during night rendering the expenditure on providing Aids to Navigation (ATONs) for night movement wasteful. The night navigational facilities provided on NW1 and NW2 were not available uniformly around the clock thus making them unreliable. Moreover, ATONs provided had shortcomings like drifting due to heavy floods and damages due to various river morphological factors apart from pilferage and thefts. 78 lighted buoys on NW1 and NW2 were lost/damaged due to drifting, pilferage and theft during the period 2000-01 to 2006-07.

In NW1 and NW2, the Authority deployed small country boats at identified locations of the channel (generally two km apart), manned with a person and light, to prevent theft and pilferage and also to provide aid in marking channels at night. The system had the inherent disadvantages of (i) the position could not be reliably marked (ii) it was entirely human dependent (iii) it did not cater to day navigation requirement (iv) the control of the system was not entirely with the Authority (v) operational cost was high and (vi) it was not effective during flood season. The Authority did not consider other permanent and dependable alternatives like Automatic Identification System (AIS) or Differential Global Positioning System (DGPS) that were available.

The Authority stated that round the clock navigation facility needed to be provided without waiting for actual vessels movement to convince the operators. It further stated that a scheme to provide the DGPS system was sanctioned and tendering process was in progress (November 2007).

Recommendation No. 8.2

The Authority should formulate an annual and a rolling plan with benchmarks and milestones to ensure that

(i) ***permanent/semi permanent measures are adopted for river conservancy to reduce expenditure on recurring annual expenditure on bandalling, channel marking, dredging, etc., and the plan should be reviewed and monitored at the highest level in the Authority. (Technical help from reputed agencies could be considered for river training, bank protection and to plug the secondary channels);***

(ii) ***capital dredging is achieved and maintained at the required dimension of the navigational channels; and***

(iii) ***modern, dependable and permanent night navigation systems are installed in a time bound phased manner.***

8.4 Unplanned development of infrastructural facilities on the waterways.

The Authority did not strategise the phasing and planning of the three National waterways so as to develop the fairway/navigational channel and provide infrastructural facilities once the channels were completed/near completion, on the basis of availability/estimated demand from cargo and IWT operators. The Dutch terminal expert had recommended (July 1996) that suitable option would be to manage initially with a floating pontoon and to construct the concrete platform at a later stage. This would keep the handling cost low in the initial stage. The Asian Development Bank (ADB) who were requested to provide technical assistance for formulation of projects suitable for financing by ADB in the IWT sector also stated (July 2004) that the resources were being used in the development of terminals without adequate research in regard to their contribution to the success of IWT as an alternate mode of transportation and the terminal designs did not appear to reflect a realistic assessment of the types and volume of cargo to be the expected. Audit observed that infrastructure facilities like terminals, storage and mechanical handing equipment on the three National waterways where provided were not linked with the development of fairway, availability of cargo, and movement of vessels as described in the following paragraphs.

National Waterway 1

8.4.1 Construction of terminals at Gaighat Patna

8.4.1.1 Due to large vertical and horizontal variation in water levels during the lean and flood period, the Authority decided (1998) to construct low and high level jetties at Patna. The GOI approved (March 1998) the revised estimated cost of Rs.14.45 crore for low level jetty, earlier estimated at Rs.4.90 crore in September 1991. The Authority gave an advance of Rs.2.20 crore and Rs.2.51 crore to CPWD in March 1998 and July 1998, respectively. The cost was again revised to Rs.25.17 crore by CPWD. However, the Ministry advised the Authority in August 2000 to suspend the project and take refund from CPWD. However, the need for the jetty was again reviewed after declaration of new IWT policy in 2001 and the Ministry approved (March 2002) the proposal for construction of low level jetty at an estimated cost of Rs.25.50 crore. The work was entrusted (March 2002) to CPWD who awarded (October 2002) the contract to UP State Bridge Corporation Limited, Lucknow, scheduled to be completed by March 2004. The low level jetty was constructed and handed over to the Authority in April 2007 at an escalated cost of Rs.30.29 crore.

The Authority, after approval of the Ministry, entrusted (July 2005) the work of construction of a high level jetty to CPWD at a cost of Rs.13.73 crore with July 2007 as the scheduled date of completion. The Authority released the full advance of Rs.13.73 crore till March 2007 though the construction work was yet to start (November 2007).

Audit observed that at no stage in the process of preparing the project and its approval was the cargo being handled considered. In the year 2002-03, when the project was approved no cargo was being handled at Patna which increased during the period 2005-06 and 2006-07 at 5668 tonnes and 4945 tonnes, respectively. As such, the existing floating jetty that was already available at the terminal was capable of handling this limited quantity of cargo. The Authority stated that they decided to set up the permanent terminals at Patna based on cargo potential. The contention of the Authority is not tenable as due to wide variation in level of water and limited cargo, floating jetty would have been a suitable option till the cargo movement substantially increased justifying permanent jetties. The limited resources available with the Authority would have been better utilised for development of the navigational channels.

8.4.1.2 The Authority procured one container handling crane for Rs.2.89 crore in July 2005 though there was no container movement at Patna. The Authority in its reply stated that efforts were being made to use the crane. However, it was noted in audit that the crane had remained idle (till September 2007) since its procurement in July 2005.

8.4.2 Construction of floating RCC jetty at Allahabad

The Authority awarded (March 2007) the work of construction of a floating jetty on river Ganga at Allahabad on NW1 to CPWD on nomination basis at a cost of Rs.23.64 crore. An advance of Rs. eight crore was released. The work was to be completed within 24 months.

Since an LAD of two metres was required for smooth sailing of cargo vessels which Authority was unable to maintain in the Allahabad-Patna sector for most part of the year. The decision to construct the jetty disregarded the facts that the Allahabad-Patna section was considered to be too problematic because of shallow depth, (often less than one metre) and also the presence of some 14 floating bridges that constituted major impediments to the efficient utilisation of this section of the waterway. Further the fixed service schedules conducted during 2004-05, 2005-06 and 2006-07 showed that the cargo movement was negligible at the Allahabad terminal with no incoming cargo during the period. However, the Authority was also in the process of constructing one floating pontoon terminal at Allahabad.

The Authority stated that as per report of National Buildings Construction Corporation, the annual cargo projected for Allahabad terminal would be 2.82 million tonne by the year 2025. Therefore, a better terminal with storage facility and mechanical handling facility at Allahabad was considered crucial for movement of vessels. The reply of the Authority was not tenable as the Authority failed to maintain LAD of two metres in Allahabad sector for most part of the year for smooth operation of vessels in the absence of which, there was little likelihood of the waterway achieving the periodical annual cargo load.

8.4.3 Construction of floating terminals

8.4.3.1 The Authority approved (June 2006) a scheme for construction of 10 floating pontoon terminals[9] on NW1 at a total cost of Rs.6.53 crore to facilitate handling of cargo and was to be completed during 2007-08. Initially only two floating pontoons were to be fabricated to assess the operational efficiency of the floating gangways. The Board changed its earlier decision and accorded its approval (December 2006) to award the full work for fabrication of all the 10 floating pontoons to PWD, UP.

The Authority placed the order (January 2007) on PWD for supply of the remaining eight pontoons although the two pontoons earlier supplied were yet to be installed (September 2007) and their efficiency established. Further, no land was available at the eight locations identified for installation of the floating terminals. Thus, the amounts of Rs.43.25 lakh paid in December 2006 and Rs.1.73 crore in February 2007 remained blocked.

The Authority stated that parallel action for land acquisition and gangways was being taken. The reply of the Authority was not tenable as availability of land should have been secured and procurement of infrastructure facilities for terminals without ensuring availability of the land indicated defective planning.

8.4.3.2 Construction of floating terminal at Kolkata

The Authority approved (March 1993) a scheme for construction of a floating terminal at Kolkata at estimated cost of Rs.1.98 crore. It deposited (April 1994) Rs.57.57 lakh towards lease premium and security deposit with Kolkata Port Trust (KOPT) for allotment of land. The KOPT allotted (November 1998) land measuring 11606.64 sq metres on lease basis for 10 years at a monthly lease rent of Rs.1.78 lakh plus municipal taxes at 20.25 *per cent* of the lease rent with a provision for five *per cent* enhancement *per annum*. Though the Authority paid the lease rent with effect from November 1998, however, due to frequent revisions in design specifications and in the nature of facilities to be provided, the scheme for construction of floating terminal with gangway pontoon was finalised only in May 2004. The construction of floating terminal was completed in January 2005 whereas the lease is due to expire in October 2008. Thus, the expenditure of Rs.1.58 crore towards lease rent from November 1998 to April 2004 remained unfruitful. The Authority stated that the delay in construction of floating terminal with pontoon gangway was due to factors beyond their control *viz.*, non-handing over of site by KOPT till November 1998, need for updating of terminal facilities, and directive of the Ministry to wait for decision on free transfer of land.

[9] Facilities at Rajmahal, Sahibganj, Manihari, Bhagalpur, Semaria, Doriganj, Balia, Ghazipur, Chunar and Allahabad

The Authority however, could not produce any document to substantiate its claim of a Ministry's directive preventing execution of work pending decision on free transfer of land.

8.4.4 National Waterway 2

8.4.4.1 Construction of terminals at Pandu, Guwahati.

The Authority decided (March 2002 and March 2006) to construct low and high level jetties at Pandu due to large variations in the water level during lean and monsoon period at an estimated cost of Rs.47.70 crore[10]. The work was entrusted to CPWD. The scheduled dates of completion were September 2005 and March 2008, respectively. The work on the low level jetty was not completed and that on high level jetty was still to start as of August 2007 despite the release of the entire amount of Rs.47.70 crore as advance.

Audit observed that the navigational channels in NW2 were not well established for day and night navigation. As such there was limited cargo and vessel movement on the river. In fact, no cargo was handled at Pandu terminal during 2005-06 and the cargo handled during 2006-07 was only 1340 tonnes which did not justify the huge expenditure of Rs.47.70 crore on the construction of the two jetties. The present cargo could have been handled with the floating jetty already available at the terminal. Further, while the jetties were still under construction, the Authority incurred expenditure of Rs.2.90 crore on procurement of one container handling crane in June 2005 though there was no container movement at Guwahati.

8.4.4.2 Construction of broad-gauge railway siding at Pandu

The Authority approved a scheme for construction of a new broad gauge railway siding at Pandu Terminal on NW2 in March 2005 at an estimated cost of Rs.5.93 crore as assessed by North Eastern Frontier (NF) Railways. Due to changes in design, the estimates were revised in March 2006 to Rs.10.30 crore. The full payment was released to NF Railways during 2005-06. In the meeting held in July 2007, it was informed that the work on the siding would start by August 2007. Thus, the funds released remained idle till August 2007 and the Authority lost Rs.1.54 crore[11] as interest during the period April 2006 to September 2007.

Audit observed that the Authority did not conduct any feasibility or techno-economic study for the project. As such, the present status of cargo on NW2 did not justify the construction of a new railway siding at Pandu.

The Authority stated that creation of a proper terminal with multimodal linkage was kept in view while approving the project. The reply is not acceptable as the Authority had not prepared any feasibility report prior to investing in construction of the siding.

8.4.4.3 Unplanned construction of dry dock at Pandu

The work of construction of one floating dry dock for repair of vessels at Pandu was awarded to M/s Hooghly Docks and Port Engineers (HDPE) Limited at a cost of Rs.10.86 crore in March 2005. The Authority paid (March 2005) Rs.3.49 crore towards first and second stage payments. Subsequently, the Authority decided (June 2005) to reconsider the design of the dock. A committee was constituted which recommended (February

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[10] Rs.30 crore for low level jetty and Rs.17.70 crore for high level jetty.
[11] Calculated at the rate of 10 per cent.

2006) detachable type floating dry dock. Due to change in design, the Authority terminated (January 2007) the contract with M/s HDPE and requested for refund of Rs.2.47 crore after adjusting cost of steel (Rs.14.58 lakh) and security deposit (Rs.87.30 lakh). M/s HDPE did not refund the amount as it had already utilised the money in the preparation of design, layout and labour.

Audit observed that the project was approved even when no vessel was plying there (except the four newly acquired survey launches of the Authority) and a marine work shop existed at Pandu to cater to the present need. The substantive revisions in design of the dock also indicated deficiencies at the stage of preparing the DPR.

The Authority stated that the committee constituted had recommended award of the work again to M/s HDPE at a cost of Rs.13.53 crore and the outstanding would be adjusted from other works awarded to HDPE. The fact remains that there were serious deficiencies in preparation of DPR and planning and the adjustment of the outstanding from the future bills against a new contract was not ensured as a contractual condition.

8.4.5 National Waterway 3

8.4.5.1 Construction of terminals and procurement of mechanical handling equipment

The Ministry approved in July 1999 the construction of 11 terminals at a cost of Rs.14.84 crore. Audit observed that the seven terminals constructed between March 2004 and January 2006 at a cost of Rs.15.32 crore could not be used because of non-development of the waterway for want of capital dredging and also because there was negligible cargo on this stretch; the terminals at Kottapuram and Thannermukkam could not be used as the channel had not been fully dredged and developed; the terminals at Vaikom, Thirkkunnapuza, Maradu and Kayamkulam did not have proper connecting roads for cargo trucks to approach the terminals; and the terminal at Aluva was not used due to non-availability of cargo. Of the remaining four terminals, construction of two terminals at Kakkanad and Chevra had been deferred pending assessment of potential traffic and one at Alappuzha could not be taken up as State Government expressed reservations in handing over the land. The Authority released (February 2007) full amount of Rs.4.79 crore to CPWD for the fourth terminal at Kollam even though the structural drawings and estimates were yet to be finalised. Moreover, the Authority procured eight mobile hydraulic cranes and forklifts for the eight terminals, including one where work was yet to start, at a cost of Rs.7.55 crore. The order for procurement of eight platform trucks at an estimated cost of Rs.32 lakh was also under consideration (June 2007).

Thus, the Authority blocked funds of Rs.27.66 crore spent on the construction of eight terminals including mechanical handling equipment, without first cleaning/sustaining channel for cargo movement.

The Authority stated that efforts were being made for utilisation of completed terminals and mechanical handling equipment to attract entrepreneurs to adopt IWT. The reply is not tenable as the construction of terminals was not synchronised with the capital dredging work. As a result the terminals and mechanical handling equipment without availability of cargo remained idle and unutilised.

Recommendation No.8.3

The Authority should ensure that

(i) ***all the project activities should be synchronised so that there is no idling of facilities created due to non-completion of related activities; and***

(ii) ***permanent jetties should be constructed only at terminals where it is systematically assessed that there is/would be in an estimated time span, sufficient cargo for optimum utilisation. In other places the option of floating jetties should be considered.***

8.5 Cargo movement

8.5.1 Procurement of cargo vessels

The Authority prepared (September 2001) a scheme for procurement of 28 cargo vessels at a cost of Rs.107.92 crore for promotion of cargo services on NW1 and NW2. The scheme was revised (November 2001) to procure four cargo vessels (one oil tanker, one container vessel, two general cargo vessels) for NW1 and NW2 at a cost of Rs.14.12 crore. The Board, however, in the first instance did not approve (May 2002) the scheme stating that running of cargo vessels was not within the mandate of the Authority which was already running one cargo vessel 'MV Rajagopalachari' on NWI and NW2. Subsequently, the modified proposal (November 2002 and September 2003) for procurement of four vessels at a cost of Rs.12.04 crore (excluding operational expenditure of Rs.12.96 crore for five years) was approved by the Board. The four vessels were procured at a cost of Rs.11.09 crore on nomination basis from M/s HDPE from June 2004 to July 2006.

The Authority placed another order in June 2004 on M/s HDPE on nomination basis for procurement of two self loading cargo vessels at a cost of Rs.8.70 crore and released Rs.5.69 crore as advance. The vessels which were scheduled for delivery in September/October 2005 were yet to be delivered (August 2007).

Audit observed that the Authority had entered into a MOU (April 2002) with Central Inland Water Transport Corporation (CIWTC) to create a resource pool which would consist of vessels and manpower of CIWTC and financial resources of Authority for promotion of IWTs. As per the MOU, the Authority was to maintain LAD, channel marking in the fairway, provide pilotage and temporary jetties while the vessels were to be provided by CIWTC. Thus, the Authority had access to the vessels of CIWTC if required and the procurement of vessels was infructuous. Audit tabulated the vessel utilisation for 2006-07 which is shown in the Table-8.6**.**

Table-8.6

(Rs. in lakh)

Vessel (Date of acquisition)	**Cargo in MT handled 2006-07**	**No of Trips**	**No of empty trips**	**Revenue earned**	**POL Cost**	**Percentage of revenue to POL cost**	**Salary of the crew**
Rajagopalachari Cargo Vessel-(1993)	1669.69	07	2	17.76	25.43	70	25.50
Cargo Vessel Lal Bahadur Shastri (June 2004)	1548.79	08	2	6.97	14.41	48	
Cargo Vessel Homi Bhabha (December 2004)	2281.71	11	3	8.73	21.32	41	
Oil Tanker Vishweshsariyya (March 2006)	897.94	06	3	4.49	14.60	31	
Container Vessel R.N. Tagore (June 2006)	568.23	04	2	5.29	9.91	53	
Total				**43.24**	**85.67**		**25.50**

As would be seen from Table-8.6 above, the Authority earned only Rs.43.24 lakh against an expenditure of Rs.1.11 crore. The indirect costs and overheads also could not be recovered.

The Authority stated that CIWTC could not get sufficient cargo for economically viable operation and MOU was in-operational. Therefore, the Authority decided to procure some of its own cargo vessels.

However, the operation of vessels was not as per the objectives of the Authority and moreover, were also evidencing uneconomic operations.

8.5.2 Non-exploitation of cargo potential on national waterways.

8.5.2.1 As per the study conducted by Asian Development Bank (July 2004) there was potential for bulk cargo such as bitumen, fertilizer, coal, steel products, cement, petroleum, lime stone, paper, bamboos, gypsum, salt, *etc.*, on NW1 and NW2 which could be transported through IWT.

However, despite inherent strength of the river transport mode, cargo transportation by this mode had not substantively increased in the last five years upto 2006-07 as is shown in Table-8.7.

Table-8.7

(in btkm)

Year	**NW1**	**NW2**	**NW3**	**Total**
2002-03	0.128	0.004	0.019	0.151
2003-04	0.160	0.029	0.022	0.211
2004-05	0.312	0.025	0.015	0.352
2005-06	0.411	0.032	0.017	0.460
2006-07	0.580	0.173	0.015	0.768
Total	**1.591**	**0.263**	**0.088**	**1.942**

8.5.2.2 The GOI in February 1998 issued directives to various Ministries to reserve a minimum of five *per cent* of their annual movement of cargo for 1998-99 and 1999-00 for transportation by waterways on those routes that were notified as operational by the

Authority. All Public Sector Undertakings which had the financial capacity were also encouraged to create captive vessel capacity. The Authority noted (May 1998) that the major constraint in discharging the responsibility was paucity of experienced officers and staff in the field of traffic and cargo development. To overcome these constraints, the Traffic and Cargo Development Wing headed by a full time Member (Cargo) was established. Audit observed that there was no follow up on the Government directives and the Authority failed to capitalise on the initiative.

8.5.2.3 NTPC Limited approached (2001) the Authority for movement of coal from Talchar and Barh coal mines, imported furnace oil and coal to Farakka and Kahalgaon Power Plants. Cost calculations showed that IWT mode was competitive with rail and road. NTPC Limited however, doubted the Authority's ability to maintain sufficient water depth round the year and the project did not take off (August 2007).

8.6 IWT Promotion Schemes

8.6.1 With a view to providing impetus to the development of IWT through Private Sector Participation (PSP), the GOI introduced various schemes *viz.,* Interest subsidy scheme (1980 - January 2001), Compensation for non-availability of infrastructure facilities (April 1993- March 1998) and Inland Vessel building subsidy scheme (April 2002 – March 2007). However, the schemes failed to attract private operators to invest in IWT. The Inland Transport Policy announced by GOI in 2001 envisaged various incentives viz. (i) borrowing from the market by the Authority (ii) equity participation in BOT projects, (iii) inland vessels building subsidy of 30 *per cent*, (iv) higher depreciation rate for inland vessels, (v) customs duty concessions for equipment/machinery related to IWT sector, (vi) tax exemptions to investors similar to National Highways and (vii) foreign direct investment.

Audit observed that the Authority, despite being the implementing agency, had not capitalised on the initiatives and identify projects for Private Sector participation for development of National waterways and water based recreation activities.

8.6.2 Tourism on National waterways was an untapped area. No efforts were made to connect places of tourist interest, pilgrimage points and other sight seeing places by short distance cruises. In the case of Brahamputra River, there was a scope to develop tourism oriented cruises connecting Guwahati and Kazhiranga, Tezpur-Singri-Biswanath, Kaziranga-Jorhat-Sibsagar, *etc.* Similarly on the Ganga, cruises could have been developed at Patna (Buddhist circuit), Bhagalpur (for Devghar) and Kolkata.

Audit observed that Authority did not identify the places/locations of tourist importance despite emphasis in this regard in the policy. The projects of private parties like M/s Vomsi India Limited (2002) and M/s Smita Associates (2003) could not take off due to non-availability of required water depth between Varanasi and Allahabad. M/s Assam Bengal Navigation (ABN), an Indo-British joint venture, was the only party to operate river cruising in Brahmaputra river on NW2.

Recommendation No.8.4

The Authority should

(i) ***identify specific items or cargo which could be targeted for being transported through National waterways and establish procedures and facilities to operationalise the handling of the identified cargo/loads; and***

(ii) ***identify and assess the potential for projects for private sector participation for development and utilisation of facilities on the national waterways for water based recreation activities.***

8.7 Project monitoring and internal control

The Authority has no system of periodical monitoring of the projects taken up for development of waterways and provision of infrastructure facilities thereon to ensure that the work progressed as per schedule and the variations in time and cost were justified. Though the Authority has an EDP section in Head Office at Noida, no MIS (Management Information System) was introduced for monitoring the implementation of the projects, utilisation of vessels and dredgers against standards and benchmarks.

The Authority did not have works manual or manuals on accounting system and internal audit, the latter having been entrusted to a firm of Chartered Accountants. The periodicity and extent of coverage was inadequate. The internal audit reports were not being submitted to chief executive of the Authority and action taken on the internal audit reports was not available on records.

The Authority while accepting the observation stated that the manuals would be prepared as suggested by Audit.

Recommendation No. 8.5

The Authority should ensure that

(i) ***the Internal Audit functions independently and reports its findings directly to the chief executive;***

(ii) ***accounting /auditing manual are prepared early; and***

(iii) ***systems are established and staff accountabilities defined for a comprehensive Management Information System and monitoring of selected performance and status reports at appropriate management levels.***

8.8. Other topics of interest

8.8.1 Non-disposal of dredged material

The DPR for NW3 envisaged that the dredged material was in good demand as manure and had a sale value which would fetch a good price.

The Authority got 22.20 lakh cubic metres (22200 lakh kg approximately) dredged upto March 2007 from private parties. Audit observed (September 2007) that the Authority did not incorporate a clause in the technical specifications for sale of the dredged material. On a conservative basis it could have reduced the cost of dredging by at least Rs.2.22

crore had it allowed the contractors to sell the dredged material at as low a price as one paisa per Kg.

The Authority replied that the issue was not analysed clearly in DPR. The dredged material was the property of State Government and there was no scope for selling the same by the Authority. The reply is not tenable as the DPR had clearly indicated that the dredged material was valuable and in good demand and the Authority should have taken up the matter with State Government for useful disposal of the dredged material.

8.8.2 Undue favour in the award of contract.

The work for supply of 750 LED navigational lights for installation on NW2 was awarded (July 2004) to M/s Asia Navigation Aids at a cost of Rs.70.88 lakh. Of the 750 lights supplied, 150 developed cracks in solar panels/Programme Control Boxes (PCBs) immediately after installation in January 2005. The programme of LED lights was also not functioning properly and to avoid any further damage to the PCBs, all lights were withdrawn from the field in May 2005.

The supplier dismantled 225 LED lights and repaired 75 by June 2006. The remaining lights could not be repaired (June 2007) as the solar panels had become defective and new panels were not available with the manufacturer.

The Authority, however, refunded security of Rs.7.09 lakh in April 2006 to the contractor. The Authority, thus, unduly favoured the supplier. The Authority replied that the balance lights would be repaired by the contractor and the security deposit was released as per the tender conditions. The reply is not tenable as the Authority was also fully aware of the defects before refunding the security deposit in 2006.

8.8.3 Procurement of workboats

The Authority entered (January 2003) into a contract with M/s Neptune Marine Pvt. Limited (NMPL) for supply of three work boats at a cost of Rs.3.60 crore to be delivered in September 2003 (one) and October 2003 (two). The Authority paid Rs.53.98 lakh as interest free mobilisation advance on signing of the contract against bank guarantee valid upto December 2006. Another Rs.1.08 crore was paid on laying of the keel and on completion of 50 *per cent* steel work without any bank guarantee. The payment of interest free advance was in violation of the CVC guidelines. M/s NMPL failed to deliver the work boats. The Authority neither encashed the bank guarantee nor got it extended from the party to reduce its losses. The Authority lost Rs.60.30 lakh as interest[12] for the period January 2003 to December 2006 on Rs.1.62 crore advanced to the party. Besides, recovery of Rs.1.62 crore was also doubtful.

The Authority stated that they have asked the bank and the party to extend validity of bank guarantee. The reply is not tenable as neither the bank nor the party had responded to the request for extension of bank guarantee (December 2007).

8.8.4 Loss of interest of Rs.3.02 crore due to non-refund of excess amount

Audit reviewed the records relating to acquisition of land for widening of narrow canals and construction of terminals on NW3 and found that the Authority was to recover Rs.6.48 crore (excess deposit-Rs.3.77 crore and cost of land not handed over-Rs.2.71 crore) from the Kerala Government. The non refund of amount since August 2002

[12] Calculated at the rate of 10 per cent.

resulted in loss of interest of Rs.3.02 crore upto March 2007. Further, an advance of Rs.3.23 crore deposited during 2003-04 to 2006-07 with Department of Irrigation, for repairs of locks and bank protection remained unadjusted as the Authority was not aware of its utilisation (June 2007).

The Authority replied that the appeals seeking enhanced compensation were pending in various courts and attempt was being made to reconcile actual expenditure and balance available with District Revenue Offices; and that the Department of Irrigation, Kerala would be requested to refund the amount in case of further delay in execution of work. The reply is not tenable as there was no handing over of land after 2002 and the Authority should have worked out the balance amount by this time.

8.8.5 Excess purchase of spare parts/inventories

A review of inventory records at Patna revealed that as on 31 March 2007, spare parts in respect of survey equipment, dredgers, tugs etc. purchased during the period 1998 to 2005 at a cost of Rs.3.78 crore were lying unutilised for a long time. Most of the inventories had become obsolete with the passage of time/change of technology but no action was taken to dispose off the same.

Recommendation No.8.6

The Authority should ensure that

(i) mobilisation advances are interest bearing as per CVC guidelines; and

(ii) the obsolete inventories are reviewed and segregated for appropriate disposal.

8.9 Conclusion

IWAI was formed in 1986 to regulate and develop three National waterways for shipping and navigation. The IWAI failed to accomplish its objective of development, maintenance and better utilisation of National waterways and appurtenants for shipping and navigation. Even after 20 years of its existence, not a single National waterway was fully operational. The Authority failed to maintain LAD of two metre in 31 out of 80 stretches as of March 2007, rendering the National waterways unsuitable for consistent and sustained cargo movement. Permanent terminals constructed/under construction and mechanical handling equipment were lying unused due to non-availability of cargo and under utilisation of the National waterways because of inadequate depths in the National waterways. The benefits of terminals and mechanical handling equipment constructed/under construction at Rs.150.70 crore could not be availed due to non development of the waterways.

The matter was reported to the Ministry in January 2008; reply was awaited.

DEPARTMENT OF SPACE

CHAPTER IX

Antrix Corporation Limited

Performance of the Company

Highlights

- Company specific guidelines/procedures for accounts, investments, personnel *etc.*, had not been developed even 15 years after its creation and Government of India's directive.

  (Para 9.7.1.1)

- The functional distinction between the Company and the Department of Space (DOS) was ambiguous since the officers of the DOS were also executives of the Company. Proper delegation of powers consistent with good governance, structure and growth of the Company had not been drawn up (November 2007).

  (Para 9.7.1.2)

- The Company's interest earnings averaged around 50 *per cent* of the profit after tax during the years 2002-03 to 2006-07 which would suggest that the Company was being used as a special purpose vehicle for parking of unutilised funds by the DOS. Despite having substantial cash balances, the Company had not developed proper procedures to increase its yield from the surplus cash retained by it.

  (Para 9.7.1.3)

- The Company credited the DOS share of revenue to the Indian Space Research Organisation (ISRO) instead of the Consolidated Fund of India. Remittances were also not prompt even though the relevant moneys were shown as accrued to the DOS in the Accounts. Periodical reconciliation of amounts due and payable to the DOS had not been carried out.

  (Para 9.7.1.4)

- Though the Company was set up as the commercial arm of the DOS, several commercial contracts like with Prasar Bharati, New Sky Satellite, Netherlands and INTELSAT were not entrusted to the Company.

  (Para 9.7.3)

- Absence of a deemed supply clause in 16 contracts led to loss of revenue of Rs.27.45 crore.

  (Para 9.7.4.1)

- There were delays in revenue recognition/raising bills; and important contractual provisions in respect of performance bank guarantee, surrender or termination of leased capacity were not followed.

  (Para 9.7.4.2)

- The Company extended undue benefit to Space TV (Tata Sky) by reducing the rates originally accepted to by the customer while entering the long form agreement.

(Para 9.7.4.3)

- There were delays in recovery of quarterly recurring charges and service charges on foreign transponders were voluntary reduced resulted in recurring loss of revenue of Rs.8.30 crore in seven cases.

(Paras 9.7.5.1 and 9.7.5.2)

- While Service Tax for INSAT operations was being collected, the same was not being collected in respect of foreign hired transponders resulting in a likely liability of Rs.16.77 crore to the exchequer.

(Para 9.7.5.4)

Summary of recommendations

1. ***The Company should formulate and issue guidelines and procedures for all aspects of its operations.***
2. ***The Company should prepare a table of authorities ensuring that there is proper segregation of duties among officers and staff having authorising, approving or paying responsibilities in the Company.***
3. ***The Company should devise suitable ways to maximise returns from its surplus cash balances.***
4. ***The Company should credit the DOS's share of revenue directly to the Consolidated Fund of India instead of through ISRO. Remittances should be made promptly and periodical reconciliation should be carried out to enable a fair assessment of balances reflected in the Accounts.***
5. ***The DOS should establish norms for entrustment of commercial contracts to the Company consistent with its assigned role and article of establishment of the Company.***
6. ***The Company should ensure inclusion of a suitable clause in the contracts to avoid idle capacity and loss of revenue due to delay in compliance of various formalities by the customers. The Company should proactively interact with various regulatory agencies and discharge its mandated role as a facilitator.***
7. ***The Company should raise bills as per the terms of the contract and take suitable steps for prompt collection and enforce the terms of the contracts for collection of performance bank guarantee and for surrender or termination of lease.***
8. ***The Company should ensure that suitable provisions are made in the contracts requiring payment of interest for delay in payments and that the contractual terms are not to the disadvantage of the Company.***
9. ***Even in cases where the applicability of certain taxes or duties are pending clarification, the Company should initiate recovery so as to offset any future liability.***

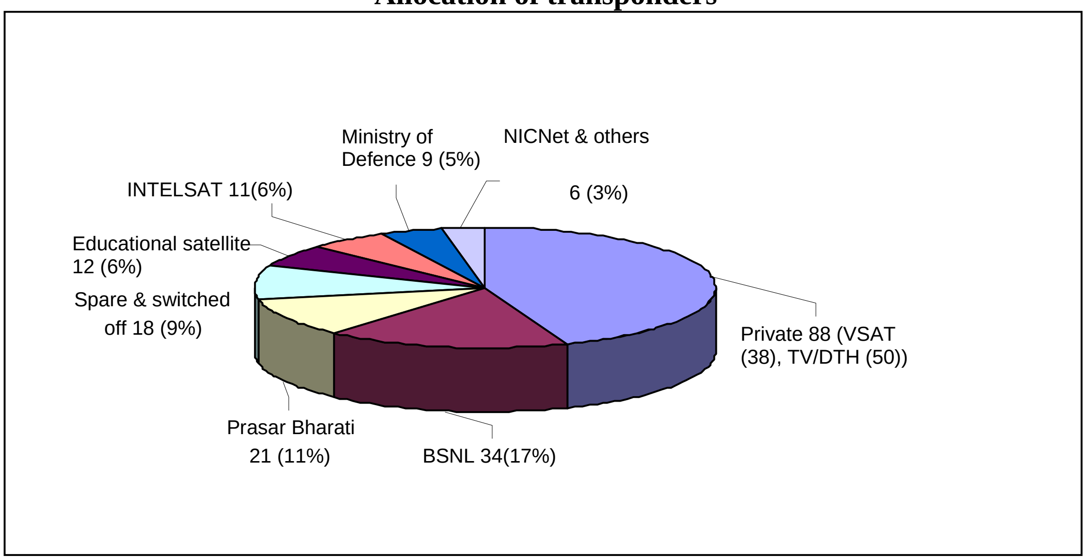
9.1 Introduction

The Indian National Satellite (INSAT) system, a joint venture of the Department of Space (DOS), Department of Telecommunications (DOT), All India Radio (AIR), Doordarshan and Indian Meteorological Department (IMD) was established in 1977 primarily to cater to the telecommunication, broadcasting and meteorological needs of the nation. Overall coordination and management of INSAT system rests with INSAT Coordination Committee (ICC) and the DOS was identified as the administrative authority in all matters relating to space systems. Antrix Corporation Limited (Company) was incorporated in September 1992 to function as a commercial arm of the DOS with access to resources of the DOS and Indian Space Research Organisation (ISRO) to promote the commercial exploitation of space products and to transfer the technology developed by ISRO.

Up to August 2007, ISRO had launched nine satellites with an aggregate capacity of 199 transponders[1] ***(Annexure-XXXI)*** catering to Broadcasting/TV/DTH (83 transponders), telecommunication-Very Small Aperture Terminal (VSAT) (98 transponders) and balance (18 transponders) as spare and switched off. The allocation of transponders among the users was as shown in the chart below:

Chart-9.1

Allocation of transponders



According to the working arrangement between the DOS and the Company, while individual contracts in respect of lease of transponder capacity were entered into by the DOS, the Company was designated as the contract manager. However, there was no formal agreement between the DOS and the Company laying down specific responsibilities of both entities. In an internal note of August 2003, the Company was designated as the contract manager to carry out activities like billing, collection and monitoring of dues, drafting amendments to contracts for the augmentation/surrendering

[1] ***Transponder (derived from 'transmitter + responder) on board a satellite transmits signals automatically when it receives predetermined signals and consists of a chain of electronic communications equipment, which receives, filters, amplifies and transmits a signal.***

of space segment capacity and accounting for revenues earned and expenses incurred from contract management. Included in this note was that revenue realised would be shared between the DOS and the Company in the ratio of 80:20 for transponders relating to telecommunication (VSAT) and 85:15 for transponders relating to television.

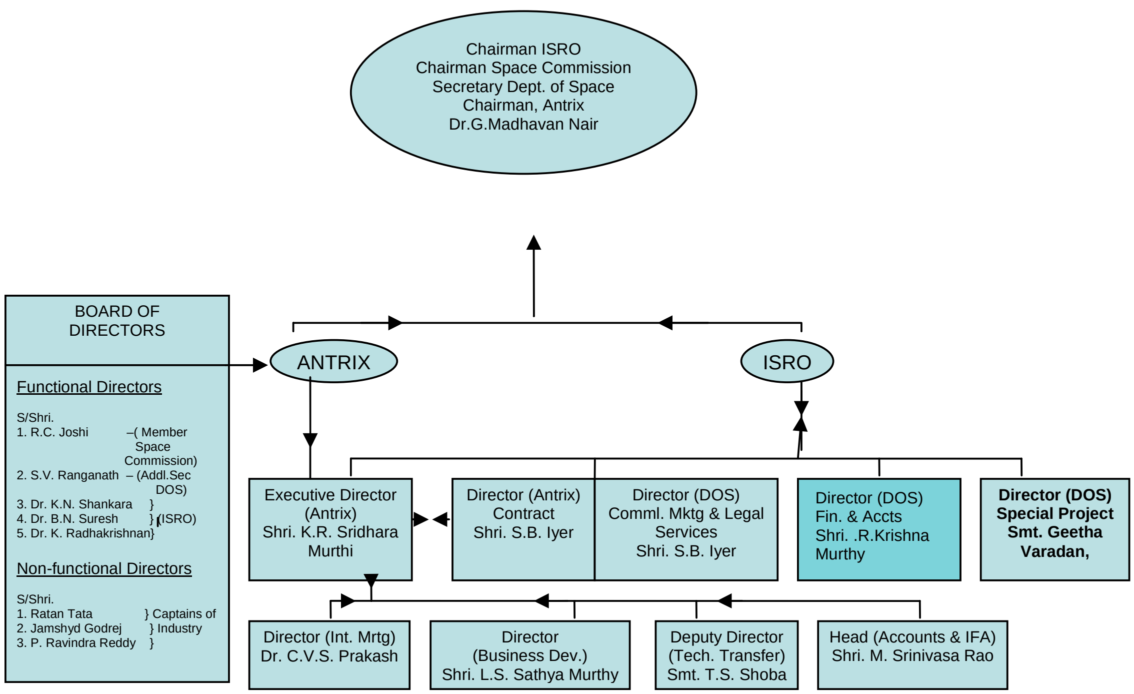
Out of 199 transponders, the Company was assigned to manage contracts for 131 transponders used both for commercial and non-commercial purposes. The Company also directly entered into contracts with Americom Asia Pacific (AAP) in August 2001 and New Sky Satellite, Netherlands (NSS) in May 2004 for hiring space capacity and leasing it to Indian customers to augment INSAT capacity.

The Company was also the nodal agency in respect of six remote sensing satellites for reception, archival, processing and dissemination of Indian Remote Sensing (IRS) data ***(Annexure-XXXII)***. In addition, the Company was managing/entering contracts for launch services, support services and contracts for foreign supply and installations**.**

9.2 Organisational set up

The Secretary, DOS is the *ex-officio* Chairman of the Company. The Chairman as well as the functional Directors and the non-functional Directors on the Board were all part-time. The multiple responsibilities discharged by the senior management as on 30 September 2007 are brought out in the organisation chart shown below:

Chart 9.2



It would be seen that all the executives including the Executive Director constituting the senior management in the Company were on transfer[2] from the DOS and drew a part of

[2] ***Not on deputation***

their pay and allowances from their parent departments namely DOS/ISRO[3]. The three crucial functions of Finance, Special Projects, Commercial Marketing and Legal services, in the Company were held by ISRO officers merely in an *ex-officio* capacity, and their entire salary was being paid by DOS/ISRO. There were only two permanent employees in the Company**.**

9.3 Audit Objective

Audit assessed the efficiency and effectiveness of the Company in its assigned role as the contracts manager for the DOS and particularly reviewed the authorities and accountabilities established and defined in the Company for it to carry its designated role.

9.4 Audit Criteria

Audit was carried out with reference to the following criteria

(i) Company's assigned role as a contract manager of contracts.
(ii) Company's policy on deployment of advances received for various contracts.
(iii) Agreements entered into with the DOS, Ministry of Defence (MOD) and other customers.

9.5 Scope of Audit

The Performance Audit of the Company was taken up to review its performance as the commercial arm of the DOS and covered the period of five years from 2003-04 to 2006-07.

9.6 Audit Methodology and Acknowledgement

9.6.1 Audit was conducted in accordance with the Auditing Standards and the Performance Auditing Guidelines notified by the CAG of India. These standards and guidelines lay down the professional practices that government auditors should follow in planning, implementation, reporting and quality assurance in all performance audits. The audit was conducted on the basis of review of records, documented minutes of meetings, and discussion with senior executives. Audit objectives and criteria were discussed at the entry conference held with the management in May 2007 and audit findings and recommendations were discussed at the exit conference held in September 2007.

9.6.2 Out of the total 225 contracts, 164 contracts were entered into by the DOS and 61 contracts were entered into by the Company for an aggregate contract value of Rs.586 crore during the period of review. Audit scrutinised 209 contracts having an aggregate contract value of Rs.533 crore covering 100 *per cent* in all segments except 92 *per cent* of broadcasting and 67 *per cent* of foreign supply & installations contracts ***(Annexure-XXXIII).*** Audit also reviewed all the seven foreign contracts entered into by the Company for hiring transponder capacity from AAP and NSS.

9.6.3 Audit acknowledges the co-operation and assistance extended by different levels of the management at various stages of the Performance Audit.

[3] ***75 per cent of the salary cost of the Executive Director and three senior executives is reimbursed to ISRO by the Company under a cost sharing arrangement.***

9.7 Audit Findings

9.7.1 The following weaknesses were noticed in the prevalent operating environment in the Company:

9.7.1.1 Non preparation of Company specific guidelines

The selection and appointment of Board level functionaries including the Chairman of the Company was approved (May 1992) by the Government of India with directions to frame its own guidelines in line with Bureau of Public Enterprises (BPE) guidelines duly approved by the Space Commission. However, the same had not been put in place even after 15 years of grant of the special dispensation. The Company had also not prepared any manual on the procedures to be followed in the areas of accounts, investments, personnel, purchase, sales and internal audit.

The Management stated (November 2007) that most decisions were taken consistent with BPE guidelines and ISRO /DOS policy with respect to pay and allowances and therefore, the task of framing separate guidelines with the approval of Space Commission had not been taken up so far. The reply is not acceptable as absence of a written down Company specific guidance created risk for ad-hoc and variable work procedures. Moreover, there was also the attendant risk of diluted accountability, especially in view of blurred distinction between the DOS and the Company.

9.7.1.2 Delegation of Powers

Detailed delegation of powers enumerating the additional powers to the Executive Director, consistent with the structure and growth of the Company decided by the Board in 2001, had not been drawn up (November 2007). Audit also noticed over-laps in the responsibilities and thereby unclear segregation of duties, exercised by the various executive officers of the Company as follows:

- The Company was an independent entity under the Companies Act and entrusted with contractual management of the DOS**.** However, it did not have a full-time independent executive for contract management. The Director (Commercial Management and Legal services) in the DOS was fully involved in the decision making prior to the finalisation of a contract and was also a signatory to some of the contract from the DOS side. The same officer in his capacity as Director (Contracts) of the Company was responsible for enforcing the conditions of the contract.
- The functional distinction between the executives of the Company and officers in the DOS was nebulous since the officers of the DOS were *ex-officio* executives of the Company.
- The responsibility for Finance and Accounts of the Company was vested with a relatively junior functionary, while the Internal Financial Advisor of the DOS was designated as Head of Accounts & Internal Financial Advisor in the Company.

The Management stated (November 2007) that manpower resources of the Company were to be strengthened substantially when additional delegation of powers would be taken up for approval with the Board.

9.7.1.3 Fund management

The working results of the Company during the five years up to 2006-07 are detailed in the table below:

Table-9.1

Working results

(Rupees in crore)

Sl. No	Particulars	2002-03	2003-04	2004-05	2005-06	2006-07
1	Income (Operational)					
	(a) Foreign	30	15	19	55	76
	(b) Inland	69	279	330	331	530
	Income (Non-Operational)					
	(a)Interest	8	7	17	27	56
	(b)Others	2	1	1	1	3
	Total:	109	302	367	414	665
II	Expenditure					
	(a) Foreign	19	8	9	35	45
	(b) Inland	60	253	295	287	458
	(c) Others	2	4	2	3	3
	Total:	81	265	306	325	506
III	Profit before Tax	28	37	61	89	159
IV	Profit after Tax (PAT)	19	24	39	61	106
VI	Percentage of Profit to turnover	26	12	17	21	24
VI	Percentage of Non-operational income to Profit after tax	53	33	46	46	56

The profit before tax increased from Rs.28 crore in 2002-03 to Rs.159 crore in 2006-07. The steep increase in domestic revenue was due to substantial increase in non-operational revenue (interest income), which from a mere Rs.8 crore in 2002-03 increased to Rs.56 crore in 2006-07 ***(Annexure-XXXIV)***. The Company's interest earnings averaged 50 *per cent* of the profit after tax in all the years except 2003-04, which suggested that the Company was being used more as a special purpose vehicle for parking unutilised surplus funds by the DOS. As of March 2007, the Company had Rs.828 crore in term deposits in PSU banks.

Considering the substantial routing of funds through the Company that remained un-utilised, an Investment Committee was constituted in January 2003. The Board of Directors authorised the Committee (March 2004) to invest without any ceiling which was initially Rs.300 crore in January 2003 and was increased to Rs.500 crore in January 2004. The Committee was also authorised (December 2005) by the Board of Directors to invest up to Rs.75 crore in an individual bank. The Committee, however, reduced (April 2006) the limit to Rs.65 crore based on its assessment of the performance and credit rating of the banks**.** Investments made in 19 cases revealed that the Company was deprived of income of Rs.4.54 crore by way of higher rate of return being offered by the individual PSU banks had the investments been made without any ceiling ***(Annexure-XXXV)***. It was also observed that huge amounts ranging from Rs.1 crore to Rs.380 crore were kept idle for periods ranging from 7 to 20 days ***(Annexure-XXXVI)***, resulting in substantial loss of interest.

9.7.1.4 Revenue sharing

As brought out in para-9.1 (Introduction), there was no formal agreement between the DOS and the Company laying down specific responsibilities and revenue sharing arrangement of both entities. Further, the revenue sharing arrangements between the DOS and the Company had not been approved by the Member (Finance) of Space Commission. This issue was highlighted in CAG's Audit Report No. 9 of 2006 on Non-Tax Receipts. The DOS in its reply (July 2006) stated that would obtain the approval from Member (Finance). However, no such approval had been obtained as of December 2007.

As per the revenue sharing arrangement[4], the revenue share of the DOS was to be remitted to the Government account[5] on an annual basis upto 2006-07 and on quarterly basis from June 2007. It was observed that the Company was remitting the DOS share of revenue to ISRO. There were no reasons on record for such re-routing and for not crediting directly into the Government account. As brought out in this review in para 9.7.4.2 (i) and (ii), the remittance of the DOS share of revenue to ISRO was not being done promptly as noticed in audit, and reconciliation of the amounts due and remitted between the DOS and the Company had also not been done (December 2007).

Recommendation No. 9.1

(i) ***The Company should formulate and issue guidelines and procedures for all aspects of its operations.***

(ii) ***The Company should prepare a table of authorities ensuring that there is proper segregation of duties among officers and staff having authorising, approving or paying responsibilities in the Company.***

(iii) ***The Company should devise suitable ways to maximise returns from its surplus cash balances.***

(iv) ***The Company should credit the DOS's share of revenue directly to the Consolidated Fund of India instead of through ISRO. Remittances should be made promptly and periodical reconciliation should be carried out to enable a fair assessment of balances reflected in the accounts***.

9.7.2 Contract Management

The various points noticed by audit in the contract management activities of the Company as brought out in subsequent paragraphs should be viewed in the background that the role of the Company was not clearly defined. Since the Company was mandated to manage only 131 transponders out of a total of 199 transponders, the Audit findings are grouped under three distinct headings:

- Contracts not entrusted to the Company;
- Contracts entered into by the DOS and managed by the Company; and
- Contracts entered into by the Company

[4] ***In the ratio of 80:20 for VSAT, 85:15 for DTH/TV and 40:60 for IRS operations.***
[5] ***Major Head 1425-Other Scientific Research-102.***

9.7.3 Contracts not entrusted to the Company

Out of a total of 199 transponders, contract management of 68 transponders was retained by the DOS. Thirty two of these 68 transponders were leased by the DOS for commercial purposes. The management of these was, however, not transferred to the Company as highlighted below:

- The management of 21 INSAT transponders used for commercial purposes by Prasar Bharati since March 2004 was not transferred to the Company. Prasar Bharati also commenced its Direct to Home (DTH) service in December 2004 using four foreign (NSS) transponders. The DOS itself entered into contracts with NSS though in some other cases, the Company was empowered to enter into contracts with foreign service providers. The non entrustment of the billing contract in respect of Prasar Bharati deprived the Company of revenue of Rs.125.37 crore with Company's share of income of Rs.18.81 crore as lease charges from March 2004 to March 2007 and loss of service charges of Rs.0.69 crore (based on 4 *per cent* of the annual lease charges of US $1 million per transponder charged by NSS).
- Similarly, a contract was signed by the DOS in 1995 with INTELSAT (Panamsat) for lease of 11 INSAT transponders for US$ 9.0 million *per annum*. The commercial contract was, however, not transferred to the Company thereby depriving it of US$ 9 million (Rs.38.63 crore) of revenue *per annum* with share of income of Rs.7.73 crore.

The Management stated (November 2007) that the transaction regarding transponder capacity allocated to Prasar Bharati and INTELSAT had not been assigned to the Company by the DOS, but did not provide any justification for non entrustment of these commercial contracts to the Company. In case of BSNL, which became a corporate entity from October 2000, the billing in respect of space segment charges was assigned (with effect from 1 July 2003) to the Company, which enabled the Company to earn 20 *per cent* of the revenue as its share of service charges.

Recommendation No.9.2

The DOS should establish norms for entrustment of commercial contracts to the Company consistent with its assigned role and article of establishment of the Company.

9.7.4 Contracts entered into by the DOS and managed by the Company

9.7.4.1 Interaction with Government agencies– Under the Company's business practice the DOS allocates the bandwidth requested by the customer and a lease agreement is entered into. The customers have to submit this agreement when they seek a license from Ministry of Information & Broadcasting (I&B). After obtaining the license the customer approaches the Network Operational Control Center (NOCC) for frequency allocation and certification of the antenna. Transponder services are activated only after obtaining clearance from NOCC. The Company has not fixed the date for commencement of the lease period.

As satellites have a limited life of 7 to 12 years, it is important to complete the process of regulatory clearances as early as possible to maximise their commercial availability.

Audit observed that though the Company was specifically vested with the responsibility to liaise with the regulatory authorities there were cases of delay in obtaining clearances and utilising the allocated transponder services by the customers, whereby revenue of Rs.27.45 crore had to be foregone by the Company ***(Annexure-XXXVII)***. Absence of a deemed supply clause after a specified period in the contract/agreement also led to non-collection of space segment charges after a reasonable period. Two such cases where despite similar delays the DOS/Company had amended the contract clause to bill for actual usage or agreed usage within the mutually agreed time are discussed below:

(i) An agreement was entered (September 2004) with Reliance Communications Limited (RCL) for lease of 162 MHz for VSAT (telecommunication) operations at Rs.1.65 lakh *per* MHz *per quarter* for a period up to 31 March 2006. The period of lease was to commence from 1 October 2004 or from the date of obtaining NOCC clearance. NOCC started giving clearance from April 2005 in small MHz. Due to absence of deemed supply clause, the Company billed the customer only for the actual bandwidth utilised. This resulted in loss of revenue of Rs.17.15 crore for the period October 2004 to February 2006.

When the Company informed (February 2006) the customer that the unused capacity would be allocated to others, the latter proposed a staggered slab[6] of utilising the allocated capacity by 31 December 2006. Accordingly, the DOS/Company decided (February 2006) to bill the customer as per slab proposed or the actual usage whichever was higher. Even as of December 2006, the customer could obtain NOCC clearance on piecemeal basis for 98.58 MHz only.

(ii) Electronics Corporation of India Limited (ECIL) with allocated capacity of 9 MHz, requested (June 2003) the DOS/Company for an additional 18 MHz capacity to be utilised in two phase’s of 9 MHz each from July 2003 and October 2003. Accordingly a lease agreement for 27 MHz was entered (June 2003) at a quarterly charge of Rs.22.73 lakh for each 9 MHz bandwidth. The Company instead of billing for 18 MHz from July 2003 and for 27 MHz from October 2003 agreed to the customer’s request that the billing for the additional allocation could be done only from the date of clearance by NOCC. The NOCC clearance was obtained by the customer only in March/April 2004. Thus due to delay in obtaining/arranging for the NOCC clearance the Company lost the benefit of additional revenue of Rs.91.32 lakh.

The Management stated (November 2007) that:

- the processing/lead time taken by Ministries/Departments of Government of India for administrative clearances cannot be treated as delay, which was beyond the control of the DOS/Company.
- in case of RCL, the conduct of mandatory verification tests by NOCC was very important because the INSAT system has several hundreds of antennas operating at the same time and the presence of one or two bad antennas can create problems for the entire network.

[6] 90 MHz by 31 March 2006, 120 MHz by 30 June 2006 and 162 MHz by 31 December 2006.

- delay of a few months (in case of ECIL) need to be looked into from a larger perspective where the customer would provide steady revenues for many years to come.

The reply is not acceptable as the Company failed to include proper incentives in the contracts for expediting clearances by including a clause in the contract for deemed supply if the customer failed to obtain the clearance within a reasonable period. Moreover, the Company should itself have taken some initiative with regulatory agencies in terms of the duties assigned to it by the DOS. Proper planning and networking would have allowed the Company to address the concerns of regulations promptly which in turn would have improved the commercial availability of satellites. The Company was not able to facilitate grant of *ad-hoc* licenses from I&B Ministry to its domestic customers whereas 53 foreign television channels were operating in India on the basis of *ad-hoc* licenses which were being renewed year after year.

Recommendation No. 9.3

(i) The Company should ensure inclusion of suitable clause in the contracts to avoid idle capacity and loss of revenue due to delay in compliance of various formalities by the customers.

(ii) The Company should proactively interact with the various regulatory agencies and discharge its mandated role as a facilitator.

9.7.4.2 Terms of Contract

Audit findings on delay in revenue recognition, delay in raising including facilitating the realise of bills and monitoring of receivables, non enforcement of contractual terms and periodicity of contracts are discussed below:

(i) Delay in revenue recognition

The Company follows a system of raising demand invoices in respect of amounts due from the customers towards milestone payments (stage-wise payments as per the contracts), advances and access/space segment charges. Such demands raised were not brought to the books of accounts pending confirmation by customers. The management stated that only when the customers accepted the Company's claim, the 'demand invoice' was formalised by issuing a 'commercial invoice' and the amounts in the commercial invoice were brought to the books of account.

The non-raising of commercial invoices in the first instance for certain and well defined claims such as space segment charges and access fees, services for which were already rendered, delays the realisation of payment and goes against the provisions of Accounting Standard-9 for revenue recognition prescribed under section 211 of the Companies Act 1956. The Company also did not have a system to monitor demand invoices raised and those converted into commercial invoices. The Management stated (September 2007) that the data relating to demand invoices converted into commercial invoices were under compilation.

The Management further stated (November 2007) that it was a general accounting practice to raise demand invoice.

The reply is not tenable as raising of demand invoices delays the accrual of claims where there is no material uncertainty regarding the propriety of the claim. This also encourages the customers to deny or defer the claim under some subterfuge or the other, as was attempted by BSNL discussed subsequently at para 9.7.4.4.

(ii) Delay in raising of bills and monitoring of receivables

The Company raises invoices for quarterly lease charges as per the contract. However, a sample check of 27 contracts, out of total 55 broadcasting/TV/DTH contracts and 53 VSAT (telecommunication) contracts as of March 2007, revealed that there were considerable delays in raising of commercial invoice of upto 385 days. And there was further delay in realising the payments which varied upto 608 days during the period 2003-04 to 2006-07.

The Management stated (November 2007) that it had demanded interest on outstanding payments as per the terms of the agreement and the outstanding cases were under constant correspondence**.** The Company demanded Rs.51.63 lakh as interest on delayed payments during 2006-07 but no payment had been received (November 2007).

(iii) Non-collection of performance bank guarantee/cash security

According to the terms of contract every customer was required to pay 25 *per cent* of the annual lease charges in the form of Performance Bank guarantee (PBG) or cash security. The Company, however, had not enforced the condition in the following cases:

- In case of broadcasting/TV/DTH contracts, out of 118 contracts (upto December 2007) necessary PBG or cash security was not obtained from 35 customers.
- In case of 53 VSAT customers, PBG was not obtained from 32 customers.

The Management stated (November 2007) that in the case of VSAT agreements, the Company insists on 25 *per cent* of the annual lease charges in the form of PBG or payment in advance in lieu thereof before commencement of the service. Non-receipt of PBG did not render an agreement as unsecured since the customer would make advance payment for transponder service.

The reply does not reflect the correct position as in case of VSAT operators the Company had changed (April 2005) the billing pattern from 25 *per cent* advance payment to payment before the end of the quarter. As a result the commercial services were being provided without adequate assurance of payment.

(iv) Surrender or termination of leased capacity

As per the terms of the contract, customers could surrender or terminate part of the leased capacity by giving three months notice. However, Audit observed that in seven out of eight such cases during the period April 2004 to March 2007, the Company did not enforce the condition of three months notice resulting in non-recovery of space segment charges of Rs.1.27 crore ***(Annexure-XXXVIII)***.

The Management stated (November 2007) that they would follow the terms of the lease agreement in future.

(v) Periodicity of contract and revision of rates

A uniform policy on the period for long term contracts had not been framed by the DOS/Company. The DOS/Company was generally following a five year cycle for renewal and there was no price revision clause in the contracts. As a result the Company ended up having a long drawn contract with little scope for any price revision. However, contracts with foreign satellite operators for VSAT (telecommunication) services, had duration of lease period of three years with a price revision clause up to a maximum of five *per cent*. It was seen that while renewing the contracts, AAP had increased the tariff by seven *per cent* after three years with effect from August 2007.

The Management stated (November 2007) that global industry practice was to have longest possible period of contract so that it could reduce non utilisation to the minimum.

The reply does not give the complete picture as there was no clause for revision in rates at the time of renewal in any of the contracts. Moreover, in the absence of a uniform policy, the Company conveyed an uncertain approach thereby giving confusing signals to its customers.

Recommendation No. 9.4

The Company should

(i) raise bills as per the terms of the contract and take suitable steps for prompt collection. The Company should develop a system on the status of demand invoices raised and commercial invoices raised there against to monitor the correctness of accounting of all legitimate claims;

(ii) strictly enforce the terms of the contract for the collection of PBG or advance payment as security for the commercial services provided;

(iii) enforce the terms of the contract while accepting surrender/termination of lease; and

(iv) develop a uniform policy for long term contracts and should consider incorporating a clause in the contract for appropriate revision of rates.

9.7.4.3 Undue benefit by excluding conditions agreed upon

Space TV (Tata Sky) required (March 2004), 12 high power KU band transponders in the INSAT System. The Secretary DOS/Chairman of the Company while approving (March 2004) the financial negotiations to be held with the customer stated that the DOS should conclude a comprehensive contract and negotiate the charges at Rs. five crore per transponder year. Accordingly, a ‘Term Sheet’ agreement was signed in June 2004, fixing lease charge at Rs. five crore per transponder year with two months free period. However, when the agreement in ‘long form’ was signed in November 2005, the lease charges were not only reduced to Rs.4.6 crore but a free period of three months was also offered to Space TV.

Due to this reduction in lease charge, there was a recurring loss of revenue of Rs.4.8 crore *per annum* for 12 transponders and revenue foregone by increase in free period for additional one-month worked out to Rs. five crore.

The Management stated (November 2007) that Space TV had intentions to lease only eight transponders whereas by the time the long-form agreement was signed, it increased the number of transponders to 12. The initial free period of three months after commencement was being offered to all the customers whenever requested.

The reply is not tenable since the 'term sheet' agreement which formed the basis for the initial commitment was for all the 12 transponders. Further there was no formal request from the customer for reduction of lease charges or for additional one month's free period after signing of the 'term sheet'.

9.7.4.4 Contract with Bharat Sanchar Nigam Limited

Bharat Sanchar Nigam Limited (BSNL) was using 34 transponders (31-C band and 3 KU band) under telecommunication (VSAT) segment. Management of all contracts of VSAT business including those of BSNL was taken over from DOT by the DOS and transferred to the Company in July 2003. As per the DOS directive (May 2003), the Company was to bill for the services availed by BSNL from July 2003. However, user charges for C band only were finalised through an MOU between the DOS and BSNL in May 2006 after a delay of three years.

The amount receivable from BSNL from July 2003 to March 2006 aggregating to Rs.229.18 crore was not recognised in the books (2006-07) as no commercial invoice was raised. The non-raising of commercial invoice deprived the Company of its income of Rs.40.82 crore. BSNL had been paying charges from April 2006.

Management stated (November 2007) that BSNL had taken up the issue with the Government of India for waiver of the transponder charges up to March 2006.

Reply is not tenable since as per the DOS directive, Company was to bill for the services availed by BSNL from July 2003.

9.7.4.5 Contracts with Ministry of Defence

Ministry of Defence (MOD) was using nine transponders, for which, eleven contracts were managed by the Company. Audit reviewed all the 11 contracts with some of the agencies of MOD and noticed that either there was absence of suitable clause in the agreement or there were no formal agreement/MOU with the customer as described below:

- An agreement was signed on 3 December 2003 with Defence Research Development Organisation, for leasing of 36 MHz. The customer was regular in making payments upto March 2005. However, the customer stopped further payments from April 2005 to till date (December 2007) on the ground that the allocated bandwidth was not utilised due to non-commissioning/installation of systems. Absence of a suitable clause in the agreement to ensure that payments would be made for the allocated bandwidth resulted in non-recovery of Rs.6.62 crore and the Company's share of income of Rs.1.32 crore.
- Director of Concept Studies (DICOST) of Air Force Headquarters was allocated space segment capacity of 2 MHz (October 2005) and 4 MHz (January 2006). The Company raised commercial invoices for Rs.58.73 lakh for the period up to March 2007 against which no payment was made by DICOST stating that the bandwidths were not made use of till February 2006, due to project delays. In the

absence of either an agreement or a MOU with the customer, the Company had to forego its share of income of Rs.11.74 lakh.

- Directorate of Naval Air Material (DNAM) was allotted (December 2005) 10 MHz. The agreement with DNAM was not formalised. The Company raised the commercial invoices for Rs.1.85 crore between February 2006 and August 2007, but no payment had been received (November 2007).

The Management stated (November 2007) that the DOS/Company had taken up the formalisation of all the MOUs with the MOD/MOD organisations.

Recommendation No. 9.5
The Company should formalise all contracts with the MOD and bill accordingly.

9.7.5 Contracts entered into by the Company

9.7.5.1 Delay in recovery of quarterly recurring charges

A contract was entered (August 2005) between the Company and Shin Satellite Public Company Limited of Thailand (Shin Sat), for the establishment and operation support of Radio Frequency Auto Track (RFAT) uplink station at Port Blair.

As per the contract, the quarterly recurring charge (QRC) of US$ 95,000 was to be paid 30 days in advance. Shin Sat was not regular in making the QRC but the Company could not levy interest on delayed payments due to absence of penal interest clause in the agreement. There were delays in payment ranging a year in 2006 and QRC for 2007 was yet to be paid (August 2007).

The Management stated (November 2007) that in almost all cases of foreign contracts, the penal interest clause for levy of interest was not being agreed to by the foreign customers.

The reply is not tenable since it was observed that in the case of the international contracts for hiring of foreign transponders signed by the Company as customer, such interest clause was invariably included for delay in payment on the part of the Company.

9.7.5.2 Voluntary reduction in service charge

The Company hired space segments from AAP on monthly recurring charges (MRC). From April 2004 the MRC was brought down from US$ 3500 to slab rates ranging between US$ 1796 and US$ 2083. As per the agreement with six customers using AAP transponders, the Company was to charge 10 *per cent* as service charges. In April 2004 the Company voluntarily reduced its service charges to four *per cent* though there was no demand from the customers. Similarly, for hiring transponder for one customer from New Sky Satellite (NSS) Netherlands (May 2004), the Company considered service charges at four *per cent* only instead of at 10 *per cent* it was collecting from AAP customers till April 2004. This resulted in loss of revenue of Rs.8.30 crore upto 31 March 2007 and consequent recurring loss of revenue of Rs.3.73 crore *per annum*.

The Management stated (November 2007) that measures like reduction of space segment charges and reduction of services charges of the Company, were required to be given from time to time as a business strategy to win the customer.

The reply is not tenable as the number of customers involved remained seven over the period April/May 2004 to March 2007 and there was no contractual obligation for reduction in service charges from 10 *per cent* to 4 *per cent*.

9.7.5.3 Passing of free period

The Company hired (May 2004) five foreign transponders on annual basis from NSS, Netherlands. As per the agreement with NSS, the Company was entitled to use the service at no charge for three months. Further, on hiring of two more transponders in January 2005, the Company was entitled to six and a half months free period. The Company was also entitled for free period of one month for all the seven transponders hired at the time of renewal of the agreement. The Company passed on the entire free period to its customer though the Company was not obliged to do so. This resulted in foregoing revenue of US$ 2.32 million (Rs.10.09 crore).

The Management stated (November 2007) that the free period was normally part of the negotiation and a standard approach towards the free period did not work in this industry.

The reply is not tenable as the Company was not giving free period to its other customers under INSAT after the commencement of the contract.

9.7.5.4 Non-collection of Service Tax

Although the Company was collecting service tax from all INSAT customers, it did not collect service tax from customers using foreign transponders. The amount of service tax not collected was Rs.16.77 crore, as of March 2007.

The Management stated (November 2007) that the issue whether service tax needed to be collected for capacity leased on satellites had been taken up with the concerned authorities and the clarification was awaited. The Company should have recovered the amount in advance to avoid any risk that the Company would be required to pay for the tax liability from its own funds.

Recommendation No. 9.6

(i) The Company should ensure that suitable provisions are made in the contracts regarding payment of interest for delay in payments; and that the contractual terms are not to the disadvantage of the Company.

(ii) The Company should initiate recovery even in cases where the applicability of certain taxes or duties are pending clarification so as to offset any future liability.

9.7.5.5 Marketing of Indian Remote Sensing data

(i) Agreements with Space Imaging

The Company was vested with the international marketing rights for access as well as data sales for Indian Remote Sensing (IRS) constellation of satellites. In order to promote IRS system globally, the Company entered (February 1995) into a comprehensive long term cooperative agreement with Earth Observation Satellite Company (EOSAT), USA subsequently renamed as Space Imaging (SI), LLC, USA and now GEO EYE. The agreement was amended five times and the latest was in November 2003.

Audit noticed the following limitations in the implementation of the above contract:

- SI agreed to pay a royalty at 10 *per cent* to the Company on the sale price for the commercial data sales and for this purpose a quarterly statement of the products sold by SI and International Ground Station[7] (IGS) was to be provided to the Company. In the absence of suitable penal clause in the agreement the Company was not in a position to verify the IRS data sold by SI and IGS to determine the royalty due.
- As per the terms of the agreement, SI agreed for a minimum IGS access commitment of US$ 3 million[8] from IRS P6 alone by March 2007. However, even in 2006-07 the total access fee from all the sources aggregated only to US$2.9 million indicating absence of proper monitoring.

The Management stated (November 2007) that despite Company's efforts to obtain quarterly statements including customer data; it was not possible to realise such details. Further, in each case of IGS established by SI the minimum fee as specified in the agreement, was claimed.

The Company's admits to a weakness in dealing with international customers and inadequate contractual safeguards to protect its financial interests.

(ii) Degradation of data

Of the six IRS satellites in operation, three satellites had outlived their life. Audit observed that due to degradation of data from IRS 1C/1D the Company had to reduce the access fee for the year 2005-06 by Rs.1.80 crore from MOD. Request for waiver of access fee of Rs.3.80 crore for the year 2006-07 was pending with the DOS. In the absence of a proper mechanism to verify the period of access by the customer, reasonable assurance could not be obtained regarding the validity of the basics for deciding on the waivers.

The Management stated (November 2007) that the Company confirmed the periods of access through the schedules provided by the satellite control centers and the contract provides for negotiation in good faith and the right to terminate the contract if the degradations were incurable.

The reply is not tenable as the details of the access made by MOD for the last two years were not kept on record. For the degradation of data of IRS 1C/1D, the DOS was yet to take any decision on MOD's request for waiver of the access fee for the year 2006-07 as it did not appear to have proper system for verifying the correctness of the claim.

(iii) Failure to discontinue access to defaulters

The Company entered (October 2002) into an agreement with a foreign customer for accessing data from IRS 1C/1D stipulating that the access would be renewed every year by the customer. The customer did not request for renewal of the agreement from 2005-06 and had also not make annual payments to the Company. The Company, however, did

[7] ***International Ground stations are established at various countries for downloading imageries from remote sensing satellites whenever the satellite's foot print passes over that particular country.***

[8] ***12 IGS sales/upgrades during the first three years at an annual access fee of US$250000 per IGS***

not deny access to the customer and instead raised the invoices for user charges for the years 2005-06 and 2006-07 amounting to Rs.3.47 crore (Rs.2.09 crore Company's share of revenue). The Company paid corporate tax of Rs.0.71 crore in anticipation of the receipts. Failure to include a clause in the contract to monitor the access by the customer and deny access in case of default, led to merely raising of invoice.

The Management stated (August 2007) that the matter of verification of having availed the access by the foreign customer was referred to controlling centres of ISRO/DOS.

The reply is not tenable since as a contract manager, the Company had not link the access time availed by the customer at the time of billing, more so, when the same senior officers of ISRO were also the *ex-officio* executives of the Company.

Recommendation No. 9.7

(i) The Company should incorporate suitable clause in the contracts to ensure that the royalty paid by the customers was assessed correctly.

(ii) Verification of access by the foreign customers should be referred promptly to controlling centers of ISRO/DOS and remedial action initiated periodically to avoid accumulation of the receivables.

9.7.6 Other Points of interest

9.7.6.1 Loss of opportunity to supply satellite due to non pursuance

In the backdrop of policy measures adopted by the GOI to allow private operators to own satellite systems, M/s Agrani Satellite Services Limited approached (September 2003) the Company for a communication satellite with a capacity of 12 transponders with a design life of 15 years. The satellite was to be manufactured by ISRO and launched by GSLV launch vehicle within a period of two years at an estimated cost of Rs.320 crore. The customer was ready to pay Rs.32 crore being 10 *per cent* of the project cost as non-refundable deposit and the balance in 8-10 years after which the ownership would be transferred to them. The Board of Directors accorded (September 2003) in principle approval. The Company carried out the cost analysis in consultation with ISRO and submitted a proposal through the DOS to the Government for necessary authorisation. It was decided to submit a detailed proposal to the Board as soon as the Government position was clear. No further development was reported to the Board.

The Management replied (May 2007) that due to slow progress in obtaining the orbital slot for its satellites through DOT, the Company had kept the matter on the back burner.

Thus, due to non pursuance at appropriate levels by the Company to secure necessary clearance from the DOT, the Company lost the opportunity of earning service charges of approximately Rs.16 crore in supplying the satellite to M/s Agrani Satellite Services Limited, who had since moved to a foreign manufacturer.

Recommendation No. 9.8

The Company should establish procedures and define staff responsibilities to facilitate and as necessary to proactively interact with various regulatory agencies in the manufacture of satellites as an opportunity to earn income and also to fulfill its mandated role.

9.7.6.2 Societal obligations

The DOS allocated (June 2003) two transponders for internet education. The rates fixed for the first transponder was Rs.1.80 crore *per annum*, while the second transponder was given free of cost for use by the Ministry of Information and Technology. However, a dedicated satellite exclusively for educational services was already available since September 2004 with the launch of "EDUSAT" having 12 transponders and allocation of Internet education services could also have been under EDUSAT.

The Management stated (November 2007) that they would take up the matter with the DOS.

9.7.6.3 Gifts to Government servants

To commemorate its 15th anniversary, the Company gifted four gram gold coins to 15631 Government employees of the DOS, and other subordinate organisations such as ISRO, Vikram Sarabhai Space Centre, National Remote Sensing Agency, ISRO Satellite Tracking Centre, Master Control Facility, etc. involving an expenditure of Rs.7.36 crore (including fringe benefit tax of Rs.37 lakh) as an acknowledgement of the support received from these organisations. Audit observed that since the ISRO/DOS employees were permanent Government servants who were also eligible for special cash incentives at the time of every 'successful launch' of satellites, the giving of gifts to government employees was not justified.

The Management stated (November 2007) that it was a small gesture shown by the Company to ISRO/DOS personnel to continue their contributions in this area and the Company felt that such an action was justified.

The reply of the Management should be seen in the light of the fact that the value of gifts constituted approximately seven *per cent* of the profit after tax. Further, the Central Vigilance Commission had clearly stipulated (September 2004) that no gifts should be given to Government servants by PSUs.

9.8 Conclusion

The Company credited the DOS share of revenue to the ISRO instead of directly crediting it to the Consolidated Fund of India. Remittances were also not done in a prompt manner and periodical reconciliation of amounts due and payable to the DOS was not being carried out. The Company's interest earnings were on an average, 50 *per cent* of its profit after tax, which suggested that the Company was being used as a special purpose vehicle for parking of unutilised funds of the DOS. The Company specific guidelines/procedures for accounts, investments, internal audit, personnel, etc. had not been developed even 15 years after Government of India's directive. The functional distinction between the Company and the DOS was ambiguous since the officers of the DOS were also executives of the Company. There was no clear chart of delegation of powers and segregation of duties consistent with good governance, structure and growth of the Company. Owing to ambiguities in the operating environment of the Company, several control weaknesses were observed in the management of funds and contracts in the Company. Instances were noticed of non-adherence to the conditions of contract and absence of appropriate provisions in the agreements; performance bank guarantee/cash securities were not collected, and savings on free period were passed on to customers.

Service tax was not collected for hired foreign transponders and service charges were reduced in favour of private customers.

The matter was reported to the Ministry in January 2008; reply was awaited.

(BHARTI PRASAD)
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The **cum Chairperson, Audit Board**

Countersigned

(VINOD RAI)
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