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मंत्री भारी उद्योग एवं लोक उद्यम् मंत्रालय
Minister of Heavy Ind. & Public Enterprises
दिनांक/Date.....

Performance Audit of
Activities of selected Public Sector Undertakings

Report of the
Comptroller and Auditor General
of India
for the year ended March 2008

Union Government (Commercial)
No. PA 27 of 2009-10
(Performance Audit)


संसद ग्रंथालय
REPORTS

CONTENTS

PREFACE

This Report contains reviews on the following activities of selected PSUs:

Name of the Ministry/ Department	**Title of the Review**
Ministry of Commerce	Selected guarantee and policy products -Export Credit Guarantee Corporation of India Limited
Ministry of Communications and Information Technology	(a) Follow up of audit recommendations of previous reviews - Bharat Sanchar Nigam Limited
	(b) Functioning of telecom project circles - Bharat Sanchar Nigam Limited
Ministry of Petroleum and Natural Gas	a) Capacity expansion and creation of infrastructure at Cauvery basin refinery - Chennai Petroleum Corporation Limited
	b) LPG operations - Indian Oil Corporation Limited
	c) Onshore exploration activities - Oil and Natural Gas Corporation Limited
	d) Production and surface facilities in western onshore areas- Oil and Natural Gas Corporation Limited
Ministry of Power	Implementation of 10th Plan hydel projects in North Eastern and Eastern regions – North Eastern Electric Power Corporation Limited and NHPC Limited
Ministry of Textiles	Sale of surplus land and buildings - National Textile Corporation Limited

OVERVIEW

This volume of Audit Report contains reviews on nine selected areas of operation involving eight Public Sector Undertakings under five Ministries. These areas were selected in audit for review on the basis of their relative importance in the functioning of the concerned organisation. The total financial implication of these reviews is Rs.6269.79 crore.

MINISTRY OF COMMERCE

Export Credit Guarantee Corporation of India Limited

❖ **Selected guarantee and policy products**

Export Credit Guarantee Corporation of India Limited (ECGC) provides risk cover to exporters against loss in exports of goods and services and offers guarantees to banks to cover the risk of insolvency or protracted default by foreign buyer to enable exporters to obtain better facilities from banks. It offers 31 types of guarantees and policy products through its five regional offices and 43 branches.

As three of the 31 products together constituted 63.43 *per cent* and 83.40 *per cent* of the premium income and claims business of the ECGC during 2007-08, a Performance Audit was conducted of three products *viz* (i) Export Credit Insurance Guarantee for banks-Whole Turnover Packing Credit, (ii) Export Credit Insurance Guarantee for Banks-Whole Turnover Post Shipment Credit and (iii) Shipment (Comprehensive Risk) Policy.

The review revealed that the ECGC had a well laid down procedure for sanction of insurance coverage and processing of claims. There was scope for further engagement of the ECGC in the following areas:

- urging banks to verify the credit worthiness of foreign buyers to reduce the incidence of claims arising;
- strengthening the arrangement of effecting recovery through banks;
- instituting a mechanism to introduce objectivity and transparency to the in-house examination of reports of credit information agencies on individual buyers before policies are extended so as to avert avoidable claim payments.

The ECGC agreed to address the above issues beginning April 2009.

MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY

Bharat Sanchar Nigam Limited

❖ **Follow up of audit recommendations of previous reviews**

The performance audit on follow up of audit recommendations of previous reviews relating to Bharat Sanchar Nigam Limited (BSNL) primarily focuses on the effectiveness and compliance of remedial measures taken/assurances given by the Ministry/Company in its Action Taken Notes (ATNs) submitted to Audit for vetting.

This performance review covers the following three past reviews that appeared in Audit Reports of Union Government, Commercial:

- "Working of Telecom Maintenance Wing in BSNL" Report No. 5 of 2004
- "Information Technology Audit of DotSoft Package in BSNL" Report No. 5 of 2005
- "Cellular Mobile Telephone Services (CMTS) in BSNL" Report No. 10 of 2007

The purpose of this performance audit was to obtain reasonable assurance that the Company had acted on audit recommendations in case of the three chosen reviews. It also attempts to assess that there was a mechanism to monitor implementation of remedial measures and that the measures implemented have actually been successful.

Detailed audit probe and data analysis of the ATNs relating to the three selected reviews revealed that none of them were submitted within the prescribed time schedule of six months from the date of presentation of the concerned Audit Reports in the Parliament. As of August 2008, out of 86 ATNs due for submission by Ministry/BSNL, 30 ATNs pertaining to the three reviews selected for follow up were pending.

BSNL while submitting ATNs had given assurances to take appropriate measures in implementing the audit recommendations and addressing audit observations. It had issued instructions to its field units/circles for rectifying the deficiencies. While some corrective action had been taken by BSNL, especially in cases of revenue recoveries, but in a number of cases action was either pending or ineffective at the field/circle level. Consequently, the remedial measures implemented were not successful and the assurances given in the ATNs were not met. Hence there was lot of scope for improvement in the timely submission of ATNs and compliance to audit observations and recommendations at the field level.

At present ATNs are submitted by the BSNL Corporate office to the Ministry and sent to CAG for vetting. In order to make this entire process effective and to have accountability on the assurances given in the ATNs, the confirmation of the same from the concerned Heads of Departments at the Corporate office/telecom circle level as well as the concerned Internal Auditors could be appended to the ATNs. This may facilitate better corporate governance and go a long way in providing assurance to all the stakeholders regarding Management action on audit paras/recommendations placed in the Parliament.

❖ Functioning of telecom project circles

In BSNL optical fibre cable is used in large scale for creation of digital transmission network throughout the country and is a vital component of telecom infrastructure. Local area network which is confined to Revenue Districts is established and maintained by Secondary Switching Areas under territorial circles whereas long distance transmission network covering different circles are established by the Telecom Project circles (TPCs). After commissioning, these long distance transmission networks are handed over to the concerned territorial circles and Telecom Maintenance Regions for its maintenance and utilisation. In addition the TPCs are responsible for commissioning of Broadband and Narrowband Digital Microwave systems, Satellite Based Voice systems, and Satellite Based High Speed Data Network.

The performance audit on ' Functioning of Telecom Project Circles in BSNL' was conducted with a view to examine planning, execution and monitoring of projects executed by TPCs, covering four circles *viz.*, WTP, STP, ETP, and NTP from 2003-04 to 2007-08.

Against the primary objective of New Telecom Policy-1999 to create a modern and efficient telecommunications infrastructure to propel India to the forefront in the global telecom scenario, Audit observed systemic deficiencies in planning, procurement of equipment and stores, execution and monitoring of long distance transmission network projects/schemes by the TPCs. Audit also found delay in commencement, completion and commissioning of these projects and their delayed handing over to the user circles. Besides, Audit noticed compliance deficiencies in TPCs, its divisions and sub-divisions such as violation of corporate office instructions, delegation of financial powers and provisions of procurement manual. All these shortcomings undermined the overall performance of the TPCs and the Company.

These deficiencies are to be addressed urgently by the Company for achieving the objective of National Telecom Policy and to have a competitive edge over private telecom service providers.

MINISTRY OF PETROLEUM AND NATURAL GAS

Chennai Petroleum Corporation Limited

❖ Capacity expansion and creation of infrastructure at Cauvery basin refinery

Chennai Petroleum Corporation Limited (Company) commissioned a 0.5 Million Metric Tonne Per Annum (MMTPA) refinery at Cauvery basin (near Nagapattinam) in November 1993 at a total cost of Rs.196 crore for processing low sulphur crude produced by Oil and Natural Gas Corporation Limited from the Cauvery basin (onshore). The Company expanded (September 2002) the capacity of the Cauvery basin refinery (CBR) to 1.00 MMTPA at a cost of Rs.24.31 crore and commissioned (March 2003) a jetty at a cost of Rs.91.58 crore. The expansion of CBR was not commensurate with the projected deficit of products in the market zone served by CBR. There was delay in award of work relating to construction of jetty resulting in additional expenditure of Rs.6.75 crore on transport of 475462 MT of crude from Chennai. The under utilisation of capacity resulted in excess consumption of steam and power to the extent of Rs.4.05 crore and over absorption of fixed overheads by Rs.16.59 crore. Further, transportation of crude in smaller parcels than the projected size of 15000 MT resulted in additional shipments leading to extra expenditure towards transportation cost by Rs.5.46 crore during the period 2003-04 to 2007-08. The Company incurred a loss of Rs.172.23 crore during 2004-05 and 2005-06 on sale of intermediate residual crude oil (RCO) as Low Sulphur Heavy Stock due to absence of secondary process unit. The Company could have generated additional revenue of Rs.38.63 crore during 2005-06 and 2006-07 had the intermediate RCO been processed in secondary process unit of the Company's refinery at Chennai.

Indian Oil Corporation Limited

❖ **LPG operations**

Indian Oil Corporation Limited (Company) is India's largest public sector oil marketing company and had a market share of 49 *per cent* of the Liquefied Petroleum Gas (LPG) market during 2007-08. The performance audit of the LPG operations of the Company disclosed that the Company was mixing butane and propane to form LPG in different proportions other than the one considered for subsidy claims resulting in loss of Rs.40.97 crore during five years ended March 2008. Actual operating cost in more than 50 *per cent* bottling plants was less than the cost ceiling fixed under the subsidy scheme which indicated a need to revise the cost ceiling under the subsidy scheme based on the standard and normative conditions. The Company not only had excess deployment of manpower *vis-à-vis* benchmarks but was also paying overtime entailing financial bearing in terms of higher operating cost of the bottling plants. Despite adoption of Industry Logistics Plan (ILP) system for distribution of LPG to meet the market demand, the Company failed to use the suggested ILP linkages, leading to frequent deviations/manual interventions that remained unevaluated through ILP. Due to wide gap between the prices of subsidised LPG and commercial LPG an effective system to curb diversion of domestic LPG for commercial usage was required. The Company failed to exercise effective control in the absence of adequate customer master database integrated with other OMCs which led to issuance of multiple and possible fake connections. The Company adopted a lenient approach in following the marketing discipline guidelines for penalising dealerships which led to increasing indiscipline in the distribution channel. Similarly the cases of tampering of tare weight of cylinders were not dealt with as per the guidelines.

Oil and Natural Gas Corporation Limited

❖ **Onshore exploration activities**

- Exploration of hydrocarbon reserves in the blocks awarded by the Government of India (Nomination blocks) and Directorate General of Hydrocarbon (New Exploration Licensing Policy - NELP blocks) and development of proved reserves for production, is the main activity of the Oil and Natural Gas Corporation Limited (Company). To carry out exploration activities, the Company acquires, processes and interprets the seismic data, releases and drills exploratory locations to establish hydrocarbon for future exploitation.
- The Company acquired 67 nomination blocks and 23 NELP blocks. In addition, the Company was a consortium partner in eight NELP blocks.
- The Company had not completed the committed work programme in 15 nomination blocks. The Company also could not establish prospectivity of the area in two basins, after incurring an expenditure of Rs.404.89 crore. The Company had also not completed the minimum work programme in seven NELP blocks, resulting in payment of penalty of Rs.1.68 crore.
- The Company had not fixed standards/norms for total field days in a field season, normal non-production days towards camp establishment and winding up, experimental/topographical survey days and productivity of geophysical parties, resulting in wide variance in different basins. Similarly, the Company had also not

fixed norms for production testing in terms of number of days to be spent per object of testing.

- The Company had delayed the finalisation of shot hole drilling contracts which resulted in under achievement of data acquisition targets by 207 Ground Line Kilometer and 49.29 Square Kilometer (SKM), besides idling of the geophysical parties for 463 days with nugatory expenditure of Rs.1.85 crore.
- The Company did not ensure availability of ready drill sites, further drilling programme, equipment and spare parts, *etc*. before deployment of drilling rigs resulting in idling of rigs for 1566 days, incurring an expenditure of Rs.40.83 crore.

❖ **Production and surface facilities in western onshore areas**

- The western onshore of Oil and Natural Gas Corporation Limited (Company) consists of three Assets at Ankleshwar, Ahmedabad and Mehsana which are responsible for production of oil and gas from the explored and developed reservoirs. The main production and surface facilities for production of crude oil and gas included Group Gathering Station (GGS), Gas Compression Plant (GCP), Effluent Treatment Plant (ETP), Central Tank Farm (CTF), Desalter Plant, *etc*. The performance of these facilities was assessed in audit with particular reference to planning and implementation of projects pertaining to these facilities as also adherence to stipulations of health, safety and environment.
- Though 47 out of 120 facilities in the three Assets were more than 25 years old, the Company did not have a standard policy for replacement of critical equipment for the surface facilities.
- There were delays in construction of GGSs at three locations as a result of which produce of the wells in absence of there being a nearby GGS continued through hired road tankers, exposing the Company to the vulnerabilities associated with road movement including safety and environmental risks and malpractices.
- Accumulation of oily sludge continued at 51 installations at Ahmedabad and Mehsana Assets in violation of the stipulations of Gujarat Pollution Control Board. Frequent cases of leakages in pipeline were noticed which also had adverse implications on the environment. Mehsana Asset had not taken effective steps for arresting emission of hydrogen sulphide gas into the environment.
- During the period 2004-08, all the three Assets did not achieve the norms of transit loss of one *per cent* in transportation and handling of crude oil resulting in a loss of Rs.73.38 crore. Stipulations of statutory bodies such as Directorate General of Mines Safety were not attended to by the Company. Despite being in operation for over 30 years, an updated surface plan indicating pipelines and other infrastructure was not in existence in the three Assets.

MINISTRY OF POWER

North Eastern Electric Power Corporation Limited and NHPC Limited

❖ **Implementation of 10th Plan hydel projects in North Eastern and Eastern regions**

NHPC Limited (NHPC) and North Eastern Electric Power Corporation Limited (NEEPCO) planned for capacity addition of 642 Mega Watt (MW) and 85 MW respectively in North Eastern and Eastern regions during the 10th Five Year Plan (10th Plan) period (2002-2007). NEEPCO could add only 25 MW capacity against the 10th Plan hydel capacity addition target of 85 MW and could spend only Rs.983 crore (March 2008) against 10th Plan outlay of Rs.2,509 crore. NHPC could not make any capacity addition in the North Eastern and Eastern Region against the proposed hydel capacity addition of 642 MW in the 10th Plan. Teesta Stage –V of 510 MW was commissioned in April 2008. Further, NHPC could spend only Rs.5165 crore (March 2008) against the 10th Plan outlay of Rs.12,755 crore for hydel projects to be executed in these regions. Such shortfalls were on account of delays in environmental and forest clearance, delays in investment decisions, delays in signing of Memorandum of Understanding (MOU)/Memorandum of Agreement (MOA) with the State Governments, natural calamities, geological surprises, law and order problems, *etc.* The Detailed Project Reports were also found to be deficient. Delay in obtaining requisite clearances had affected most of the projects. The Companies should adopt fast track mechanism for obtaining the requisite clearances.

MINISTRY OF TEXTILES

National Textile Corporation Limited

❖ **Sale of surplus land and buildings**

National Textile Corporation Limited (Company) incorporated in April 1968 was managing 119 textile mills taken over by the Government of India, through its nine subsidiaries. All these subsidiaries were declared sick under the Sick Industrial Companies (Special Provisions) Act 1985. Revival schemes (2002) and a modified revival scheme (2006) were approved by the Board for Industrial and Financial Reconstruction/Government of India which had envisaged closure of unviable mills and revival of viable mills. According to these schemes, 77 unviable mills were to be closed, 40 viable mills were to be revived (22 through modernisation and 18 through public private partnership) and two mills in Pondicherry were to be transferred to the State Government. The scheme was self-financing, the funds realised from sale of surplus assets were to be utilised for revival/modernisation.

After analysing the whole process of sale and disposal of land and buildings, it was observed that:

- The Board for Industrial and Financial Reconstruction/Government of India guidelines for determination of reserve price were not followed in certain cases.
- Reports of consultants were not evaluated resulting in under fixation of reserve price by Rs.493.46 crore in five cases.
- Tender documents had certain irregularities resulting in loss of Rs.185.10 crore in three cases.
- Properties were sold below registration/circle rates resulting in loss of opportunity to earn Rs.10.43 crore in six cases.
- Properties were sold below reserve price and without following the tender process in contravention of BIFR/GOI guidelines.
- No prescribed procedure for valuation of building structures was in existence.
- There were inconsistencies among the guidelines issued by BIFR/GOI and the procedure laid down by the Company.

MINISTRY OF COMMERCE

CHAPTER I

Export Credit Guarantee Corporation of India Limited

Selected guarantee and policy products

Highlights

Export Credit Guarantee Corporation of India Limited (Company) had not prescribed any timeframe for processing the credit limit applications received from banks for export credit insurance. It took more than two months in 14, 9 and 9 *per cent* of cases in 2005-06, 2006-07 and 2007-08 respectively.

(Para 1.6.1.3)

There was absence of a system of regular follow up action with banks in respect of claims involving accountability issues.

(Para 1.6.2.1)

The Company did not insist on proper verification of the creditworthiness of the foreign buyers by banks where exporters happened to be non-policyholder. The claims were 62 *per cent* (Rs. 61.89 crore) where the creditworthiness of the foreign buyers was either not verified or partially verified.

(Para 1.6.3.3)

The Company was not geared to take full advantage of the opportunities presented by the Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest Act, 2002 with respect to recovery action. In 67 claims settled for Rs.123.81 crore in 2005-08, no recoveries were effected through banks even though banks held collateral securities of Rs.587.25 crore.

(Para 1.6.4.4)

There was an inconsistency in the 'recovery-sharing clause' with regard to the rate of interest on delayed remittance of recoveries by banks and non-recovery of interest from banks. In six cases, the Company did not levy interest even on receipt of late payments.

(Paras 1.6.5 and 1.6.5.6)

The Company settled Shipment (Comprehensive Risks) Policy (SCR) claims without obtaining customs certified documents to confirm that exports had actually taken place.

(Para 1.7.1)

The Company permitted the extension of insurance coverage without advance deposit of premium thereby violating the requirements of the Insurance Act, 1938.

(Para 1.7.2.4)

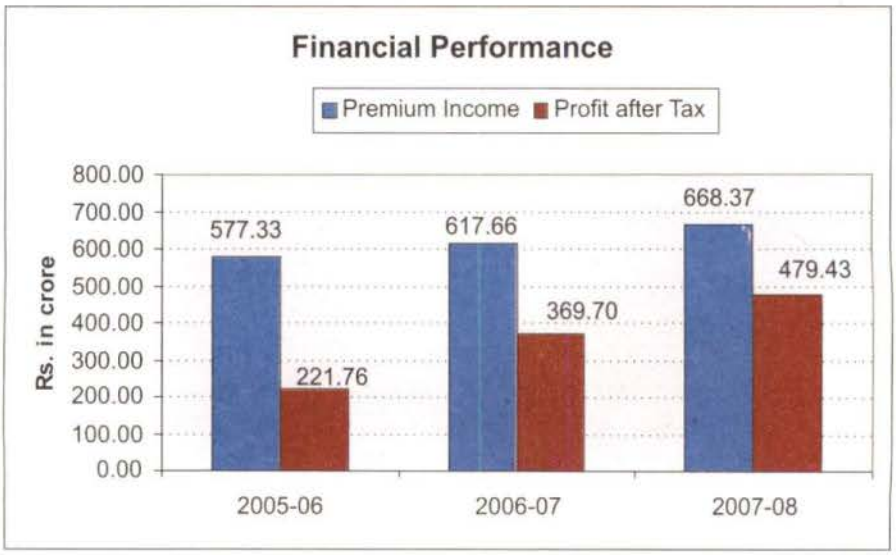
The Company incurred avoidable claim payments of Rs.16.13 crore under SCR policies due to non-cancellation of overall limit on buyers despite adverse reports of credit information agencies.

(Para 1.7.3)

1.1 Introduction

In order to provide export credit insurance support to Indian exporters, the Government of India set up the Export Credit Guarantee Corporation of India Limited (Company) in July 1957[1] under the administrative control of the Ministry of Commerce. As on 31 March 2008, the paid-up capital of the Company was Rs.900 crore. Since 2000-2001, the Company has been signing MOU with its administrative Ministry and was graded "excellent" in 2005-06 and 2006-07 by the latter. Its profit after tax was Rs.221.76 crore in 2005-06 which increased to Rs.369.70 crore in 2006-07 and further to Rs.479.43 crore in 2007-08 as can be seen from the chart below.

Chart 1 1



The Company provides a range of risk insurance covers to exporters against loss in export of goods and services; offers guarantees to banks to enable exporters to obtain better facilities from them; provides overseas investment insurance to Indian companies investing in joint ventures abroad in the form of equity or loan. It offered these services through 31 types of guarantees and policy products under five sectors as detailed in ***Annexure–I*** and had 97 brokers, 25 agency agreements with commercial banks and a tie up with the National Small Industries Corporation Limited to market them as of June 2008. The organisation insured business of Rs.4,37,882.88 crore, Rs.4,28,840.80 crore and Rs.9,22,183.08 crore in 2005-06, 2006-07 and 2007-08 respectively.

[1] ***Originally known as the Export Risks Insurance Corporation Private Limited in 1957; later changed to Export Credit & Guarantee Corporation Limited in 1964 and finally in 1983, to Export Credit Guarantee Corporation of India Limited.***

1.2. Scope of Audit and coverage

Performance audit was carried out of the Company's business covering the period 2005-06 to 2007-08 pertaining to three products (i) Export Credit Insurance guarantee[2] for Banks (ECIB)-Whole Turnover Packing Credit[3](Packing Credit), (ii) ECIB-Whole Turnover Post Shipment[4] (Post Shipment Insurance) and (iii) Shipment (Comprehensive Risks) Policy[5] (SCR). These three products represented 63.43 *per cent* of the premium income and 83.40 *per cent* of claims paid by the Company in 2007-08 as shown in the chart below:

Chart 1.2

1.2.1 Performance of the products

Table given below shows the performance of the products in 2007-08.

Table 1.1

	Premium income	Claims	Recoveries	Claims to premium ratio	Recoveries to claims ratio
	Rs. in crore			In percentage	
Packing credit	250.48	176.08	93.45	70.30	53.07
Post shipment	76.48	92.93	35.01	121.51	37.67
SCR Policy	96.99	81.28	5.43	83.80	6.68
Others	244.42	69.73	23.14	28.53	33.19
Total	**668.37**	**420.02**	**157.03**	**62.84**	**37.39**

A higher percentage of claims to premium income points towards poor performance of a product. A high percentage of recovery to claim is a measure of effectiveness of the recovery mechanism. It would be seen from the preceding table that the claim ratio was

[2] ***Guarantees are contracts between the Company and banks to protect the latter against the risk of insolvency or protracted default of/by the exporter to pay amounts due to a bank.***

[3] ***Packing Credit (PC) refers to any loan, advance or credit granted by a bank to an exporter for financing the purchase, manufacturing, or packing of goods prior to shipment.***

[4] ***Post Shipment credit is any loan, advance or credit granted by a bank to an exporter of goods or services from India after shipment of goods or rendering of services to the date of realisation of export proceeds.***

[5] ***Shipment (Comprehensive Risks) Policy is a cover issued for two years by the Company directly to an exporter whose anticipated export turnover for the next 12 months is more than Rs. 50 lakh, to cover commercial and political risks in respect of goods exported on short-term credit not exceeding 180 days.***

highest in post shipment guarantees at 121.51 *per cent* against the average of 62.84 *per cent* indicating poor performance of the scheme. The lowest percentage of recovery to claim at 6.68 *per cent* in SCR Policies against the average of 37.39 *per cent* signified a weak recovery system.

1.3. Audit objectives

The performance audit of the three selected products-the packing credit, the post shipment guarantee for banks and SCR policy was conducted with the objective of identifying systemic and compliance issues relating to the procedure of sanctioning, evaluation of creditworthiness of foreign buyers/exporters, settlement of claims, system and effectiveness of recovery action.

1.4. Audit methodology and sample

The performance audit was carried out through scrutiny of records, policies, guarantees and claims for the three years 2005-06 to 2007-08 at the Company Head office in Mumbai, three of the six[6] Bank Business Branches (BBB) in Delhi, Kolkata and Mumbai (Nariman Point) and five of the 43 Exporters Branch Offices (EBO) in Chennai, Delhi, Kolkata, Mumbai and Bangalore. The sampling method adopted is detailed at ***Annexure-II***. In all, Audit reviewed 223 guarantees, 122 claims for Rs.239.13 crore, 305 SCR policies and 70 SCR claims for Rs.26.25 crore.

The Entry conference with the Management was held on 8 May 2008. Preliminary audit observations were issued to the Company on 21 August 2008 to which a formal response was received on 29 August 2008. The Exit conference was held with Management on 4 September 2008. The audit observations detailed in the succeeding paragraphs were finalised in the light of the formal response and discussions with the Management. The Ministry sent its comments on 2 January 2009. The viewpoint of the Ministry and the Company has been considered and included appropriately at the time of finalisation of this report.

1.5. Acknowledgement

Audit acknowledges the cooperation and assistance extended at different levels of the organisation, which facilitated the completion of this performance audit within the set timeframe.

1.6 Audit findings – Packing credit and post shipment guarantees for banks

Systemic issues

1.6.1 Absence of a timeframe to grant credit limit approval under the packing credit and post shipment guarantee for banks

1.6.1.1 As per the Company's policy, banks have unlimited powers to sanction credit limits to existing exporter clients with standard rating. In case of new clients, however, banks have to obtain the Company's approval to grant a credit limit to any exporter, if it exceeds the 'Discretionary Limit'[7](DL) fixed by the Company for that bank. For obtaining an approval of the credit limit, the bank has to submit, within 60 days from the

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[6] ***Bank Business Branches at (i) Bangalore, (ii) Chennai, (iii) Delhi, (iv) Kolkata,(v),Mumbai (Nariman Point), and (vi) Mumbai (Bandra)***

[7] ***'Discretionary Limit' is the limit fixed by the Company in respect of each bank upto which the bank can grant advances to each new client without the Company's approval.***

date of sanction of that limit by the bank, an application to the Company in respect of the new exporter as per clause 6(1)(b) of the standard agreement between the Company and banks. The bank, however, is at liberty to make credit advances to the exporter pending receipt of approval from the Company – in such a situation, the Company's claim liability is limited only to the extent of the amount of the DL fixed for that bank.

1.6.1.2 Audit observed that although the banks had a 60-days deadline within which to submit their applications, the Company was not bound by any reciprocal obligation to convey its approval/disapproval. An analysis of the time taken by the Company in this regard revealed the following:

Table 1.2

Year		**2005-06**	**2006-07**	**2007-08**
No. of applications received by the Company during the year		667	415	458
Time taken by the Company to convey approval/disapproval to banks	Within 2 months	576	378	418
	> 2 months < 6 months	65	30	35
	>6 months < 12 months	21	03	05
	> 12 months	05	04	-

1.6.1.3 It would be seen that the time taken by the Company to communicate its decisions to banks during 2005-06, 2006-07 and 2007-08 was more than two months in 14, 9 and 9 *per cent* cases respectively.

1.6.1.4 Further, the intention of the Company to limit its claim liability to the extent of the DL fixed for each bank was not served and the grant of the approvals appeared to be a mere formality as illustrated in the following cases where the bank granted advances without the approval of the Company and upon default, the Company had to pay out even though the credit limit was not sanctioned or sanctioned after the payment of advance by the bank:

(i) Central Bank of India, in August 2003 applied for a credit limit approval of Rs. seven crore in favour of West Bengal Essential Commodity Supply Corporation Limited (WBECSC). Although the application was acknowledged by the Company in September 2003, no approval was communicated to the Bank. The latter granted advances to the WBECSC during February 2004 to February 2005 totalling Rs.5.89 crore, without the approval of credit limit by the Company. Subsequently, when it preferred claims in November 2007 against these advances, the Company made a claim payment of Rs. 3.83 crore in February 2008.

(ii) Syndicate Bank applied to the Company in April 2005 for a credit limit of Rs.100 crore in favour of the WBECSC which was approved in May 2006. In the meantime, the bank granted an advance of Rs.5.88 crore in May 2005 to the WBECSC against which a claim arose in October 2007 and was settled for Rs.3.66 crore by the Company in January 2008.

Recommendation No.1.1

The Company should set itself a timeline for processing credit limit applications received from banks.

The Ministry stated (January 2009) that the Company had accepted the suggestion and would implement the recommendation effective 1 April 2009 after making necessary changes in its IT systems.

1.6.2 Follow up of claims involving accountability issues under the packing credit and post shipment credit guarantees

1.6.2.1 As per the claim settlement procedure prescribed by the Company, the bank is required to submit along with a claim form, 19 other documents of which one is a 'Staff Accountability Report' (SAR). The SAR, the format of which is prescribed by the Company, is a certification with two options *viz.*, (a) that there has been no act of commission or omission on the part of the bank officials in causing loss to the bank which ultimately resulted in the bank invoking the Company cover; or (b) in respect of the claim preferred to the Company the bank has made an internal enquiry/matter is under investigation by external agencies (CBI, Enforcement Directorate, *etc.*) and in the event of any of the bank officials being held guilty of *malafide* negligence or irregularity in causing loss to the bank either in the internal/external enquiry, the bank unconditionally agrees to refund the entire amount of claim received to the Company within 30 days. One of these options is to be ticked and the SAR is necessarily to be signed off by an officer of the rank of General Manager of the claimant bank.

1.6.2.2 All claims where the second option is marked in SAR are required to be forwarded to the Company's Head Office for a decision at the level of General Manager and above only.

1.6.2.3 It was observed that the Company did not monitor on a regular basis nor did it have a ready list of such cases. In the absence of any such list it was not clear as to how the organisation was keeping track of the progress and/or final outcome of the investigations and its receivables, if any, emanating from these proceedings.

1.6.2.4 In one case noticed, the Company settled a claim for Rs.67.32 lakh in March 2006 with the Development Credit Bank Limited (DCBL) even though DCBL established that its Zonal Chief committed negligence (as a result of which he was asked to leave the bank) in accepting a loss making company with weak financials, enhancing exposure by more than 75 *per cent* within 15 months in spite of being aware of irregularities in the maintenance of stocks and not undertaking security protection to secure the advances by collateral securities.

Recommendation No. 1.2

The Company should institute a system of regular in-house consolidated reporting and follow up of claims involving accountability issues besides ascertaining its dues, if any, arising out of such cases.

The Ministry stated (January 2009) that the recommendation had been accepted by the Company and necessary change would be made effective 1 April 2009 after making the necessary modifications in its IT systems.

1.6.3 Inadequate verification of creditworthiness of importers

1.6.3.1 The post shipment credit guarantee issued by the Company to the insured banks covers advances given by banks to two categories of exporters *viz.*, policyholders and non-policyholders.

1.6.3.2 A policyholder is an exporter who already has another existing one-on-one policy cover with the Company. In this case the Company carries out a creditworthiness verification[8] of the buyers involved *i.e.*, importers, before the policy is given, to reduce the risks of claims arising.

1.6.3.3 For non-policyholders, however, the Company does not make it incumbent on banks to verify buyers' creditworthiness. This is a lacuna that requires to be addressed as there has been a greater number of claims from non-policyholders *vis-à-vis* policyholders. Of the 48 post shipment guarantee claims[9] paid during 2005-06 to 2007-08 totalling Rs.99.30 crore by Kolkata, Delhi and Mumbai BBBs seen in audit, it was found that:

(i) only 16 claims paid pertained to policyholders;

(ii) 32 claims for Rs.61.89 crore (62 *per cent*) pertained to exporters who were non-policyholders.

1.6.3.4 In respect of the latter 32 claims, it was further seen that:

(i) in nine claims totalling Rs.9.60 crore, the banks had not carried out creditworthiness verification of the foreign buyers nor was this condition stipulated in the sanction terms of the concerned banks in six out of the nine cases;

(ii) in five claims totalling Rs.16.77 crore, the banks had only partially carried out verification of 23 out of the 40 importers involved;

(iii) in the remaining 18 cases, full verification of the importers was carried out;

(iv) of the 23 cases where partial/full verification was carried out, in respect of 11 importers forming part of seven claims paid totalling Rs.24.72 crore, the dates of the verification had no relevance to the period of the advances given by the banks.

Recommendation No. 1.3

To reduce the risk of claims, the Company should make it mandatory for banks to carry out creditworthiness verification of foreign importers before sanctioning advances to an exporter under the post shipment credit guarantee.

The Ministry stated (January 2009) the recommendation had been accepted by the Company and the necessary condition would be laid down by the Company for verification of importers' credit worthiness, effective 1 April 2009.

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[8] ***Creditworthiness of the buyer is ascertained by the Company from credit reports obtained from specialised agencies.***

[9] ***Sample size on the basis of sampling method adopted.***

1.6.4 Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest Act, 2002 – impact on the Company

1.6.4.1 The Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act, 2002 empowers banks to recover their dues by disposing off defaulters' properties lodged with them as securities.

1.6.4.2 The recovery performance under the 'Guarantees - Short Term Exports' sector in the 31 years (April 1971 to March 2002) before the enactment of the SARFAESI Act and in six years (April 2002 to March 2008) post-SARFAESI, was as under[10]:

Table 1.3

(Rupees in crore)

Period	Claims paid	Recoveries effected
April 1971 to March 2002	901.55	92.56
April 2002 to March 2008	1804.25	558.34

The percentage recoveries effected to claims paid was 10 and 31 in the pre-SARFAESI and post-SARFAESI periods respectively.

1.6.4.3 The onus of recovery action against individual exporters with respect to packing credit and post shipment credit guarantees under the 'Guarantees - Short Term Exports' sector, lies with banks. However, the Company is a definite beneficiary arising out of any successful efforts by banks on this count. It is, therefore, expected that the Company take on a proactive role in urging banks to escalate recovery action. This, however, did not appear to be the case.

1.6.4.4 Of the 122[11] claims paid totalling Rs.239.13 crore under the packing credit and the post shipment credit guarantees during 2005-06 to 2007-08 in the three selected BBBs seen in audit, 67 claims were settled for Rs.123.81 crore. Against none of these claims paid out did any related recoveries accrue to the Company although records available with the Company showed that banks held collateral securities worth Rs.587.25 crore in these cases. Despite possessing this information, it did not make any extra efforts to urge banks to initiate recovery action under the SARFAESI Act apart from issuing routine letters to them.

1.6.4.5 Thus, while the SARFAESI Act has significantly achieved its objective of enabling banks to take effective action to recover their dues because of which the Company had also benefited, the Company on its part was yet to be geared upto take full advantage of the opportunities presented by the situation.

Recommendation No. 1.4

In consultation with banks, the Company should evolve a strategy to escalate recovery action under the SARFAESI Act.

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[10] ***The Company being an insurance company does not come within the purview the SARFAESI Act. It cannot therefore, take recourse to this Act to initiate recovery action in respect of policies extended by it under the 'Standard Policies and Transfer Guarantees' sector.***

[11] ***Sample size on the basis of sampling method adopted.***

The Ministry stated (January 2009) the Company had intimated that they would consult banks and explore possibilities of accelerating recovery action in consultation with banks. Depending on the outcome, a strategy would be evolved by the Company.

Compliance issues

1.6.5 Inconsistency in recovery sharing clause and non-recovery of interest from banks

1.6.5.1 Clause 13 of Part-III of the Packing Credit Operational Guidelines issued by the Company to banks stipulates that all amounts recovered by a bank, after payment of claims by the Company, are to be promptly shared between the two in the ratio in which the loss was shared. A delayed payment by the bank beyond 30 days from the date of recovery entitles the Company to claim interest at five *per cent* over the Bank Rate.

1.6.5.2 However, clause 4(b) of the proposal form (format prescribed by the Company) needed to be submitted by a bank at the time of new guarantee/renewal of an existing guarantee states that the bank undertakes to pay to the Company its share of any recoveries made by the bank within seven days of effecting such recoveries and in the event of delay, interest at the prevailing Bank Rate will be charged for the delayed period.

1.6.5.3 The inconsistencies between the two aforementioned clauses need to be remedied.

1.6.5.4 In case of recoveries made by banks under the post shipment credit guarantee, interest is chargeable at five *per cent* over the bank rate for any delay in excess of seven days from the date of recovery by the bank.

1.6.5.5 During 2005-06 to 2007-08, of the 122[12] packing credit and post shipment guarantee claims paid by Kolkata, Delhi and Mumbai BBBs seen in audit, recoveries were effected by banks in 34 instances with the Company getting Rs.24.55 crore as its share of the recoveries. It was noticed that in three instances the banks had remitted the Company's share promptly. In 25 out of the remaining 31 cases, banks had not notified the Company of the recovery dates nor were they asked to. Neither had the Company claimed any interest on delayed payments in these cases.

1.6.5.6 In four instances relating to the packing credit guarantees where dates were available, the interest that ought to have been charged by the Company, but not collected, was Rs.2.05 lakh calculated by the first method. In the two cases relating to the post shipment credit guarantees, interest worked out to Rs.3.37 lakh.

1.6.5.7 Audit observed that the Company was not in a position to keep track of its share of recoveries and/or to claim interest on delayed payments, as banks were not bound to report the dates on which the recoveries were made. Currently, banks through routine letters remit the Company's share of recoveries by bank drafts/cheques. Recoveries under the packing credit and the post shipment credit together constituted 69 and 82 *per cent* of the Company's total recoveries in 2006-07[13] and 2007-08 respectively. Given these numbers it is necessary that a standardised letter be prescribed by the Company for use by banks so as to enable the former to keep track and verify that it receives its correct share of recoveries and interest due, if any. The letter, should *inter alia* include details of

[12] ***Sample size on the basis of sampling method adopted.***
[13] ***Figures for 2005-06 not available as product-wise details were not maintained by the Company.***

claim number, name of exporter, date/month/amount of claim settled, date of recovery/amount recovered by bank and the Company's share, date of remittance by bank, number of days delay beyond due date, interest calculated/paid to the Company for delay, *etc.*

Recommendation No. 1.5

The Company should prescribe a standardised format of the communication under which banks should remit cheques/bank drafts of its share of recoveries to its offices.

The Ministry stated (January 2009) that the recommendation to prescribe a standardised format of communication under which banks would remit their share of recoveries had been accepted by the Company and steps were being taken by the Company to standardise the recovery sharing clause.

1.7. Audit findings- SCR Policy

The SCR policy is a credit insurance policy meant for goods exported on short term credit not exceeding 180 days. It covers individual exporter's risk upto 90 *per cent* against commercial and political risk from the date of shipment and is issued to exporters whose anticipated turnover for the next 12 months is more than Rs.50 lakh. It covers all shipments made by an exporter during 24 months from the issue of the policy subject to sanction of a credit limit on the foreign buyer by the Company in favour of the policyholder. A review of sanction procedures prescribed for sanctioning and 305 SCR policies issued during 2005-06 to 2007-08 revealed the following:

Systemic issues

1.7.1 Settlement of claims without obtaining proper documents

1.7.1.1 A claim form[14] under an SCR policy is to be submitted along with the following nine documents:

i) Contract/Order

ii) Invoice

iii) Bill of Lading/Airway Bill

iv) Non-payment advice from the foreign bank

v) Original unpaid accepted Bill of Exchange

vi) In respect of open delivery claims, proof of delivery from airline/ shipping /cargo companies and confirmation from the buyer that he has taken delivery

vii) Protest note

viii) Correspondence with original buyer

ix) Statements of exports made to all buyers in last two years prior to the first shipments in default, giving date of shipment, GR No., Gross Invoice value, terms of payment, amount realised and date of realisation.

[14] ***The Company's Circular No. 105 dated 6 February 2004.***

A check of 70 claims[15] settled under the SCR policy in Kolkata, Bangalore, Chennai, Delhi and Mumbai EBOs disclosed that claims were settled without receiving the prescribed documents as detailed below:

(i) in 18 cases, the exporters while preferring the claims had not submitted the accepted original Bill of Exchange (BOE); however, the Company admitted and settled these claims to the tune of Rs.5.04 crore by condoning this lapse;

(ii) in 69 cases the BsOE were unstamped although exporters are required to affix stamps of the mandatory value in accordance with the Indian Stamp Act, 1899; and

(iii) in 18 cases, claims settled for Rs.5.85 crore were preferred either by submitting proforma invoices (12 claims) or without the required contract or purchase order (six claims).

The Company condoned[16] non- submission of an accepted BOE as a non-serious (category 'C') lapse. This is not in order as in the absence of an accepted BOE, admission of liability by the buyer (importer) cannot be established. Therefore, the legal options available to the Company against the buyer to enforce- recovery would be limited. The instances of the 69 unstamped BsOE leads to the question whether the documents can technically and legally be considered as acceptable.

As per clause 3 of the terms and conditions of the SCR policy, the policy shall apply to all shipments of goods made by the insured pursuant to any contract or agreement. A contract or agreement must, therefore, exist for every shipment under an SCR policy and its submission along with the claim should hence be insisted upon by the Company. A proforma invoice cannot be substituted for a contract or purchase order as this document will contain additional vital information such as schedule of shipment, procedure of quality inspection, weighment, packing, etc. The contract or purchase order is also essential for the Company to determine the validity of the claim with reference to the excluded risks covered under clauses 1(a)(iii), 2 and 5(a) of the SCR policy. Here again, the Company had categorised this lapse on the part of the exporter as a condonable category 'C' lapse.

1.7.1.2 Audit observed that none of the above nine documents required to be submitted by an exporter along with the claim form were papers endorsed by the customs authorities in the absence of which, the fact that actual exports had taken place could not be vouchsafed with absolute certainty. To establish the genuineness of a claim, it is suggested that the Company prescribe the additional following customs cleared documents for submission by an exporter with the claim:

Table 1.4

Sl. No.	Document recommended	Remarks
1	Export Promotion copy of the Shipping Bill	This is a copy of the Shipping Bill that is endorsed by the customs authorities and returned to the exporter. It contains important details of the shipment *viz.* full details of shipment, consignment value, Purchase Order No., reference to Mate

[15] ***Sample size on the basis of sampling method adopted.***
[16] ***The Company's Circular No. 204 dated 24 September 2007.***

Sl. No.	Document recommended	Remarks
		Receipt (an acknowledgement issued by an officer of a ship/airline that goods have actually been taken on board) No., *etc.* Para 4 .8 of the 'Handbook of Procedures' (Vol.-I) brought out by the GOI, Ministry of Commerce and Industry, Department of Commerce states that in the case of gem and jewellery exports, the "exporter has to furnish the Export Promotion copy of the Shipping Bill as the proof of exports whenever required". The Export Promotion copy of the Shipping Bill is common for all exports. It can, therefore, be prescribed by the Company for submission by an exporter as definitive proof of export.
2	Statutory Declaration Form (SDF) – In case of Shipping Bill processed electronically by Customs *Or* Exchange Control Declaration (Guaranteed Receipt -GR) Form - In case of Shipping Bill processed manually by Customs	The form contains reference to the Shipping Bill, declaration of full export value and name of the bank and the branch through which the foreign exchange is to be received. This form is required to be submitted by the exporter under the Foreign Exchange Management Act, 1999 to the customs authorities who return it to the exporter after verification/cross check with other documents. This is a detailed form containing all particulars of the export shipment and required to be submitted by the exporter to the customs authorities under the Foreign Exchange Management (Export of goods and services) Regulations, 2000. After duly verifying and authenticating the form, the customs forwards the original declaration form to the RBI and the duplicate copy to the exporter. The customs give their running serial number - denoting the code number of port of shipment, calendar year and six-digit running serial number, on the copies of the form.

Recommendation No. 1.6

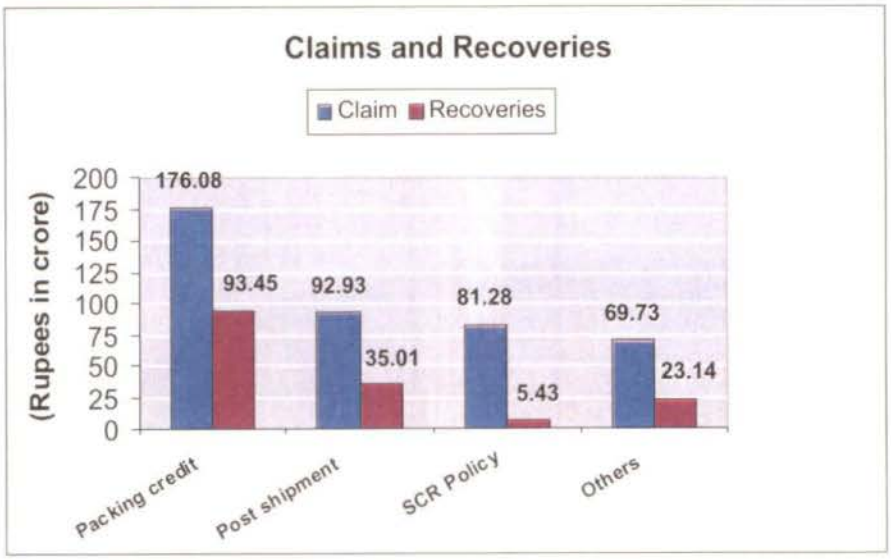
The Company should require the above two documents, in addition to the nine already prescribed, to be submitted by an exporter along with a claim form under the SCR policy.

The Ministry stated (January 2009) that the Management had accepted (August 2008) the recommendation and necessary instruction had been issued by the Company to implement the suggestion.

Compliance issues

The following pictorial shows the percentage of the recoveries to claims, which is a measure of the effectiveness of the recovery system, in 2007-08

Chart 1.3



The figures show poor performance of the recovery system in SCR policy *vis-à-vis* guarantees and other products of the Company.

Recommendation No.1.7

The Company should strengthen the recovery system in SCR policies.

1.7.2 Violation of the Insurance Act, 1938

1.7.2.1 The Company was registered as an insurance company in September 2002 and was, therefore, governed by the provisions of Insurance Act, 1938. Section 64 VB of the Act enjoins that no insurer shall assume any risks in India in respect of any insurance business unless and until the premium payable is received in advance. This condition was also incorporated as clause 10(b) of the Company's SCR policy document.

1.7.2.2 The Company's Board on 31 May 2005 approved the collection of advance premium for SCR policies and Small Exporters (SEP) policies with effect from 1 September 2005. Following this, the Company in August 2005[17] decided that the collection of advance premium would be effective for policies issued/renewed or in force from/on 1 September 2005. Branch offices were to collect advance premium based on export projections of the exporter subject to a minimum of Rs.10,000 and Rs.2,000 for every SCR and SEP policy respectively.

1.7.2.3 In July 2006[18] it was decided that till policyholders became acquainted with the new system, the old system of payment of premium was to be allowed till 31 August 2006 and this arrangement would be reviewed in August 2006. In September 2007[19], the Company issued revised guidelines allowing time extension for another two years on the same grounds.

1.7.2.4 Under the old system *i.e.* prior to 1 September 2005, the Company collected a minimum premium of Rs.10,000 at the time of issue of an SCR policy while the actual

[17] ***The Company's Circular No. 137 dated 02 August 2005***
[18] ***The Company's Circular No. 172 dated 20 July 2006***
[19] ***The Company's Circular No 204 dated 24 September 2007***

premium for each shipment was made subsequent to the date of shipment, by the 15th day of each month for all shipments made during the previous month. Thus, in cases where the actual premium payable by an exporter for a shipment or shipments during a particular month exceeded Rs.10,000, the exporter was allowed time upto the 15th of the following month to pay the differential - on the other hand, the Company had already assumed the risks from the date of each export shipment. This situation violated a fundamental tenet of the insurance business *viz.*, that no insurer shall assume any risk unless and until the premium payable is received in advance – a principle laid down in the Insurance Act, 1938 as well as by the Company itself in the SCR policy document.

Recommendation No. 1.8

The Company being an insurance company is required to operate within the purview of the Insurance Act, 1938. Any divergence therefrom is legally untenable. As such it is suggested that no further extension of time be allowed to exporters beyond September 2009 to comply with the provisions relating to payment of advance premium under the SCR and SEP policies.

The Ministry stated (January 2009) that the Company had amended the relevant clause of the SCR policy document and guidelines had been issued by the Company to treat the non-compliance of the above requirement as a lapse to be examined at the time of claim.

1.7.3 Avoidable claim payments of Rs.16.13 crore under SCR policies due to approval/enhancement/non-cancellation of overall limit on importers despite adverse reports of credit information agencies

1.7.3.1 Overall Limit (OL) is the maximum limit fixed by the Company on a particular buyer (importer) upto which it may consider the claim in the event of loss for one or more policyholders (exporters) under one or more types of policies falling under the sector ' Standard Policies and Transfer Guarantees'. As per the Company's procedures[20], reports of specialised credit information agencies[21] on a particular buyer is an important input based on which the decision to fix/review an OL for a particular buyer is taken. A check of 70[22] SCR policy claims paid during 2005-06 to 2007-08 in five selected EBOs showed that serious adverse remarks on buyers by credit information agencies in two cases, both pertaining to the Mumbai EBO, were ignored resulting in the Company settling avoidable claims of Rs.16.13 crore, as narrated below:

(a) A claim settlement of Rs.2.43 crore was made in October 2005 to an exporter M/s Dinurejee against an SCR policy for losses suffered on account of a buyer's, M/s Friedman's Inc. USA, failure to pay for five shipments made between 8 November 2004 and 30 December 2004.

The Company also settled five more claims amounting to Rs.11.73 crore, as detailed below, of other exporters for shipments made between October 2004 and January 2005 to the same buyer *i.e.* M/s. Friedman's Inc. USA.

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[20] ***Paras 9.20 to 9.22 of the Company's Policy Planning Department Circular No. 115 dated 5 July 2004***

[21] ***M/s. Dun & Bradstreet India and M/s Mira Inform Pvt. Ltd. are the credit information agencies whose services are utilised on a regular basis by the Company.***

[22] ***Sample size on the basis of sampling method adopted.***

Table 1.5

Sl. No.	Exporter	Shipment months	Claims paid (Rs. in crore)	Date of payment
1	C. Mahendra Infojewel	November and December 2004, January 2005	7.74	29 March 2006
2	Saunay Jewels Pvt. Limited	November and December 2004	1.96	29 March 2006
3	Shankar Jewels Limited	November and December 2004	0.90	6 September 2005
4	Diam Star Jewellery (India) Pvt. Limited	October, November and December 2004	0.87	6 June 2005
5	C. Mahendra Infojewel	November and December 2004, January 2005	0.26	31 March 2006
		Total	**11.73**	

It was observed that the Company fixed an OL of Rs 20 crore on M/s. Friedman's Inc. USA on 22 November 2003 based on the September 2003 report of M/s. Dun & Bradstreet India (D&B). The Company doubled the OL to Rs.40 crore on 4 December 2003 and again to Rs.50 crore on 29 May 2004 without waiting for a satisfactory experience of the buyer's bona fides or without carrying out further credit checks.

On 25 November 2004, the OL was further enhanced to Rs.70 crore despite the Company receiving adverse reports on the buyer from D&B on 16 September 2004 and from Mira Inform Pvt. Ltd. on 10 November 2004. The negative remarks in these two reports concerned the restatement of financial statements for three previous years, absence of rating, default under credit agreement, withdrawal of audit opinion by auditors on the previously filed annual financial statements, closure of 50 to 65 of the buyer's stores and class action suit against the buyer alleging securities fraud. The failure to take note of these observations, which would have led to cancellation/suspension of the OL on the buyer from October 2004 (after receipt of D&B's report in September 2004), resulted in the Company having to pay out Rs.14.15 crore as claim settlement on account of defaults by M/s Friedman's Inc. USA.

(b) Based on D&B's credit report of April 2003, the Company fixed an OL of Rs. four crore on 9 April 2003 on a buyer, M/s. Cheminter, S.A. Paraguay. Citing the same D&B report, this was raised to Rs. five crore on 19 June 2003. Against this OL, Hetero International Ltd and BDR Pharmaceuticals International Pvt. Limited, made exports to the buyer valuing Rs.1.35 crore and Rs.1.37 crore respectively between 13 June 2003 and 20 August 2003. The buyer failed to make the requisite payments for which both exporters filed claims which were settled by the Company for Rs.1.98 crore (Hetero International Ltd for Rs.75 lakh in June 2005 and BDR Pharmaceuticals International Pvt. Limited for Rs. 1.23 crore in July 2005).

Audit observed that the D&B report of April 2003 had clearly stated that the buyer's "economic and financial cannot be determined" as his payments, financial position, sales, trend, history, balance sheet and/or accounting figures were "not evaluable",

"undetermined" or "incomplete". The Company's decision in the first place to grant an OL of Rs. four crore to the buyer was, therefore, unjustifiable and subsequently raising it to Rs. five crore within three months based on the basis of the same D&B report, inexplicable. Had the OL not been allowed to M/s. Cheminter, S.A. Paraguay, the Company would not have found itself in a situation of paying claims totalling Rs.1.98 crore.

The Company with respect to the first case replied (August 2008) that though there were few negative features it was decided to continue to underwrite the business taking into consideration the past payment experience of the buyer. It further stated that the buyer had not gone out of business nor the non-payment had arisen due to bad/*malafide* intention of the buyer.

In the face of the very serious and adverse nature of the information about the buyer, M/s Friedman's Inc. USA, provided to the Company by both the credit rating agencies, the reply of the Company was unacceptable. Further, in response to another audit observation, the Company stated that caution was exercised in some countries and precaution was taken in case of commodities with adverse claim ratio. Audit observed that though the list included the country of export and the commodity, the credit limit was extended even after receipt of adverse financial report indicated that such caution and precaution were not exercised in this case.

The Company did not respond with respect to the second case.

Recommendation No. 1.9

The Company should require its Buyer Underwriting Department (BUD) to devise and implement a system of assigning pre-determined weights to various parameters (credit rating agency reports, buyer history, track record of the Company with the buyer, etc) that are taken into account in proposing an OL for a particular buyer. This would facilitate BUD to submit an objective review note to the Management for taking a transparent and balanced decision while approving/enhancing the OL of a buyer.

The Ministry stated (January 2009) that the Company had initiated steps to strengthen the buyer underwriting department and a system generated office note for fixation/enhancement of overall limit was also being introduced.

1.8 Conclusion

1.8.1 The Company has to play a more active role in carrying out background commercial and financial checks of exporters/importers, a task currently largely left to banks. This would help in further bringing down the level of claims. It should increase its share of recoveries by urging banks to take action under the SARFAESI Act and regular follow up on this matter.

1.8.2 The Company should ensure that it functions within the statutory provisions of the Insurance Act, 1938 in relation to its SCR and SEP policies business. It should require exporters to submit additional documentation while submitting claims and for banks to carry out credit worthiness checks of exporters. The Company should also give due and timely emphasis to reports of credit information agencies.

MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY

CHAPTER II

Bharat Sanchar Nigam Limited

Follow up of audit recommendations of previous reviews

Highlights

In respect of three reviews covered in the performance audit, none of the ATNs were received for vetting within their due dates. Subsequently out of a total of 86 ATNs relating to the three reviews, only 56 had been vetted till August 2008.

(Para 2.7)

Though the ATN was given stating that a Committee was set up to study the utilisation aspects of microwave links, 37 microwave link routes remained idle without being decommissioned even after introduction of Optical Fibre Cable (OFC) ring in the Eastern Telecom Region (ETR).

(Para 2.8.2 (a))

The Ministry assured that necessary instructions had been issued (January 2005) to the circles for rectifying the deficiencies as observed by Audit. However, 10 microwave routes falling under categories III and IV, which were ordered for closure by Bharat Sanchar Nigam Limited (Company), were yet to be decommissioned in ETR.

(Para 2.8.2(c))

In the ATN it was stated that the DotSoft package had been modified to tackle the problem of unaddressed bills. Audit, however, noticed that un-addressed bills continued to be generated in 11 Secondary Switching Areas (SSAs) under Gujarat, Karnataka and Orissa telecom circles despite modifications in the DotSoft Package.

(Para 2.9.2(b))

In spite of assurances of remedial measures by the Company, the auto disconnection of outgoing calls of subscribers beyond their prescribed credit limits was not effected, resulting in arrears of Rs.49.49 lakh in seven SSAs test checked under Gujarat and UP (West) circles.

(Para 2.10.2(a))

A Disaster Recovery Plan to safeguard the system and data relating to CMTS billing centres was recommended by Audit in April 2007. The Company was yet to implement the same although the revenue from CMTS was Rs.10,579 crore during the year 2007-08.

(Para 2.10.2(b))

Summary of recommendations

1. ***Before issuing ATNs to audit paragraphs, the Ministry and the Company should ensure actual implementation of the remedial measures in the field units. Mere assurances in the form of issuance of instructions to field units would not serve any purpose.***

2. ***The Ministry and the Company should ensure that ATNs duly vetted by Audit are submitted to Committee on Public Undertakings within the prescribed time frame of six months.***

3. ***The review on working of Telecom Maintenance Wing in the Company highlighted amongst other things, idling of micro wave systems. In spite of assurances the same has not improved. The Company should once again review and ensure proper utilisation of micro wave systems.***

4. ***The review on Information Technology Audit of DotSoft Package in the Company highlighted deficiencies in the package leading to non-realisation of revenue. As the deficiencies still persist, the Company should ensure that modifications made in the DotSoft software are properly implemented. Also these deficiencies should be addressed in any new billing software being introduced in the Company.***

5. ***The review on Cellular Mobile Telephone Services (CMTS) in the Company focused on various deficiencies relating to planning, procurement, commissioning and operations of CMTS. ATNs in respect of Audit recommendations made in the performance audit on CMTS have not been received. The Audit Report was laid in the Parliament in April 2007 and belated submission of ATNs would not serve any purpose. The mobile telephony has already moved from 2G to 3G cellular telecom networks and in the rapidly changing telecom scenario the Company has to take swift action on the Audit recommendations to gain benefit out of it.***

2.1 Introduction

Topics/themes relating to an entity having significance and financial considerations are examined and developed into Performance Audit Reports/Reviews/Information Technology Audit Reports. These reviews along with audit recommendations are included in the Audit Reports which are laid in the Parliament. The concerned Ministries/entities submit Action Taken Notes (ATNs) which *inter-alia* brings out the remedial measures taken by the entity, in respect of all the paragraphs relating to the Performance Audit/Review/Information Technology Audit included in the Audit Reports. These ATNs are duly vetted by Audit and submitted by the concerned Ministry/entity to the Committee on Public Undertakings (COPU) within six months from the date of presentation of the relevant Audit Report.

The performance audit on follow up of audit recommendations of previous reviews relating to Bharat Sanchar Nigam Limited primarily focuses on the effectiveness and compliance of remedial measures taken/assurances given by the Ministry/Company in its ATNs submitted to Audit for vetting.

This performance review covers the following three past reviews that appeared in Audit Report of Union Government, Commercial:

- "Working of Telecom Maintenance Wing in BSNL" Report No. 5 of 2004
- "Information Technology Audit of DotSoft Package in BSNL" Report No. 5 of 2005
- "Cellular Mobile Telephone Services (CMTS) in BSNL" Report No. 10 of 2007

2.2 Scope of Audit

The purpose of this performance audit was to obtain reasonable assurance that the Company has acted on audit recommendations in case of the three chosen reviews. It also attempts to assess that there was a mechanism to monitor implementation of remedial measures and that the measures implemented have actually been successful.

2.3 Audit objectives

The objectives of Audit were to assess that:

- the Company responded adequately and timely to audit findings,
- the remedial measures initiated by the Company on audit recommendations in the selected reviews were adequate and fruitful.

2.4 Audit criteria

The main audit criteria used were:

- COPU in its Second Report (1998-99 Twelfth Lok Sabha) recommended that follow up ATNs duly vetted by Audit in respect of various paragraphs contained in the Reports of the C&AG, should be furnished to COPU within six months from the date of presentation of the Reports in the Parliament.
- Orders and instructions issued by the Company to its field offices from time to time and assurances given, as stated in ATNs.

2.5 Audit methodology

The audit methodology involved examination of related documents and discussions with the auditee on implementation of remedial measures undertaken by the Company on the audit recommendations of selected reviews. The field work was carried out between June and July 2008. The details of circles and Secondary Switching Areas (SSAs) selected are given in ***Annexure – III***. Simple random sampling technique was used for selection and analysis of data.

2.6 Acknowledgement

Audit acknowledges the cooperation and assistance extended by all the levels of Management at various stages till completion of the audit.

2.7 Audit findings

Status of receipt of ATNs and review-wise audit findings on the follow up action taken by the Company are given in the succeeding paragraphs.

Status of receipt of ATNs

The position of submission of ATNs by Department of Telecommunications under the Ministry of Communication and Information Technology in respect of the three reviews selected for performance audit is given in the Table below.

Table 2.1

Reviews selected for performance audit	Audit report	Date of presentation in the Parliament	Total ATNs required for sub-paras	ATNs vetted within six months	ATNs vetted with delay	ATNs pending as of August 2008
Telecom Maintenance Wing	**5 of 2004**	**4.02.2004**	**19**	**Nil**	**17**	**2**
DotSoft Package	**5 of 2005**	**9.03.2005**	**26**	**Nil**	**13**	**13**
CMTS	**10 of 2007**	**26.04.2007**	**41**	**Nil**	**26**	**15**
Total			**86**	**Nil**	**56**	**30**

As can be seen from the table, none of the ATNs were vetted and submitted to COPU within the due dates, *i.e.,* within six months of the presentation of the concerned Audit Report in the Parliament.

Recommendation No. 2.1

The Company should ensure that ATNs are submitted within prescribed time frame.

2.8 Review on working of Telecom Maintenance Wing of BSNL

This review was conducted in June 2003, covering the period 1998 to 2003 to assess the functioning of the Telecom Maintenance Wing of the Company. The primary objective of the review was to examine the effectiveness of the Telecom Maintenance Regions in management and maintenance of various telecom networks entrusted to them.

The original major audit observations and recommendations were as follows:

- Microwave systems were installed without any requirement as Optical Fibre Cable (OFC) media was available. Also no action was taken to decommission the microwave systems after commissioning of OFC on several routes. Consequently, microwave systems were not functional/did not carry any traffic on these routes. Audit recommended that measures should be taken to decommission microwave schemes on the routes where optical fibre cable had been introduced and was handling total traffic.

- Projections indicated that annual recurring expenditure of Rs.556 crore incurred on microwave media, earned revenue of Rs.135 crore resulting in annual loss of Rs.421 crore.

- The Company failed to frame generic requirements for Multi Channel per Carrier (MCPC) Very Small Aperture Terminal (VSAT) systems. Consequently, the systems procured at a cost of Rs.47.83 crore were found to be faulty or lying idle and there were problems in their maintenance. Audit recommended that the Company should strengthen co-ordination between the Quality Assurance Wing and the Telecom Engineering Centre to avoid acquisition of poor quality equipment.

- Failure to adhere to Corporate office instructions and ineffective pursuance of dues led to non-recovery of compensation claims of Rs.40.46 crore on account of damage to cables. Audit recommended that the Company should introduce a uniform method for recovery of compensation for damages to cables.

- Company suffered loss due to delays in providing leased circuits within the time frame of four weeks prescribed by Telecom Regulatory Authority of India.

2.8.1 Action taken by the Company

Out of 19 paras in the review, 17 paras had been vetted and balance two paras were pending (as of August 2008) for want of reply from the Ministry. In the ATNs submitted by the Company through the Ministry it was assured that necessary instructions had been issued (January 2005) to the circles for rectifying the deficiencies as observed by Audit. Audit, however, noticed that the deficiencies still persisted as brought out in the next paragraph.

Further some of the directives issued by the Corporate office of the Company to its field units in response to the audit observations/recommendations, as seen from the ATNs are as below:

- A Committee was set upto study the utilisation aspects of microwave links working in the Company
- A uniform method for raising claims and recovery of compensation for damages done to the Company by private parties was considered for adoption by the Company.
- On-line leased circuit booking/commercial system, *i.e.*, TVARIT was introduced to enable faster provisioning of leased circuits.

2.8.2 Current audit observations

During test check (June and July 2008) of records in the selected sub-regions under four non-territorial circles, it was noticed that no action was taken by the telecom circles on assurances given in the ATN to implement the remedial measures in the following cases:

a) Non-decommissioning of microwave schemes on the routes where optical fibre cable was introduced

Optical Fibre Cable (OFC) ring routes are auto protected and do not require any standby media due to its ring structure. However, it was observed in the ETR (June and July 2008) that microwave link on 37 routes were kept as standby despite availability of OFC ring.

b) Non-commissioning/non-utilisation of microwave system resulted in idling of network

Fourteen microwave systems (seven diverted by ETR to North East circles[1] but not taken over and another seven diverted from Southern Telecom Region (STR) to North Eastern circles) were lying idle in ETR. Further, 11 microwave systems which were closed due to introduction of OFC media, were yet to be diverted or scrapped in ETR.

c) Non-implementation of recommendations of the committee set up for review of the utility of microwave routes

The Company formed a committee to study the utilisation of microwave links. On the basis of the Committee's recommendations, the Company categorised (March 2005) these links into four categories and directed its field offices for closure of microwave

[1] *One to North East I circle, four to North East II circle and two to North East Task Force circle.*

links falling under categories III[2] and IV[3]. However, in ETR, it was noticed that 10 microwave routes falling under categories III and IV were still in operation instead of being decommissioned.

Recommendation No. 2.2

The Company should review the implementation of its own directives regarding utilisation of microwave systems in the ETR.

2.9 Information Technology Audit of DotSoft package in BSNL

The DotSoft package was introduced in September 1998 as an integrated telecom database system for commercial, billing, accounting, fault repair and directory enquiry services.

The audit of this package was conducted in July 2004 covering the period from September 1998 to July 2004. At the time of audit, the package was functioning in 76 Secondary Switching Areas (SSAs) under 13 telecom circles out of 332 SSAs in 26 circles of the Company. Audit selected 35 SSAs in 10 circles for detailed scrutiny.

The primary objective of this audit was to examine the effectiveness of the functioning of the software package, maintenance of data integrity, incorporation of rules and regulations as per codes and manuals and also to evaluate and test the effectiveness of general IT controls specific to the computerised database system operated by the Company, ensuring non-leakage of revenue.

The original major audit observations and recommendations were as follows:

- The package could not eliminate un-addressed bills with the result that bills worth Rs.39 crore were lying in the database in 33 SSAs of eight telecom circles from the year 2000 onwards. The package also did not have checks to ensure that changes in exchange capacity, tariff and interest rates had been regularly updated. This resulted in short billing of Rs.72.87 lakh and excess payment of interest of Rs.7.55 lakh. Audit recommended that the DotSoft package should be redesigned to take care of un-addressed bills and to ensure regular updation of data in respect of tariff changes. The package should also ensure that proper audit trails were created by the system to ensure that changes were duly recorded and authorised.
- There was no provision for checking of unbilled trunk call tickets, resulting in tickets worth Rs.37 lakh lying unbilled in eight telecom circles. There was also no provision for calculation of *pro-rata* rent.
- There was no provision for reconciliation of calls metered in the exchanges and actually billed for, so as to prevent leakages. Audit recommended that the package should be redesigned to reconcile calls downloaded from the exchanges and billed for. It should also generate Management Information System reports so that reliance on manual methods was avoided.
- System resources were not utilised for immediate disconnection of telephone connections and sub-ledger accounting was being done manually.

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[2] ***Microwave routes which were working as standby media to OFC links and being used occasionally.***

[3] ***Microwave routes which were not being used at all for traffic.***

- No monitoring measures were in place to prevent data manipulation and tampering. Audit recommended that there should be a mechanism to control and monitor the activities of Data Base Administrator. Internal systems audit should be regularly carried out to ensure that confidentiality and integrity aspects of the IT system were not put to risk.
- There was no IT Security Policy or a documented Disaster Recovery and Business Continuity plan. Audit recommended that proper Disaster Recovery and Business Continuity plan and an IT Security Policy should be framed and made available to all the SSAs and staff.

2.9.1 Action taken by the Company

Out of 26 paras in the review, 13 paras had been vetted and balance 13 paras were pending (as of 31 August 2008) for want of reply from the Ministry. In the ATNs submitted by the Company through the Ministry it was assured that necessary instructions had been issued (June 2005) to the circles for rectifying the deficiencies pointed out by Audit.

It was stated in the ATNs that:

- the DotSoft package had been modified to calculate rent on pro-rata basis and also to tackle the problem of unaddressed bills
- instructions had been issued to all the circles for mandatory updating of master data in respect of installation charges and interest rates
- guidelines on security for Wide Area Network of the Company had also been made available to prevent data manipulation and tampering

Audit, however, noticed that the deficiencies still persisted as brought out in the next paragraph.

2.9.2 Current audit observations

During test check (June and July 2008) of records in the selected SSAs of four territorial circles, it was noticed that no action had been taken by the telecom circles to implement the remedial measures in the cases mentioned below:

a) Reconciliation of metered calls and calls billed

Reconciliation of metered calls of telephone exchanges and calls billed for in a particular billing cycle was required to be done through Call Data Record (CDR) based billing system to check the leakage of revenue. However, the system had not been introduced in any of the SSAs selected for audit.

b) Unaddressed bills

Though DotSoft package was re-designed to tackle the problem of unaddressed bills, the same continue to be generated in 11 SSAs under Gujarat, Karnataka and Orissa telecom circles.

c) Calculation of pro rata rental for shifting cases

There was no provision in the system to calculate the rent on *pro-rata* basis and generate one bill in case of shifting of telephone connections from rural to urban areas or vice-

versa, resulting in short realisation of revenue in respect one SSA of UP (West) telecom circle.

d) Non implementation of periodical audit of IT system of DotSoft package

To ensure confidentiality and integrity aspects of IT system, internal audit of the system should be carried out regularly. In the ATN, the Ministry had stated that Internal Audit Software was proposed to be developed using which periodical audit of IT systems would be done. However, it was observed that the system had not been developed. It was stated (July 2008) by the Management that the system was under development and likely to take a year.

Recommendation No. 2.3

The Company should ensure that modifications made in the DotSoft software are implemented uniformly across all units.

2.10 Performance audit of Cellular Mobile Telephone Services in BSNL

The introduction and expansion of Cellular Mobile Telephone Services (CMTS) was one of the major components in the Tenth Plan and the Company was expected to be a major national player in these services. A large scale country wide roll-out of CMTS on commercial basis was done by the Company in October 2002.

The performance audit of CMTS in the Company covered various activities relating to planning, procurement, delivery, installation, acceptance testing, commissioning; utilisation and operational performance; billing, collection and accounting of revenue; customer care and quality of services provided to customers covering the period from 2001-02 to 2005-06.

The audit objective of the performance audit of CMTS was to assess the efficiency, economy and effectiveness of various activities relating to the initial launch and subsequent expansion of CMTS services.

The original major audit observations and recommendations were as follows:

- Non-achievement of operational targets in capacity building for provision of CMTS connections was noticed. Audit recommended that the Company should expedite the procurement process to avoid delays in setting up of CMTS systems and consequent loss of customer base. Further appropriate strategies should be prepared for ensuring optimum utilisation of the equipped capacity.

- Quality of CMTS remained unsatisfactory due to poor network coverage, system failures, non-attendance of customer complaints, *etc*. Besides, the Company was unable to meet the service quality benchmarks prescribed by the Telecom Regulatory Authority of India (TRAI). Audit recommended that performance of customer care centres should be monitored and adherence to quality of service norms fixed by TRAI ensured to avoid risk of migration of customers from the Company.

- Delays of upto two years in handing over sites to vendors for installation and commissioning of CMTS equipment and execution of annual maintenance contracts was noticed in several circles. In many cases CMTS sites were operated without obtaining mandatory clearance from the Standing Advisory Committee

on Frequency Allocations. Audit recommended that time schedules should be prescribed in advance for various activities to be undertaken by the circles for creation of infrastructure and for handing over of sites to vendors for installation and commissioning of CMTS equipment.

- Delays were noticed in implementation of threshold servers for monitoring credit limits of the customers, timely billing, auto disconnection facility and prompt recovery of billed amounts from post-paid customers.
- Inadequate disaster recovery plan and access controls for CMTS billing centres.
- The Company failed to levy/recover penalty from vendors for delays in rectification of faults during warranty/AMC periods.

2.10.1 Action taken by the Company

Out of 41 sub-paras in the review, 26 paras had been vetted and ATNs for 15 paras were pending as of August 2008 from the Ministry. However, ATNs had not been received in respect of any of the audit recommendations.

In the ATNs submitted by the Company through the Ministry, it was assured that necessary instructions had been issued (March 2008) to the circles for addressing the audit observations. The specific action taken/replies to the audit observations/recommendations, as intimated in the ATNs, includes the following:

- The capacity utilisation of CMTS systems till March 2007 was 101.55 *per cent*.
- The Company had started maintaining data on surrender of CMTS connections by customers and disconnections due to non-payment.
- A high powered committee was constituted to decide the amount to be recovered from vendors for non-rectification of faults during warranty period.

Audit, however, noticed that the deficiencies still persisted as brought out in the next paragraph.

2.10.2 Current audit observations

During test check (June and July 2008) of records in the selected SSAs of four territorial circles, it was noticed that remedial measures, as assured by the Company, had not been taken in the cases mentioned below:

a) Non-implementation of credit limit and auto disconnection

Despite fixation of credit limit for cellular mobile subscribers, auto-disconnection of outgoing calls was not implemented for subscribers beyond the credit limit in seven SSAs test checked under Gujarat and UP (West) circles. This resulted in accumulation of arrears of revenue to the extent of Rs.49.49 lakh.

b) Non implementation of Disaster Recovery Plan

"Disaster Recovery Plan" to safeguard the system and data in the event of unforeseen circumstances had not been implemented by the Company for its CMTS billing centres, although the revenue from CMTS was Rs.10,578.89 crore for the year 2008-09.

c) Non-maintenance of data of customers

The data on surrender and disconnections of cellular mobile connections due to non-payment, *etc*. was required to be maintained separately to analyse the reasons for losing customers. However, no such separate database was maintained in seven SSAs test checked in Gujarat and Orissa circles.

Recommendation No. 2.4

ATNs in respect of audit recommendations made in the performance audit on CMTS have not been received. The Audit Report was laid in the Parliament in April 2007 and such belated submission of ATNs relating to audit recommendations would not serve any purpose. The mobile telephony has already moved from 2G to 3G cellular telecom networks and in the rapidly changing telecom scenario the Company has to take swift action on the Audit recommendations to gain benefit out of it.

2.11 Conclusion

After the detailed audit probe and data analysis of the ATNs submitted by the Ministry/Company relating to three selected reviews it was found that there was lot of scope for improvement in the timely submission of ATNs and compliance to the audit observations and recommendations at the field level.

None of the ATNs submitted were within the prescribed time schedule of six months from the date of presentation of the concerned Audit Reports in the Parliament. As of August 2008, out of 86 ATNs due for submission by Ministry/Company, 30 ATNs pertaining to the three reviews selected for follow up were pending.

The Company, while submitting ATNs, had given assurances to take appropriate measures in implementing the audit recommendations and addressing audit observations. It had issued instructions to its field units/circles for rectifying the deficiencies. While some corrective action had been taken by the Company, especially in cases of revenue recoveries, but in a number of cases action was either pending or ineffective at the field/circle level. Consequently the entire audit exercise and action taken by the Ministry/Company has not yielded the best results.

At present the ATNs are submitted by the Company's Corporate office to the Ministry and sent to the C&AG for vetting. In order to make this entire process effective and to have accountability on the assurances given in the ATNs, the confirmation of the same from the concerned Heads of Departments at the Corporate office/telecom circle level as well as the concerned Internal Auditors could be appended to the ATNs. This would go a long way in providing assurance to all the stakeholders regarding Management action on audit paras placed in the Parliament.

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

CHAPTER III

Bharat Sanchar Nigam Limited

Functioning of telecom project circles

Highlights

In spite of creation of surplus transmission media capacity during 2004-05 to 2006-07, its further augmentation planned during 2008-09 to 2009-10 would increase the risk of underutilisation and obsolescence due to frequent technological changes.

(Para 3.8.1.1)

Delay in procurement of equipment by the Corporate office during 2004-05 and 2005-06 resulted in non-completion of 66 projects valuing Rs.175 crore out of 153 projects selected for audit.

(Para 3.8.2.6)

Fifty Overlay Access Network projects costing Rs.335 crore were sanctioned by Northern Telecom Project (NTP) circle in violation of Corporate office instructions and expenditure of Rs.98 crore was incurred on these projects without the approval of competent authority.

(Para 3.8.3.1)

Irregular expenditure of Rs.38 crore was incurred by different divisions under NTP circle on 57 works without obtaining approval of the competent authority and by splitting the works to avoid approval of higher authority.

(Paras 3.8.3.2 and 3.8.3.3)

Execution of optical fibre cable network for Indian Air Force, without obtaining advance deposit resulted in blocking of capital of Rs.466 crore for 10 months.

(Para 3.8.3.6)

Lack of budgetary control in Western Telecom Project (WTP) circle resulted in excess expenditure of Rs.86 crore over allotted funds during 2006-07.

(Para 3.8.3.7)

Delays ranging from one month to seven years in commencement, completion and commissioning of 294 projects executed upto 2007-08 by different divisions under all the four TPCs, resulted in loss of potential revenue of Rs.633 crore.

(Para 3.8.3.8)

Southern Telecom Project circle extended undue benefit of Rs.131 crore to HCL Infosystem Limited by releasing advance payment before installation, commissioning and acceptance testing of the equipment in violation of terms and conditions of the purchase order.

(Para 3.8.3.11)

Non-release of completion reports by different divisions resulted in non-capitalisation of expenditure of Rs.302 crore and consequent non-availing of benefits of depreciation while paying corporate tax.

(Paras 3.8.4.1 and 3.8.4.2)

Eleven microwave schemes undertaken by WTP, NTP and ETP circles could not be commissioned due to equipment deficiencies and availability of better optical fibre cable transmission media, resulting in abandoning of schemes and consequent blocking of capital of Rs.44 crore.

(Para 3.8.4.3)

Summary of recommendations

The Company may:

1. ***ensure expansion of transmission media capacity keeping in view current trends in demand and actual expansion requirement;***
2. ***ensure holding of Circle Planning Board/Regional Trunk Planning Committee meetings on need basis and also involve Telecom Project circles (TPC) in convening these meetings;***
3. ***ensure establishment of proper control mechanism and Management Information System for creating consolidated database of projects at the level of TPCs and the Corporate office;***
4. ***ensure compliance with the provisions of the Manual for Procurement of Telecom Stores and Equipment by all TPCs;***
5. ***ensure compliance of delegation of powers and other instructions issued by the Corporate office pertaining to sanction and execution of the projects including collection of advance deposits by the TPCs;***
6. ***ensure timely issue of completion reports pertaining to completed projects, handing over of commissioned projects and issue and acceptance of Advice of Transfer Debits (ATD); and***
7. ***ensure proper maintenance of measurement books and various registers prescribed for recording details of the projects.***

3.1 Introduction

In India, before introduction of wireless technologies, the transmission media used in telecom sector was 'Overhead wires', which was followed by underground cables, *i.e.*, co-axial/copper cables *etc.* Due to frequent damage and problems in their repairs and maintenance, the Company introduced use of radio frequency based microwave system network based on analog/digital technology. They were found useful mainly in hilly regions, but required installation of Repeater Stations *en-route* to boost the signals. Satellite systems, in which availability of channels was more, was also used as transmission media. However, the cost involved in setting up of a satellite system was huge.

At present, Optical Fibre Cable (OFC), based on digital technology, is used in large scale for creation of transmission network in the Company and the execution of work on radio frequency network has considerably reduced.

In the Company, local area network is established and maintained by Secondary Switching Areas (SSAs) under territorial circles whereas long distance media, *i.e.*, transmission systems, mostly involving OFC, are established by the Telecom Project circles (TPCs) and handed over to Telecom Maintenance Regions and territorial circles for utilisation and maintenance. There are four TPCs namely, Western Telecom Project (WTP), Eastern Telecom Project (ETP), Southern Telecom Project (STP), and Northern Telecom Project (NTP), each headed by a Chief General Manager.

The TPCs are responsible for planning, installation and commissioning of OFC systems, broadband and narrowband digital microwave systems, satellite based voice systems, and Satellite Based High Speed Data Network (HVNET).

WTP, STP, ETP and NTP cover the following States/Union Territories:

Table 3.1

Circle	States/Union Territories covered
WTP	**Maharashtra, Madhya Pradesh, Chhattisgarh, Gujarat and Goa**
STP	**Andhra Pradesh, Karnataka, Kerala and Tamil Nadu**
ETP	**Andaman and Nicobar Islands, Bihar, Jharkhand, Orissa, Sikkim and West Bengal**
NTP	**Delhi, Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan, Uttar Pradesh (East and West) and Uttarakhand**

3.2 Organisational setup

Overall control over functioning of TPCs rests with the Chairman and Managing Director (CMD) of the Company. At the Corporate office level, Director (Planning and New Services) assists CMD. At the circle level, respective Chief General Managers (CGMs) and their General Managers (GMs) and Deputy General Managers (DGMs) assist the CMD.

3.3 Scope of Audit

Performance audit was conducted during January 2008 to May 2008 with a view to examine planning, execution and monitoring of projects executed by TPCs of the Company, covering four circles *viz.*, WTP, STP, ETP and NTP from 2003-04 to 2007-08, on the basis of documents maintained by Corporate office and Head Offices of TPCs along with their selected divisions and sub-divisions. North East Task Force (NETF) unit of the Company, with its Head Office at Guwahati, covers all the seven states[1] in North East region. However, functioning of NETF has not been covered in this performance audit.

[1] ***Arunachal Pradesh, Assam, Meghalaya, Mizoram, Tripura, Manipur and Nagaland***

3.4 Audit objectives

The main audit objectives were to assess that:

- there was proper planning for projects being undertaken by TPCs,
- the projects were executed economically, efficiently and effectively by TPCs and
- commissioning of projects by TPCs had resulted in improvements in flow of telecom traffic in inter-circle and intra-circle locations.

3.5 Audit criteria

The following audit criteria were used:

- Codal provisions for project planning;
- Codal provisions for preparation of project estimates and for tendering and procurement;
- Terms and conditions of purchase orders;
- Operational and financial performance indicators fixed by the Company for telecom projects;
- Monitoring mechanism to ensure timely execution and handing over of projects to requisitioning territorial circles/telecom maintenance regions; and
- Guidelines pertaining to Advice of Transfer Debits (ATDs).

3.6 Audit methodology

The Report was prepared based on review of relevant documents, discussions with various levels of the Management and field visits. Statistical sampling techniques have been adopted for data analysis as detailed in ***Annexure-IV.*** Entry and exit meetings were also held in February 2008 and October 2008 respectively with the Management.

3.7 Acknowledgement

The cooperation and assistance extended by the Company Management and staff, at all levels, is acknowledged.

3.8 Audit findings

Audit observed deficiencies in planning of projects, procurement of equipment and stores, monitoring and execution of projects and quality of telephone service. The Company needs to address these deficiencies to improve the quality of service in light of competition from private operators, besides achieving the objectives of National Telecom Policy and Universal Service Obligations. These deficiencies are discussed in the succeeding paragraphs.

3.8.1 Planning

Telecom project planning primarily involves assessment of media requirement of telecom circles in the Company. This assessment is based on forecast of demand for telecom services, existing media capacity, technological options and media guidelines issued by Corporate office of the Company. Meetings at circle and Regional Trunk Planning

Committee (RTPC[2]) level were held to assess the media requirement and projects finalised. Further based on decisions taken in the meetings, project estimates were formulated and executed. Audit scrutiny revealed the following deficiencies in project planning.

3.8.1.1 Creation of huge transmission media capacity without demand

Transmission Media Planning guidelines issued (March 2005) by the Company provided for assessing demand for media requirement based on thrice the actual number of connections as of December 2004. This resulted in tripling of media capacity by December 2007. Contrary to this, actual demand for telephone connections increased from 45 million to about 69 million by December 2007, registering thereby an increase of 53 *per cent*.

Despite creation of surplus transmission media capacity, further increase of transmission media has been provisioned under new Transmission Planning guidelines (2008-2010), to meet transmission media capacity to 191 million telephone connections by December 2010.

The Corporate office, in reply (March 2008) to audit observation, stated that transmission network was built for taking care of long term demand upto 10 years. It was further stated that even though demand for telephone connections did not increase, the transmission media demand for the broadband connections had increased manifold. The reply was not convincing as there was a decline in basic telephone connections and no appreciable increase was noticed in broadband connections which stood at 20.32 lakh connection as of 31 March 2008. Besides, further augmentation of transmission media, as planned in new Transmission Planning guidelines (2008-2010), would increase capacity of transmission network manifold and consequent underutilisation.

The Management replied (February 2009) that there was not only acute shortage of Bandwidth (BW) to meet BW requirements of Broad bands and CMTS expansion but the Company also planned to become carrier over and above its requirement to generate revenue by selling BW itself. It was, however, agreed that the risk of obsolescence would be kept in view in future procurement.

3.8.1.2 Non-holding of regular meetings of RTPC and CPB

(i) As per the prescribed schedule, at least one meeting of RTPC during each year should be held in each zone. Review of records relating to planning committees (RTPC and CPB[3]) in NTP circle revealed few meetings during January 2003 to March 2008. Hence progress of 15 projects already sanctioned during 2006-07 was held up for 18 months till the next RTPC meeting in which these projects were modified.

It was intimated by the Management that RTPC was being held once in a year. The reply was not tenable as only four such meetings of RTPC were held in more than five years in NTP circle.

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[2] ***CGMs/GMs from all the territorial circles, Telecom Project circle, Telecom Maintenance Region of the concerned zone and Core Network Cell of Corporate office are the Members of RTPC. The zone-wise meetings of RTPC are coordinated by the Telecom Maintenance Region of the concerned zone and these meetings are mostly held once a year.***

[3] ***CPB- Circle Planning Board.***

It was also noticed that RTPC and CPB meetings were held by Telecom (Maintenance) Regions and territorial circles under various zones and not by TPCs who executed the projects. This implied that TPCs had no control over planning committee forums and could not convene these meetings to consider various issues regarding transmission network projects undertaken by them.

(ii) It was noticed in STP circle that RTPC meetings were held amongst STP circle, maintenance wing and the territorial circles to identify routes/schemes to be taken up for execution. However, out of 130 projects taken up for detailed study by Audit in STP circle, 41 projects (32 *per cent*) were not recommended by RTPC in its meetings.

The Management replied (February 2009) that the instructions had been issued for holding quarterly review meetings to review the status and changes/modifications in the projects for which monitoring would be done at the Corporate office. Besides, the Management also agreed to hold CPB/RTPC meetings on a periodic basis.

3.8.1.3 Inadequate forecast of demand for taking up new projects

Audit scrutiny of records of STP circle revealed that new projects were identified in CPB and RTPC meetings without reviewing utilisation of existing capacity. Also details of capacity utilisation of completed projects were not available with the respective DGMs. Thus, the major requirement of assessment of existing facilities while formulating project plans had not been complied with by STP circle.

The Management replied (February 2009) that the suggestion of Audit for taking into account the complete utilisation of existing media while formulating project plans had been noted for compliance.

3.8.1.4 Inadequate control mechanism and Management Information System

Instructions provide for regular interaction between heads of project divisions/territorial circles/Corporate office and heads of TPCs for avoiding unnecessary delays in formulation of plans for new telecom projects. For this a strong Management Information System (MIS) coupled with control mechanism are required, both at the level of each TPC as well as the Corporate office.

Audit checks revealed that no consolidated database/MIS of projects planned/in-progress/completed was maintained by NTP and ETP circles as well as the Corporate office for planning and monitoring of projects.

The Management replied (February 2009) that the suggestion of Audit for maintaining a detailed MIS of projects planned/in-progress/completed had been noted for compliance. It was further replied that action had been initiated for developing unified software by its IT circle for online uploading of the required details of projects at the level of DGM for proper monitoring.

Recommendation No 3.1

(i) The Company should ensure expansion of transmission media capacity keeping in view current trend of demand and actual expansion requirement.

(ii) The Company should ensure holding of CPB/RTPC meetings on need basis and also involve TPCs in convening of these meetings.

(iii) The Company should ensure establishment of proper control mechanism and MIS for creating consolidated database of projects at the levels of TPCs and the corporate office.

3.8.2 Tendering and procurement

3.8.2.1 Execution of work without inviting tenders

The project-cum-detailed estimate of Overlay Access Network (OAN) for West Polygon Kanpur city at a total cost of Rs.10.03 crore was sanctioned (August 2005) by CGM, NTP circle. The project estimate contained provision for trenching for laying of permanently lubricated pipes and construction of manholes.

Scrutiny of records revealed that open tender was not invited by DGM (TP), Lucknow for the above work to ensure competitive rates. Instead the entire trenching through horizontal directional drilling was done irregularly by contractors working on other sites and schemes at a cost of Rs. 3.03 crore.

On being pointed out by Audit, the local Management did not furnish any reply for justifying execution of work without inviting open tender.

The Management replied (February 2009) that the OAN works in Kanpur and Lucknow cities were got done through the tenders. It was further stated that these works were awarded to contractors as per 25 *per cent* extra provision in the tenders to save the time and for early commissioning of schemes and the rates available were similar in both the cities.

The Management's reply is not tenable as the above referred entire horizontal directional drilling work valuing Rs.3.03 crore was got done through contractors who were awarded work on various other sites and schemes, disregarding provisions and rules contained in the Manual of Procurement and thereby extending undue benefit to the existing contractors.

3.8.2.2 Short collection of bid security in tenders floated by NTP circle

Procurement manual of the Company provides that the value of bid security should be equal to two *per cent* of the estimated cost of stores proposed to be procured from lowest bidder in the tender, subject to a maximum of Rs. two crore. However, in 13 cases in NTP circle the bid security collected from the bidders was only 2 *per cent* of 30 *per cent* of the cost of package. This resulted in short collection of bid security of Rs.2.23 crore. The Management replied that bidders were asked to quote for 30 *per cent* quantity. The reply was not tenable as tenders were invited for 100 *per cent* quantity from all the bidders, in all cases.

The Management replied (February 2009) that the tendering for the procurement of material was multi-vendor based and the L-1 vendor was to be given 30 *per cent* of the

tendered quantity; and accordingly bid security was taken as 2 *per cent* of the 30 *per cent* of estimated cost to the store proposed to be procured.

The Management's reply is not tenable as the tenders were invited for 100 *per cent* quantity from all the bidders, in all cases and as per the provisions and rules contained in the Manual of Procurement, every bidder, while depositing his bid, was required to deposit bid security equal to two *per cent* of the total estimated cost of the material proposed to be procured in each of these tenders.

3.8.2.3 Procurement of equipment and stores

The Company procured equipment and material based on Manual of Procurement of Telecom Equipment and Stores. Audit observed the following deficiencies in procurement of equipment and stores for execution of projects by TPCs:

3.8.2.4 Undue benefit to contractors by NTP circle

CGM, NTP circle increased the Schedule of Rates (SOR) for construction of manholes for OAN works at Lucknow, Kanpur, Varanasi and Allahabad cities from Rs.30,000 per manhole to Rs.36,000 per manhole as a special case in October 2004. The increased rate was applicable for tenders to be floated upto December 2004 so as to complete OAN works of these cities by March 2005. DGM (TP) Lucknow accordingly invited tenders at higher SOR of Rs.36,000 after December 2004 for construction of manholes under OAN schemes and finalised rates ranging from Rs.38,952 to Rs.38,990 per manhole. Adoption of higher SOR resulted in extending undue benefit of Rs.1.53 crore in basic rates on construction of 2,553 manholes upto March 2008. Further, the work could not be completed till March 2005, defeating the very purpose of increase in SOR. Audit, however, noticed that DGMs (TP), Dehradun and Agra were able to execute the same work by adopting SOR of Rs.30,000 per manhole.

The Management replied (February 2009) that seeing the previous experience of getting higher rates ranging from Rs.36,000 per manhole to Rs.48,500 per manhole for the tenders floated for construction of manholes for OAN works at the above four cities, further tenders were also floated on the basis of the revised SOR.

The Management's reply is not tenable as the increase in the SOR for construction of manholes from Rs.30,000 per manhole to Rs.36,000 per manhole at these four cities was approved by the CGM, NTP circle as a special case for the tenders to be floated up to December 2004 only and not beyond that. Hence, floating of the tenders by the DGM (TP) Lucknow for the above work after the prescribed date of December 2004, that too at much higher rates ranging from Rs.38,952 to Rs.38,990 per manhole and without specific approval of the competent authority, was not justified.

3.8.2.5 Unauthorised procurement of polyethylene pipe by NTP circle

High-density polyethylene (HDPE) pipe is a decentralised item of store and the same was to be purchased by heads of circles, *i.e.* CGMs only with the concurrence of their Internal Financial Advisors. These powers for decentralised procurement were not to be further delegated to lower formations.

Audit noticed that GM (TP) Lucknow purchased 164 km of Double Wall Corrugated (DWC) HDPE pipes at a cost of Rs.1.45 crore during the period from February 2006 to November 2007 in violation of delegation of powers approved by Corporate office. Further engineering instructions for laying of OFC stipulate that Reinforced Cement

Concrete(RCC)/Galvinised Iron pipes should be used for providing protection to OFC and use of HDPE pipes is yet to be approved. This resulted in unauthorised procurement of DWC HDPE pipes valued at Rs.1.45 crore.

Also sample check by comparison of rates of similar dimensions of DWC HDPE pipes and RCC pipes revealed that procurement of 73.750 km DWC HDPE pipes in place of RCC pipes resulted in excess expenditure of Rs. 52.11 lakh.

On being pointed out by Audit, the Management stated that DWC HDPE pipes were being used in place of RCC pipes and were being procured by GM/DGM within their financial limits. The reply was not acceptable as GMs were not empowered to purchase the same; moreover, engineering instructions do not permit use of DWC HDPE pipes.

The Management replied (February 2009) that as per the engineering instructions issued by the Technical & Development (T&D) circle (received from Corporate office on 17 August 2005), DWC HDPE pipes could also be utilised for protection of OFC as preferable choice due to techno-economic consideration and, hence, DWC HDPE pipes were procured for protection of OFC in place of RCC pipe. It was further stated that as the RCC pipes were being procured by DGMs concerned, the DWC HDPE pipes were also procured by the DGMs locally.

The Management's reply that DWC HDPE pipe was a preferable choice in place of RCC pipe due to techno-economic consideration was not tenable as sample check done by Audit by comparison of rates of similar dimensions of DWC HDPE pipes and RCC pipes revealed that DWC HDPE pipes were costlier than the RCC pipes. Further, the competent authority for procurement of DWC HDPE pipes according to delegation of powers was only the CGMs and not the DGMs/GMs.

3.8.2.6 Non-completion of projects due to delayed procurement of equipment

Procurement of major telecom equipment was carried out centrally by Corporate office, based on consolidated demand put up by the circles as per the procurement manual. Audit scrutiny of Material Management and Planning Wings of the Corporate office revealed that during 2003-04 to 2007-08, requirements for 5,224 number of equipment {4,312 Synchronous Transport Modules (STMs) and 912 Dense Wave Division Multiplexings (DWDMs)} were placed by divisions under NTP circle and the same was finalised by Head Office of NTP circle. Against this, 3,653 number of equipment was approved by Corporate office and only 1,603 number of equipment (1568 STMs and 35 DWDMs) were actually procured during 2003-08. Actual procurement of equipment by Corporate office was only 31 *per cent* of demand raised by NTP circle.

Audit further found that against 679 and 362 numbers of STM equipment approved by Corporate office for procurement during 2004-05 and 2005-06, respectively, for NTP circle, actual procurement was only 310 and 315 number during these years. However, procurement of 943 number of STM equipment was made during 2006-07 without any demand from NTP circle. This delayed procurement by Corporate office resulted in non completion of 66 projects (out of 153 projects selected by Audit), having total outlay of Rs.174.51 crore, which were sanctioned during 2003-04 to 2007-08 pertaining to DGMs (TP), Jaipur, Lucknow, Dehradun, Jodhpur, Jalandhar and National Capital Region (NCR) Delhi.

The Management replied (February 2009) that as most of the rings for which the equipment was planned required infrastructure work, which was itself a time consuming job, accordingly, the procurement of the equipment was done in phased manner.

The Management's reply was not acceptable as procurement of the equipment by the Corporate office in a phased manner instead of as per the demand of the NTP circle, had resulted in delays in commissioning of the projects.

3.8.2.7 Irregular procurement of OFC

As per revised guidelines for Transmission Media Planning (March 2005), 96F OFC was not to be utilised in any of the schemes. Against these guidelines, during 2005-06 and 2006-07, 124 kms of 96F OFC was procured irregularly at a cost of Rs.1.44 crore. No reply to this observation was furnished by the Management (March 2009).

Recommendation No. 3.2

The Company should ensure compliance of provisions of the Manual of Procurement of Telecom Equipment and Stores by all TPCs while procurement of material and stores and execution of works/projects.

3.8.3 Execution of projects

Approval of competent authority not obtained before taking up the projects

3.8.3.1 Irregular execution of OAN works

The Company's Corporate office (Transmission Planning Cell) issued (March 2005) revised guidelines for transmission media planning which stipulated that all transmission works within SDCC[4] were to be carried out by territorial circles and project estimates should be sanctioned by territorial circles/heads of SSAs. In view this the primary responsibility for execution of Overlay Access Network (OAN) works rested with the concerned territorial circles.

Audit scrutiny of records of NTP circle and DGM (TP), Lucknow, revealed that 50 projects were sanctioned by NTP circle at a cost of Rs.334.78 crore and an expenditure of Rs.98.29 crore was incurred without obtaining sanction of projects/detailed estimates from concerned territorial circles. As such, these projects were executed without approval of the competent authority.

The local Management stated that there were clear cut guidelines for sanction and execution of OAN projects by TPCs. The reply was not tenable as after issue of revised guidelines and clarification thereto, the OAN project estimates were to be sanctioned by concerned territorial circles/heads of SSAs and not by TPCs. DGM (TP), Lucknow, accepted the facts.

The Management replied (February 2009) that since the NTP circle was doing execution of the OAN work including sanctioning of estimates prior to issue of new Transmission Guidelines, NTP circle continued the same practice, as the OAN projects were placed in top most priority by the Corporate office. It was further stated that the approval of Survey Report was obtained from SSA/circle concerned before the sanction of the estimate.

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[4] ***Short Distance Charging Centre is generally situated at Taluka headquarters and is the reference point for chargeable distance calculation for all the exchanges working in the Short Distance Charging Area (SDCA), which is declared as the Local Area.***

The Management's reply was not tenable as after issue of the revised Transmission Planning Guidelines 2005, the OAN project estimates were to be sanctioned by concerned territorial circles/heads of SSAs and not by the NTP circle.

3.8.3.2 Irregular expenditure on execution of work

(a) Audit noticed that DGM (TP), Lucknow commenced execution of 13 works during 2002-07 and incurred Rs.7.93 crore (upto September 2007) on execution of these works without obtaining sanction of projects/detailed estimates from the competent authority. These works were not of emergent nature, which was evident from the fact that some of these works were under progress as of March 2008. Execution of works without sanction of competent authority was irregular.

On being pointed out by Audit, the Management sanctioned DE/PE for most of the schemes which were under execution. Thus, execution of works without approval of competent authority defeated the very purpose of sanction of project/estimate detailed estimates for exercising financial control.

The Management replied (February 2009) that in future care would be taken to ensure sanctioning of the estimates by the competent authority prior to execution of the work.

(b) Audit scrutiny of records of OAN works pertaining to Ghaziabad, Noida, Yamuna Nagar, Panipat and Karnal city under NTP circle revealed execution of extra work by divisions without approval by the competent authority resulting in irregular expenditure of Rs.1.99 crore. The local Management replied that matter would be taken up with the higher authorities for approval of increase in works.

The Management replied (February 2009) that the approval of SSA for modified OAN works was being obtained.

(c) Similarly, irregular expenditure of Rs.2.09 crore was incurred in one project executed by DGMs (TP) Lucknow under NTP circle, which was 49 *per cent* higher than the sanctioned cost of Rs.4.24 crore.

The Management replied (February 2009) that due to change in the project, some equipment had increased resulting in increase of cost of project and accordingly the project estimate and detailed estimate were being revised for sanction from the competent authority.

(d) Scrutiny of records relating to procurement and installation of 29 number of Digital Circuit Multiplication Equipment by DGM (TP), Satellite Communication Project NTP revealed that Rs.8.99 crore was incurred against the sanctioned cost of Rs. 7.80 crore resulting in irregular expenditure of Rs.1.19 crore. The local Management replied (May 2008) that the estimate was revised in August 2005 to Rs.12.62 crore and sanction of competent authority was awaited.

The Management replied (February 2009) that the estimate had already been revised and it was under sanction.

3.8.3.3 Irregular expenditure on splitted works

(a) Project estimate for OFC Overlay Access Network (OAN) for Central Polygon of Kanpur city connecting Benajhabar Govind Nagar and Lajpat Nagar exchanges was sanctioned (May 2004) by CGM, NTP circle. Based on this Divisional Engineer (DE), TP, Kanpur prepared detailed estimate for Rs.7.80 crore, which was not approved by GM

(TP), Lucknow due to incorrect application of schedule of rates. DGM (TP), Lucknow split the project in two parts to avoid sanction of higher authorities and accorded sanction (March 2005) for two Project-cum-Detailed estimates for Rs.3.00 crore each.

Audit scrutiny further revealed that expenditure of Rs.7.67 crore was incurred during the period from February 2005 to December 2007 against both these estimates, which were irregularly sanctioned. Despite incurring irregular expenditure the project still remained incomplete.

The Management replied (February 2009) that the project was sanctioned by the CGM (NTP) but based on the urgent requirement of the SSA/circle, the detailed estimate was prepared and sanctioned by the DGM.

The Management's reply is not tenable as the DGM (TP) Lucknow had split the project into two parts without obtaining prior approval of the competent authority, the detailed estimate of which was otherwise required to be approved by the CGM (TP), Lucknow. Hence, splitting of the project in two parts by the DGM (TP), Lucknow was irregular.

(b) As per delegation of financial powers, DGM (TP) was empowered to award work upto Rs. one crore through open tender. GM (TP) was empowered to sanction individual works each costing upto Rs. three crore and for rest of the cases respective CGM of the circle was empowered. Scrutiny of records pertaining to OAN Projects for Ghaziabad City (Phase-II), Faridabad City, Phase-I Noida City, Panipat City, Hissar, Karnal city and Yamuna Nagar revealed that works valued Rs.16.79 crore were splitted into parts so that delegation remained within the powers of DGM (TP) and approval from higher competent authority was avoided.

The Management replied (February 2009) that the whole planned OAN work was not taken up for execution as it would have required huge inventory that might not have been put to use and commensurate revenue would not have been earned. To avoid such situation only part of planned OAN was taken for execution that could be put to use immediately after commissioning. It was further stated that since phase-wise implementation was decided, estimates falling in the financial powers of DGMs were sanctioned by concerned DGMs.

The Management's reply is not tenable as the works need not be split to avoid piling up of inventory. By better planning for inventory procurement, the delivery of inventory could be taken in phases from the vendors as per the execution schedule of the works. The DGMs (TP) had split the above works without prior approval of the competent authority, the detailed estimates of which otherwise were required to be approved by the higher authorities, which was irregular.

Requisite clearance for project/scheme routes not obtained

3.8.3.4 Delay in obtaining permission from Forest Department

In WTP circle, a project estimate for Satna-Panna-Chhattarpur OFC route was sanctioned for Rs. 7.30 crore in November 1997. A part of work crossing Panna National Park area was stopped by the Forest Department for not obtaining their permission before the commencement of work. The route between Satna-Panna was completed in March 2001 after incurring an expenditure of Rs.4.76 crore but could not be used due to non-completion of the remaining route. Further Rs. one crore had to be paid for afforestation

fund along with Rs. six lakh for additional right of way to Forest Department in September 2006.

On being pointed out, it was stated that the work was delayed due to right of way permission in Reserve Forest Area. Had the WTP circle obtained the requisite permission from the Forest Department before commencement of work, blocking of capital expenditure of Rs.4.76 crore for the last seven years could have been avoided. As such purpose for which the OFC route was planned had been defeated.

The Management replied (February 2009) that out of Satna-Panna-Chhatarpur OFC route, Satna-Panna route could be commissioned in 2001 itself but Panna-Chhatarpur route could not be commissioned due to non-receipt of permission from Forest Department. It was further stated that the Forest Department referred the case to the Central Empowered Committee of the Supreme Court and on the order of the Supreme Court, the Company paid afforestation fund and now the work was at completion stage.

The Management's reply was not tenable as had the work been commenced after obtaining requisite permission from the Forest Department, the entire work on Satna-Panna-Chhatarpur OFC route could have been completed in one go and blocking of capital for more than seven years could have been avoided.

3.8.3.5 Loss due to laying of OFC without permission from NHAI

CGM, STP circle sanctioned (December 2001) a project estimate of Rs. 3.47 crore for laying 24F OFC in Tirunelveli– Valliyur route under DGM (TP) Madurai. While the work was in progress, National Highway Authority of India (NHAI) had commenced four ways laning of highway from Madurai to Kanyakumari section and consequently the OFC work had to be stopped as it fell in that route.

Audit scrutiny of the records revealed that the project was commenced without the permission of NHAI and an expenditure of Rs.1.61 crore was incurred. Consequently, Rs. 99.56 lakh pertaining to cost of diverted inventory, had to be transferred to other schemes/units and balance amount of Rs.61.87 lakh, being the cost of tendering, restoration charges, contractors' bills, cost of stores utilised and miscellaneous expenditure was proposed to be written off.

On this being pointed out, the local Management stated that only oral permission was sought from NHAI before commencement of the work and road restoration charges of Rs.7.11 lakh were also paid to NHAI at that time.

The fact remained that due to failure on the part of STP circle to obtain proper written permission from NHAI before commencement of the work, the Company was not in a position to claim compensation for loss of its property worth Rs.61.87 lakh from NHAI. STP circle had proposed (July 2007) to write off the above amount but the Corporate office had not accorded approval for the same (April 2008).

The Management replied (February 2009) that even if, written permission was obtained from NHAI for laying OFC along National Highway after paying the necessary restoration charges, they did not give compensation for shifting of pipes/cable damages rather the pipes/cable had to be shifted by the Company at its own cost.

The Management's reply was not tenable as had the Company waited for prior written permission from NHAI, and in case it was denied, the route of this work could have been

shifted and incurring of the above mentioned wasteful expenditure of Rs.61.87 lakh could have been avoided.

3.8.3.6 Blocking of capital on OFC Network for Indian Air Force

As per the Company's Corporate office instructions, advance deposit should be collected for works executed on behalf of other organisations.

Department of Telecommunications (DoT) entrusted (April 2006) the Company to create an alternate network for Indian Air Force in order to vacate the existing frequency spectrum for launch of 3G mobile services. Accordingly, Board of Directors of the Company decided (May 2006) to execute the Internet Protocol Multi Protocol Label Switching (IP MPLS) based OFC Network for Indian Air Force through all the four TPCs. CGM, STP circle was nominated as the Nodal Officer for planning, execution and monitoring of this work. After finalisation of tender, STP circle awarded (March 2007) the work to HCL Infosystem Limited for planning, engineering, supply, installation and commissioning of this network.

The project cost was estimated at Rs.1,164 crore by the Company and the entire capital cost was to be paid by DoT to the Company on deposit work basis. The project was initially proposed to be completed by October 2006 but due to delays in infrastructure readiness at Indian Air Force sites, the project was expected to be competed by March 2009. Audit noticed that against an estimated cost of Rs.1,164 crore, the Company failed to collect any advance deposit from DoT, which was a violation of its own instructions. Further, the Company had incurred an expenditure of Rs.624.54 crore till January 2008 on the project, while the reimbursement made (March 2008) by DoT was only Rs. 158.60 crore. Thereafter, no amount has been reimbursed by DoT to the Company despite reminders.

Thus, failure on the part of the Company to collect advance deposit from DoT, resulted in blocking of capital of Rs. 465.94 crore and consequent loss of interest of Rs. 46 crore *per annum*.

The Management accepted (February 2009) that despite repeated reminders, DoT had not reimbursed the expenditure so far incurred on the project.

3.8.3.7 Lack of budgetary control

The funds for different projects/schemes should be requisitioned by divisions/sub-divisions executing projects/schemes based on actual requirements and allotted funds should be efficiently utilised. The actual expenditure in excess of allotted funds, if any, should be sanctioned by the competent authority.

The Corporate office issued instructions from time to time to review the expenditure on capital outlay. During review of records relating to budget allotment and actual expenditure incurred in WTP circle for the year 2006-07 it was observed that:

(i) In respect of 12 service component heads for which no funds were allotted by Corporate office, an expenditure of Rs.13.29 crore was incurred without the prior permission of Corporate office.

(ii) Under the service head 'OFC cable', an expenditure of Rs.134.80 crore was incurred against the allotment of Rs.62.38 crore resulting in excess expenditure of Rs.72.42 crore over allotted funds.

Thus, expenditure of Rs.85.71 crore without allotment of funds/prior permission of the Corporate office was irregular and showed lack of budgetary control over expenditure by WTP circle.

The Management replied (February 2009) that in future it would be ensured to keep the expenditure well within the allotment.

3.8.3.8 Loss of estimated revenue due to delays in execution of projects

Audit scrutiny of records pertaining to execution of projects by WTP circle (Mumbai, Pune, Nagpur, Ahmedabad, Bhopal, Jabalpur divisions), NTP circle (National Capital Region, Satellite Communication Project, Jodhpur, Jalandhar, Dehradun, Lucknow divisions), STP circle (Eranakulam, Bangalore, Madurai, Salem divisions) and ETP circle (OFC Kolkata, circle office, Bhubaneswar, Patna, Ranchi divisions) revealed that commencement, completion and commissioning of 294 projects executed by these circles during 1999-00 to 2007-08 were delayed for periods ranging from one month to seven years as detailed in ***Annexure-V***. These delays resulted in loss of estimated revenue of Rs.632.73 crore.

Delays in commissioning of these projects were attributable mainly to delayed/non-receipt of equipment, non-allocation of satellite frequency, delays in obtaining permission for right of way from different authorities and lack of coordination between TPCs and Telecom Maintenance Regions for taking over of completed projects.

The Management replied (February 2009) that instructions were being issued to the field units to avoid delays in execution of projects and hand over the completed projects immediately after commissioning in future.

3.8.3.9 Excess expenditure on execution of projects

Out of 138 projects, each costing Rs. one crore and above, executed by WTP circle during 2003-08 and examined by audit, it was noticed that in 16 completed projects the actual expenditure had exceeded their sanctioned cost by Rs.8.79 crore due to erroneous booking of overheads and excess drawal of stores.

On being pointed out, local Management replied that action would be taken for preparation of revised estimates after verification and checking of expenditure incurred with related bills.

The Management replied (February 2009) that action was being taken to revise the project estimates. It was further stated that in order to avoid repetition of such error in future, it would be ensured that required provision for overhead charges would be made in future project estimates.

Deficiencies in payments to contractors

3.8.3.10 Non-levy of penalty by NTP circle on the contractors

(a) As per tender documents a maximum of 10 *per cent* of the estimated cost of contract, was recoverable from the contractors for delay in execution of the work.

Audit scrutiny of OAN works awarded to different firms under DEs (TP), Kanpur and Lucknow, revealed that there were delays ranging from 2 to 64 weeks in completion of cable laying work on different routes in Kanpur and Lucknow. Extension of time (EOT) was granted to contractors frequently on the basis of non-availability of PLB pipes/stores

and non-availability of permission from local authorities during the course of execution of these works. Audit noticed that despite availability of sufficient PLB pipes in stores, the stock position was never verified by DGM (TP) before granting EOT to the contractors. Besides, permission from local authorities for execution of works was required to be obtained by the Management with assistance of contractors before execution of works, but both Management as well as the contractors failed to timely obtain the required permission from the local authorities.

Thus, failures on the part of the local Management to verify the stock position of PLB pipes in stores before granting EOT to the contractors as well as failure on the part of the Management and the contractors to obtain timely permission from local authorities for execution of works, resulted not only in delays in execution of works but the Management could also not levy penalty of Rs.27 lakh on the contractors for delays in execution of works.

The Management replied (February 2009) that the works were started in anticipation that early permission would be granted by the local authorities but at later stage, the permission was delayed due to different reasons. It was further stated that as the delay was not on the part of contractors, but on part of the Company, therefore, penalty was not levied on contractors for the delays.

The Management, however, did not reply as to why the local management failed to verify the stock position of PLB pipes in stores before granting EOT to the contractors.

(b) Scrutiny of records of DGM (TP), NCR pertaining to execution of OAN and Manhole works for Ghaziabad Phase-II, Noida Phase I (Part I and II), Gurgaon Phase II, Hissar, Panipat, Yamuna Nagar, Faridabad and Ambala revealed that in each case the extension for execution of works was granted to the contractors without imposing liquidated damage charges for delays in execution of works on the ground that the permission for road cutting was not granted by the concerned civic authorities. However, letters written by the Company/contractors to the civic authorities for granting permission for road restoration were not on record. In the absence of any document in support of hindrance of work, the reason for not imposing penalty of Rs.1.31 crore for delays in completion of works was not found justified.

The local Management stated that extension of time was granted without imposing penalty due to non-availability of road restoration permission. The reply furnished by the local Management could not be verified as documents to show efforts made by the Company /contractors to obtain permission from civic authorities were not produced in support of reply.

The Management accepted (February 2009) that no formal letters/reminders were written to local authorities for expediting permission for execution of works, however, it was stated that the same would be done in future to keep the things on record.

3.8.3.11 Advance payment to HCL Infosystem Limited in violation of purchase order

In March 2007, STP circle placed purchase order on HCL Infosystem Limited (HCL) for supply, installation and commissioning of IP MPLS Network for Indian Air Force at an estimated cost of Rs.506 crore. As per terms and conditions of the purchase order, payments were to be released to HCL, (i) 30 *per cent* on supply of all the equipment, (ii) 50 *per cent* on installation, commissioning and acceptance testing of equipment, and (iii)

20 *per cent* after one year of successful installation and commissioning of the entire network.

Based on the approval conveyed (March 2008) by the Corporate office, STP circle released (March 2008) Rs. 131 crore to the supplier as advance payment against 50 *per cent* payment, which was required to be made only after installation, commissioning and acceptance testing of equipment. This resulted in undue benefit of Rs. 131 crore to HCL.

On being pointed out, local Management stated that advance was released to HCL as per orders issued by the Corporate office. The reply was not tenable as terms and conditions of the purchase order did not permit the same.

The Management replied (February 2009) that as the delay was not attributable to HCL, Management Committee of the Company approved for release of payment by taking bank guarantee (BG) of equivalent amount. It was further apprised that the case for payment to HCL was taken up when HCL approached Secretary (Telecom) to release the payment against a BG of an equivalent amount and accordingly payment was made after approval by the Company's Management Committee.

The Management's reply was not tenable as release of Rs.131 crore to the supplier as advance payment was against the terms and conditions of the purchase order.

Recommendation No.3.3

The Company should ensure compliance of delegation of powers and other instructions issued by the Corporate office pertaining to sanction and execution of the projects including collection of advance deposits and release of payments to the contractors.

3.8.4 Utilisation of completed projects

3.8.4.1 Completion reports of schemes/projects not released

On completion of project/scheme an indication to that effect was to be made in the Estimate Register and a Completion Report (CR) was to be released. It was also imperative that undue delays should not occur in the release of CR of any work which was physically completed.

Audit scrutiny revealed that CRs pertaining to 57 projects completed by the NTP circle[5] during 2004-08 and 77 projects completed by the WTP circle[6] during 1999-08 at a total cost of Rs. 54 crore and Rs. 129 crore, respectively, were yet to be released.

Non-release of CRs was not only a violation of the existing instructions but also resulted in non-issue of ATDs and non-capitalisation of expenditure of Rs.183 crore. Hence depreciation to that extent could not be charged and consequent benefit on reduction in Corporate tax could not be availed.

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[5] ***DGMs (TP), National Capital Region, Satellite Communication Project, Lucknow, Jodhpur and Dehradun.***

[6] ***West Maharashtra Area (Mumbai), South Maharashtra Area (Pune), West Madhya Pradesh (Bhopal), East Madhya Pradesh (Jabalpur), Gujarat Region (Ahmedabad), East Maharashtra Area (Nagpur) Divisions.***

No reply was furnished by concerned divisions of NTP circle with regard to delay in issue of CRs. However, WTP circle replied that concerned divisions would be asked to release the completion reports.

The Management replied (February 2009) that efforts were being made to release Completion Reports of all completed works. It was further stated that strict watch would be kept at circle level for this work.

3.8.4.2 Non-acceptance of ATDs for completed works

As per Telecom Accounts Manual, ATDs received by units should be adjusted in accounts in the same month in which it is received.

Scrutiny of ATD Registers pertaining to the years 2003-08, revealed that 241 ATDs pertaining to projects costing Rs.118.49 crore raised by DGM (WMA) Mumbai, DGM (EMA) Nagpur, DGM (SMA) Pune, DGM (TP) Jabalpur, DGM (TP) Ahmedabad and DGM (TP) Bhopal under WTP circle remained unaccepted by the requisitioning territorial circles/Western Telecom (Maintenance) Region mainly due to lack of timely making over of ATDs and non-submission of supporting documents. As a result, the Company could not capitalise these projects and avail deduction in payment of Corporate tax on account of depreciation.

On being pointed out by Audit, Western Telecom (Maintenance) Region stated that the main reason for non-acceptance of ATDs was non–furnishing of details of expenditure on each component of these projects.

The Management replied (February 2009) that routes/schemes commissioned were under process for making over to Western Telecom (Maintenance) Region / concerned circles, therefore, ATDs were pending. It was further, stated that efforts were being made to get them accepted from the concerned units.

3.8.4.3 Abandoning of Microwave schemes

In the CGMs (Maintenance) conference and Management Meeting of WTR held in May 2003, emphasis was laid on closure of all Microwave systems which were not loaded fully in order to save spectrum charges. It was further decided that the Digital Microwave systems should be fully loaded with Trunk Automatic Exchange traffic and utilised as an alternate route in case of failure of PDH/Linear routes.

Audit scrutiny of relevant records in WTP, NTP and ETP circles, revealed that of the 11 Microwave schemes valued at Rs. 44.50 crore taken up by these circles during the period from February 1998 to March 2001, only six schemes were commissioned by July 2005 and remaining five schemes could not be commissioned due to deficiencies in their equipment as detailed in ***Annexure-VI***. Of the six schemes commissioned, none could be put to use due to obsolescence of microwave technology and operation of alternative OFC routes. Consequently, all 11 Microwave schemes had been proposed for scrapping by the local Management on the ground of availability of better transmission media on OFC. Thus, expenditure of Rs. 44.50 crore incurred on these Microwave schemes remained blocked.

The Management replied (February 2009) that due to availability of better transmission media on OFC system, the microwave technology became obsolete resulting in abandonment of microwave schemes. It was further stated that action was being taken for scrapping of the abandoned microwave equipment.

3.8.4.4 OFC routes remained underutilised

After decentralised procurement of OFC upto 24F for long distance projects, the TPCs were authorised to procure OFC on the basis of requirements received from their field units as planned in the RTPC meetings, but for getting the transmission equipment, the TPCs were dependent on the Corporate office.

During review of records in WTP circle, it was noticed that OFC was laid by its divisions on 107 routes to support SDCC rings for expansion of Broadband and Mobile Telephone services. However, these routes could not be fully loaded, as against the requirement of 2478 numbers of Synchronous Transport Module level-16 Add-Drop Multiplexer (STM-16 ADM) transmission system equipment, only 440 numbers of STM-16 ADM equipment were supplied by the Corporate office upto 2007-08. Thus, due to non-supply of the required number of STM-16 ADM equipment by the Corporate office, 107 OFC routes remained underutilised and the plan for expansion of Broadband and Mobile Telephone services was defeated. The Company also suffered loss of potential revenue, which could have been earned from expansion of Broadband and Mobile Telephone services.

On being pointed out by Audit, while accepting the facts, local Management stated that the traffic was partially loaded in the SDCC rings and all the rings could not be commissioned due to shortage of equipment.

The Management replied (February 2009) that 2500 number of STM-16 ADM equipment had been ordered for WTP, which were under supply.

3.8.4.5 Unproductive expenditure on laying of higher capacity OFC

In WTP circle against its plan to lay 24F OFC on two routes between Prabhadevi - Dahisar and Thane - Panvel, prepared detailed estimates for laying higher capacity 48F OFC on both these routes for a length of 40 km each. Detailed estimates were prepared on the presumption that 50 *per cent* of the fibres of OFC would be shared with the Mahanagar Telephone Nigam Limited (MTNL), Mumbai. Accordingly, both these routes were commissioned during the year 2002. Since commissioning of these routes, a maximum of 20 fibres of OFC were being utilised by Western Telecom Region (WTR) and the remaining fibres remained idle. Hence, laying of higher capacity 48 F OFC, the cost of which was almost eight times more than the 24F OFC, resulted in unproductive expenditure of Rs. 2.19 crore, being the cost differential of 24F and 48F OFC.

On being pointed out by Audit, local Management stated that proposals were under process for sharing of OFC with MTNL. But the fact remained that both the higher fibre capacity OFC routes laid by the WTP circle could not be utilised fully during the last six years upto 2007-08.

The Management replied (February 2009) that about a year back, the Company Headquarters had issued guidelines for laying OAN scheme in Mumbai city area and these fibres would be used for extending fibres to the premium customers in Mumbai city area.

The Management's reply was not tenable as the Company cannot have OAN scheme and extend telecom service to customers in Mumbai city area as this area is under the operational jurisdiction of MTNL only.

3.8.4.6 Non- disposal of unserviceable/obsolete stores

In order to avoid loss due to deterioration of unserviceable/obsolete stores, the same should be promptly disposed off after following the accounting policy/procedure of the Company. However, review of records pertaining to unserviceable/obsolete stores of Lucknow and Kanpur divisions under NTP circle and divisions of ETP circle in Orissa area, revealed that substantial quantity of unserviceable/obsolete stores valued at Rs. 2.98 crore[7] were lying for disposal as on March 2008 resulting in blocking of capital of Rs. 2.98 crore.

On being pointed out by Audit, local Management stated that the disposal of these unserviceable/obsolete stores was under process. Any further delay in their disposal would decrease their realisable value.

The Management replied (February 2009) that except Lucknow and Kanpur divisions, the unserviceable/obsolete store had already been disposed off in other divisions and action was being taken for early disposal of the said stores in Lucknow and Kanpur divisions.

Recommendation No. 3.4

The Company should ensure timely issue of completion reports pertaining to completed projects, handing over of commissioned projects, issue and acceptance of ATDs for avoiding delays in capitalisation of the projects.

3.8.5 Non/improper maintenance of prescribed records of projects/schemes/works

For proper recording of work done and accounting of expenditure, Measurement Books (MBs) and prescribed Registers (like Works registers, Hindrance registers, Agreement registers) should be properly maintained by the TPCs. However, audit scrutiny revealed deficiencies in maintenance of MBs and prescribed Registers in the NTP circle as detailed in ***Annexure -VII.***

The Management replied (February 2009) that instructions were being issued to all field offices to properly maintain the prescribed MBs/Registers with requisite details. It was further stated that all Inspecting officers would also check the details entered in these MBs/ Registers during their inspections henceforth.

Recommendation no 3.5

The Company should ensure proper maintenance of Measurement Books and various Registers prescribed for recording details of the projects.

3.8.6 Inadequate control mechanism

As per existing instructions, regular interaction between heads of divisions/ territorial circles/Corporate office and heads of TPCs for ensuring economical, efficient and effective execution of new telecom projects/schemes is a must, for which laid down control mechanism and MIS is required to be maintained both at the levels of head office of each TPC and the Corporate office.

However, test check of records revealed that no consolidated database of projects planned/in-progress was maintained by NTP and STP circles or by the Corporate office for monitoring economical, efficient and effective execution of telecom projects/schemes.

[7] *Rs. 0.32 crore - Kanpur, Rs. 0.87 crore - Lucknow, Rs. 1.79 crore - Orissa area*

The Management replied (February 2009) that unified software was required for the Management Information System for the entire Project circles that would be developed by Information Technology Cell.

3.8.7 No significant improvement in quality of service

Projects executed by TPCs of the Company were mainly for augmentation of transmission network for ensuring uninterrupted flow of telecom traffic of the Company as well as other operators in inter-circle and intra-circle locations. Hence benchmarks for various quality of service parameters, *viz.*, call completion rate in local network for wire line services, accumulated downtime of community isolation for wireless services, call set up success rate, call drop rate, *etc* should have been prescribed in the project estimates. Further, achievement of these benchmarks should have been closely monitored to ensure benefits of huge expenditure on execution and commissioning of projects/schemes by TPCs.

However, above benchmarks were not prescribed in the project estimates by the Management on the plea that these 'quality of service' parameters were not transmission parameters. Plea of Management was not tenable as in the absence of these parameters, neither the quality of performance of long distance transmission network laid by the TPCs could be ensured nor expenditure incurred on projects/schemes by TPCs could be justified.

It was further noticed that the Telecom Regulatory Authority of India (TRAI) had been bringing out quality of service reports on quarterly basis highlighting achievement of various benchmarks for improving overall quality of service of Wire line and Wireless telephone services by different telecom operators in different circles. The Corporate office of the Company has been reviewing these reports of TRAI for taking corrective action.

Test check of quarterly quality of service reports of TRAI revealed no significant improvements in the quality of service of the Company's Wire line and Wireless telephone services in Bihar, Jharkhand, Tamil Nadu and Kerala circles due to non achievement of quality of service benchmark prescribed by TRAI.

The Management replied (February 2009) that TPCs were responsible for planning and execution of long distance transmission networks in inter-circle and intra-circle locations and the benchmarks for various quality of service parameters were not monitored by TPCs as the projects/schemes were handed over to Maintenance regions after installation and commissioning. It was further stated that the "Bit error rate" and other parameters pertaining to quality of service for the transmission networks were being maintained by respective Maintenance regions and some of the parameters, which were service dependent, such as wire line and wireless categories, were maintained by territorial circles.

The Management, however, did not reply as to why benchmarks for various quality of service parameters were not prescribed in the project estimates to ensure benefits of huge expenditure incurred on execution and commissioning of projects/schemes by TPCs.

3.9 Conclusion

The primary objective of New Telecom Policy-1999 was to create a modern and efficient telecommunications infrastructure taking into account convergence of Information

Technology, media, telecom and consumer electronics, and thereby propel India to the forefront in the global telecom scenario.

In order to achieve the above objective of providing efficient telecommunications infrastructure, the Company had to plan and execute various long distance transmission projects/schemes through its Telecom Project Circles for ensuring uninterrupted flow of telecom traffic through out the country.

Audit observed systemic deficiencies in planning, procurement of equipment and stores, quality of telephone services, execution and monitoring of long distance projects/schemes and their timely handing over to user circles. Audit also found compliance deficiencies in TPCs, its divisions and sub-divisions which undermined the overall performance of the TPCs. These deficiencies are to be addressed urgently by the Company to have a competitive edge over private telecom service providers, besides achieving the objective of National Telecom Policy.

The matter was referred to the Ministry/Management in December 2008. The Management replied (February 2009) that the Company was striving to achieve the objectives of NTP-99 for which long distance network was being expanded rapidly through planning and execution of various transmission projects/schemes by TPCs and these projects/schemes were being commissioned and capitalised as soon as possible to avoid the revenue loss. It was further stated that in case of delay of the projects/schemes, necessary steps were undertaken for commissioning with minimum of delay time. It was also stated that the suggestions of Audit had been taken to improve the planning and execution of transmission projects/schemes.

The matter was reported to the Ministry in December 2008; reply was awaited (March 2009).

MINISTRY OF PETROLEUM AND NATURAL GAS

CHAPTER IV

Chennai Petroleum Corporation Limited

Capacity expansion and creation of infrastructure at Cauvery basin refinery

Highlights

The expansion of the Cauvery basin refinery was not commensurate with the projected deficit of products in the market zone served by the refinery.

(Para 4.8.2)

Delay in award of work resulted in transport of 475 Thousand Metric Tonne of crude from Chennai by incurring additional cost of Rs.6.75 crore.

(Para 4.9.1)

Undertaking re-survey of area consequent to the serious infirmities in the earlier geo-technical study resulted in additional expenditure of Rs.1.10 crore.

(Para 4.10.1)

The under utilisation of capacity resulted in excess consumption of steam and power to the extent of Rs.4.05 crore and over absorption of fixed overheads by Rs.16.59 crore.

(Para 4.11.1)

Transportation of crude in smaller parcels than the projected size of 15000 MT resulted in additional shipments leading to extra expenditure towards transportation by Rs.5.46 crore during 2004-05 to 2007-08.

(Para 4.11.2)

The Company incurred a loss of Rs.172 crore during 2004-05 and 2005-06 on sale of intermediate residual crude oil (RCO) as Low Sulphur Heavy Stock due to absence of secondary process unit. Had this RCO been transported to Chennai and then processed in the secondary process unit, the Company could have generated additional revenue of Rs.38.63 crore during 2005-06 and 2006-07.

(Para 4.11.4)

Summary of recommendations

The Company may:

1. ***Prepare a suitable long-term plan to ensure continued viability of the refinery.***
2. ***Pursue with the GOI for allocation of crude from Ravva oil fields to ensure the economic operation of the refinery.***
3. ***Put in place a better contract management system in which the contractor's work is monitored on a day to day basis and disputes resolved in a timely manner.***
4. ***Review the norms for consumption of utilities in view of continued reduction in thruput.***
5. ***Examine the possibility of third party usage of the jetty to further augment the revenue.***
6. ***Explore the possibility of either installing a secondary process unit or work out the economy in transporting the intermediate product to Manali refinery for further processing and getting additional margins.***

4.1. Introduction

Chennai Petroleum Corporation Limited (Company) was incorporated in December 1965 as Madras Refineries Limited under a formation agreement amongst Government of India (GOI), National Iranian Oil Company of Iran (NIOC) and AMOCO India Inc., of USA. The Company commissioned (June 1969) a refinery at Manali, Chennai with an installed capacity of 2.5 million metric tonnes *per annum* (MMTPA) which was augmented to 9.5 MMTPA (as on March 2008) over a period of time. The Company became a subsidiary of Indian Oil Corporation Limited (IOC), by virtue of IOC acquiring (March 2001) the GOI's shareholding of 51.81 *per cent*.

The Company commissioned another refinery at Cauvery basin (near Nagapattinam) in November 1993 at a total cost of Rs.196 crore for processing of low sulphur crude produced from the Cauvery basin (onshore) of Oil and Natural Gas Corporation Limited (ONGC). Based on the initial projections of ONGC, the capacity of the Cauvery basin refinery (CBR) was designed at 0.5 MMTPA which could be enhanced to 0.65 MMTPA at no extra cost. Some important and critical facilities were, however, required to be added for a capacity of 1.0 MMTPA.

In 1997, the GOI awarded the production sharing contract for PY-3 offshore well to PY-3 Consortium[1] and nominated the CBR as the recipient refinery for crude from PY-3. The production of crude at PY-3 wells was estimated at 0.4 MMTPA. The PY-3 crude had similar characteristics as the crude from ONGC on-shore wells and was ideally suited for processing at CBR. The offshore wells were located around 75 km to the north east of Nagapattinam. On the recommendations (1997) of the consultant, Engineers India Limited (EIL), the Company decided (June 1997) to construct an oil jetty and setting up of Marine Crude Receipt Facilities off Nagapattinam coast at an estimated cost of Rs.55 crore. The estimate was subsequently revised to Rs.96 crore (September 1999).

[1] ***Hardy exploration & Production (India) Inc, ONGC, Tata Petrodyne Limited and Hindustan Oil Exploration Company Limited.***

Based on the crude availability from PY-3 and to effectively utilise capacity of the existing equipment, the Company decided (June 1997) to expand capacity of the CBR to 1.0 MMTPA. The expansion was completed (September 2002) at a cost of Rs.24.31 crore and the jetty was commissioned (March 2003) at a cost of Rs.91.58 crore.

The Management stated (October 2008) that the capacity was improved from 0.5 MMTPA to 1.0 MMTPA through a debottlenecking exercise and there was no major revamp or expansion of the refinery.

4.2 Scope of Audit

The performance audit reviewed the planning and implementation of the expansion of CBR along with the creation of infrastructure facilities (*viz.* jetty) and the performance/operation of refinery and jetty facilities during post-expansion period from April 2003 to March 2008. The Company increased the refining capacity from 0.5 to 1.0 MMTPA and created infrastructure to meet the requirement of petroleum products in the market zone served by CBR. The performance audit was undertaken to assess the extent of utilisation of the infrastructure created and to examine whether the intended objectives were achieved.

4.3. Audit objectives

Audit reviewed the planning and implementation of the expansion of the refinery and creation of infrastructure with the following objectives:

- Examine the need for capacity expansion;
- Examine whether the decision of capacity expansion/creation of infrastructure was preceded by a detailed study of related issues like availability of crude, expected demand, *etc;*
- Examine the delays in execution of works; and
- Assess the adequacy and utilisation of the infrastructure created.

4.4. Audit criteria

Following criteria were mutually agreed with the Management in the Entry conference held in April 2008;

- Approved proposal for going in for expansion/debottlenecking and creation of infrastructure facilities;
- Approved investment proposal;
- Detailed project report for execution of the project;
- Crude oil sales agreement (COSA) for supply of crude;
- Industry standards/standards set by the Company for economy in operation; and
- Approved marketing arrangement with Oil Marketing Companies (OMC) for sale of products.

4.5. Audit methodology

Audit reviewed Detailed Project Report (DPR)/Feasibility report for the creation of infrastructure, Memorandum of Understanding (MOU) with ONGC/Crude oil supply

agreements (COSA) with, PY-3 Consortium for supply of crude, MOU/agreements with Oil Marketing Companies (OMC) for marketing the products and actual performance *vis-a-vis* the expected performance. Entry and exit discussions were also held with the Management.

4.6. Acknowledgement

The cooperation and assistance extended by the Management at all levels is acknowledged.

4.7. Audit findings

4.7.1. Physical performance

Performance of the refinery during the last five years ended 2007-08 was as shown below:

Table 4.1

Year	Actual Thruput (in tonnes)	Percentage of achievement	
		To target (700000 MT)	To capacity (1000000 MT)
2003-04	6,53,157	93.31	65.31
2004-05	7,42,239	106.03	74.22
2005-06	6,81,777	97.40	68.18
2006-07	6,17,994	88.28	61.80
2007-08	4,64,227	66.32	46.42

The targets were fixed based on the availability of crude. The low capacity utilisation was mainly due to non-availability of crude.

4.8. Need for expansion

4.8.1. Demand and supply of petroleum products

The Planning Commission estimated (Ninth Plan-1997-2002) the country's demand for petroleum products at 79.16 million tonnes as against the Eighth Plan (1992-97) projection of 81.19 million tonnes in 1996-97. The compounded annual growth rate (CAGR) during the Eighth Plan was 6.8 *per cent* against the projection of 6.9 *per cent* envisaged at the time of the formulation of Eighth Plan. The demand of petroleum products was estimated to grow at a CAGR of 5.77 *per cent* and was expected to be 104.80 million tonnes in the terminal year of the Ninth Plan. The Eighth Plan had emphasised the need for maximisation of domestic crude oil production. However, against a total planned production of 197.3 million tonnes during 1992-97, the crude oil production was only 154.28 million tonnes.

The refining capacity at the end of the Eighth Plan was 61.55 million tonnes. This was expected to go upto 113.95 million tonnes by the terminal year of the Ninth Plan. Taking into account the likely demand and the estimated indigenous crude oil production, the Ninth Plan envisaged specific attention, among other things, to creating refining capacity to meet at least 80 to 90 *per cent* of demand of petroleum products and balance to be met from imports.

Under the administered price mechanism regime, there was a system of assigning a refinery to meet the demand for petroleum products in a specified area/district. The Oil coordination committee determined (1994) that the market zone of the CBR would comprise of areas/district like Salem, Trichy West, Trichy East, Madurai, Dharmapurai, Neyveli, Thanjavur and Pondicherry. The deficit projected by the Committee (1994) for Motor Spirit (MS), High Speed Diesel (HSD) and Superior Kerosene Oil (SKO) was 1.426 MMT, 2.235 MMT, 3.137 MMT in 1995-96, 2001-02 and 2006-07 respectively. Based on the reduced demand, the projected demand, supply and deficit in the market zone of the CBR adopting CAGR of 5 *per cent*, however, was as follows:

Table 4.2

(Million Metric Tonnes)

Year		HSD	MS	SKO	Total
1995-96	Demand	1.352	0.109	0.333	1.794
	Supply	0.244	0	0.124	0.368
	Deficit	1.108	0.109	0.209	1.426
2001-02	Demand	1.886	0.152	0.464	2.502
	Supply	0.244	0	0.124	0.368
	Deficit	1.642	0.152	0.340	2.134
2006-07	Demand	2.488	0.201	0.613	3.302
	Supply	0.244	0	0.124	0.368
	Deficit	2.244	0.201	0.489	2.934

4.8.2. Planning for expansion

Considering the revised CAGR as per the Ninth Plan, there was deficit in supply of petroleum products to the extent of 3.0 MMTPA. As such there was scope for expansion to that extent. However, the Company proposed to expand the capacity of the CBR from 0.5 MMTPA to 1.0 MMTPA. As such, the expansion planned was not commensurate with the deficit in supply of petroleum products to the market zone served by CBR as shown above.

The Management stated (October 2008) that since the projections in 1994, many changes had taken place after the year 2000 in logistics and market zone of CBR.

The Company did not come out with fresh data on the market zone of CBR either before going for expansion or subsequently.

The Company planned (June 1997) to increase the capacity from 0.5 to 1.0 MMTPA at an estimated cost of Rs.30 crore. It expected to earn net additional return on investment to the extent of Rs.14.41 crore *per annum* by sale of products. As the CBR was designed to process maximum of 0.65 MMTPA of crude oil, additional balancing equipments were added for a capacity of 1.0 MMTPA. The work awarded in June 1999 was completed in September 2002 at a cost of Rs.24.31 crore.

It was observed in Audit that the Company was aware that CBR could process only low sulphur crude and as there was no oil field with adequate reserves of low sulphur crude in India allocated to it, it had to resort to import, even to cater to the limited expansion to 1.0 MMTPA. Thus, the Company could have planned for expansion to meet the entire demand of its market zone.

The Management stated (October 2008) that in CBR, only the crude distillation facility was debottlenecked and the refinery at Manali was expanded in 2004 by three MMTPA

at a cost of Rs.2,280 crore. Full expansion in CBR to meet the entire demand was not considered as implementing similar expansion in CBR would involve an investment of Rs.5,000 crore and the Manali refinery met the product demand of market zone of CBR.

It was also observed in Audit that a private company had already initiated steps to set up a refinery with a capacity of six MMTPA in Cuddalore (100 km from the refinery) with plans to cater to the demand of refinery's market zone. On this unit's coming up, the refinery would face competition in its own economic supply zone. The competitive advantage of the private company would deprive CBR of its supply volumes, variety of products and also cost of these products. Thus, the Company is likely to lose its competitive advantage to another refinery.

The Management stated (October 2008) that it was confident that its combined refining capacity would help it to supply the products in market zone of CBR at a better competitive price than the private company. The CBR would, however, be at a disadvantageous position due to lack of secondary processing unit and larger volumes of the private company.

4.9. Planning for creation of infrastructure and sourcing of crude

4.9.1. Marine crude handling facilities

In view of low crude availability from ONGC, the Company moved (November 1996) additional crude from Chennai by road as a short term measure. The Company had considered setting up of marine crude handling facilities off Nagapattinam coast to receive crude from PY-3 and import crude to augment capacity utilisation of the CBR. Oil Coordination Committee (OCC) had also advised (March 1997) the Company to consider import of crude, in addition to PY-3 crude, by coastal movement and also to include pipelines for products. Further, the Company expected that the jetty could also be utilised by other companies, who had expressed interest, for import of their feedstock for which thruput charges would be receivable. Considering the high transportation cost, risk involved, uncertainty in gauge conversion by Railways, the Company nominated EIL as consultant to conduct a techno-economic study for bringing in offshore PY-3 crude. EIL suggested (February 1997) three options namely Fixed jetty (project cost Rs.55 crore), Multi buoy mooring (Rs.77 crore) and Single buoy mooring (Rs.130 crore). Of these, construction of jetty off Nagapattinam coast was considered the viable option and the Company decided (June 1997) to move crude oil through coastal tankers. It awarded the work in June 2000 to Afcons Limited for Rs.65.93 crore with a scheduled completion period of 15 months.

Audit observed that even after allowing time for tendering (six months) and scheduled completion (15 months) the Company delayed the award of work by 30 months since its decision (June 1997). This resulted in movement of 4,75,462 MT of crude by road (during April 1999 to September 2001) and consequent extra expenditure of Rs.6.75 crore.

The Management stated (October 2008) that though approval was accorded in June 1997, some more studies were carried out subsequently to finalise the proposal and there was no delay in decision making. However, the Company took 30 months to award a work involving a further completion period of 15 months after the decision was taken. Some of the studies mentioned were found to have been done even after award of work. The studies referred to by the Company should have preceded the decision.

4.9.2 Crude from ONGC (Cauvery basin)

The demand for petroleum products in the country in 1997-98 was 83.73 MMT which rose to 104.80 MMT during 2001-02. Against this, the domestic crude production by ONGC, Oil India Limited and other Private and Joint venture companies was only 34.42 MMT in 1997-98 which increased to 36.98 MMT in 2001-02. The country had to depend largely on imported crude to meet the demand for petroleum products.

The detailed feasibility report prepared (1989) by the Company for establishing the 0.5 MMTPA refinery at Cauvery Basin had envisaged that the available reserves of raw material (crude) to be sourced from ONGC's onshore wells would be 78 MMT by the year 1997. However, no commitment for any specific quantum of crude supply was obtained from ONGC.

Audit observed that the maximum crude oil received by the CBR in any year from ONGC was only 0.44 MMT (2001-02) and the receipt thereafter decreased from 0.39 MMT in 2002-03 to 0.30 MMT in 2007-08.

The Management stated (October 2008) that the decline in crude availability was taken up with ONGC on various occasions. ONGC intimated that 1.899 MMT of crude produced at Cauvery basin during 10th Plan period was supplied to CBR and this far exceeded the target of 1.216 MMT and that the supply would further decline during 11th plan period to 1.113 MMT. However, the Company did not take timely steps to obtain any data from ONGC on the probable balance of crude reserves and the longevity to plan the utilisation of CBR's full capacity or identify any other source for crude.

4.9.3 Crude from PY-3 offshore field

The Company entered into (September 2003) crude oil supply agreement (COSA) with PY-3 Consortium and during finalisation of the COSA, proven reserves of PY-3 offshore field were estimated (June 1997) by owners of the field between 2 MMT and 5.5 MMT and the reserves would last till the year 2008. As per the terms of COSA, the Consortium was required to furnish the production profile relating to probabilistic reserve estimates from time to time.

Audit observed that the Company did not obtain any data/estimates for proven reserves from the suppliers of crude, other than monthly production targets at periodical intervals. The supply from PY-3 on any given year had not reached the 0.4 MMT as envisaged for expansion. The Consortium could supply maximum of 0.287 MMT of crude during 2004-05 which came down to 0.162 MMT during 2007-08. The receipt of crude from different sources during last five years ended 31 March 2008 revealed that the CBR did not achieve the expanded capacity of one million metric tonnes in any year of operation.

Audit also observed that as at the time of expansion the availability of indigenous crude was estimated at 0.7 MMTPA (0.3+0.4) only, the Company had to either import the low sulphur crude or divert 0.3 MMTPA crude from its Manali refinery to CBR. But the Company did not import any crude and it diverted only 0.29 MMT of crude from Chennai during last five years ended March 2008. Further, the agreements entered into with the suppliers of crude (ONGC and Consortium of PY-3) did not provide for either any assured supply of crude or its longevity. The Company's efforts to get allocation of crude from nearby Ravva oil fields (indigenous crude having lower sulphur content

similar to crude from ONGC and PY-3) could not fructify (October 2008). Thus, CBR was forced to remain under utilised during 2003-04 to 2007-08.

The Management stated (October 2008) that the supplier of crude had been giving the estimates for proven reserves and monthly production targets. The Company, however, got the updated data on the estimated production only after being pointed out (July 2008) by Audit. Quantum of reserves available has still not been obtained by the Company.

Recommendation No 4.1

(i) The Company may prepare a suitable long-term plan to ensure continued viability of the refinery.

(ii) The Company may pursue with the GOI for allocation of crude from Ravva oil fields to ensure economic operation of the refinery.

4.10 Implementation of expansion

4.10.1. Geo-technical survey

The Company awarded (May 1998) the work of geo-technical studies for marine facilities to Dolphin Off-shore Enterprises, Mumbai (Dolphin) at a cost of Rs.1.59 crore. The work was completed in October 1998. Based on Dolphin's geo-technical analysis/survey reports, the Company awarded (June 2000) the work of construction of jetty and associated facilities to Afcons Infrastructure Limited (Contractor) for Rs.65.93 crore with a scheduled completion period of 15 months *i.e.* by September 2001. As the Contractor encountered hard soil strata throughout the jetty alignment during execution (August 2001) which indicated infirmities in the geo-technical soil studies/survey reports of Dolphin, the Company permitted them to re-survey the area on payment of Rs.1.10 crore and also execute additional works for a total value of Rs.4.10 crore.

Audit observed that the Company could collect Rs.15.85 lakh only as liquidated damages from Dolphin and could not recover Rs 1.10 crore incurred for conducting the survey again. Further, the Company had not obtained any professional liability insurance or any other security from Dolphin till completion of the work which would have compensated the loss suffered by the Company due to infirmities in the design study.

While confirming the facts, the Management stated (October 2008) that professional liability insurance would be obtained for similar contracts in future.

4.10.2. Delay in completion of jetty

The progress of work by the Contractor was slow due to delay in mobilising resources, site grading, fabrication and assembling of piling gantry, arrangements of casting yards, infirmities encountered in the geo-technical survey report and as a result additional works for steel pile driving were awarded to the same Contractor with extended completion schedule upto 15 September 2002. Beyond September 2002, extension of time was not granted and for any delay in completion of work the Contractor was to pay liquidated damages (LD) subject to a maximum of 10 *per cent*. The jetty was finally commissioned in March 2003. The Contractor raised certain claims due to reasons attributable to the Company. As the Company did not agree to such claims, the Contractor invoked the provisions of the Arbitration proceedings. As per the arbitration award, the Company paid the Contractor's additional claims to the extent of Rs.5.20 crore (Rs.1.10 crore for

again conducting the geo-technical survey and Rs.4.10 crore for additional works). The Company also recovered LD of Rs.2.10 crore.

Thus, delayed construction of jetty resulted in net extra expenditure of Rs.2.42 crore towards movement of 1,18,888 MT of crude from September 2002 to February 2003 by road from Chennai to CBR after taking into account the LD recovered.

The Management stated (October 2008) that the delay was attributable also to other factors like breakage of bridge, agitation by fishermen, *etc*. The Company accepted that the delay was also attributable to contractor due to slow progress of work but there was no enabling clause in the contract for recovery of additional expenditure incurred due to delay besides the liquidated damages which were limited to 10 *per cent* of the contract value.

Recommendation No. 4.2

The Company has to put in place a better contract management system in which the contractor's work is monitored on a day to day basis and disputes resolved in a timely manner.

4.11. Performance of the refinery after expansion

4.11.1. Consumption of utilities and absorption of fixed costs

Though capacity of CBR was increased to 1.0 MMTPA, the Company had fixed the annual target of thruput at 7,00,000 MT (based on the crude availability) for the last five years ended 31 March 2008.

The design value (norm) for consumption of power and steam for processing per 1,000 MTs of crude was fixed as 5.26 MWhrs of power and 87.52 MT of steam respectively.

The table in the ***Annexure - VIII*** indicates the thruput achieved, consumption of steam and power, and excess consumption of utilities in the refinery during the last four years ended 31 March 2008.

Audit observed that under utilisation of capacity resulted in excess consumption of steam (15,308 MT; value Rs.1.42 crore) and power (3,739.664 MWhrs; Rs.2.63 crore) during the last four years upto 31 March 2008.

The overheads like employee cost, repairs and maintenance, insurance, depreciation, *etc*. had to be incurred at a fixed level irrespective of the level of operations. In view of decreasing level of operations, the overheads were absorbed at higher rates resulting in over absorption by Rs.16.59 crore during 2005-06 to 2007-08. The Management confirmed the facts relating to over absorption of overheads and attributed (October 2008) the reduction in targets, which were further reduced to 0.4 MMT for 2008-09, due to non-availability of the crude.

4.11.2. Extra expenditure on transportation of crude

The jetty was constructed to berth vessels of 40000 DWT[2] capacities. Based on the design draft of 7.5 metre, it could receive crude parcels of 13,000 to 15,000 MTs. Two vessels belonging to Shipping Corporation of India (SCI) (MT Homi Bhaba and MT

[2] ***Dead Weight Tonnage***

C.V.Raman) with a capacity of 40,000 DWT each were deployed in the transportation of crude oil from PY-3 to Nagapattinam jetty. The vessels were hired on time charter basis.

During the last five years ended March 2008, the refinery received 10,94,082 MT of crude from PY-3 field. This required 75 shipments. The Company, however, used 87 shipments to transport the same quantity which resulted in extra expenditure of Rs.5.46 crore on additional 12 shipments as shown below:

Table No. 4.3

Year	Quantity shipped (MT)	Number of shipment required. @ 15,000 MT	Actual number of shipment	Excess shipments	Extra expenditure (Rs. in lakh)
2003-04	177558.23	12	15	3	122.77
2004-05	288695.64	20	23	3	60.40
2005-06	221407.50	15	17	2	107.54
2006-07	243733.40	17	19	2	114.23
2007-08	162687.35	11	13	2	141.48
Total	**1094082.12**	**75**	**87**	**12**	**546.42**

The Management stated (October 2008) that the draft available was only 6.2 metre as against 7.5 metre envisaged. To accommodate this draft, the parcel size was restricted to 13,000 MT. The reply indicated that the Company did not assess the real field conditions before execution of the jetty project. This led to receipt of lower parcel size and extra shipments resulting in extra expenditure.

4.11.3. Foregoing of revenue on use of marine facilities by third parties

While approving the construction of marine facilities at Nagapattinam, the Company envisaged that the spare capacity in the jetty could be utilised for import/export of feed stock/petroleum products by various PSUs and private sector companies, which would bring an additional income of Rs.52.50 crore (at Rs.300 per MT) for the first five years of operation of the jetty and Rs.15 crore *per annum* thereafter at 100 *per cent* spare capacity utilisation.

Audit observed that while designing the jetty, the Company did not consider creating facilities for import/export of finished products. The jetty was not utilised by third parties resulting in non-accrual of expected revenue of Rs.52.50 crore. There was no record to show that the Company had made efforts for third party usage of the jetty to further augment the revenue. The naphtha produced by the refinery had to be moved to Tuticorin by road which resulted in under recovery on account of transportation to the extent of Rs.9.04 crore during the last five years ended 31 March 2008.

Against an expected utilisation of 3,120 hours per year, the Company utilised the jetty for 2,706 hours only during the last five years ended 31 March 2008.

The Management, while confirming the facts, stated (October 2008) that provision was made for putting up loading/unloading arms at jetty platform and pipelines in the approach trestle. Further, product pipelines were laid in November 2007. A private company had constructed a jetty on their own. An offer from a private party for import of palm oil was not considered due to poor revenue realisation.

The viability of the project was estimated considering the revenue that could accrue on third party usage. As the Company did not obtain any commitment from prospective

users before creating necessary facilities, one of the prospective users had commissioned its own jetty nearby and consequently the Company's jetty remained underutilised leading to non-realisation of expected revenue.

4.11.4. Absence of secondary process unit

The CBR did not have a secondary process unit, to extract value added products such as MS, HSD, FO and LPG, *etc.* from the intermediate product *i.e.*, reduced crude oil (RCO) to increase the operating margin. In absence of this unit, the Company was selling RCO as low sulphur heavy stock (LSHS). During 2006-07, the CBR transferred 3,672 MT of RCO to fluidised catalyst cracking unit (FCCU) at Manali for further processing to get value added products.

Audit observed that by not transferring the entire quantity of RCO to Manali refinery and by selling it as LSHS, the refinery suffered a loss of Rs.172.23 crore during 2004-05 and 2005-06 (as there was negative margin in the price of LSHS) and had foregone revenue of Rs.98.73 crore during the period 2004-05 to 2006-07.

The Management stated (October 2008) that it had committed to IOC to supply LSHS to its customers and the same could not be supplied from Manali Refinery. As the thruput in FCCU (Manali) was saturated, transportation of RCO to Manali could not be continued. Further, IOC and the Company decided to reduce the LSHS commitment to customers and the movement of LSHS was being streamlined.

However, the Company need not commit supplies which lead to negative margin. As receipt of LSHS from the process could not be avoided and would be recurring, the Company should have explored the possibility of its economical disposal. Further, taking into account the combined spare capacity available in the secondary processing units (FCCU and OHCU[3]) at Manali, the Company would have earned a revenue of Rs.38.63 crore by processing 0.12 MMT of RCO at Manali during 2005-06 and 2006-07.

Recommendation No .4.3

(i) The Company may review the norms for consumption of utilities in view of continued reduction in thruput.

(ii) The Company may examine the possibility of allowing third party usage of the jetty to further augment the revenue.

(iii) The Company may explore the possibility of either installing a secondary process unit or work out the economics of transporting the intermediate product to Manali refinery for further processing and getting additional margins.

4.12. Challenges for future

4.12.1. Statutory requirement relating to Auto fuel policy

The Government of India had formulated (October 2003) the Auto Fuel Policy which prescribes the emission norms for all vehicles. According to the policy, the entire country is required to adopt Bharat Stage II emission norms from April 2005 and Euro III or equivalent emission norms from 1 April 2010. For cities like Delhi/NCR, Mumbai, Chennai, Kolkata, Hyderabad, Bangalore, Pune, Ahmedabad, Surat, Kanpur and Agra,

[3] ***Once Through Hydro-cracker Unit.***

the emission norms fixed were Euro III or equivalent by 1 April 2005 and Euro IV or equivalent by 1 April 2010.

It was noticed that HSD constitutes more than 40 *per cent* of the production of the refinery. To upgrade the HSD to Euro III norms, the refinery is required to set up suitable processing facilities or the product had to be transported to Manali Refinery for further processing which would involve loss of margin/under-recovery of costs. If the HSD was not upgraded to Euro III compliance, the same has to be sold only to industrial users for which the Company has to approach IOC (marketing company) to market the product at a discounted rate. This would result in pushing up under-recoveries. The Company, for its Manali refinery, had approved (August 2006) an investment proposal of Rs.1,665.44 crore to upgrade the HSD and MS to Euro IV norm. It had not, however, made any strategic investment decision so far (August 2008) to install suitable processing facilities at CBR or to transport the HSD to Manali refinery for further processing to comply with Euro III norms. Thus, CBR faces serious challenges to meet the new emission norms beyond 2010.

4.13 Conclusion

The operations of the Cauvery basin refinery continue with inadequate supply of crude and under utilisation of infrastructure. Unless concerted efforts are made to get crude from other fields for achieving the economics of production through larger scale of operations, variety of products with low cost, *etc.*, the viability of the refinery in the long run would be uncertain. The CBR would not only suffer cost disadvantage by low level operation but also face competition from a private company which is setting up a 6.0 MMTPA refinery within 100 km radius. Moreover, the CBR has not prepared itself to meet the Euro III emission norms to be applicable from April 2010.

The matter was reported to the Ministry in January 2009; reply was awaited.

CHAPTER V

Indian Oil Corporation Limited

LPG operations

Highlights

The Company mixed butane and propane to form Liquefied Petroleum Gas (LPG) in different proportions other than the one considered for subsidy claims resulting in loss of Rs.40.97 crore during five years ended March 2008.

(Para 5.8.1.1)

The Company claimed Rs.51.22 crore as subsidy for stock loss without actually incurring it.

(Para 5.8.2.2)

The Company incurred higher bottling cost of Rs.716.06 crore as compared to benchmark operating cost during the period 2004-05 to 2007-08. Due to this the Company could not claim subsidy to the extent of Rs.90.92 crore.

(Para 5.8.2.2)

Surplus manpower over the benchmark fixed for the bottling plants resulted in higher operating cost to the extent of Rs.51.93 crore. Apart from having surplus manpower, the Company made overtime payment at plants.

(Paras 5.8.3.1 and 5.8.3.2)

Despite adoption of Industry Logistic Plan system for distribution of bulk/packed LPG to meet the market demand, it failed to establish the economical linkages, leading to manual intervention/regular deviation.

(Para 5.8.4.1)

The Company suffered a loss of Rs.15.29 crore due to short receipt of bulk LPG through Railways due to inadequate infrastructure and non-appointment of surveyor at Reliance Industries Limited, Jamnagar to witness the loading operations.

(Para 5.8.4.3)

Absence of effective system for exchange and reconciliation of cylinders amongst Oil Marketing Companies (OMCs) resulted in blocking of working capital of OMCs to the extent of Rs.5.44 crore.

(Para 5.8.5.3)

Summary of recommendations

1. ***The Company should evolve an effective system to conform to the Subsidy Scheme 2002 for mixing propane and butane to avoid loss and to ensure quality supply to the customers at optimum cost.***
2. ***The Company needs to regularly review and redefine the actual installed capacities of the bottling plants in order to make correct assessment of their performance and operating efficiencies.***
3. ***Existing cost monitoring and control systems should be streamlined and made more stringent so that the operating cost is restricted to the benchmark.***
4. ***The Company should ensure deployment of manpower within benchmarks to control the operating cost.***
5. ***Efforts need to be made to rationalise overtime payment through deployment of manpower within benchmark. Overtime should be paid in line with the statutory provisions.***
6. ***The Company needs to identify the reasons for abnormal increase in consumption of valves and take remedial measures for non-achievement of the prescribed limit.***
7. ***The Company should ensure minimum transportation charges by reviewing the slabs system in other State Offices in line with Bihar State Office.***
8. ***Adequate weighment infrastructure should be installed at the source and destination to avoid losses and pilferages.***
9. ***The Company should revisit the existing transportation agreement provisions relating to weight loss norms and should rationalise the same with available standards.***

10. ***Bulk and packed LPG stock levels should be maintained within the permissible limits prescribed by the Chief Controller of Explosives to ensure safety of the plant, staff and surrounding property/population.***

11. ***The Company should evolve an effective system for timely disposal of scrap/idle inventory, to avoid blockade of funds.***

12. ***The Company may evolve an effective control system of exchange and reconciliation of cylinders with other OMCs at regular intervals.***

13. ***The Company should evolve comprehensive customer master data and take necessary steps to identify and capture details of LPG consumers like size of the family and consumption pattern necessary for prevention of unauthorised use of domestic LPG. The Company should also share customer database with other OMCs to avoid release of multiple connection.***

14. ***LPG order 2000 needs to be revised and effective system may be put in place to take back LPG connections from Piped Natural Gas (PNG) consumers to ensure that a customer is allowed to hold only one connection either PNG or LPG at a point of time.***

15. ***The Company should review the system of fixing Supply Plan for Distributors to rationalise it in line with actual consumption pattern based on family size. The Company should also maintain cylinders masters with distinctive numbers allocated to each cylinder to control diversion of domestic LPG for commercial use.***

16. ***The Company should revisit its existing Marketing discipline guidelines and make penal provisions more stringent.***

17. ***The Company needs to strictly deal with tampering of cylinder weight to discourage such malpractices so as to ensure supply of proper weight of LPG to the customers***

18. ***The Marketing discipline guidelines should be strictly followed in letter and spirit for an effective control and monitoring system of the distributors.***

19. ***The Company should amend existing provisions of security deposit in the contracts so as to secure comprehensive coverage of LPG consignments.***

5.1 Introduction

Indian Oil Corporation Limited (Company) was incorporated in 1964 and is presently a dominant player and India's largest public sector oil marketing company (OMC). It had a market share of 49 *per cent* of the Liquefied Petroleum Gas (LPG) market during 2007-08. The balance was shared by other OMCs *viz.*, Bharat Petroleum Corporation Limited (BPCL) and Hindustan Petroleum Corporation Limited (HPCL) as 26 *per cent* and 25 *per cent* respectively. The Company has 89 LPG bottling plants with bottling capacity of 4,165 TMT[1].

[1] ***Thousand Metric tonnes***

The OMCs procure LPG from refineries, fractionators (ONGC and GAIL), private parties (M/s. Reliance and M/s. Essar) and import. LPG is bottled in the bottling plants and supplied to the customers in the packed form.

The Company is marketing packed LPG under its brand name "Indane" to domestic customers (in cylinders of 5 kilogram (kg) and 14.2 kg) and to commercial customers (in cylinders of 19 kg, 35 kg and 47.5 kg) through 4996 distributors attached with its bottling plants as on March 2008 to cater to the demand of 5.04 crore consumers.

5.2 Organisational set-up

The LPG operation is controlled by the Marketing Division of the Company located at Mumbai and headed by Executive Director (LPG Marketing). The network consists of Regional Offices located at Mumbai, Delhi, Kolkata and Chennai, 16 State Offices and 39 Area Offices. The Executive Director (LPG) reports to Director (Marketing).

5.3 Scope of Audit

The performance audit covered the activities relating to sourcing and planning, maintenance, transportation and selling and distribution of LPG through 30 bottling plants of the Company in four regions during the last five years ended March 2008 to assess the efficiency, economy and effectiveness of these activities. Wherever records/information for five years was not available, the scope of audit was restricted to the period for which information was provided by the Company.

5.4 Audit objectives

Performance audit was carried out to

- evaluate sourcing and logistics arrangements of LPG planned to encourage economies and promote efficiencies;
- examine the performance of LPG bottling plants to evaluate the degree of economy, effectiveness and efficiency in operation;
- review cost control mechanism aimed to confine cost within the defined cost ceilings;
- analyse the system of subsidy claims and to verify whether the subsidy was claimed in the letter and spirit of the subsidy scheme to quantify irregular subsidy claims;
- study whether distribution channel for supply of LPG was economical, efficient and effective; and
- scrutinise existing monitoring system necessary to curb diversion of subsidised supply for unauthorised uses.

5.5 Audit criteria

The following criteria were used in the performance audit:

- Policies and guidelines of the Government of India, the Company and minutes of Board of Directors/Committees;
- Operational and financial performance indicating the benchmark/budgeted/ targetted cost and issue price/cost price considered in the subsidy scheme of the Government of India;

- Provisions of rules and regulations and national/international standards;
- Guidelines and manuals relating to sourcing, logistics, plant operation and supply and distribution;
- Terms and conditions of contracts with vendors, distributors and customers for procurement, logistics, maintenance and services, supply and distribution;
- Monitoring mechanism envisaged in the guidelines to check the diversion, multiple connection and unauthorised usages.

5.6 Audit methodology and sample size

The audit methodology involved examination of Management Information System reports generated through SAP/ERP documents, analysis of statistical information and discussion with the Management to evaluate the operating activities of bottling plants, sourcing and logistics planning of bulk LPG, sales and distribution and subsidy.

30 out of 89 bottling plants were selected on the basis of operating cost per MT by using Stratified Random Sampling Method through IDEA[2] package by categorising bottling plants in three capacity utilisation strata *i.e.* less than 100 *per cent*, between 100 *per cent* to 150 *per cent* and more than 150 *per cent* in the ratio of 2:1:2 respectively.

5.7 Acknowledgement

Audit acknowledges the cooperation of the Company in providing necessary records and information. An Entry conference was held on 8 July 2008 with the Management to discuss the audit objectives, audit criteria and audit methodology. The draft performance audit report was issued to the Management on 19 September 2008. An Exit conference was held on 14 November 2008 with the Management to discuss the results of this report. The views expressed by them have been suitably incorporated in this report.

5.8 Audit findings

As per the Domestic LPG Subsidy Scheme, 2002, OMCs get subsidy from the Government of India (GOI) as difference between cost (defined under subsidy scheme) and retail selling price (issue price) of bottled LPG fixed by the GOI.

Major components of cost as per the subsidy scheme were landed cost, bottling charges, transportation cost and stock loss. Audit observations in each of these components have been discussed below:

5.8.1 Sourcing and logistics

LPG is procured from indigenous sources and the deficit is met through imports. Procurement of LPG by the Company during the last five years was as under.

[2] ***Interactive Data Extraction and Analysis***

Table 5.1

(figures in TMT)

Year	2003-04		2004-05		2005-06		2006-07		2007-08	
	TMT	%	TMT	%	TMT	%	TMT	%	TMT	%
(a)Indigenous										
Refineries of OMCs	1505	33.79	1580	32.67	1868	37.64	1876	37.54	1970	35.92
Fractionators	826	18.55	814	16.83	784	15.80	745	14.91	759	13.84
Private parties	1236	27.75	1340	27.71	1055	21.26	1375	27.51	1480	26.99
(b) Import	887	19.91	1102	22.79	1256	25.31	1002	20.05	1275	23.25
Total (a+b)	**4454**	100.00	**4836**	100.00	**4963**	100.00	**4998**	100.00	**5484**	100.00

5.8.1.1 Losses in LPG import

Under the Domestic LPG Subsidy Scheme, 2002 the cost price of the domestic LPG is worked out on the basis of a mixture of butane and propane in the ratio of 60 *per cent* butane and 40 *per cent* propane.

Audit analysis revealed that the Company imported 4,956 TMT butane which was 90 *per cent* of total 5,522 TMT butane and propane imported and supplied as LPG during the last five years ended March 2008. Thus, on an average the Company supplied LPG as a mixture containing more than 60 *per cent* butane which was not in accordance with the LPG Subsidy Scheme. As the Company raised its subsidy claims on the basis of LPG in the ratio of 60:40 for butane and propane, higher import of costlier butane and its supply in LPG resulted in loss of Rs.40.97 crore to the Company during the last five years owing to rising cost of butane since 2003-04.

It was also observed from the test reports of LPG supplied by the fractionators to the Company that butane content therein was less than 60 *per cent* though they were being paid by the Company for LPG containing 60 *per cent* butane. Receipt of lesser butane in the LPG from fractionators resulted in loss to the Company due to price difference of propane and butane. The amount of loss sustained by the Company on this account could not be ascertained in the absence of proper system in place in the Company to maintain break-up of the quantities of propane and butane received from the LPG producing sources. The test reports of LPG supplied by OMCs and private parties were not made available to Audit for analysis and comment thereon.

Further, the vapour pressure of butane is around one-third that of propane. Higher butane content in LPG supplied by the Company meant lesser vaporisation especially in winter season resulting in non-receipt of full value of money by the customers due to residual gas left in the cylinders.

The Management stated (November 2008) that the difference in the price between propane and butane had reversed gradually from 2003-04 onwards and attempts were also made to upgrade the infrastructure at Vizag and Mangalore and import propane and butane in the ratio of 25:75 during 2009 as against the earlier average of 9:91. LPG supplies to customers were meeting BIS specifications.

Recommendation No. 5.1

The Company should evolve an effective system to conform to the Subsidy Scheme 2002 for mixing propane and butane to avoid loss and to ensure quality supply to the customers at optimum cost.

5.8.2 Capacity utilisation and operating efficiency

5.8.2.1 Installed capacity

The rated capacities of the bottling plants were assessed by the Company as per the benchmarks defined during the APM[3] period on industry basis. The Company had not revised the installed capacities of the bottling plants considering the automation and upgradation of carousels at the bottling plants. It was observed that based on the parameters defined by the Committee (July 2001), the actual available rated capacity of 72 bottling plants in 2002-03 was 5,583 TMTPA[4] as against 3,100 TMTPA assessed by the Management. During 2002-03 the Company could utilise the capacity of 3,725 TMTPA leaving an idle capacity of 1,858 TMTPA. Despite idle capacity the Company commissioned/upgraded the bottling plants with an additional capacity of 1,436 TMTPA during 2002-03 to 2007-08. Actual utilisation of the bottling plants during 2007-08 was only 4,950 TMTPA which was even less than the available rated capacity in 2002-03. Thus, considering the available idle capacity in 2002-03, creation of additional capacity of 1,436 TMTPA was not required. On account of low assessed capacity the Company was also showing higher capacity utilisation of the bottling plants.

The Management accepted (December 2008) that rated capacities of the bottling plants were recognised as per the benchmarks defined during the APM period on Industry basis and were to be re-benchmarked on the industry basis.

Thus, non-revision of the rated capacity indicated an incorrect depiction of total capacity and utilisation of the bottling plants.

Recommendation No. 5.2

The Company needs to regularly review and redefine the actual installed capacities of the bottling plants in order to make correct assessment of their performance and operating efficiencies.

5.8.2.2 Operating cost of bottling plants

With a view to control operating cost of bottling plants, the Company had fixed (September 2003) benchmarks based on their installed capacities. Weighted average operating cost of bottling plants during last four years *vis-à-vis* benchmarks was as under:-

[3] ***Administered Price Mechanism***
[4] ***Thousand metric tones per annum***

Table 5.2

(Figures in Rs. per MT)

2004-05		2005-06		2006-07		2007-08	
Weighted average operating cost as per benchmarks	Actual operating cost	Weighted average operating cost as per benchmarks	Actual operating cost	Weighted average operating cost as per benchmarks	Actual operating cost	Weighted average operating cost as per benchmarks	Actual operating cost
589.96	682.12	593.04	658.61	582.68	842.82	583.92	849.59

It was noticed in audit that:

- An analysis of the bottling cost of individual plants indicated that 46 out of 78 bottling plants in 2004-05 that increased to 72 out of 80 bottling plants during 2007-08 were unable to achieve operating cost benchmark. The Company incurred higher bottling cost of Rs.716.06 crore as compared to benchmark operating cost during the period 2004-05 to 2007-08.
- Out of the above bottling plants the operating cost was even more than the cost ceiling prescribed under the subsidy scheme[5] in 32 bottling plants during 2004-05 that increased to 39 plants during 2007-08 as a result of which the Company could not claim subsidy to the extent of Rs.90.92 crore (Rs.45.46 crore from the GOI and Rs.45.46 crore from fractionators).
- As the actual operating cost in more than 50 *per cent* bottling plants was less than the cost ceiling fixed in the subsidy scheme, there was a need to revise the cost ceiling based on the standard and normative conditions.
- The subsidy scheme provides for operational stock loss at the rate of 0.25 *per cent*. However, the Company has fixed zero *per cent* norm for operational losses and was able to achieve it in 80 out of 89 bottling plants. Despite achieving zero *per cent* stock loss, the Company claimed subsidy of Rs.51.22 crore (Rs.25.61 crore from the GOI and Rs.25.61 crore from fractionators) against the notional stock loss not actually incurred during last five years ended March 2008.

The Management stated (November 2008) that during 2003 the Company had taken an initiative to have common understanding at all levels about the cost targets and to take effective steps in achieving the same. However, bigger impacts could not be achieved within a short period as these mainly involved manpower related issues. Further with regard to subsidy, the Management added that the operating cost element in the `Subsidy Scheme' had been adopted on industry basis and not on the basis of any particular bottling plant with resultant plus/minus variations.

The reply was not convincing as the Company could not achieve the benchmarks even after more than four years.

[5] ***Rs.780.77 per MT for 2004-05 and Rs.908 per MT for 2005-06 onwards.***

Recommendation No. 5.3

Existing cost monitoring and control systems should be streamlined and made more stringent so that the operating cost is restricted to the benchmark.

5.8.3 Manpower deployment

5.8.3.1 Excess manpower

Manpower cost is a major component of the operating cost. The Company deployed White Collar Workmen (WCW)[6], Blue Collar Workmen (BCW)[7] and contracted labour on the basis of carousels and shift operation. However, it was noticed that the Company had actually deployed BCWs in excess of the benchmarks fixed (September 2005) by them as below:

Table 5.3

Year→	2005-06				2006-07				2007-08			
Region	No. of plants	Bench mark	Actual	Surplus	No. of plants	Bench mark	Actual	Surplus	No. of plants	Bench mark	Actual	Surplus
Northern	22	667	1059	392	19	633	979	346	21	665	951	286
Eastern	5	140	275	135	8	176	315	139	6	135	260	125
Western	8	166	248	82	7	144	215	71	6	127	180	53
Southern	10	239	283	44	7	182	212	30	5	114	142	28
Total	**45**	**1212**	**1865**	**653**	**31**	**1135**	**1721**	**586**	**38**	**1041**	**1533**	**492**

Deployment of BCWs in excess of the benchmark fixed for the bottling plants resulted in extra expenditure of Rs.51.93 crore on account of staff cost during the last three years ended March 2008 resulting in higher operating cost.

The Management (November 2008) while agreeing with Audit stated that as part of regular efforts to reduce cost and increase efficiencies; the Company had devised 'benchmarking' of manpower for its LPG plants, based on capacities, number of shifts operated, type of equipment available, *etc.*

The reply of the Management was not tenable because the benchmarks were fixed on the assessment of plant capacity, operation, work load, *etc.* and as such, actual deployment of manpower should be within the prescribed benchmark. Excess deployment of manpower beyond the benchmarks resulted in higher operating cost.

Recommendation No. 5.4

The Company should ensure deployment of manpower within benchmarks to control the operating cost.

5.8.3.2 Overtime

Audit analysis revealed that in addition to the deployment of manpower in excess of benchmarks as pointed out in the preceding para, there was overtime payment indicating non-identification of extra manpower and ineffective deployment of surplus manpower.

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[6] ***Deployed for office work viz., finance and accounts, store and other clerical work***

[7] ***Deployed for LPG operation and production activities***

Moreover, as per Factories Act 1948, payment of overtime should not exceed 12 hours in a week. However, a test check revealed substantial payments of overtime in excess of the statutory ceilings during 2007-08 as detailed below:

Table 5.4

Bottling plant	Manpower in excess of benchmark	Number of cases of payment of overtime	Number of cases in which overtime more than 48 hours per month was paid	Maximum overtime paid in hours in a month
Mathura	51	1243	202	136
Karnal	20	593	545	240
Loni	5	412	313	152
Jaipur	8	351	122	122

The Management stated (November 2008) that some of the bottling plants were yet to achieve rostering of manpower in line with the benchmarks. Continuous efforts were made to reduce the deployment levels closer to benchmark norms for reducing the overtime as well as cost at the bottling plants.

Thus, the fact remained that the Company was paying overtime despite overstaffing and also in violation of the statutory provisions.

Recommendation No. 5.5

Efforts need to be made to rationalise overtime payment through deployment of manpower within benchmark. Overtime should be paid in line with statutory provisions.

5.8.3.3 Loss due to increase in cost of repair and maintenance

The Company had fixed a norm for consumption of valves at 1.6 *per cent* of the cylinders filled. Actual average consumption of valves during 2007-08 in the Company was 0.875 *per cent* of cylinders filled and was well within the norms. However, in three units, *viz.*, Gurgaon, Refinery co-ordinator office-Chennai Petroleum Corporation Limited and Lakhimpur Kheri bottling plants, the valve consumption was significantly higher than the norms and ranged from 2.085 *per cent* to 3.157 *per cent*.

The Management stated in November 2008 that the target of 1.6 *per cent* for valve consumption was fixed to ensure that no leaky cylinders were dispatched to the customers. However, valve consumption at the specified plants increased as more leaky cylinders were detected and replaced with new valves to avoid supply of leaky cylinders to the customers.

The reply was not convincing as reasons for leaky cylinders in excess of norms by three to four times were not analysed and indicated by the Company.

Recommendation No. 5.6

The Company needs to identify the reasons for abnormal increase in consumption of valves and take remedial measures for non-achievement of the prescribed limit.

5.8.4 Deviations from Industry Logistics Plan

5.8.4.1 Loss in transportation cost due to un-economic linkages.

The Company prepared monthly Industry Logistic Plan (ILP) for optimal routing of bulk LPG from various sources to bottling plants and packed LPG from bottling plants to market/distributors at minimum cost by using a specialised software *viz*,. SAND[8] module considering various input parameters like availability of LPG at different sources, bottling capacity of plants, market demand, transportation cost and operating cost of the plants, *etc*.

In order to reap full benefits of the system it is necessary that the input parameters should be updated on real time basis. Audit observed that the SAND module was run by the Company on monthly basis and the input parameters were not updated on real time basis resulting in deviations from the projected logistics plan and consequent losses or gains during 2007-08 as indicated below:

- In Northern region, there was a saving of Rs.138.99 crore in seven months and a loss of Rs.87.91 crore in five months with a resultant net gain of Rs.51.08 crore;
- In Western region, there was a savings of Rs.212.79 crore in ten months and a loss of Rs.1.47 crore in two months with a resultant net gain of Rs.211.32 crore;
- In Southern region, there was a saving of Rs.135.09 crore in seven months and a loss of Rs.75.93 crore in five months with a resultant net gain of Rs.59.16 crore, and
- In Eastern region, there was a saving of Rs.158.98 crore in nine months and a loss of Rs.65.42 crore in three months with a resultant net gain of Rs.93.56 crore.

Audit also observed that the bottling plants were attached with limited number of LPG sources instead of all available sources. This limitation restricted the system to optimise the linkage within the limited number of LPG sources attached to the bottling plants and not with respect to all available sources.

The Management stated (November 2008) that bottling plants were attached with all realistic probable and feasible sources with minimum three sources attached with each bottling plant. Non-feasible and unrealistic linkages had not been taken into consideration. ILP linkages were finalised based on the projected demand and other inputs. Actual movements varied depending on various factors including unforeseen circumstances.

The reply was not tenable because Udaipur, Loni, Ajmer, Jhunjunu, Bikaner and Sawaimadhopur bottling plants were not attached to even three minimum sources during April 2007. It is possible to get better optimisation by attaching bottling plants to all sources instead of attaching them to a limited number of sources. Overall savings achieved in all the regions due to deviations from the ILP indicated deficiencies in updating the actual inputs and results of ILP. Though manual modifications from the ILP suggested linkages resulted in gain at regional level, no exercise was done by the Company to study the holistic impact at the company level.

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[8] ***Supply and Distribution***

5.8.4.2 Loss in transportation of packed LPG

The Company is paying freight on round trip basis (RTD) for transportation of packed cylinders from plant to distributors and to bring empty cylinders from distributors as per the transportation agreements that provided for payment of transportation charges per cylinder per kilometre (km).

Audit observed that in Loni bottling plant, the transportation contract for packed LPG cylinders was renewed in November 2007 with two rate slabs for transportation charges within the State *viz,*. (i) RTD upto 50 km and (ii) RTD above 50 km. As a result of introduction of two slabs instead of per km rate the Company saved Rs.34.16 lakh *per annum*.

Similarly actual savings in Bihar State office during July 2006 to March 2008 towards transportation cost due to implementation of new slabs, *i.e.*, upto RTD of 50 km and beyond 50 km on packed LPG transportation cost was Rs.1.30 crore.

The Management while agreeing with Audit (November 2008) on savings in case of Loni bottling plant apprehended that in slab rate system transporters may work out rates based on highest km slab and might result in higher financial outgo.

The apprehension of the Management is not tenable in light of proven savings achieved due to introduction of a new slabs in the above two instances.

Recommendation No. 5.7

The Company should ensure minimum transportation charges by reviewing the slab system in other State Offices in line with Bihar State Office.

5.8.4.3 Short receipt of bulk LPG through transportation

The bulk LPG transferred from refineries/dockyards to LPG bottling plants is shared by road (63 *per cent*), pipeline (25 *per cent*) and rail (12 *per cent*). Weighing of LPG is done through weighbridges in case of road and rail transfers and through mass flow meters in case of pipeline transfers.

During audit, the following instances were noticed

a. The Tikrikalan LPG bottling plant was not having a wagon weighbridge and receipt of the LPG by railway wagons was accepted on 'said to contain basis'. Due to non-availability of weighing scale in the plant, the Company could not safeguard its interest against short receipt of LPG in transit nor claim the same from Railways and consequently suffered loss of Rs.8.63 crore during the period 2005-06 to 2007-08.

b. Kanpur LPG bottling plant was receiving bulk LPG from different dispatch locations through rail since 2005-06. The quantities of bulk LPG received through rail were also accounted for on "said to contain basis". During the year 2006-07 and 2007-08; the short receipt was 1.76 TMT LPG valuing Rs.3.14 crore for which no claims were lodged on Railways.

c. Devanagonthi (Karnataka) LPG bottling plant received short supply of 2.44 TMT of bulk LPG transported in tank wagons from Mangalore LPG Import Facility during the period 2001-2002 to 2005-06 due to non-operation of weighbridge resulting in loss of Rs.3.52 crore to the Company. The Company preferred a claim

for compensation for the stock loss on HPCL (the supplier) which was not accepted by them.

The Management stated (November 2008) that major input of bulk LPG through rail at Tikrikalan and Kanpur bottling plants was from Reliance Industries Limited (RIL) Jamnagar. After consistent pursuance with RIL on Industry basis, it has since been decided to appoint a surveyor to witness the loading operation at RIL Jamnagar on behalf of Industry. Regarding loss at Devanagonthi bottling plant, the Management stated that despite pursuance for compensation with HPCL, the same was not accepted by the latter.

Thus, due to inadequate weighing infrastructure and delayed action to safeguard its interest, the Company suffered a loss of Rs.15.29 crore.

Recommendation No. 5.8

Adequate infrastructure should be installed at the source and destination to avoid losses and pilferages.

5.8.4.4 Unrealistic transit loss norms

As per the vendors' specifications, the weighbridge accuracy tolerance was +/-10 kg for non-self indicating weighbridge upto 50 MT capacity. For such weighbridges International Organization of Legal Metrology (IOLM) prescribed a permissible error limit of +/-20 kg. However, the Company, in its transportation contracts with transporters for movement of bulk LPG by road, agreed to ignore any shortages upto a maximum of 100 kg per trip between the loading point and unloading point, irrespective of tank truck (TT) capacity.

Considering IOLM standards, weighing error limit of each consignment worked out to 40 kg per TT per trip (20 kg each at the loading and unloading locations) as against 100 kg adopted by the Company. Review of bulk LPG movement in 21 bottling plants of Northern Region for the period 2005-06 to 2007-08, revealed transit loss of 2.07 TMT amounting to Rs.8.86 crore being the difference between the reasonable loss of 40 kgs per tank truck as against the actual loss upto 100 kgs allowed by the Company.

It was noticed that the District administration had caught red-handed seven bulk TTs of OMCs in Loni during 2008 filling cylinders *en route* to the plants. The raid established that transporters were misutilising the excess leverage so allowed to them.

The Management stated (November 2008) that bulk TTs was subject to weighing four times and due to variation in calibration of the weighbridge at the loading/unloading location, weighing differences were noticed. Moreover, there were limitations for the decantation of the product and entire product could not be unloaded from a particular truck leading to gain at one location and loss at another. Weight variation to the tune of 80-90 kg was observed between the loading location and the unloading location even under escorted condition. To ignore any shortage upto a maximum of 100 kg per trip was an Industry norm.

The reply of the Management was not acceptable as industry norms of weight loss above 100 kg were not in conformity with the recognised standards or manufacturer's specifications of the weighing scales. A test check of five locations involving 20,801 trips during 2007-08 indicated that there was zero loss in 6838 trips (33 *per cent*), loss of less

than 40 kg in 7,683 trips (37 *per cent*). Thus, transit loss in 70 *per cent* cases was upto 40 kg indicating that the norm for 100 kg transit loss was not realistic.

Recommendation No. 5.9

The Company should revisit the existing transportation agreement provisions relating to weight loss norms and should rationalise the same with available standards.

5.8.5 Inventory management

5.8.5.1 Storage of filled cylinders beyond licensed capacity

As per provisions of LPG Operation Manual, the stock of filled cylinders should be within the licensed capacity to avoid any hazardous incident.

As per the license issued by the Chief Controller of Explosives (CCOE), the licensed storage capacities of bottled LPG at Chakan and Manmad bottling plants were 11,928 kg and 70,000 kg per day respectively. It was noticed that stock of packed cylinders was in excess of the licensed storage capacity during 16 out of 25 working days in January 2008 at Chakan bottling plant and 37 days between July 2007 and July 2008 at Manmad bottling plant.

The Management stated (November 2008) that excess stock was loaded in trucks which could not be dispatched for want of indents or any other reason (invoice not getting generated due to loss of connectivity to server) and stock on wheels (in trucks) did not require explosive license.

The reply of the Management was not tenable as the filled cylinders in trucks remained within the plant premises and therefore, required to be within the licensed limit for storage of packed LPG cylinders to avoid risk.

Recommendation No. 5.10

Bulk and packed LPG stock levels should be maintained within the permissible limits prescribed by the CCOE to ensure safety of the plant, staff and surrounding property/population.

5.8.5.2 Delay in disposal of scrap/non-moving items

A test check of inventory records as on March 2008 revealed the following cases of blockade of funds due to non-disposal of scrap/non-moving items:

- De-shaped valves, pressure regulators and rejected cylinders valuing Rs.5.04 crore were lying undisposed at 13 bottling plants ranging from two to three years.
- The use of aluminium safety caps was replaced with plastic safety caps. The unused stock of aluminium caps across the Company was neither used nor disposed off resulting in blocking a sum of Rs.28 lakh.

The Management stated (November 2008) that the disposal activities suffered due to minimum lot size not being available or the reserve price not getting realised during disposal attempts.

The reply of the Management was not tenable as some of the scrap was lying for a period more than two to three years and unnecessary accumulation of scrap results in blockage of fund and inventory carrying cost.

Recommendation No. 5.11

The Company should evolve an effective system for timely disposal of scrap/idle inventory, to avoid blockade of funds.

5.8.5.3 Blockade of funds in non-moving stock of empty cylinders of other OMCs

It was noticed that 32,757 cylinders (14.2 kg) and 19,574 cylinders (19 kg) of other OMCs (HPCL and BPCL) valuing Rs.5.44 crore were lying with the Company. However, the Company did not have knowledge of the number of its empty cylinders lying with other OMCs. Non-exchange of empty cylinders with OMCs resulted in blocking of working capital in non-moving inventory, avoidable inventory carrying cost and additional procurement thereagainst to meet the market requirements.

The Management accepted (November 2008) that over a period of time, at some of the bottling plants, higher inventories of OMCs' cylinders have accumulated. It was informed that policy guidelines had been evolved at industry level for transfer of OMCs' cylinders to these plants and the same were expected to be circulated and made operational shortly.

However, the fact remains that due to absence of effective system for exchange and reconciliation with other OMCs at industry level, there was blockade of working capital.

Recommendation No. 5.12

The Company may evolve an effective control system of exchange and reconciliation of cylinders with other OMCs at regular intervals.

5.8.6 Distribution and diversion

Review of release of LPG connections, refill audit of distributors and monitoring of diversion of domestic LPG for unauthorised usage revealed the following shortcomings:

5.8.6.1 Multiple LPG connections

The Government of India reimbursed subsidy of Rs.22.58 per domestic cylinder and an equal amount was shared by Oil and Natural Gas Corporation Limited, GAIL (India) Limited and Oil India Limited. Total domestic subsidy bill of the Government of India during 2006-07 was Rs.1,572 crore. Considering the magnitude of the expenditure incurred by the GOI on subsidy it is imperative that steps may be taken to control the misuse of domestic LPG.

In this regard LPG order, 2000 stipulates that a person shall not possess more than one LPG connection under Public Distribution System. The Company is taking a declaration to that effect from the customers applying for new LPG connections. However, the Company or its distributors were not maintaining a comprehensive inter-company customer database to check existing connection of any OMC in the name of applicant while releasing a new connection.

The Management expressed (November 2008) its inability to maintain central data bank of its five crore customers handled by 4,996 distributors due to non-connectivity of remote places.

The fact remained that due to inadequate measures and lack of co-ordination on the part of the Company with its distributors and other OMCs, release of multiple connections

could not be checked. Audit observed that in an inter-company exercise conducted by the OMCs (July 2008) multiple connections as detailed below were identified.

Table 5.5

(figures in lakhs)

Name of the OMC	Multiple connections identified	Same name same address	Different name same address	Connections terminated/blocked	Balance
IOCL	43.39	3.97	39.42	8.39	35.00
BPCL	3.90	NA*	NA*	3.62	0.28
HPCL	60.45	4.12	56.33	5.19	55.26
Total	107.74	8.09	95.75	17.20	90.54

NA represents information not made available to audit.

As against the total of 107.74 lakh multiple connections identified by OMCs only 17.20 lakh connections could be terminated/blocked. The action in respect of remaining connections was yet to be taken. Thus, due to absence of comprehensive data bank OMCs could not exercise effective control to prevent multiple connections.

Audit is of the opinion that consumers should be allotted consumer numbers centrally at industry level all over India instead of at Company/distributor level to avoid release of multiple connections. In addition, the OMCs should devise a uniform declaration form to be obtained at the time of release of connections that should include surname, name, date of birth, yearly income, ownership of house/land/vehicles and should be supplemented with PAN/passport/birth certificate in addition to voter ID card number.

The Management stated (November 2008) that the recommendation of the Audit was already under implementation in the Company. In May 2007 industry as a whole had recommended to the GOI to modify the LPG order to the effect that instead of a person, a household shall have only one connection. Further action could not be taken as the revision in the LPG control order had not been approved.

Recommendation No. 5.13

(i) The Company should evolve comprehensive customer master data and take necessary steps to identify and capture details of LPG consumers like size of the family and consumption pattern necessary for prevention of unauthorised use of domestic LPG and multiple connections.

(ii) The Company should share customer database with other OMCs to avoid release of multiple connection.

5.8.6.2 Delay in identifying the customers having PNG connections

The Oil PSUs through joint ventures are supplying PNG to domestic, commercial and industrial consumers and have released over 4.40 lakh domestic PNG connections upto 2007-08 in Mumbai and Delhi alone.

A test check of records revealed that as of July 2008 out of 64,214 PNG customers in Delhi, 26,811 customers (41.75 *per cent* of the total customers) were possessing LPG connection issued by the Company. The LPG Order, 2000 did not prohibit the PNG customer to retain domestic LPG connection.

The Management agreed (November 2008) that LPG Order, 2000 did not make PNG customer ineligible to possess a domestic LPG connection or *vice versa*. OMCs had written to the GOI in February 2007 and September 2008 to incorporate modifications in LPG Control Order so that both PNG and LPG connections could not be held simultaneously by the customers.

Thus, there was no effective system to enforce surrender/termination of existing LPG connections of PNG customers which resulted in non-utilisation of cylinders for the new customers and possibility of diversion of cylinders for unauthorised usage.

Recommendation No. 5.14

LPG order 2000 needs to be revised and effective system may be put in place to take back LPG connections from PNG consumers to ensure that a customer is allowed to hold only one connection either PNG or LPG at a point of time.

5.8.6.3 Frequent refills of domestic LPG cylinders – possibility of diversion

It was noticed that while releasing a commercial connection, the Company enquired about the consumers' yearly consumption but the same was not being followed in respect of domestic consumers. In case of domestic LPG connection, details as to family size and consumption pattern of the domestic users was also not collected by the Company. In the absence of the required detailed information about the family size and the consumption pattern, average per capita consumption during 2007-08 ranged from 2.56 kg per month (Uttarakhand) to 16.28 kg per month (Uttar Pradesh). A distributor under Karnal Area office of the Company was found issuing three refills at a time to a domestic DBC[9] consumer due to no input control in the software used for capturing and monitoring refills to the consumers.

The Company was fixing month-wise SPD (Supply Plan for Distribution) for each distributor; considering the average sale of the same month of the two immediately preceding years. Existing mechanism of fixation of SPD without considering the LPG consumption pattern based on family size of the consumers could result in diversion of domestic cylinders for commercial use.

The Management stated (November 2008) that in order to calculate the demand figures of various distributorships for planning, based on historical data; the SPD has been found to be an effective tool. SPD could not be construed as an agent for diversion or backlog.

The reply was not tenable because existing system of SPD for determining the refills to be allocated to the distributors might lead to diversion of domestic LPG cylinders for commercial purposes in case SPD exceeded the actual demand.

Recommendation No. 5.15

The Company should review the system of fixing SPD to rationalise it in line with actual consumption pattern based on family size. The Company should also maintain cylinders masters with distinctive numbers allocated to each cylinder to control diversion of domestic LPG for commercial use.

[9] *Double bottle connection*

5.8.6.4 Refill audit

The Company periodically carried out refill audit of distributors to check the genuineness of LPG connections, inventories of cylinders and accessories and to examine the complaints of the customers.

Audit analysis revealed that irregularities noticed by the Company during refill audits increased from 546 in 2005-06 to 905 in 2007-08. Similarly cylinders found under diversion for commercial use increased from 38,330 during 2005-06 to 50,640 during 2007-08. The Company had imposed major or minor penalties in all the cases. However, increasing number of irregularities is indicative of inadequacy of the penal provisions of the guidelines to deter the distributors from committing such irregularities. In addition, district authorities along with the Company conducted 6,067 raids during last four years ended March 2008 and seized 46,590 numbers of cylinders in addition to 2,201 motorists found using domestic cylinders as fuel.

The Management stated (November 2008) that audit recommendations to curb diversions of domestic LPG for unauthorised use and for multiple and fake LPG connections was under implementation.

Recommendation No. 5.16

The Company should revisit its existing Marketing discipline guidelines and make penal provisions more stringent.

5.8.6.5 Tampered tare weight of cylinders

As per the LPG Marketing Discipline Guidelines, 2001, supply of partially used cylinders/pilfering product from cylinders is an act attracting invocation of major penalty.

In Mathura bottling plant the distributors/transporters changed the tare weight printed on 42,493 cylinders during January 2007 to October 2008 to conceal the theft of gas from LPG cylinders. Against such tampered cylinders, the plant was recovering Rs.16 per cylinder from distributors/transporters instead of applying the provisions of the guidelines.

The Management stated (November 2008) that tampering of tare weight is a phenomena reported at very few locations on All India basis. Guidelines have also been issued on All India basis for recovering a uniform penal rate of Rs.200/- per cylinder.

The reply was not tenable because action in such cases should be taken as per the provisions of the approved guidelines.

Recommendation No. 5.17

The Company needs to strictly deal with this issue to discourage such malpractices so as to ensure supply of proper weight of LPG to the customers.

5.8.6.6 Non-compliance of Marketing Discipline Guidelines

LPG Marketing Discipline Guidelines (MDG), 2001 of the Company provide for imposition of major or minor penalty on commitment of specified type of irregularity[10] by the distributor. The penalty increases progressively for second and third irregularity

[10] *like forced sale of stoves/hot plates, recovery of unauthorised charges, supply of partially used cylinders/pilfering products from cylinders, diversion of domestic cylinders to non-domestic use, etc.*

detected and in case of 3rd major irregularity or 4th minor irregularity the distributorship is terminated.

Inspection of 36 distributors in Agra Area office carried out by the Company during February 2007 to October 2007 revealed 59 irregularities against 17 distributors. However, the Company treated more than one irregularity detected in case of each distributor as first irregularity instead of treating them as second and subsequent irregularities. Had the Company correctly enumerated successive irregularities, six distributors would have got termination.

The Management stated (November 2008) that as per practice, when more than three irregularities are detected on the same day, it is considered as first instance only and penalties are imposed as per the nature of irregularity as stipulated in MDG. However, OMCs have recommended revision of MDG with more stringent provisions to the GOI.

The reply was not tenable as the main objective of defining penalty by the Company was to regulate fair distribution. Liberal implementation of MDG due to incorrect enumeration of irregularities had led to increasing irregularities in distribution.

Recommendation No. 5.18

The MDG guidelines should be strictly followed in letter and spirit for an effective control and monitoring system of the distributors.

5.8.7 Other points of interest

5.8.7.1 Decline in sale of five kg LPG cylinders

The Company introduced five kg LPG cylinders for domestic use for hilly areas where it is unaffordable and physically difficult to access 14.2 kg cylinders. However, the customers in this size reduced by 4.1 *per cent* in 2007-08 as compared to 2006-07 whereas there was a growth of 7.9 *per cent* in the customers of 14.2 kg domestic cylinders over the same period. The Company has not considered permitting the use of five kg LPG cylinders for commercial purposes.

The Management stated (November 2008) that the LPG Order 2000 stipulated use of five kg cylinders only for domestic purposes and had not permitted their use for non-domestic purpose.

The Company may either explore the possibility of suggesting modification in the LPG order for use of five kg cylinder for commercial use or revisit the continuance of this segment after evaluation of economics.

5.8.7.2 Abandonment of LPG bottling plant at Vasai

The Company decided (September 2000) to set up a bottling plant with 10 TMTPA capacity at Vasai, Mumbai at an estimated cost of Rs.8.20 crore. The Company had incurred Rs.5.90 crore for land acquisition and construction related work but the project could not progress due to opposition from the local villagers. Due to revision in the project cost to Rs.11 crore the Company decided (November 2006) to abandon the construction of the plant.

Review of records revealed that justification for taking up the project was not adequate as sufficient bottling capacity was available in Chakan and Manmad plants of the Company to meet the demand of Mumbai and Thane region.

Thus, decision to set up the plant at Vasai resulted in avoidable loss of Rs.2.60 crore on account of expenditure incurred on building at site.

The Management stated in November 2008 that bottling plant at Vasai was approved at the cost of Rs.8.20 crore during September, 2000, based on the financial viability, future demand prospects and other strategic considerations. However, the project activities could not be undertaken on sustained basis due to continuous resistance from locals. The project was re-evaluated during 2006, and a conscious decision was taken to abandon the construction activities so as to save the balance capital expenditure as well as to save future recurring costs.

The reply of the Management was not tenable as the available capacity of the existing plants should have been assessed *vis-à-vis* demand while deciding to set up the plant. Further the disputes with local residents/authorities are a normal problem in any land acquisition case and should have been ascertained and settled well in advance prior to starting construction work and placing other work orders.

5.8.7.3 Inadequate security cover for transported LPG cylinders

For transportation of packed LPG the Company enters into transportation contracts and takes security of Rs. three lakh for each contract irrespective of the number of trucks deployed for packed LPG transportation from plant to distributor and Rs. two lakh wherever the transporter is a distributor.

It was noticed that the security deposit of Rs two or three lakh as the case may be was inadequate to cover even one LPG consignment consisting of 306 number of packed LPG cylinders of 14.2 kg worth over Rs.five lakh.

The Management while accepting the audit view apprehended increase in transportation rates on loading all the risk factors in the contract and added that there are very few cases where theft of the cargo had taken place in the past.

The reply of the Management was not tenable because in anticipation of increase in transport rates; the Company should not keep its LPG packed consignment under-secured and the contention that few cases of theft had taken in the past did not guarantee that there may not be any major loss in future.

Recommendation No. 5.19

The Company should amend existing provisions of security deposit in the contracts so as to secure comprehensive coverage of LPG consignments.

5.9 Conclusion

The Company was mixing butane and propane to form LPG in different proportions other than the one considered for subsidy claims resulting in loss of Rs.40.97 crore during five years ended March 2008 and supply of LPG with higher butane. Actual operating cost in more than 50 *per cent* bottling plants was less than the cost ceiling fixed in the subsidy scheme which indicated a need to revise the cost ceiling under the subsidy scheme based on the standard and normative conditions. The Company not only had excess deployment of manpower *vis-à-vis* benchmarks but was also paying overtime entailing financial bearing in terms of higher operating cost of the bottling plants.

Despite adoption of ILP system for distribution of LPG to meet the market demand, the Company failed to use the suggested ILP linkages, leading to frequent deviations/manual

interventions that remained unevaluated through ILP. Due to wide gap between the prices of subsidised LPG and commercial LPG an effective system to curb diversion of domestic LPG for commercial usage was required. The Company failed to exercise effective control in the absence of adequate customer master database integrated with other OMCs which led to issuance of multiple and possible fake connections.

The Company adopted a lenient approach in following the marketing discipline guidelines for penalising dealerships which led to increasing indiscipline in the distribution channel. Similarly the cases of tampering of tare weight of cylinders were not dealt with as per the guidelines.

The matter was reported to the Ministry in January 2009; reply was awaited.

CHAPTER VI

Oil and Natural Gas Corporation Limited

Onshore exploration activities

Highlights

Oil and Natural Gas Corporation Limited (Company) could drill only four of the 22 wells committed in the original re-grant period of four years in 15 nomination blocks. This led to payment of petroleum exploration license fee on extension of grant period. The Company also could not establish prospectivity of the area in two basins, after incurring an expenditure of Rs.404.89 crore.

(Paras 6.7.1.1 and 6.7.1.2)

The Company did not complete the minimum work programme in seven of the 17 New Exploration Licensing Policy (NELP) blocks reviewed in audit and paid penalty of Rs.1.68 crore in two blocks.

(Para 6.7.2.1)

The Company did not fix standards/norms for total field days in a field season, normal non-production days towards camp establishment and winding up, experimental work, topographical survey days and productivity of geophysical parties. As a result, the days utilised by the field parties on these activities were in wide variance in different basins and their reasonableness was not ascertainable.

(Paras 6.7.3.2 and 6.7.3.3)

Delay in finalisation of shot hole drilling contracts resulted in under achievement of data acquisition targets by 207 Ground Line Kilometre (GLK) and 49.29 Square Kilometre (SKM), besides idling of geophysical parties for 463 days with nugatory expenditure of Rs.1.85 crore.

(Para 6.7.3.4(i))

Delay in procurement of seismic data acquisition systems by the Company resulted in idling of two geophysical parties in a basin during 2005-06 and six geophysical parties in two basins during the field season 2006-07.

(Para 6.7.3.4 (iii))

The Company could not acquire the desired 3D seismic data during the field season 2006-07 due to delay in hiring of acquisition services.

(Para 6.7.3.5)

The Company awarded a shot hole drilling contract to an inexperienced party, which resulted in under achievement of targets by 67.75 GLK.

(Para 6.7.3.6)

Due to non-availability of ready drill sites, further programme, equipment and spare parts *etc.*, the rigs remained idle for 1,566 days incurring idling expenditure amounting to Rs.40.83 crore.

(Paras 6.7.4.1 to 6.7.4.5)

Due to not conducting site survey before award of civil construction contract, the Company had to incur infructuous expenditure of Rs.1.65 crore on civil works.

(Para 6.7.4.6)

The Company did not fix norms for production testing in terms of number of days to be spent per object of testing. In the absence of norms, there was a wide variation in four basins ranging from 4 to 70 days per object of testing.

(Para 6.7.5.1)

The Company did not achieve exploration objectives due to deferment of production testing after incurring expenditure of Rs.64.40 crore on three wells.

(Para 6.7.5.2)

Excessive time taken for production testing and non-availability of equipment before deployment of rig resulted in increase in well cost by Rs.10.90 crore.

(Para 6.7.5.3)

Summary of recommendations

The Company may:

1. ***ensure execution of exploration activities under nomination blocks taking into account its work commitments under the block in the original re-grant period of Petroleum Exploration License (PEL) so as to achieve exploration objectives and to avoid payment of additional PEL fee on renewals;***
2. ***ensure execution of exploration activities under NELP blocks taking into account work commitments under the block and completion of each activity as per Minimum Work Programme (MWP) targets to avoid penalty;***
3. ***fix norms for field days, non-production days, experimental days and productivity of the geophysical parties;***
4. ***ensure availability of state of the art data acquisition equipment with the geophysical parties before their deployment;***
5. ***finalise the shot hole drilling contracts before scheduled deployment of geophysical parties and also ensure that the contractor is of proven capability;***

6. ***ensure availability of locations and ready drill sites before release of rigs from the previous locations to avoid expensive idling of rigs;***

7. ***ensure availability of drilling equipment i.e. compressors, fishing tools, logging parties, etc. at the drill site to avoid expensive shut downs of the rigs;***

8. ***finalise the transportation contract before release of rigs from the previous locations to avoid expensive idling of rigs and adhere to the provisions contained in the Material Management Manual;***

9. ***prescribe norms in terms of number of days to be spent per object of production testing keeping in view the sub-surface conditions of various basins;***

10. ***ensure completion of conclusive production testing before release of rigs and avoid deferment of testing for long periods; and***

11. ***fix reserve accretion targets in Frontier basins.***

6.1 Introduction

6.1.1 Exploration activities in the Company

Oil and Natural Gas Corporation Limited (Company) is carrying out activities relating to exploration and production of hydrocarbon since 1956. Upto 1998, the National Oil Companies were offered exploratory blocks on nomination basis and were allowed to apply to the Government of India (GOI) for grant of Petroleum Exploration Licences (PELs) for these blocks.

In 1999, the Directorate General of Hydrocarbon (DGH) formulated and implemented New Exploration Licensing Policy (NELP) of the GOI. Under the NELP, the GOI offered 63 exploration blocks between 1999 to 2006 under round I to VI to the private as well as joint venture companies under Production Sharing Contracts (PSCs).

To achieve the committed work programme under the PEL/NELP blocks, the Company prepared a five-year plan (FYP) envisaging the exploration and production activities in the ensuing five-year period. On an annual basis, the Company entered into a Memorandum of Understanding (MOU) with the Ministry of Petroleum and Natural Gas in which it undertook to achieve the reserve accretion and production targets during the particular year in order to achieve the overall targets depicted in the FYP. For achieving the targets of MOU at Basin[1] level, a performance agreement was signed every year between Director (Exploration) of the Company and the concerned Basin Manager.

6.2 Scope of audit

Audit covered the review of the Company's transactions relating to nomination and NELP blocks in the onshore areas held by the Company in its individual capacity or with consortium partners, data acquisition, processing and interpretation, release and drilling of exploratory locations and estimation of reserve accretion. The records and documents relating to exploration activities of the Company during the 10th FYP (2002-2007) in six onshore basins were test checked.

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[1] ***Basin - An entity involved in exploration related activities, headed by a Basin Manager reporting to Director (Exploration).***

6.3 Audit objectives

The performance audit was conducted to assess that:

- the planning and achievement of the exploration of nomination and NELP blocks was adequate;
- the Company had established systems and procedures for optimal seismic data collection, its timely processing and interpretation;
- the rig deployment plan was inclusive of the inputs provided by different basins; was sufficient and met the Minimum Work Programme (MWP)/Work Programme (WP)/Corporate targets; and
- production testing, well completion and reserve estimation were in compliance with the prescribed procedure and schedules.

6.4 Audit criteria

The following criteria were used for the performance audit:

- Exploration of nomination blocks: WP committed under nomination blocks to achieve corporate objectives of reserve accretion of hydrocarbon.
- Bidding for NELP blocks/obtaining of PELs: MWP committed in the PSCs to achieve corporate objectives of reserve accretion of hydrocarbon.
- Acquisition, processing and interpretation of seismic data: Preparation of exploration work programme, award of shot hole drilling contracts, applicable provisions of Material Management (MM) Manual/Corporate directions, last purchase price (LPP), planned period of seismic data acquisition, its processing and interpretation and conditions of contract.
- Release and drilling of exploratory locations: FYPs, Annual plans, Regional Exploration Board (REXB) meetings, drilling plans and drilling of exploratory locations.
- Production testing and reserve creation estimation: Production testing programme, well completion reports and reserve estimation reports.

6.5 Audit methodology

Audit reviewed the records relating to acquisition of the blocks under nomination and NELP regime, contracts and payments for shot hole drilling for survey work, processing and interpretation of seismic data, plans and execution of deployment of drilling rigs, reports relating to production testing, well completion and reserve estimation. A representative sample of the blocks was selected on the basis of random sampling. The sample covered 50 *per cent* of Nomination/NELP blocks, 50 *per cent* of data acquired, processed and interpreted and 33 *per cent* of exploratory locations drilled and reserve accreted.

An Entry conference with the Management was held on 16 April 2008 wherein the audit objectives, scope and methodology were explained. Subsequently, during the Exit conference held on 29 September 2008, major issues incorporated in the report were discussed.

6.6 Acknowledgement

Audit is thankful for the cooperation received from the Management of the Company in providing information, records, clarifications and for arranging discussions with the concerned officers from time to time. Their cooperation facilitated the conduct of the review within the given time frame.

6.7 Audit findings

6.7.1 Exploration of nomination blocks

6.7.1.1 Non-drilling of committed wells in original re-grant period

Upto 1998, before the formulation and implementation of NELP, the Company was offered exploratory blocks on nomination basis and was allowed to apply to the GOI for grant of PEL for these blocks ***(Annexure IX).*** As on 31 March 2007, the Company was having 67 onshore nomination blocks acquired during January 2001 to April 2006, on re-grant basis, on which exploration activities were being conducted.

Audit observed that in 15 nomination blocks (***Annexure X***), the Company had drilled four wells against the eight wells committed in four blocks, within the initial four years of the re-grant period. It failed to drill any well in the remaining 11 blocks where it had committed to drill 14 wells within this period. Audit further observed that even the acquisition, processing and interpretation (API) of seismic data had not been completed in 11 blocks within the initial four years. To continue its exploration activities for fulfilling commitments beyond the initial period of four years, the Company had to pay additional PEL fees of Rs.1.14 crore (March 2007) in 10 blocks for obtaining extension of time.

The Management stated (September 2008) that most of the wells shown as shortfall had been drilled in the fifth year of the cycle. The Management further stated that as per the orders (March 2002) of the GOI, re-grant would be given for a period of four years with an extension for the next year based on a definite work programme to be submitted and approved by DGH. In case, any lead is obtained during the re-grant period, further extension of two years would be given.

The reply was not satisfactory, as these nomination blocks were awarded to the Company prior to formulation and implementation of NELP-1999. The Company, however, failed to drill the committed wells during the first four years of the re-grant period. As the Company had already worked on these blocks for seven years during the initial grant period, the committed wells should have been drilled during the extended four year period.

6.7.1.2 Non-establishment of prospectivity

The Krishna Godavari- Pranhita Godavari (KG-PG) basin drilled four wells in nominated block-1A, incurring an expenditure of Rs.60.64 crore (March 2007). In block-1B, the basin had drilled 21 wells incurring an expenditure of Rs.300.65 crore (March 2007). Further, the Cauvery basin drilled two wells in block L-X which were declared dry and abandoned. The basin had already incurred an expenditure of Rs.17.74 crore on survey and drilling under this block. The additional committed one well under this block was not drilled. In block L-XII, the basin drilled two exploratory wells which were declared dry and abandoned after incurring an expenditure of Rs.25.86 crore on survey and drilling of wells. The additional one well committed under this block was also not drilled.

The Management stated (September 2008) that out of the four wells drilled in block IA of the KG-PG basin, one well was a gas well and acquisition of new 3D data would provide multiple level of prospect evaluation in time to come. In case of block IB of KG-PG basin, out of the 21 wells drilled, eight were hydrocarbon bearing which had provided significant exploratory leads. The Management further stated that in two blocks in Cauvery basin, the wells drilled had helped in fine tuning the geological model, in spite of the fact that they were devoid of hydrocarbons.

The reply was not convincing as the blocks IA and IB in KG-PG basin were received on re-grant basis in December 2003 and January 2004, respectively. Even after expiry of more than 11 years[2] from the initial grant, no prospectivity of the area could be established. Furthermore, the re-grant licenses of the block IA would expire in December 2010 and block IB in January 2011. Similarly, no prospects were established in Cauvery basin, although the re-grant licences of the blocks L-X and L-XII would expire in December 2010 and November 2010 respectively. As per orders (March 2002) of the GOI no further extension would be granted for those blocks.

6.7.2 Exploration of NELP blocks

6.7.2.1 Non-completion of Minimum Work Programme under NELP

Under NELP, the GOI offered blocks to private as well as joint venture companies. Against 63 blocks offered by the Government under NELP I to VI between 1999 and 2006, the Company submitted bids for 51 blocks and obtained 23 blocks under different rounds. In addition, the Company was a consortium partner in eight blocks where other companies were operators (***Annexure XI***).

The MWP in each exploration block consisted of commitments by the Company in terms of extent of surveys to be conducted and wells to be drilled within seven years, divided into three Phases. In the event of non-fulfilment of the MWP commitments for any Phase, the Company could be granted extension in the time schedule by the Management Committee of the block or the GOI, for a period not exceeding six months, subject to the provisions of the PSC. Further extensions envisaged furnishing of a bank guarantee equal to the value of shortfall in achievement of MWP commitments, besides liquidated damages (LD) ranging from 10 *per cent* to 30 *per cent*. In the event of non-extension of the completion schedule, the Company could offer the block for surrender or the GOI could also direct the Company to do the same.

Audit observed that out of 17 NELP blocks selected for review, the Company could not drill the wells committed under the MWP in seven blocks which are discussed in the succeeding paragraphs:

i) Non-drilling of a well due to delay in release of location leading to payment of penalty

Block AA-ONN-2001/1 in Eastern Tripura was awarded to the Company under NELP-III with 100 *per cent* participating interest. As per the MWP committed in the PSC (February 2003), the Company was to acquire and re-process 2D/3D seismic data and drill an exploratory well under Phase-I effective from May 2003 to April 2006.

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[2] ***Seven years for initial grant period plus four years of re-grant period.***

As the Company could not drill the committed well in the first Phase, the GOI allowed first extension of six months upto October 2006, without penalty. Further extension upto April 2007 was granted by DGH on payment of 10 *per cent* penalty of Rs.1.06 crore.

Audit observed that though the Company had completed the API by May 2005, the location was released after seven months in January 2006. The Company commenced drilling in February 2007 as against its scheduled completion by April 2006. Thus, due to delay in release of location/drilling of the well, the Company had to pay penalty of Rs.1.06 crore, besides extension fee of PEL of Rs.21.07 lakh due to non-completion of MWP of Phase-I.

The Management stated (September 2008) that the delay in taking up the well was a cumulative effect of delays in various stages of exploration and that DGH was apprised of the constraints while seeking extension and waiver of the penalty.

The reply was not convincing, as the Company lost seven months time in releasing the location for drilling and another one year in commencing drilling after the location had been released. Consequently, the commitment was not fulfilled within the first extension (without penalty) of Phase-I. DGH also did not agree with the justification given by the Management for the delays. As a result, the Company was constrained to seek a second extension by paying a penalty of Rs.1.06 crore against the unfinished MWP commitments.

ii) Delay in arranging a rig leading to non-drilling of a committed well

The GOI awarded the onshore block MN-ONN-2000/01 under NELP-II to the consortium of ONGC–IOC[3]-GAIL[4]-OIL[5] (OIL being operator) with 20 *per cent* participating interest of the Company. As per the PSC, the consortium was to complete the API between April 2002 to April 2005 in Phase-I and drill a well by the end of April 2007 in Phase-II. Another well was to be drilled in Phase III ending April 2009.

Audit observed that API was completed in Phase-I by availing of six months' extension adjustable in Phase-II. However, the operator could not arrange a rig for drilling a committed well within the remaining scheduled period of Phase-II. Due to this, the consortium had to obtain two more extensions of six months each in Phase-II also by paying 40 *per cent* penalty and 100 *per cent* bank guarantee of the unfinished MWP. The share of penalty to the Company was Rs.62 lakh.

The Management stated (September 2008) that OIL was the designated operator of the block and as per the PSC, the operator takes all the initiative and action for the committed work programme in a NELP block.

[3] ***Indian Oil Corporation Limited***
[4] ***GAIL(India) Limited***
[5] ***Oil India Limited***

The reply was not convincing as being a consortium partner and member of the Management/Operating committee, as per the provisions of Article 6 and 7 of the PSC[6], the Company was required to pursue the matter with the operator for completion of MWP, to avoid payment of penalty and other avoidable expenditure.

iii) Delay in conducting pre-drilling Environment Impact Assessment studies

According to Article 14.5 of the PSC, the Company was required to carry out Environment Impact Assessment (EIA) 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 impact of exploration activities on the same. The time taken for completion of pre-drilling EIA studies are given in ***Annexure XII***.

Audit observed that in five blocks the time taken for pre-drilling EIA studies ranged from 21 to 60 months from the date of signing respective PSC. In case of one block, the study had not been completed even by July 2008, though the block had been acquired by the Company in July 2003. As considerable time had been lost in carrying out the EIA studies, the MWP commitment of drilling 11 wells in these blocks had not been fulfilled as of July 2008.

The Management stated (July 2008) that approval for extension from the DGH was awaited.

The fact, however, remained that the inordinate time taken in carrying out the EIA studies affected the achievement of MWP in these blocks.

Recommendation No. 6.1
The Company may:
(i) ensure execution of exploration activities under nomination blocks taking into account its work commitments under the block in the original re-grant period of PEL so as to achieve exploration objectives and to avoid payment of additional PEL fee on renewals; and
(ii) ensure execution of exploration activities under NELP blocks taking into account work commitments under the block and completion of each activity as per MWP targets to avoid payment of penalty.

[6] *Article 6 of the PSC provides that government shall nominate two members representing government in the management committee, whereas each company constituting the contractor shall nominate one member each to represent the contractor in the management committee. The operator on behalf of the contractor with the approval of operating committee shall submit to the management committee the documents relating to annual work programme and budget, annual work progress and cost incurred thereon, proposal for surrender and relinquishment of any part of the contract area, proposal for an appraisal program or revisions or additions thereto, any other matter required by the terms of this contract and any other matter which the contractor decide to submit for review. Article 7 of the PSC further lays down the provisions relating to establishment of an operating committee comprising of an agreed number of representatives of the companies chaired by a representative of the operator, functions of the said operating committee taking into account the provisions of the contract, procedures for decision making, frequency and place of meetings.*

6.7.3 Acquisition, processing and interpretation of seismic data

6.7.3.1 Acquisition of seismic data

The prime activity in exploration of hydrocarbons is acquisition of seismic data for which Geophysical parties (GPs) were deployed at basin level as per the work programme approved by the Director (Exploration) of the Company. The GPs remained in the field for data acquisition between November and June except Cauvery basin (March to October). The GPs were provided with departmental as well as contractual support services for shot hole drilling and job services for seismic data acquisition work. The 2D/3D seismic data acquired was processed and interpreted for analyzing hydrocarbon accumulation. Prospects were then generated for release of locations for drilling of wells. MWP for the NELP blocks stipulate targets for acquisition, processing and interpretation of seismic data in the first phase of the contract. Audit findings in this regard are discussed below:

6.7.3.2 Non-fixation of norms for field days and production days

The available field days in one field season were 240 days which included days for non-production like (i) camp establishment and winding up, (ii) experimental work, (iii) topographic survey, (iv) stoppage of work due to environmental problems, instrument failures *etc.* and (v) idling due to non-availability of contractual services. The production days of each GP were worked out by deducting non-production days from the total field days. Analysis of data relating to field days is detailed below in Table -6.1:

Table – 6.1

Sl. No.	Name of basin	Average field days	Average non-production days	Experimental days
1	Frontier basin	115 to 210	20 to 42	4 to 15
2	MBA basin	142 to 194	36 to 52	1 to 16
3	A&AA basin	151 to 220	44 to 104	5 to 18
4.	Western Onshore basin	191 to 237	23 to 35	5 to 18
5	Cauvery basin	129 to 233	11 to 34	2 to 11
6	KG-PG basin	170 to 222	09 to 23	2 to 12

As seen from the above table, the GPs remained in the field for 115 to 237 days as against the available 240 days. Similarly, non-production and experimental days ranged from 9 to 104 and 1 to 18 respectively.

Audit observed that no standards/norms were fixed for total field days in the field season, normal non-production days towards camp establishment and winding up and experimental work and topographical survey days. In the absence of standards/norms for target days, the reasonableness of actual days utilised for field operations, non-production days and experimental works by the different basins was not ascertainable.

6.7.3.3 Non-fixation of norms for productivity of the geophysical parties

The productivity of GPs was measured in terms of shot holes charged per production day for data acquisition. The contractual services were hired for the purpose of shot hole drilling. In addition, the departmental facilities were available for experimental work.

Audit observed that no standards/norms were fixed for the productivity in terms of shot holes charged to monitor the performance of GPs. Analysis of data relating to

productivity of shot holes charged in different basins during the 10th FYP period revealed that in Frontier basin it ranged from 18 to 42, in MBA basin 16 to 24, in A&AA basin 22 to 48, in Western Onshore basin 55 to 96, in Cauvery basin 82 to 116 and in KG-PG basin 78 to 159. In the absence of standards/norms for productivity, the reasonableness of productivity achieved by the different basins was not ascertainable.

The Management, while accepting the audit comment and in response to the audit recommendation, agreed (September 2008) to review the position and fix norms for different geophysical field activities. It further assured formulation and implementation of the norms from the next field season, if feasible.

6.7.3.4 Idling of geophysical party due to delay in finalisation of tender

i) For conducting the seismic surveys, shot holes of pre-determined depths were drilled for laying the explosives. Earlier, the shot hole drilling work was carried out departmentally but since 1985-86, contractual shot holes drilling services were increasingly availed in all the six onshore basins.

The field season in the Company's various basins (except Cauvery basin) commences from 1 November and ends on 30 June next year. The GPs were provided with contractual support services for shot hole drilling and job services for the seismic data acquisition work. The award of shot hole drilling contract for this contractual service was required to be completed by October every year before commencement of the field season, so that the field season is utilised optimally by the GPs for acquiring the targeted data in time. In order to achieve the assigned targets, it was imperative to complete all administrative/tender activities for award of contracts well before the onset of the field season.

The details of contracts awarded for shot hole drilling and job services for seismic data acquisition work and the delays in placement of order in three basins are given in ***Annexure XIII***.

Audit observed that the shot hole drilling contracts were awarded in November/December. The contractors, however, mobilised the equipment in December/January by which 49 to 77 days of the field season were lost. Thus, delay in awarding the contracts affected the whole process of acquisition of seismic data in the respective Nomination/NELP blocks. As a result, there was under achievement of data acquisition targets of 207 Ground Line Kilometre (GLK) and 49.29 Square Kilometre (SKM), besides idling of GPs for 463 days, with nugatory expenditure of Rs.1.85 crore. Delayed finalisation of tenders also indicated lack of planning on the part of the Management which resulted in loss of a significant part of the field season.

The Management in their reply (September 2008) while detailing the procedural constraints at various stages, confirmed the delays in MBA basin and Frontier basin. The Management, however, stated that there was no delay in A&AA basin as the GPs were not deployed in November due to climatic conditions.

The reply was not satisfactory as the field season in onshore basins was November to June except in Cauvery basin which was from March to October. The contracts, therefore, should have been awarded well before commencement of the field season.

ii) As per the work programme for the field season 2003-04, GP-10 was planned to be deployed in Mizoram area (NELP block AA-ONN-2001/2 under NELP-III) to carry

out 2D seismic survey. The party could not be deployed during the field season due to non-finalisation of integrated seismic job services and shot hole drilling contract.

Audit observed that proposal for shot hole drilling contract for GP-10 was first initiated in April 2003 for deployment in the field season 2003-04. However, tenders were invited in July 2003 *i.e.* after three months. As the Tender Committee (TC) found the rates quoted by the lowest bidder on the higher side, it recommended (January 2004) for re-invitation of tender. The competent authority, while approving the recommendation of the TC, remarked that the complete case was dealt without considering urgency of the work, which was the requirement of the NELP block. The case was further initiated in January 2004 for the field season 2003-04. The TC met only in March 2004 to finalise the Bid Evaluation Criteria (BEC) for the above tender and the competent authority accorded the approval in May 2004. As the field season 2003-04 was almost over, the Notice Inviting Tender was floated for the field season 2004-05. The contract was finally awarded in September 2004 for the field season 2004-05.

Thus, due to abnormal delay in finalisation of tender for hiring of shot hole drilling services, GP-10 could not be deployed in the NELP block during the field season 2003-04, resulting in idling of the party with nugatory expenditure of Rs.36 lakh.

The Management stated (September 2008) that there was no delay till the stage of opening of price bid. Thereafter, TC meeting had to be held on seven occasions as the price quoted by the only bidder was 200 *per cent* higher than the estimated price. Even after negotiations, the rates offered were higher and hence, TC had recommended re-tendering.

The reply was not satisfactory in view of the fact that the Management took 193 days in recommending the re-invitation of tender as against 90 days for finalisation of the tender provided in the MM Manual of the Company. Invitation of fresh bids was also delayed due to delay in deciding BEC. As a result, the contract could only be awarded in September 2004 by which time a complete field season 2003-04 was lost.

iii) The Company acquired 2D/3D seismic data through its seismic crews to meet exploration work programs of different basins. These crews were equipped with seismic data acquisition systems (system) of different vintages (1991 to 1997) which had outlived their usable life of seven to eight years. The systems required replacement to equip the GPs with appropriate systems for acquisition of data considering the stringent and competitive environment in NELP regime. The Company decided to replace 16 systems during 2005-06 to 2007-08 at an estimated cost of Rs.366.85 crore.

The Executive Committee of the Company approved (April 2005) the proposal for procurement of all the systems at one time to minimise the time, cost and effort. Accordingly, an indent was raised (November 2005) for procurement of 16 systems (subsequently reduced to 14). The Board approved (August 2006) procurement of 14 systems at an estimated cost of Rs.407.68 crore with completion schedule of 12 months from the date of approval. The purchase orders were placed in December 2006 and the 14 systems were received in the basins between July 2007 and January 2008.

Audit observed that the two GPs in A&AA basin during the field season 2005-06 and three GPs each in A&AA basin and Western Onshore basin during the field season 2006-07, could not be deployed gainfully due to delay in procurement of the new systems.

The Management, while confirming the facts, stated (September 2008) that the parties could not be deployed because of their outdated systems. It further stated that the three parties of Western Onshore basin were merged with other parties for data acquisition and that manpower of one party of A&AA basin was loaned to another party.

The reply was not satisfactory as the other parties already had sufficient manpower, as per the norms of the Company. The fact remained that the grounding/merger of parties was an offshoot of the delay in procurement of required systems and should have been avoided.

Recommendation No.6.2

The Company may ensure availability of state of the art data acquisition equipment with the geophysical parties before deployment.

6.7.3.5. Non-acquisition of seismic data by the contractors

The Company decided to acquire 3D seismic data (5074 SKM) during the field season 2006-07 by hiring services from private parties through ICB[7] tender. Accordingly, the Company floated (July 2006) an ICB tender for acquisition of 3D seismic data in 10 sectors[8] covering, mainly, 10 nomination blocks. Executive Purchase Committee (EPC) of the Company found the offers received as technically/commercially unacceptable and directed (October 2006) that a limited tender be invited. The EPC approved (February 2007) award of contracts on the three lowest firms.

Audit observed that the contractor for sectors 1, 2, 3 and 4 (A&AA basin, 5 blocks) and sector 9 (Western Onshore basin, 2 blocks) did not mobilise the equipment in time and the period for mobilisation was extended upto 10 January 2008 (sector-1) and 18 January 2008 (sector- 2, 3, 4 and 9). The contractor for sectors 5, 6, 7 and 8 (KG-PG basin, 2 blocks) did not mobilise the services on the mobilisation date of 1 June 2007 and sought extension in the mobilisation period from time to time. Considering the urgency to cover the area by May 2008, the Company terminated the contract (November 2007). The contractor for sector-10 (Cauvery basin, one block) also did not acquire the data in time and sought extension in the contract period upto 31 May 2008. The Company granted the extension on 28 October 2007 with levy of LD.

The volume of data acquired by the two contractors as of April 2008 is given in Table - 6.2:

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[7] *International Competitive Bidding*

[8] *Sectors – Bifurcation of area on geographical parameters viz: Sec-1: Sibsagar district PEL, Rudrasagar ML, Charali Ext ML, Lakwa ML; Sec-2: Cachar district PEL; Sec-3: Agartala Syncline-Agartala dom, Large area PEL; Sec-4: Sunderbari, Tichna east, south Bisalgarh, Kunzanban, Bamutiya in Tripura, Large area of PEL and West Tripura PEL under A&AA Basin. Sec-5: Bhimavaram-Lakshmipuram-Padatadaka-IBPEL; Sec-6: Kaza-Nandigama-IA PEL, Sec-7: Suryaraopeta-Mahadevapatnam-IA PEL; Sec-8: Keikalur-Lingala-Penduru-Bantumilli-IA PEL under KG-PG Basin. Sec-9: Dhinoj-Chanasma PEL, Patan Central PEL and Pantan North PEL under Western onshore basin. Sec-10: Puttur, West of Puttur and Pandanallur-L-I PEL under Cauvery basin.*

Table – 6.2

Particulars	A&AA and Western onshore basin					Cauvery basin
Sectors	**1**	**2**	**3**	**4**	**9**	**10**
Completion date as per contract	06.05.08	06.12.07	06.12.07	06.12.07	06.12.07	31.10.07
Work awarded (SKM)	1321	210	298	380	440	525
Work completed (SKM)	100.41	18.57	104.23	132.79	166.61	313.57
Per cent of work completed	7.60	8.84	34.98	34.94	37.87	59.73

As seen from the above table, the contractor for sectors 1, 2, 3 and 4 (A&AA basin) and sector 9 (Western Onshore basin) acquired only 7.60 *per cent* to 37.87 *per cent* of data. The contractor for sector 10 (Cauvery basin) acquired 59.73 *per cent* upto April 2008 against the contractual date of October 2007. Thus, the contractors did not discharge their contractual obligations despite the extensions given by the Company. In KG-PG basin the desired data could not be acquired due to failure on the part of contractor and the contract was terminated in November 2007. The delay in acquisition of data affected the exploration objectives of the Company in all the 10 nomination blocks.

The Management stated (September 2008) that the extensions were granted considering the requirement to meet the exploration objectives. As regards KG-PG basin, it stated that the departmental crew had been diverted to cover the priority areas and that the seismic data would be acquired during 2008-09.

The fact remained that the seismic data could not be acquired in the particular field season resulting in non-achievement of exploration targets.

6.7.3.6 Award of contract to an inexperienced party

Geophysical Services of Frontier basin planned to conduct 2D seismic reflection survey in Paror-Baijnath-Dharampur area of Himachal Pradesh (Kangra Mandi nomination block) during the field season 2005-06 and fixed a target of acquiring 75 GLK of seismic data. In order to execute the seismic survey and to acquire targeted data, GP-38 was deployed.

Audit, however, observed that the contract for providing services to the GP was awarded to a contractor who did not have sufficient experience of providing shot hole drilling and other job services in the area. The contractor, therefore, failed to provide the required shot hole services to the GP. As a result, the GP could achieve only 7.25 GLK of data in the field season 2005-06 as against the target of 75 GLK. The cost per GLK during the field season was Rs.65.35 lakh against the average cost of Rs.4.44 lakh per GLK for data acquired by the same party during the last three field seasons.

The Management, while confirming (September 2008) the facts, agreed that shot hole drilling contracts would be finalised before scheduled deployment of geophysical parties and also ensured that the contractor is of proven capability as recommended by Audit. It also stated that in future the terms and conditions for technical collaborators would be suitably modified when engaging a new contractor.

6.7.4 Release and drilling of exploratory locations -

Loss due to idling of rigs and failure to conduct site survey

As per the guidelines of the Company, release of a drilling location as category 'B' meant that location was a firm one for actual drilling where the spade work like land acquisition, construction of civil works, *etc.* should be completed before release of the rig from the previous location as per the rig deployment plan, so as to avoid rig idling.

Audit observed that rigs remained idle for 1566 days for various reasons in respect of such locations scheduled in the rig deployment plan, as discussed below:

6.7.4.1 Idling of rig for want of ready drill sites

In two nomination blocks of A&AA basin, rigs remained idle for 235 days in 2004-05 for want of sites due to incomplete civil works/non-availability of alternate sites, *etc.* The idling resulted in a loss of Rs.7.18 crore.

Similarly, in Cachar Forward Base, after completion of the well TK-1A in Sector 5-C nomination block, the rig E-1400-XII was released on 31 May 2006. Thereafter, the rig remained idle for 195 days due to non-availability of location, thereby incurring an expenditure of Rs.4.89 crore on idling of rig.

The Management, while confirming the facts, stated (September 2008) that extra efforts were being made to make drill sites ready in time. It also agreed that audit recommendation for ensuring availability of locations and ready drill sites before release of rigs from the previous locations would be adhered to avoid expensive idling of rigs.

6.7.4.2 Idling due to non-availability of manpower/material

i) The Company released a 'B' category exploratory location, HRAA in 2003 for drilling in a nomination block *viz.* Cachar district. The well was spudded on 11 August 2005 and was hermetically[9] tested on 21 March 2006. Production testing started from the same date and was completed on 19 May 2006. The well was declared dry and abandoned and the rig was released on 31 May 2006.

Audit observed that the rig remained idle for 52 days during 11 August 2005 to 31 May 2006 for want of manpower, compressor and logging party which could have been avoided with better planning before the start of drilling. Idling of rig resulted in avoidable excess well cost of Rs.96 lakh.

The Management, while confirming the facts, stated (September 2008) that to avoid such delays additional compressor unit had been procured and also sufficient numbers of tubing had been stocked for ongoing and subsequent planned wells. It also assured that audit recommendation to ensure availability of drilling equipment *i.e.* compressors, fishing tools, logging parties, *etc.* at the drill site to avoid expensive shut downs of the rigs would be adhered to.

ii) The Company upgraded its own rig 'ARMCO' in October 2002 from DC-DC system to PLC/AC-SCR system[10]. The rig remained under shutdown for 92 days due to failure of

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[9] ***Hermetical testing refers to the closed cycle pressure testing of casings of wells completed by pumping water at steady rate to detect leakage before handing over the well for production testing.***

[10] ***A PLC (Programmable Logic Controller) is an industrial computer used to automate a machine or a process.***

its two engines during the period between 10 May 2006 and 29 October 2006 for want of key spare parts when it was deployed on the location ADAF_SUB in the 'Large Area' nomination block. The rig could be put into operation only on 30 October 2006 after repairs and replacement of the spare parts.

Audit observed that the rig was unique in nature, being the only rig upgraded to PLC/AC-SCR based system. Keeping this in view, its key spare parts should have been stocked for any emergency. Due to failure of the Company to maintain key spare parts, the rig remained idle for 92 days and incurred an idling cost of Rs.3.45 crore.

The Management stated (September 2008) that operational spares for two years were available and replenishment was also ordered in time. It attributed the delay to failure of the vendor to supply the parts even after one year of placing the purchase order.

The reply was not satisfactory as the Management did not maintain even the minimum requirement of the key spare parts for the said rig, when it was known that the original equipment manufacturer was normally taking lead time of one year for supplying the spare parts. The Company placed the order in June 2006 when the rig actually broke down. Apart from the idling cost, delays also affected the exploration efforts of the Company in the nomination block.

6.7.4.3 Idling due to non-availability of programme

Rig B-1-2001 took up drilling activities at well No. GB# 1 in Contai nomination block of MBA basin on 28 September 2003 and was released on 28 April 2004 after completing the drilling.

Audit observed that due to non-availability of further programme, the rig remained idle for 616 days upto 4 January 2006 before being handed over to BHEL[11] for refurbishment, resulting in unfruitful expenditure of Rs.10.53 crore.

The Management stated (September 2008) that the rig was due for refurbishment and upgradation (R&U) and was part of a 12 rig contract awarded to BHEL. Considering the fact that all the rigs could not be accommodated together and also priority of exploration commitment in various basins, the rig was taken by BHEL on 5 January 2006. However, there was no delay in commencing the shipment of rig material after the finalisation of the contract.

The reply was not satisfactory since the rig was released on 28 April 2004 and the first lot of rig equipment was sent on 15 September 2005. The rig B-1-2001 was, however, sent in the final lot on 5 January 2006, though it remained idle from April 2004 without any further programme.

6.7.4.4 Idling due to delay in handing over rig for repairs

Cachar Forward Base under A&AA basin released the rig E-1400-XI for R&U on 31 May 2006. The rig, however, was handed over to BHEL on 19 October 2006 after over four months from the date of release of the rig from the previous location. As per the contract, the R&U was to be completed by BHEL within 105 days from the date of handing over of rig. BHEL, however, took 498 days (19 October 2006 to 29 February 2008) for the same.

[11] *Bharat Heavy Electricals Limited*

Audit observed that though the rig was planned for R&U from 1 May 2006 to 15 August 2006, the rig was actually handed over to BHEL on 19 October 2006 *i.e.* after 140 days from the date of rig release (31 May 2006) from the previous location. This resulted in idling cost of Rs.2.60 crore.

The Management attributed (September 2008) the delays to late movement of rig by BHEL.

The reply was not satisfactory as it does not take into account the fact that due to poor planning and co-ordination in the release of the rig for repairs, the Company failed to deploy the rig elsewhere and consequently incurred an avoidable idling cost of Rs.2.60 crore.

6.7.4.5 Idling due to delay in finalisation of transport contract

The Logistics Department of the Company initiated (September 2002) a proposal for inviting an open tender for transportation of a drilling rig from Sundernagar to Hamirpur drill site. The finalisation of the transport contract was unduly delayed and took 18 months as against the normal time of three months, due to non-observance of the tender procedures as laid down in the Manual.

Due to undue delay in finalisation of the contract, the rig remained idle from September 2003 to April 2004 (236 days) at the previous drill site, resulting in idling cost of Rs.11.22 crore.

While detailing the procedural delays, the Management accepted (September 2008) the audit recommendation by assuring that it would finalise the transportation contracts before release of rigs from the previous locations to avoid expensive idling of rigs and adhere to the provisions contained in the Material Management Manual.

6.7.4.6 Failure to conduct site survey prior to taking up of civil work

The Company released (August 2002) an exploratory location PBGO#3 (GOAB) in West Tripura nomination block in a hilly area covered by dense forest and surrounded by deep valleys. As no approach road was available for reaching the location, a new approach road was planned to connect the location from the existing road. After inviting tenders, the work orders for construction of the approach road and other civil works were issued in March 2005 and February 2006 respectively.

During execution of works, the Management felt that to make the approach road suitable for rig movement, huge work was required to be carried out by cutting the hill tops and filling in five deep valleys. The conventional earth/protection work was not sufficient to protect the approach road. In view of these constraints, the ongoing works were suspended in February 2006, July 2006 and August 2006. Therefore, the work orders were terminated after incurring an expenditure of Rs.1.65 crore. Audit observed that no site survey was carried out by the Company before taking up civil works.

The Management stated (September 2008) that the site survey for this location was not carried out due to dense forest, hilly and difficult terrain and deep valleys. Therefore, the estimates for civil construction were prepared based on visual inspection carried out by a team of civil engineers.

The reply was not satisfactory as the Management failed to visualise the constraints/difficulties. Therefore, site survey should have been ensured before

undertaking civil construction work. This also affected the exploration objectives in the block as the Company could not drill the location as planned.

6.7.5 Production testing and reserve creation estimation

6.7.5.1 Non-fixation of norms for production testing

After completion of drilling, production testing of the wells is conducted to establish presence of hydrocarbon. During the 10th FYP, 439 wells were drilled in six onshore basins. In 43 wells (four basins), production testing of 167 objects[12] was carried out by taking 2718 days as detailed below in Table-6.3:

Table – 6.3

Sl. No.	Name of basin	No. of wells	No. of objects tested	Total days taken for testing	Minimum-maximum days taken per object
1.	KG-PG basin	14	72	1054	09-57
2	Cauvery basin	05	19	224	10-14
3	Western Onshore basin	13	39	404	04-20
4.	A&AA, basin (Tripura Asset)	11	37	1036	15-70
	Total	**43**	**167**	**2718**	

Audit observed that the days taken for testing per object ranged from 4 to 70 days. The Company had not prescribed any norms for testing in terms of number of days to be spent per object of testing. In the absence of norms, the reasonableness of days taken by various parties could not be assessed.

The Management in response to the audit recommendation to prescribe norms in terms of number of days to be spent per object of production testing keeping in view the sub-surface conditions of various basins, stated (September 2008) during the Exit conference that it would analyse the actual time taken for production testing *vis-à-vis* preparatory activities for the same and take action for fixing norms accordingly.

6.7.5.2 Non-achievement of exploration objectives due to deferment of production testing

The Company released three locations (MKAA, DSAB, and MPAA) in Sibsagar District nomination block of North and South Assam shelf during 1996-97 to 2002-03. These locations were taken up for drilling after two to four years from the date of release of respective location. After drilling the wells, rigs were released on 16 July 2005, 13 November 2006 and 29 September 2007 respectively. Audit observed that after incurring an expenditure of Rs.64.40 crore the wells were not completed and production testing was deferred due to well complications. The desired exploration objectives from these wells could, therefore, not be achieved.

The Management stated (September 2008) that out of the three locations, production testing at location MPAA had been completed in May 2008. As regards DSAB, the area around the well had been declared as an eco-fragile zone in November 2006 subsequent to drilling of the location and further work required approval of the Supreme Court. The

[12] ***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.***

location MKAA was planned to be taken up for production testing in November 2008 with a hired rig.

The reply was not satisfactory as the two wells could not be tested so far affecting the exploration objective of the Company in the block. The Company should have ensured conclusive testing of the wells before release of the rigs.

Recommendation No.6.3

The Company may ensure completion of conclusive production testing before release of rigs and avoid deferment of testing for long periods.

6.7.5.3 Increase in well cost

The location TK#1 was released as an exploratory 'B' category location in Sector 5-C nomination block with target depth of 3500 metres to probe the hydrocarbon potential and six objects were identified for production testing. After completion of drilling in November 2004, production testing was taken up in December 2004. Six objects were planned for completion in 62 days. However, the first three objects could be tested in 164 days and were found to be devoid of any hydrocarbon. Therefore, the well was abandoned (10 June 2005) without testing the remaining three objects. The Company decided (10 June 2005) to sidetrack the well and test the remaining objects in the sidetracked well (TK-1A). The drilling in well TK-1A was started on 8 August 2005 *i.e.* 59 days after the date of the decision to drill the sidetracked well. The delay increased the cost of the sidetracked well by Rs.2.08 crore.

Audit further observed that drilling of the sidetracked well was completed on 2 December 2005 and the well was hermetically tested on 24 December 2005. As per plan, five objects were identified for testing within 75 days. Production testing was started on 24 December 2005 and completed on 12 May 2006 by taking 140 days. As all the five objects were devoid of hydrocarbon, the well was declared dry and abandoned. Thus, excess days in production testing increased the cost of both the wells by Rs.8.11 crore.

Audit also observed that due to failure in fishing out 2 7/8" tubing which fell inside the main well, a side tracked well TK#1A was drilled at a cost of Rs.12.55 crore which could have been avoided with better planning of fishing equipment before drilling the well. Further, the rig remained idle for 20 days between December 2005 and May 2006 in the sidetracked well for want of compressor, logging party, equipment, *etc.* from the A&AA basin. Idling of rig resulted in avoidable excess cost to the well to the tune of Rs.70.60 lakh.

Thus, excessive time taken for production testing, delayed decision and non-availability of equipment resulted in increase in well cost by Rs.10.90 crore.

The Management admitted the facts and stated (September 2008) that it was being ensured that regular items like tubulars, casings, chemicals, *etc.* were procured as per plan, in advance, to avoid idling of the rig. Action was also being taken to keep stock of items like general fishing tools, *etc.*

6.7.5.4 Reserve accretion

The position of reserve accretion targets projected by the Company and actual reserve accretion thereagainst during the 10th FYP period in the six onshore basins is detailed below in Table-6.4:

Table – 6.4

Units in MMTOE[13]

Name of basin	Projections by Company	Actual accretion	Percentage of achievement
Western Onshore basin	71.10	127.15	178.83
Assam and Assam Arakan (A&AA) basin	85.30	62.17	72.88
Krishna Godavari and Pranhita Godavari (KG-PG) basin	64.00*	17.03**+174.32	298.98
Cauvery basin	26.00	29.10	111.92
Frontier basin	Nil	Nil	-
Mahanadi Bengal and Andaman (MBA) basin	Nil	Nil	-

**** Includes onshore and offshore as no separate targets were fixed.***
*****Onshore accretion.***

The Company achieved reserve accretion targets in Western Onshore basin, Krishna Godavari and Pranhita Godavari basin and Cauvery basin during the 10th FYP. However, it could not achieve reserve accretion targets in the Assam and Assam Arakan basin.

There was no reserve accretion in the Frontier and Bengal basins, even though exploration activities were being carried out by the Company in these basins since 1960s. The Company had also not projected any reserve accretion in these basins during the 10th FYP period.

The Management stated that reserve accretion targets were not fixed as the Frontier basins were still in the 'lesser known' domains as far as their petroleum system and hydrocarbon generation potential were concerned.

Recommendation No.6.4
The Company may fix reserve accretion targets in Frontier basins.

6.8. Conclusion

The Company did not complete the work commitments in nomination blocks and MWP under NELP blocks which led to avoidable payment of PEL fee and penalties. The Company had also not fixed standards/norms for assessment of performance of GPs resulting in wide variation in geophysical field activities in different basins. Similarly, no standards/norms were fixed for production testing. The Company took an abnormally long time in finalising the shot hole drilling and data acquisition service contracts resulting in idling of GPs for considerable periods of time. As a result of improper planning, delay in preparation of drill sites, non-availability of materials and tools and delay in finalisation of transport contract, various rigs of the Company remained idle for 1566 days.

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

[13] *Million Metric Tonne Oil Equivalent*

CHAPTER VII

Oil and Natural Gas Corporation Limited

Production and surface facilities in western onshore areas

Highlights

Thirty nine *per cent* of the production and surface facilities in western onshore were more than 25 years old as of October 2008. The Company did not have a standard policy for replacement of critical equipment in onshore surface installations.

(Para 7.7.1.1)

Out of 31 cases nine lump sum turnkey (LSTK) contracts and 22 purchase orders (POs)) valuing above Rs.five crore, delay from the date of indent/requisition to placement of order was upto 240 days in 1 LSTK/10 POs, 241 to 780 days in 6 LSTK/11 POs, and more than 780 days upto 1357 days in 2 LSTK/1 PO as against the norm of 180 and 77 days for finalisation of LSTK contract and POs respectively.

(Para 7.7.1.3)

Two Group Gathering Stations scheduled to be commissioned by December 2003 were yet (July 2008) to be finalised. Resultantly, the incremental oil gain of 3.17 lakh MT could not be achieved.

(Para 7.7.1.4 (i))

Due to inordinate delay in awarding contract, the cost of storage tanks increased by Rs.10.05 crore besides non-achievement of the objective of creation of spare capacity for reprocessing and maintenance requirements.

(Para.7.7.1.6 (ii))

Gujarat Pollution Control Board regulations on handling and disposal of sludge being hazardous material had not been complied. As of March 2008, 21904 MT of sludge/oil contaminated soil accumulated in 51 installations was awaiting disposal.

(Para 7.7.2.1)

The transit loss exceeded the norm of one *per cent* by 0.18 to 3.31 *per cent* with consequent loss of revenue of Rs.73.38 crore during the last four years ended March 2008.

(Para 7.7.3.1)

Oil Mines Regulations on Safety Committee of Mines and maintenance and updation of pipeline network plan had not been adhered to.

(Paras 7.7.3.3 and 7.7.3.5)

The statutory requirement of providing security fencing to 1175 well locations could not be complied due to inordinate delays at different stages of tendering process initiated in November 2006.

(Para 7.7.3.4)

Compliance to 149 observations of Director General of Mines Safety (DGMS) and 35 observations of Oil Industry Safety Directorate (OISD) on inspection of installations were pending for over two years as of March 2008.

(Para 7.7.3.10 (i) and 7.7.3.10 (iii))

Summary of recommendations
The Company may:

1. ***formulate appropriate norms for regular maintenance and replacement of critical equipment for onshore surface installations expeditiously keeping in view the applicable safety and environmental regulations;***
2. ***study the industry best practices in terms of procurement system being adopted by various leading PSUs, JVs, international companies, and based on the above, revised comprehensive procurement practice may be formulated and discussed with the stakeholders before its approval and implementation;***
3. ***expedite completion of requisite surface infrastructure to avoid hazardous operations involved in road transportation through private road tankers besides attendant exposure to safety risks and malpractices;***
4. ***evolve a system for timely identification and replacement of old transportation pipelines to avoid unsafe operations which entail huge safety and environmental risks;***
5. ***create adequate storage facility of crude oil at various installations to ensure uninterrupted production of crude oil;***
6. ***expedite introduction of a system for periodic identification, estimation of quantity, handling and disposal of hazardous sludge;***
7. ***regularly monitor the condition of pipelines and ensure timely replacement to minimise the line losses and unsafe conditions;***
8. ***initiate urgent action to arrest emission of hazardous hydrogen sulphide (H_2S) gas into the environment and monitor the progress;***
9. ***ensure strict monitoring of project execution to commission the envisaged Effluent Treatment Plant to achieve the objective of recycling of effluent for the purpose of water injection;***
10. ***make efforts to sensitise the Assets for strict adherence to norms of transit losses and monitor the compliance;***
11. ***adhere to the Capital Overhauling Schedule and monitor it regularly to reduce instances of unplanned shutdowns and also maintain necessary documentation as prescribed by Oil Industry Safety Directorate (OISD);***
12. ***assign priority to update plans of the pipeline network as stipulated in the Oil Mines Regulations and also commented upon by the Director General of Mines Safety (DGMS) so as to ensure quick identification of leakages and the safety and security of pipelines;***
13. ***ensure that deficiencies in fire water system are attended to on priority to ensure safe working environment and to effectively handle unforeseen fire accidents;***

14. evolve a system for periodical inspection and cleaning of oil storage tanks as stipulated in the OISD and DGMS regulations and monitor the compliance at an appropriate level; and

15. expedite efforts for early compliance and monitoring of the observations of DGMS and OISD.

7.1. Introduction

7.1.1 The western onshore of Oil and Natural Gas Corporation Limited (ONGC) consists of three Assets at Ankleshwar, Ahmedabad and Mehsana which produce oil and gas from the explored and developed reservoirs. The production and surface facilities were created, maintained, revamped and upgraded as per the development plan of the field. The main production and surface facilities for processing of crude oil and gas were Group Gathering Stations (GGS), Gas Compression Plant (GCP), Gas Collection Station (GCS), Early Production System (EPS), Effluent Treatment Plant (ETP), Water Treatment Plant (WTP), Central Tank Farm (CTF), Desalter Plant, In-situ Combustion plant and pipelines. As of October 2008, there were 120 production and surface facilities in western onshore. A brief of these facilities along with flow chart of the production is given in ***Annexure XIV (A and B)***. The activities of the Assets were managed by the Asset Managers and monitored by the Director (Onshore).

The performance review of the production and surface facilities in western onshore was carried out keeping in view the criticality of the facilities with respect to production, processing of oil and gas and their transportation in western onshore. Furthermore, there had been incidents of leakages, accidents as well as a case of blow-out (November 2007) in an injector well. The Company had a separate Directorate headed by an Executive Director responsible for issues pertaining to Health, Safety and Environment (HSE) and also had a well documented HSE policy with a system of periodic and regular surveillance audits for maintaining Quality, Health, Safety and Environment (QHSE) accreditations[1] in the test checked work centres and installations. However, certain deficiencies were noticed in the practices and procedures with environmental and safety implications which have also been discussed subsequently in the audit findings.

7.2. Scope of Audit

Audit covered the planning, construction, maintenance and operations of Production and Surface Facilities in Western Onshore comprising of three Assets *i.e.* Ahmedabad, Ankleshwar and Mehsana for the period from 2004-05 to 2007-08.

7.3. Audit objectives

The performance audit was conducted to assess that:

(i) planning and implementation of capital projects pertaining to production and surface facilities was efficient and effective with reference to time, cost and achievement of objectives;

(ii) stipulations of environmental regulations, standards and norms were adhered to; and

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[1] ***QMS-ISO-9001:2000, EMS-ISO-14001:2004, OHSAS-18001:2007. The Company also has a well documented emergency and disaster management plan for the test checked installations. The three Assets had separate HSE groups headed by Deputy General Manager.***

(iii) stipulations of safety and health regulations, standards and norms were adhered to.

7.4. Audit criteria

The following criteria were used for the performance audit:

(i) Planning, design and construction of Production and Surface Facilities: **Feasibility** Reports and recommendations of the Institute of Oil and Gas Production Technology (IOGPT), stipulations of the Board while approving capital projects, Material Management Manual (MM Manual) of the Company, terms and conditions accompanying contracts for purchase and construction of capital assets.

(ii) Adherence to stipulations of Environmental, Health and Safety Regulations:

Applicable environmental pollution related acts and regulations and Environmental Audit Reports, Code of Safe Practices of the Company, industry regulations enacted through Oil Mines Regulations, Mines Act, standards and norms fixed by major original equipment manufacturer (OEM) and Oil Industry Safety Directorate (OISD) standards pertaining to production, treatment and transportation of oil and gas.

7.5 Audit methodology

Audit commenced after holding Entry conferences with the Asset Managers of Ahmedabad, Ankleshwar and Mehsana in April/May 2008. Desk review of records was supplemented by field visits to selected production and surface installations.

To elicit a structured response, questionnaires were devised pertaining to maintenance, production, health, safety and environmental issues. Discussions were held with the Management at different levels to familiarise the process, constraints of operations and their root causes. Selection of production and surface installations was done after segregating them into the distinctive functional areas such as GGSs, ETPs, GCPs and CTFs, *etc.* and within this stratification, individual units were selected following statistical sampling methodology ensuring that the total units selected represented 25 *per cent* of the units in the respective functional areas. The list of units test checked is given in ***Annexure XV***.

Subsequently, during the Exit conference held on 17 October 2008 major issues incorporated in the report were discussed.

7.6. Acknowledgement

Audit is thankful for the cooperation received from the Management of the Company in providing information, records, clarifications and for arranging discussions with the concerned officers from time to time. Their cooperation facilitated the conduct of the review within the time frame.

7.7. Audit findings

7.7.1 Planning, design and construction of production and surface facilities

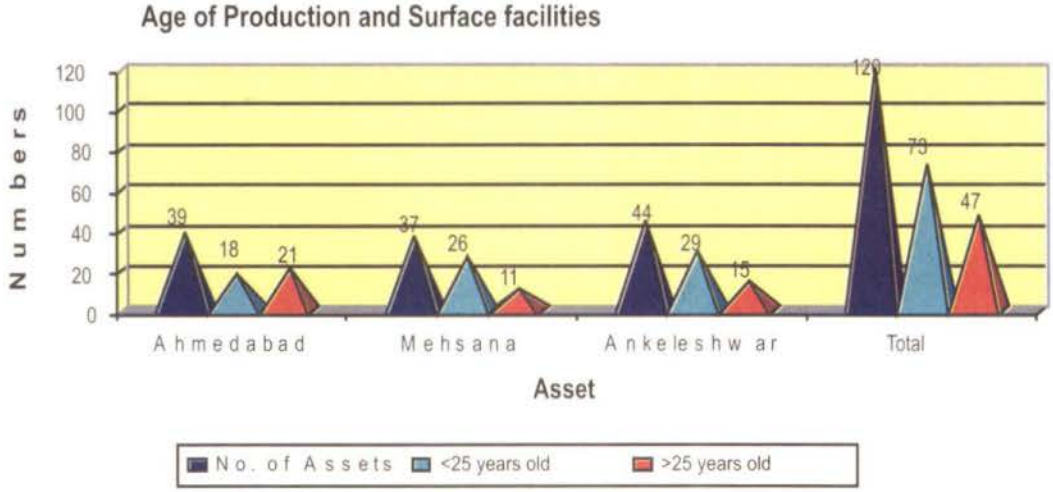
7.7.1.1 Large number of old and aging installations

Production and surface facilities include installations for processing of oil and gas and their transportation. These also include installations for ensuring adequate pressure of the reservoir and plants for treatment and disposal of effluents that get generated during

production and processing of crude oil. The Ahmedabad, Mehsana and Ankleshwar Assets had 39, 37 and 44 production and surface facilities respectively as of October 2008 ***(Annexure XVI)***. The average life of the facilities was considered to be 25 years.

However, Audit observed that the Company did not have a standard/approved policy for replacement of critical equipment for onshore surface installations. Audit also observed that out of 120 facilities, 47 facilities were more than 25 years old as of October 2008 as shown below:

Chart 7.1



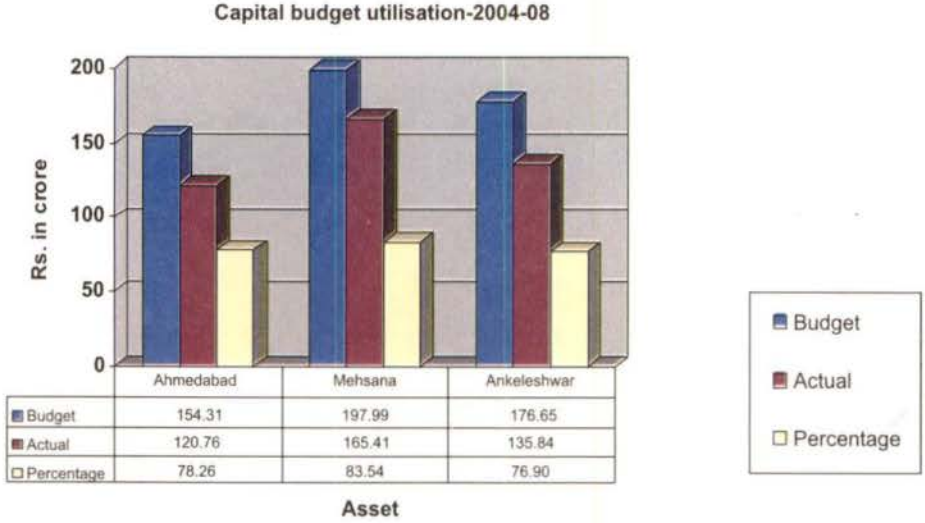
Further, as the facilities were old, induction of modern technology had not taken place in many of the installations. These facilities were also not meeting the safety requirements stipulated by the Directorate General of Mines Safety (DGMS) and Oil Industry Safety Directorate (OISD). The stipulations of the regulatory bodies came into force after these facilities were constructed. The individual deficiencies as had been observed on account of non-modernisation of technology and non-compliance with requirements of DGMS and OISD have been listed in ***Annexure XX, XXI and XXII***.

In the Exit conference, the Management while accepting (October 2008) the audit finding as well as the recommendation stated that after detailed field-wise analysis, norms including periodicity of inspection of static equipment would be formulated which could help not only in upkeep and maintenance but also point towards critical static equipment that need replacement.

7.7.1.2 Under utilisation of budget

The Assets had not utilised their capital budget in any of the four years (except Ahmedabad Asset in 2004-05 and Mehsana Asset in 2007-08) ending March 2008. The shortfall ranged between 10 and 60 *per cent* ***(Annexure XVII)*** of the capital budget. The overall utilisation of the capital budget by the three Assets was as follows:

Chart 7.2



	Ahmedabad	Mehsana	Ankeleshwar
Budget	154.31	197.99	176.65
Actual	120.76	165.41	135.84
Percentage	78.26	83.54	76.90

The reasons for under utilisation were mainly on account of procedural delays at various stages of tendering in the award of contracts as detailed in the following paragraphs.

7.7.1.3 Delays in processing of tenders

The Assets placed purchase orders/contracts/Lump sum turnkey contracts (LSTK) for procurement and installation of plants and machinery relating to production and surface facilities. Audit reviewed all the 31 cases (nine LSTK cases and 22 purchase orders) valuing above Rs. five crore placed by the three Assets during the last four years ending March 2008. Out of 31 such cases, 20 cases pertained to Ahmedabad Asset, eight cases pertained to Mehsana Asset and balance three cases pertained to Ankleshwar Asset.

In terms of MM Manual, the notice inviting tender (NIT) was to be issued within 17 days from the date of indent/purchase requisition. Audit observed that in 31 cases[2], the NITs were issued after a delay of 13 days to 1243 days. Further, the purchase orders, as per MM Manual were to be placed within two months from the date of NIT. However, in 21 cases[2] the purchase orders were delayed by 10 to 487 days. The LSTK contracts, as per MM Manual, were to be finalised within six months from the date of indent. During 2004-05 to 2007-08, the three Assets placed nine LSTK orders (Ahmedabad-4, Ankleshwar-2 and Mehsana-3). However, it was observed that all the nine LSTK cases were not placed in time and the delay ranged between 173 and 1357 days.

In the Exit conference, the Management while accepting (October 2008) the audit finding as well as the recommendation stated that industry best practices in terms of procurement system being adopted by various leading PSUs, JVs, international companies, would be studied and based on which, revised comprehensive procurement practice would be formulated and discussed with the stakeholders before its approval and implementation.

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[2] ***Delay in placement of order from date of indent/purchase requisition was upto 60 days in two cases (one LSTK/one purchase order), 61 to 240 days in nine cases (nine purchase orders), 241 to 420 days in seven cases (three LSTK/four purchase orders), 421 to 600 days in seven cases (two LSTK/five purchase orders), 601 to 780 days in three cases (one LSTK/two purchase orders) and more than 780 days upto 1357 days in three cases (two LSTK/one purchase order).***

The Management added that an Onshore Design Engineering Group was established (April 2007) for expediting contracts for major onshore facilities.

7.7.1.4 Delays in creation of various production and surface facilities

i) Delay in creation of GGS-II and III at Gamij leading to avoidable movement of crude oil through road tankers

The Feasibility Report (FR) on the development plan of Gamij oil fields of Ahmedabad Asset proposed (July 2002) creation of GGS-II and III including water injection facilities at a cost of Rs.15.20 crore by December 2003. The FR was approved in September 2004. Meanwhile, the tender procedure for construction of GGS-II and III was initiated in May 2003. However, the price bids were not opened as the expenditure sanction from the Chairman and Managing Director was not received within the validity period of September 2004. As none of the bidders agreed to extend the validity of the price bids till November 2004, the tender was closed in April 2005.

A fresh NIT was issued only in January 2006 with revised cost estimate of Rs.21.65 crore. The second tender was also cancelled as the FR (2002) required revision. Though the cost estimate of GGS-II and III was revised to Rs.27.01 crore in May 2006, the tender process for award of contract was still (July 2008) to be initiated. The land required for creation of the surface facility had also not been acquired (July 2008). Thus, the surface facilities scheduled to be completed in December 2003 were awaiting the approval, initiation of tender process and acquisition of land, as of July 2008.

Audit observed that the indefinite delay in planning and creation of surface facilities of GGS-II and III had resulted in an additional estimated cost of Rs.11.81 crore with reference to the initial estimated cost. The delay also resulted in rescheduling of the drilling plan. As of March 2008, 13 producer wells and five injector wells had been drilled as against the scheduled 19 producer wells and 15 injector wells. The drilling of balance six producer wells and 10 injector wells had been deferred till commissioning of GGS-II and III including Water Injection facility. Meanwhile, oil production from five wells was transported through road tankers to the nearby GGS causing safety and environmental hazard besides operational difficulties.

Thus, due to inordinate delay in obtaining the approval for implementation of development plan of the Gamij oil field and consequent delay in execution of the project resulted in non-achievement of incremental oil gain of 3.17 lakh MT (2003-04 to 2007-08).

The Management stated (October 2008) that in spite of sincere efforts, the tender could not be finalised and that every effort would be made to avoid such delays in future. The Management in the Exit conference added (October 2008) that efforts would be made to replace tanker transportation through pipelines, wherever possible.

ii) Delay in setting up of a GGS at Ramol leading to operational hazards

A proposal for additional GGS with water injection at Ramol oil field of Ahmedabad Asset to connect the new development wells was approved in July 2003. The cost estimate of Rs.6.32 crore along with bid package and design was prepared in July 2004.

Audit observed that the expenditure sanction for additional GGS was obtained only in September 2005 after more than two years from the date of approval for installing the GGS. Meanwhile, in anticipation of expenditure sanction the tendering process was

initiated in May 2005 but it was terminated as the cost estimate was to be revised based on new costing methodology being adopted by the Company in September 2005. Accordingly, the cost estimate of the facility was revised to Rs.11.09 crore in September 2005. As against this cost estimate, price bids received were very high resulting in re-tendering. The contract was yet (July 2008) to be finalised. In the absence of GGS, the crude oil was being transported from oil wells through tankers hired from private parties. The delay in finalisation of the contract resulted in cost overrun besides transportation of crude oil through hired road tankers and exposing the Company to the vulnerabilities of safety and environmental risks and malpractices.

The Management confirmed (October 2008) that though the case was tendered twice but the same could not be concluded as the bids received were higher than the revised estimates. Further, a new pipeline was indented with expected date of completion by March 2009 as GGS alone would not help in avoiding tanker transportation. Also due to urgency an Early Production System (EPS)[3] was planned at the proposed location.

In the Exit conference, the Management expressed (October 2008) concern regarding movement of the product through road tanker which were not only hazardous to safe operations but also had adverse consequences on environment.

Recommendation No.7.1

The Company may expedite completion of requisite surface infrastructure to avoid hazardous operations involved in road transportation through private road tankers besides attendant exposure to safety and environmental risks and malpractices.

iii) Delay in completion of gas lift facility resulted in loss of production besides hazards to environment on account of leakages

A pipeline of 15.5 km. from Jotana GGS-I to Sobhasan in Mehsana Asset was commissioned in 1985-86 for transportation of High-pressure (HP) compressed gas for use in gas lift facility. The compressed gas of around one LSCMD[4] was being transported through this pipeline. The Construction and Maintenance division (C&M), Baroda had observed (October 2001) that the condition of the pipeline was not good and was leaking frequently. As it was not advisable to operate the pipeline from the safety point of view, C&M advised replacing the pipeline at the earliest.

Accordingly, a proposal was initiated in February 2003. However, this was put on hold due to requirement of new Gas Compression Plant (GCP) at Sobhasan to cater to the gas requirement of Sobhasan. After installation of new GCP the proposed replacement of pipeline would have become redundant. Hence, the existing pipeline was continued to be operated. The proposal was again re-initiated in May 2005 considering the latest development in conversion of air compressors to gas compressors. The gas lift wells at Sobhasan were re-commissioned in April 2006 after conversion of idle air compressors to gas compressors.

Audit observed that between July 2002 and May 2005 there were 76 instances of leakage. These frequent leakages had interrupted the operation of gas lift wells resulting in loss of production of oil, besides causing environmental damage. There was also a fire accident in January 2005 due to heavy leakage from the pipeline. However, Mehsana Asset

[3] ***EPS- akin to a GGS – pending creation of the GGS, EPS proposed to be set up as a temporary measure***
[4] ***Lakh Standard Cubic Metres per day***

continued to operate the pipeline for transportation of HP compressed gas to operate the gas lift wells of Sobhasan oil field till May 2005.

Audit further observed that the pipeline was shutdown in May 2005 after a major accident resulting in stoppage of transportation of compressed gas to Sobhasan gas lift wells. As a result, the 33 gas lift wells of Sobhasan GGS-I and II were closed for want of compressed gas for gas lift facility from May 2005 to March 2006 with consequential loss/deferment of oil production of 27251 MT.

The Management stated (October 2008) that operating life of the pipeline was considered to be 20 to 25 years and the leakages were on account of aging. The delay was attributed to holdup of proposal on account of requirement of new GCP in Sobhasan area and the pipeline was operated after repair of leakages.

The fact remains that despite being pointed out, the pipeline was not replaced in time causing safety risks besides frequent release of gases into the environment on account of leakages.

Recommendation No.7.2

A system may be evolved for timely identification and replacement of old transportation pipelines to avoid unsafe operations which entail huge safety and environmental risks.

7.7.1.5 Non-recovery of additional condensate due to delay in modification

Central Processing Facilities (CPF), Gandhar of Ankleshwar Asset handled oil from Gandhar field. Oil was stabilised in Crude Stabilisation Unit (CSU) and Low Pressure (LP) and Medium Pressure (MP) gases from the area were sent to Off Gas Compressor-II (OGC-II) for recovery of condensate. This condensate was processed at Condensate Fractionation Unit (CFU) where LPG and Naphtha were generated. If incoming crude in between MP and LP separators of CSU was heated by hot gas of OGC-II, it resulted in a small gain in condensate production. Out of four trains[5] of OGC-II i.e. 16, 17, 18 and 19, facility of gas-oil exchangers to heat CSU oil was available only in two trains i.e. 18 and 19.

To obtain this additional gain in condensate, Ankleshwar Asset referred (March 2005) the project to IOGPT to study the feasibility of installing gas-oil exchangers in trains 16 and 17 of OGC-II. IOGPT recommended (January 2006) a scheme of pipeline modification utilising existing gas-oil exchangers of trains 18 and 19 at a cost of Rs.39.58 lakh. A gain of approximately 21 TPD of condensate was computed by IOGPT involving an additional revenue of Rs.4.12 crore *per annum*.

Audit observed that the scheme of pipeline modification in line with IOGPT recommendations was not carried out till October 2008. As a result, additional revenue of Rs.4.12 crore *per annum* was not realised.

The Management, while accepting the audit comment, stated (October 2008) that as suggested by IOGPT, sanction for modification of piping system was obtained and the job was being awarded.

[5] ***A set of equipment arranged so as to work in parallel mode for the purpose of load distribution and facilitate ease in maintenance.***

7.7.1.6 i) Delay in construction of storage tank in Mehsana CTF with adverse implications on quality of crude dispatched

Mehsana Asset initiated a proposal for two crude oil storage tanks of 10,000 M^3 capacity each at Mehsana CTF in October 2001 in view of the critical stock position at Mehsana CTF. The construction of new tanks was to provide additional storage capacity both from a safe (buffer) stock point-of-view as well as from quality control considerations. The cost of the two tanks was estimated (March 2004) at Rs.9.23 crore and the expenditure sanction obtained in July 2005.

The tendering procedure for award of contract for two storage tanks was initiated in August 2004. In response to the NIT (March 2005) only one bid was received from M/s Bridge & Roof Co. Ltd., Kolkata. The price bid opened in July 2005 revealed that the firm had quoted Rs.15.12 crore as against the estimated cost of Rs.9.23 crore. The estimated cost was then revised (October 2005) to Rs.13.31 crore in view of change in the costing methodology. The price negotiations were held and contract for construction of tanks was awarded (December 2005) at the negotiated price of Rs.14.65 crore.

Audit observed that the proposal for two additional tanks though initiated in October 2001 was commissioned only in July 2007 at an additional cost of Rs.5.41 crore on account of delay of over four years in obtaining sanction and award of contract. During the period the Asset was functioning with inadequate storage facilities resulting in higher percentage of base sediments and water (BS&W) in the crude oil. Audit also observed that in February 2005 the wells had to be closed due to non-availability of storage facilities which resulted in deferment/loss of oil production of 4405 MT.

The Management admitted (October 2008) that the wells had to be closed on account of non-availability of storage tanks. It, however, stated that the cost estimate of October 2001 was a notional budgetary estimate and, hence, should not be considered as a reference.

The reply of the Management, however, did not take into account the fact that Audit had calculated the cost escalation with reference to the estimate of March 2005.

ii) Avoidable expenditure due to non-inclusion of additional floating roof tank in the tender

With a view to maintain quality of crude oil of not more than 0.2 *per cent* BS&W and avoid penalty in the crude dispatched to the refinery of Indian Oil Corporation Limited (IOC) and enhance storage capacity, the Company approved (July 2004) a proposal to construct a floating roof tank of 30,000 M^3 capacity in the Desalter Plant at Nawagam in Ahmedabad Asset at an estimated cost of Rs.8.00 crore. NIT was published in April 2005 and the contract awarded in March 2006 at a cost of Rs.12.00 crore. The tank was commissioned in May 2008. Audit observed that due to inordinate delay, the cost of facilities had increased from Rs.8.00 crore to Rs.12.00 crore, besides non- maintenance of the stipulated quality in the dispatched crude.

While the NIT for the first tank had not been published, IOGPT had recommended (December 2004) one additional floating roof tank of similar capacity to facilitate operational flexibility in the event of maintenance/shutdown of the storage tank and to reprocess non-dispatchable crude. NIT for the additional tank was published in July 2007 and the contract awarded in June 2008 at a cost of Rs.18.05 crore.

Audit observed that the additional floating roof tank could have been combined with the NIT of the first tank floated in April 2005. Failure to include the procurement of an additional floating roof tank resulted in an avoidable extra expenditure of Rs.6.05 crore, besides non-creation of spare capacity for reprocessing and maintenance requirements.

The Management stated (October 2008) that the delay was due to procedural limitations.

The reply of the Management was not satisfactory since to avoid the cost and time overrun and to ensure better quality of crude, it was imperative that requirement for both the tanks should have been combined in a single NIT of April 2005 when IOGPT's recommendation had been received in December 2004.

With regard to the stated procedural limitations, the Management agreed (October 2008), during the Exit conference, to undertake a study of the industry best practices in procurement system and formulate a revised procurement practice after discussion with the stakeholders.

Recommendation No.7.3

The Company may create adequate storage facility of crude oil at various installations to ensure uninterrupted production of crude oil.

7.7.2 Adherence to stipulations of Environmental Regulations

Due to deficiencies in planning as highlighted above, there were delays in construction of adequate and requisite infrastructure which also had adverse implications on environment and safety of operations. Adherence to applicable environmental and safety regulations, standards and norms were test checked in audit. Illustrative cases highlighting environmental and safety concerns are discussed in succeeding paragraphs:

7.7.2.1 Accumulation of oily sludge causing environment hazards

Gujarat Pollution Control Board (GPCB) stipulated that the hazardous waste of more than 10 MT or a truck load, whichever was less, for a period beyond 90 days should not be stored. Prior permission was necessary for storage beyond 90 days or for storage of quantity exceeding 10 MT.

Audit observed that under the contracts awarded by the Company during 2007-08 for disposal through bio-remediation of 6674 MT of the oily sludge/soil at various installations of Ahmedabad Asset, only 44 *per cent* of the awarded quantity was cleared by the end of the year. As of March 2008, 9354 MT of the oily sludge/soil excluding that already awarded during 2007-08 was awaiting disposal at 33[6] installations of the Asset. Similarly, of the aggregate quantity of 28357 MT awarded during 2007-08 for disposal at various installations of Mehsana Asset, only 50 to 65 *per cent* of the quantity was cleared during the year and 12550 MT was awaiting disposal at 18[7] installations at the year end. Though the quantity of the oily sludge/oil contaminated soil accumulated at these Assets

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[6] ***Gamij GGS, Jhalora GGS I and II, Jhalora ETP, Kalol GGS I to IX and XI, Kalol GCS, Kalol CTF, Limbodara I and II, Motera GGS, Nandej GGS, Nawagam GGS I to III, Paliyad GGS, Ramol GGS, Sanand GGS I and II, South Kadi-CTF, Viraj GGS, Wadu GGS, CWIP II, Wasna GGS and Zundal GGS of Ahmedabad***

[7] ***Balol-1, Bechrajee GGS I, Jotana GGS, Lanwa field, Mehsana CTF, North Kadi GGS I to IV, North Kadi ETP, North Kadi CTF, North Santhal CTF, South Santhal CTF, Sobhasan CTF, Sobhasan CTF/Pit, Sobhasan GGS-II, Sobhasan ETP and South Santhal GGS I of Mehsana.***

was in excess of the ceilings of time and quantity stipulated by GPCB, the Company had not obtained any permission from the Board.

The Management stated (October 2008) that efforts were being made by the Assets for disposal of hazardous waste as per GPCB guidelines. In the Exit conference, the Management, while accepting (October 2008) the audit finding as well as the recommendation, stated that a system would be evolved for periodic and regular identification, estimation of hazardous waste and its quick handling and disposal.

7.7.2.2 Frequent pipeline leakages leading to avoidable spillages

The pipeline leakages in flow lines and trunk lines need to be continuously monitored for replacement of pipelines. The leakages disrupted normal flow of production and also time taken in attending to the repair led to closure of wells, besides loss of produced oil due to spillage.

Audit observed that in Ahmedabad Asset there were leakages on 3505 occasions and in Mehsana Asset on 5071 occasions during the last three years ending March 2008. In Ankleshwar Asset, there were 1087 leakages during the last two years ending March 2008. The Assets had no procedures in place to determine the loss of production on spillage of oil due to leakages. However, Mehsana and Ankleshwar Assets had estimated the loss of production of 4622 MT and 1630 MT respectively due to closure of wells while attending the repairs of the line leakages. Ahmedabad Asset did not have a system of working out the similar loss of production due to pipeline leakages.

The spillage of oil on account of leakages led to contamination of soil, besides affecting flora in the adjacent area.

The Management replied (October 2008) that Ahmedabad Asset was taking all steps for replacement of leaking pipelines on a war footing and that beneficial results of this would be experienced in coming times. As regards Ankleshwar Asset, it stated (October 2008) that all steps were taken to avoid leakages by introducing three layered coated pipes and glass reinforced plastic pipes in a phased manner while at Mehsana Asset, appropriate actions were being taken for timely replacement of leaking pipes. It also stated that a system existed for quantification of leakages in trunk pipeline and same would be evaluated for flow lines also.

In the Exit conference, the Management while accepting (October 2008) the audit finding as well as the recommendation stated that regular monitoring of pipelines would be carried out and based on line condition, timely replacement would be done to minimise the line losses and unsafe conditions.

7.7.2.3 Non-removal of Hydrogen Sulphide (H_2S) from flue gas at Mehsana Asset

Mehsana Asset had implemented the Enhanced Oil Recovery (EOR) scheme at Santhal, Balol, Becharaji and Lanwa fields. Content of hydrogen sulphide (H_2S) in the flue gas of these EOR fields was very high ranging from 100 to 800 parts per million (ppm). The flue gas from the EOR fields was being disposed off at the rate of 10.85 lakh NM^3 per day in the atmosphere without removing H_2S due to absence of the required facility in the installations causing environmental pollution.

Audit observed that the surface facilities at Santhal, Balol, Becharaji and Lanwa installations of the Asset were constructed more than 20 years back i.e. prior to implementation of EOR scheme and were not designed for handling the high H_2S content in the flue gas. As a result, flue gas was being disposed off in the atmosphere through flare stake without removing H_2S. This was in violation of pollution control regulations and had been objected to by the GPCB by issuing notices in December 2006. Apart from operational problems, odour of H_2S was being felt by nearby villagers who objected to it.

Audit further observed that the matter was referred to IOGPT by Mehsana Asset only in March 2008 for a study to remove H_2S from flue gas before flaring to avoid environment pollution and to adopt safe operating practices.

The Management stated (October 2008) that necessary measures were being taken for removal of H_2S from flue gas and services of a consultant were also being hired for suggesting suitable process for it.

Recommendation No.7.4

The Company may initiate urgent action to arrest emission of hazardous H_2S gas into the environment and monitor the progress.

7.7.2.4 Delay in construction of Effluent Treatment Plant (ETP) at South Kadi leading to non-achievement of recycling of effluent

The Feasibility Report (FR) on development plan of South Kadi oil field approved in August 2001 proposed construction of ETP for recycling of effluent for water injection purposes and upgradation of capacity of existing water injection facilities. The commissioning of ETP and upgradation of water injection facility were scheduled to be completed by November 2003. Due to delays in various stages of planning, preparation of bid package and finalisation of technology/drawings, the contract for construction of ETP was awarded only in November 2004 at a cost of Rs.6.14 crore. As per the contract terms, the scheduled commissioning of the ETP was January 2006.

Audit observed that trial runs of the ETP failed to achieve the desired parameters and, therefore, ETP had not been commissioned till October 2008. Consequently, the payment of Rs.4.87 crore to the contractor from October 2005 to October 2006 remained unproductive. In the absence of ETP, the effluent generated during this period was being disposed off in the effluent disposal wells after treatment in the wash tanks. Hence, the objective of recycling the effluent after treatment in ETP remained to be achieved since November 2003 till date (October 2008). In the absence of the ETP, fresh water was being pumped into the reservoir to maintain adequate pressure instead of recycled effluent.

The Management stated (October 2008) that all efforts were being made by the contractor and the Company to make the ETP functional at the earliest.

Recommendation No.7.5

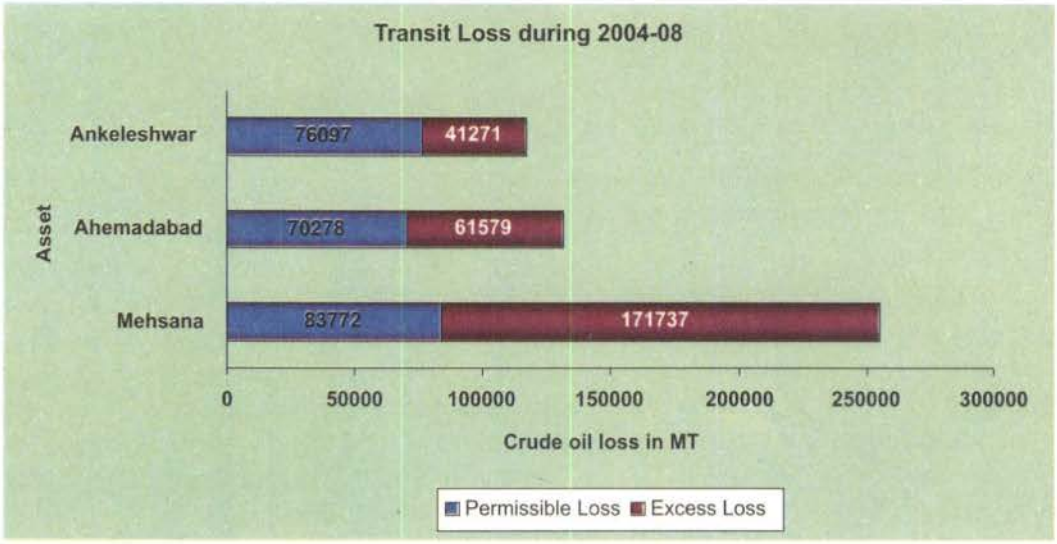
The Company may ensure strict monitoring of project execution to commission the envisaged ETP to achieve the objective of recycling of effluent for the purpose of water injection.

7.7.3 Adherence to stipulations of Safety and Health Regulations

7.7.3.1 Loss of crude oil in transit

In terms of the Company's order (March 1990), the permissible pipeline losses for all sectors would be upto a maximum of one *per cent* of the crude oil production. Audit observed that due to frequent leakages, handling and movement through road tankers coupled with *adhoc* and partial replacement of pipelines in the absence of regular replacement policy, the transit loss during the four years 2004-05 to 2007-08 was in excess of the norm by 0.18 to 3.31 *per cent* ***(Annexure XVIII)*** leading to loss of production. The aggregate loss of revenue on this account in the last four years ended March 2008 for the three Assets was Rs.73.38 crore. The total transit loss of all the three Assets during the period was 5.05 lakh MT as shown below:

Chart 7.3



The Management, while agreeing to the audit comment, stated (October 2008) that corrective action had been initiated to bring the transit loss within the permissible limits by intensifying patrolling and that efforts were being made to identify a system to detect leakages. In the Exit conference, the Management, while accepting (October 2008) the audit recommendation, stated that all efforts would be made to sensitise the Assets for strict adherence to norms of transit losses and this aspect would be closely monitored.

7.7.3.2 Failure to undertake capital overhauling of major equipment

Capital overhaul is a maintenance activity in equipment's life cycle to restore equipment reliability and ensure smooth operations. Considering the large variety of equipment of different makes, models and capacities deployed at onshore installations, norms for first and subsequent capital overhauling of Onshore Surface Installation Equipment were formulated for the first time in September 2005 for ensuring better maintenance planning, budgeting and uniformity in the Company.

On test check of records relating to capital overhauling, Audit observed that the eight main oil dispatch pumps at CTF and Desalter Plant of Ahmedabad Asset, which were overdue for first overhauling after operation for 25000 hours, had been operated for 25883 to 77633 hours. Further, out of these eight pumps, six were operated for hours

ranging from 52457 to 77633 hours and, thus, became overdue for first as well as subsequent overhauling as per the laid down norms. No pumps were planned for overhauling during 2006-07. Though four pumps were planned for capital overhauling in 2007-08, none of these pumps were actually overhauled, indicating ineffective planning and monitoring of compliance to the norms. Further, four out of 17 main gas compressors, which were operated for hours ranging from 99793 to 105163 hours, were overdue for overhauling as per laid down norms of 90000 to 100000 operating hours. However, these compressors were not taken up for overhauling in 2007-08.

Similarly, in Mehsana Asset, 37 pumps, which were due for capital overhauling after 25000 hours (first overhauling) of operation and 20000 hours thereafter for subsequent overhauling, had been operated for hours ranging from 40000 to 164603 hours and planned for capital overhauling in 2008-09. Out of these 37 pumps, 24 pumps had become overdue for first as well as subsequent overhauling as per the laid down norms.

The non-compliance to the laid down norms would have serious consequences on operational efficiency of the equipment, energy consumption and higher maintenance cost, besides having environmental and safety implications.

The Management stated (October 2008) that the equipment in respect of Mehsana Asset were planned for capital overhauling in 2008-09 as the equipment planned for capital overhauling in 2007-08 could not be attended due to procedural and operational constraints. It, however, did not offer any comments in respect of Ahmedabad Asset.

Recommendation No 7.6

The Company may adhere to the Capital Overhauling Schedule and monitor it regularly to reduce instances of unplanned shutdowns and also maintain necessary documentation as prescribed by OISD.

7.7.3.3 Non-fulfilment of requirement of Safety Committee of Mines

The Mines Rules, 1955- Chapter IV-B stipulated formation of Safety Committee of Mines (SCM) to promote safety in the mines. The Committee was required to meet at least once in 30 days to consider the matter placed before it and that action should be taken within 15 days from the date of receipt of the Committee's recommendations.

The SCM was constituted for the Surface Mine at Ahmedabad Asset in February 2008 only after Audit had pointed out its non formation and the first meeting of the SCM was held in May 2008. Audit further observed that action on the SCM recommendations in five cases in Mehsana Asset was pending for more than a year. In Ankleshwar Asset, the SCM was not in existence.

The Management stated (October 2008) that in Ankleshwar Asset separate SCM would be formed. However, the reply was silent on the action to be taken on five pending cases in Mehsana Asset.

Recommendation No. 7.7

The Company may assign due importance to the SCM as stipulated in the Mines Rules to ensure safe working environment, operation of the installations and monitor compliance to the action points as per recommendations of the SCM.

7.7.3.4 Delays in providing of security fencing at well sites

DGMS had recommended (July 2005) for providing security fencing around operational wells as a statutory requirement. The provision of fencing around the operational wells safeguarded against encroachment of the well area besides ensuring safety. Ahmedabad Asset identified (October 2005) 1175 well locations and invited tenders in November 2006 at an estimated cost of Rs.32.51 crore.

Audit observed that the tender process was terminated (October 2007) as one of the two bidders had refused to extend the validity of offer beyond the stipulated date of 16 August 2007. Therefore, the recommendations of DGMS were yet to be complied with since further action for re-tendering was still (October 2008) awaited.

The Management stated (October 2008) that the work had now been taken up on top priority and would be completed by June 2009.

Recommendation No.7.8

The Company may expedite erection of security fencing for all the wells as recommended by DGMS.

7.7.3.5 Oil Mines Regulations, 1984 – Non-maintenance and updation of pipeline networks

Regulation 9 of Oil Mines Regulations, 1984 (OMR) stipulated accurate maintenance and updation of key plan showing the area duly demarcated in which operations for winning of petroleum and ancillary operations were carried on. A surface plan showing the location of all the wells including abandoned wells, group gathering stations (GGS), railways, power transmission lines, public roads, buildings or other permanent structures not belonging to the owner, rivers and water courses within the mining areas were also to be indicated.

Audit observed that the Ahmedabad Asset, which was operating trunk lines of 637 kilometres (km.) and oil/gas and other flow lines of 3262 km., had not maintained the route and cadastral survey despite operating for over 30 years. Further, DGMS had directed (May 2006) that at every GGS, the plan showing the details of all connected wells, layout of pipeline routes and operating pressure should be maintained and submitted to them. The route survey of 1340 km. and cadastral survey of 1990 km. pipeline had been completed in January 2007. However, there had been inordinate delay in initiating action against the DGMS directives of route survey and cadastral survey of 1200 km. of pipelines. Award of work in this regard had not been completed till date (October 2008).

Similarly, Mehsana Asset operated trunk lines of 133 km., oil flow lines of 2087 km. and gas lines of 326 km. The route and cadastral survey of 450 km. pipeline was completed in April 2006. The work for carrying out route and cadastral survey for 2922 km. pipelines of other fields of Mehsana Asset awarded in January 2008 was yet (October 2008) to be completed. In respect of Ankleshwar Asset, it was observed that the records of route and cadastral survey of pipelines were not maintained (October 2008).

The Management accepted (May 2008) that the route and cadastral survey of pipeline would help in quick identification of leakages and in safety and security of pipelines. The Management, while accepting the audit comment, stated (October 2008) that in respect of

Ahmedabad and Mehsana Assets the survey work was in progress. As regards Ankleshwar Asset, a case had been initiated for preparation of drawings.

Recommendation No. 7.9

The Company may assign priority to update plans of the pipeline network as stipulated in the OMR and commented upon by DGMS so as to ensure quick identification of leakages and the safety and security of pipelines.

7.7.3.6 Discrepancy in system of Fire water network at the installations

The OISD standard 189 clause 7 regulates the firefighting facilities in CTF/GGS. As per this standard, the fire water system in an installation should be designed to meet the fire water flow required for fighting one largest risk at a time and, therefore, stipulated the design flow rate and requirement of water at the installations.

On test check of records relating to availability of fire water *vis-à-vis* the projected requirement at 12 installations of Mehsana Asset, Audit observed that in six installations there was a huge gap between requirement and availability of water in case of fire. The shortfall in availability of water in these six installations ranged between 40 to 458 M^3. Similarly, test check of records relating to fire safety network in various installations of Ahmedabad Asset (Nawagam CTF) revealed various deficiencies as detailed in ***Annexure XIX***.

While accepting the audit comment, the Management stated (October 2008) that in Ahmedabad Asset the double headed fire hydrant as required was included in the revamping proposal and for other points corrective action was being taken. As regards Mehsana Asset, the Management stated that in five out of six installations pointed out by audit, the augmentation work for water storage capacity was either planned or under construction.

Recommendation No. 7.10

The Company may ensure that deficiencies in fire water system are attended to on priority to ensure safe working environment and to effectively handle unforeseen fire accidents.

7.7.3.7 Non-compliance to Company's Code of Safe Practices

In terms of Company's Code of Safe Practices 2001, flare lines were to be provided with a pilot burner with remote control electrical ignition device to ensure that the pilot burner was continuously lighted in the installations as an effective environment management and safety measure. It was observed that in Ahmedabad and Mehsana Asset the remote control electrical ignition system to the pilot burners was not provided in any of the test checked installations.

The Management while accepting the audit comment stated (October 2008) that action was on hand for installation of flare system.

Recommendation No. 7.11

The Company may monitor compliance to the Code of Safe Practices and ensure provision of the facilities specified therein.

7.7.3.8 Inadequacy of facilities for processing of oil in production installations

The operating functionaries at the various installations in the Assets from time to time had identified a number of issues constraining smooth and efficient operations. These issues mainly were in the nature of inadequacy of the present equipment and systems. Similarly, the Assets had also engaged outside expert engineering consultants to suggest modifications and revamping which were necessary to make these installations in line with norms of Health, Safety and Environment (HSE) as well as to comply with relevant regulations and statutes. An illustrative list of these requirements is brought out in ***Annexure XX*** along with actions that the Management had proposed.

Audit observed that action to ensure the availability of the required facilities in the various installations test checked was pending and in most of the installations it was at the initial stage of planning.

The Management stated (October 2008) that action was on hand to make available the required facilities in various installations.

Recommendation No. 7.12

The Company may initiate timely action for addition and modification of facilities in production installations and monitor the progress.

7.7.3.9 Non-compliance of inspection and maintenance requirements of tanks

The standard code 129 of Oil Industry Safety Directorate (OISD) stipulated that inspection programme for tanks in service should be drawn to avoid failures and inconveniences in operation due to sudden reduction in tank storage capacity. The OISD code further stipulated that crude storage tanks should be inspected at a frequency of 10 years for internal inspection and five years for external inspection in respect of sweet crude. In case of sour crude, the duration for internal inspection and external inspection was six years and three years respectively.

Audit observed that the details of inspection programme drawn up as well as actual inspections carried out against the programme (both internal and external), maintenance observations made and action taken thereon were not on record in the installations/Asset.

While accepting the audit comment, the Management stated (October 2008) that action plan was being drawn to attend to the inspection requirement of tanks on need basis. As regards Mehsana Asset, it stated that proper records would be maintained.

Recommendation No. 7.13

A system may be evolved for periodical inspection and cleaning of oil storage tanks as stipulated in the OISD and DGMS regulations and compliance monitored at an appropriate level.

7.7.3.10 Non-compliance of observations of statutory bodies and Oil Industry Safety Directorate

i) Observations of Director General of Mines Safety

A review of compliance status of the observations of Director General of Mines Safety (DGMS) revealed that 260 DGMS observations were pending as on 31 March 2008 of which 149 observations were pending for over two years. Some of the significant pending

observations and Management's response (October 2008) thereto are detailed in ***Annexure XXI***.

The Management attributed (May 2008) the delays to requirement of time in conceptualisation and in attending to procedures, *etc.* and stated that efforts were on to comply with all the observations in the shortest possible time.

ii) Non-adherence to DGMS Rules

Para 55 of DGMS Rules stipulated that effectiveness of earthing of crude oil storage tanks would be tested once in 12 months. The results of every such test should be recorded in a bound-paged book kept for the purpose and should be signed and dated by the person carrying out the test. The code of safe practices of the Company also referred to the requirement of para 55 of DGMS Rules.

However, no such records were available at the installations test checked in audit.

The Management stated (October 2008) that in most of the cases action had been taken and that in the remaining cases, action was in hand to comply with the observations of DGMS.

Recommendation No. 7.14

The Company may expedite efforts for monitoring compliance to the observations of DGMS for appropriate and timely remedial measures.

iii) Observations of Oil Industry Safety Directorate

A review of compliance status of the observations of Oil Industry Safety Directorate (OISD) revealed that 141 OISD observations were pending as on 31 March 2008 of which 35 observations were pending for over two years. Some of the significant observations and Management's response thereto are given in ***Annexure XXII***.

The Management in reply (October 2008) stated that in most of the cases action was taken and that in some case action was in hand to comply with the observations of OISD.

Recommendation No. 7.15

The Company may expedite efforts for monitoring compliance to the observations of OISD for appropriate and timely remedial measures.

iv) Non-maintenance of records

As per OISD standard 127, clause 3.1, each critical rotating equipment should have one separate folder containing the information regarding a) Complete specification sheet of the equipment; b) Characteristic curves; c) Maintenance schedules; d) Standard clearance chart with the maximum and minimum limits; e) Maintenance history sheets; f) Breakdown analysis sheets; g) Vibration and shock pulse measurement log; and h) Complete list of spare parts with store code.

On test check of records of critical rotating equipment installed and operated in different installations of three Assets, Audit observed that history folder was not maintained in respect of any of the major critical rotating equipment and, therefore, the compliance to OISD standard was not ensured.

The Management, while accepting the audit comment, stated (October 2008) that improvement was being made for the maintenance of records as per the OISD requirements.

Recommendation No. 7.16

The Company may ensure maintenance of database in line with OISD requirements for all critical equipment and review it periodically.

7.8. Conclusion

Thirty nine *per cent* of the production and surface facilities in the western onshore were more than 25 years old. The Company did not have a standard policy for replacing the critical equipment in the onshore surface installations. The Company also did not adhere to the overhauling schedule of critical equipment which had serious consequences on operational efficiency besides environmental and safety implications. The contracts for creation of production and surface facilities were inordinately delayed. Consequently, there were operational difficulties and loss in anticipated oil gain besides safety hazards and adverse implications on the environment. Poor maintenance of equipment and pipelines led to exceeding the norm of one *per cent* for transit losses leading to loss of revenue of Rs.73.38 crore. There were inordinate delays in complying with the observations of DGMS and OISD on maintenance of production and surface facilities.

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

MINISTRY OF POWER

CHAPTER VIII

North Eastern Electric Power Corporation Limited and NHPC Limited

Implementation of 10th Plan hydel projects in North Eastern and Eastern regions

Highlights

NHPC Limited (NHPC) and North Eastern Electric Power Corporation Limited (NEEPCO) planned for capacity addition of 642 Mega Watt (MW) and 85 MW respectively in North Eastern and Eastern regions during the 10th Five Year Plan (10th Plan) period (2002-2007). NHPC could not add any capacity within the 10th Plan while NEEPCO could add only 25 MW during this period. Further, against the 10th Plan revised outlay of Rs.6,853 crore for implementation of 13 Hydroelectric Projects (HEPs), NHPC could utilise only Rs.3,998 crore within the 10th Plan period and Rs.5,165 crore till March 2008. Against the 10th Plan outlay of Rs.2,509 crore for implementation of eight HEPs, NEEPCO could utilise only Rs.692 crore within the Plan period and Rs.983 crore till March 2008.

(Para 8.2)

Such shortfalls were on account of delays in environmental and forest clearance coupled with delays in investment decisions, delays in signing of Memorandum of Understanding (MOU)/Memorandum of Agreement (MOA) with the State Governments, natural calamities, geological surprises, law and order problems and handing over of some of the projects to the private developers by the Government of Arunachal Pradesh. In case of NEEPCO, preparation of deficient Detailed Project Reports (DPRs) further complicated the matter.

(Para 8.2)

NHPC

Finalisation of tenders took inordinately long time. The time taken to finalise tenders ranged between 14.5 to 33 months.

(Para 8.5.1.1)

Due to poor contract documentation NHPC lost Rs.12.05 crore in arbitration.

(Para 8.5.1.2)

Teesta Stage-V HEP was completed with a time overrun of 13 months due to geological surprises and deviations in Bill Order Quantity (BOQ) and extra items.

(Paras 8.5.2.2, 8.5.1.2 and 8.5.2.3)

Commissioning of Teesta Low Dam Project-III (TLDP-III) HEP was delayed by 30 months.

(Annexure XXVII, Paras 8.5.2.1 and 8.5.2.5)

There was wide variation in BOQ in civil works of Teesta Stage-V HEP. The main reasons for deviations with consequent increase in scope of work were on account of change in geological conditions not envisaged in the DPR, change in construction design and drawings, technical specification and site requirement and inadequate provisions in the contract.

(Para 8.5.2.3)

Due to delay in depositing Net Present Value (NPV), the forest clearance was delayed leading to 12 months delay in commencement of work in Subansiri Lower.

(Para 8.5.3.1)

With almost complete withdrawal of NHPC from Siang Basin, the capacity addition programme of NHPC during the 11th and 12th Five Year Plans will be considerably affected with consequent deferment of revenue generation.

(Para 8.5.4)

NEEPCO

In spite of wide dispersion of sites and high values of individual packages, NEEPCO issued work orders for three civil packages to a single contractor because of which progress of work suffered.

(Para 8.4.2.1)

NEEPCO incurred infructuous expenditure of Rs.3.17 crore due to conversion of underground penstock to surface penstock due to inadequate geological information.

(Para 8.4.3.2)

Poor fund and contract management delayed completion of the project in Kopili HEP Stage-II with consequential deferment of commercial operation due to non-availability of adequate water at the end of the rainy season.

(Para 8.4.4)

Summary of recommendations

1. ***The process of acquiring clearances needs to be reviewed in view of delay in obtaining environmental clearances. The Companies should also request Ministry of Power (MOP) to conduct Environment Impact Assessment (EIA) and Environment Management Plan (EMP) through Ministry of Environment and Forests' (MoEF) institutional arrangements to ensure expeditious clearance of hydro electric projects.***

2. ***The companies may request MOP to resolve contentious issues like flood moderation, type of the projects (run-of the river or storage scheme) prior to allotment/ taking-up of a hydel project.***

3. ***To ensure transparency in the bidding process, date of submission of pre-qualification documents and technical bid should be specified and pre-qualification of bidders should be finalised within the specified date.***

4. ***NHPC may consider entering into strategic tie-ups with reputed international survey agencies for increasing the effectiveness of Survey and Investigation(S&I).***

5. ***The time and money stipulated for carrying out S&I may be suitably enhanced in line with global standards.***

6. ***In view of cost involved, NEEPCO and MOP need to take early decision regarding continuation of the Tuirial project. Further, future DPRs should be prepared on the basis of adequate investigation to avoid major deviations during execution of projects.***

7. ***With the changing policies/rules in allotment of hydel projects, the companies need to vigorously pursue with the MOP, Government of India (GOI) as well as State Governments to avert the loss of potential and attractive sites. The companies may also forward strategic proposal to the GOI for clubbing the relatively easy sites with tougher ones for development by them.***

8.1 Introduction

8.1.1 The North Eastern region (NER) and Eastern region (ER) of India have huge hydro electric power potential. The potential has been estimated at 58971 MW and 10949 MW in NER and ER respectively which together constitutes 47 *per cent* of the country's total hydro potential. Out of the total estimated potential of 58971 MW and 10949 MW, only 4029 MW (seven *per cent*) and 5755 MW (53 *per cent*) has been tapped in NER and ER respectively.

NHPC Limited was set up in 1975 to plan, organise and promote integrated and efficient development of hydroelectric power. The installed capacity of NHPC was 5175 MW of hydropower. During 10th Plan (2002-03 to 2006-07) NHPC targetted a capacity addition of 4357 MW[1]. This was subsequently revised to 3252 MW including 642 MW in the ER/NER.

NEEPCO was set up in 1976 with a mandate to plan, organise, promote, investigate, survey, design, construct, generate, operate and maintain hydro and thermal power stations in the NER. As on March 2008, NEEPCO had an installed capacity of 1130 MW (755 MW hydro and 375 MW thermal). During the 10th Plan period, NEEPCO was given a capacity addition target of 85 MW.

8.1.2 Energy security

Going by the nine *per cent* growth envisaged in the 11th Five Year Plan, the Central Electricity Authority (CEA) assessed a requirement of additional generation of one lakh MW of power by the year 2012 to achieve power for all. The capacity addition planned and achieved during Five Year Plans were as under:

[1] ***All India target***

Table 8.1

Five year Plan	All India Target (MW)	Achieved (MW)	Achievement (%)
8th	30538	16423	53.8
9th	40245	19119	47.5
10th	41110	21180	51.5

The above table shows that actual capacity addition during the last three five-year plans ranged around 50 *per cent*. This was largely on account of delays in environmental clearance, geological surprises, natural calamities, rehabilitation and resettlement issues, appraisal problems, delays in signing of Memorandum of Understanding (MOU) and delays in investment decisions. These led to peak shortage (12.6 *per cent*) as well as energy shortage (7.5 *per cent*) on account of mismatch between demand and capacity. In this scenario and the fact that India is not endowed with large primary energy reserve, expeditious development of hydel power assumes significance. Hydel stations are the best choice for meeting peak demand. In addition, hydel stations are eco-friendly and do not have any emissions.

8.1.3 Scope of Audit

The performance audit covers the implementation of 10th Plan Hydel Projects in North Eastern regions and Eastern regions by NEEPCO and NHPC during 2002-03 to 2007-08.

8.1.4 Audit objectives

The performance audit was conducted to assess whether:

- the capacity addition programmes were drawn up on the basis of detailed study;
- time taken to obtain various clearances from different project clearance authorities were reasonable;
- contract management was sound and effective;
- projects were implemented efficiently and economically; and
- achievement was consistent with the targets set in 10th Plan.

8.1.5 Audit criteria

The following criteria were adopted for reviewing the implementation of 10th Plan projects:

- Guidelines on project clearance issued by Ministry of Power (MOP), Government of India;
- Parameters set in Detailed Project Reports (DPRs);
- CEA and Central Water Commission (CWC) guidelines/Company Guidelines/ Industry best practices on implementation of Hydel projects;
- Central Vigilance Commission (CVC) guidelines on contracts; and
- Geological Survey Reports.

8.1.6 Audit methodology

After a preliminary study and collection of background information, Entry conferences were held on 4 March 2008 (NHPC) and 22 April 2008 (NEEPCO) for discussion of audit objectives and audit criteria with the Managements of the companies. Test audit was conducted during April 2008 to August 2008. Finally, Exit conferences were held on 11 August 2008 (NEEPCO) and 14 August 2008 (NHPC) to discuss the audit findings and recommendations.

8.1.7 Audit sampling

In case of NEEPCO, all major contracts (15) valuing Rs. five crore and above were selected for examination. All the minor contracts in Bichom Dam Complex (Kameng project) valuing Rs.50 lakh to Rs.5 crore were selected and from the remaining contracts (577) valuing less than Rs.50 lakh, 30 contracts were selected by adopting simple random sampling method. In case of NHPC, all contracts (16) valuing Rs. five crore and above were selected by audit. 25 *per cent* of the 62 minor contracts of Teesta-V, Teesta Low Dam Project (TLDP)-III and TLDP-IV valuing Rs.50 lakh to Rs. 5 crore were selected and from the remaining 2192 contracts valuing less than Rs.50 lakh, 30 contracts were selected by adopting simple random sampling method.

8.1.8 Audit acknowledgement

Audit acknowledges the cooperation and assistance extended by the Managements of NHPC and NEEPCO at various stages of the performance audit.

8.2. 10th Plan targets vis-à-vis achievements

NEEPCO could add a capacity of only 25 MW against the proposed capacity addition of 85 MW ***(Annexure–XXIII)***. Further, against the 10th Plan outlay of Rs.2,509 crore for implementation of eight Hydro Electric Projects (HEPs), NEEPCO could utilise only Rs.692 crore till March 2007 and Rs.983 crore till March 2008 ***(Annexure–XXIV)***. Out of eight projects, two projects were under execution (Kameng HEP and Tuirial HEP), one project was commissioned (Kopili Stage-II), two projects were being handed over to the State Government (Lower Kopili HEP and Tuivai HEP) and two projects were awaiting clearance (Pare HEP and Tipaimukh HEP). Further, DPR of Ranganadi Stage-II HEP was not approved due to high tariff and the State Government had also withdrawn all authorisation for undertaking Survey and Investigation (S&I) works and preparation of DPR for projects where no MOA was signed. Thus, execution of this project on which NEEPCO incurred Rs.7.37 crore (upto May 2008) had been stopped.

Against the proposed capacity addition of 642 MW in NER and ER, NHPC could not add any capacity within the 10th Plan. Further, against the 10th Plan outlay of Rs.12,755 crore for implementation of 13 hydel projects, which was revised to Rs 6,853 crore during mid-term appraisal of 10th Plan, NHPC utilised only Rs.3,998 crore within the Plan period (March 2007) and Rs.5,165 crore till March 2008 ***(Annexure–XXV)***. Out of 13 NHPC projects ***(Annexure–XXVI)***, two projects were scheduled for commissioning during 10th Plan. However, only Teesta Stage–V HEP has been commissioned till April 2008 after delays of 13 months from the scheduled date of completion. Two projects were handed over to private developers, three projects were abandoned, four projects were facing stoppage and three projects namely TLDP-III, TLDP-IV and Subansiri Lower Project (SLP) were under execution (March 2008). NHPC had incurred an expenditure of

Rs.1,957 crore till March 2008 ***(Annexure–XXV and XXVI)*** on Subansiri Lower Project without signing the MOU for this project with the Government of Arunachal Pradesh (GOAP). NHPC had taken up the issue of signing of MOU with MOP but it yielded no fruitful result (September 2008).

The reasons for gross under- utilisation of plan outlay were as under:

- Delays in environmental and forest clearance coupled with delays in investment decisions, signing of MOU and Memorandum of Agreement (MOA) with the State Governments ***(Annexure-XXVIII, paras 8.3 and 8.5.4).***
- Preparation and approval of DPR with inadequate and invalid data with consequential changes in drawings and design leading to time and cost over-runs ***(paras 8.4.1 and 8.4.3).***
- Delays in award of works, delays in supplies and construction by contractors and contractual problems ***(paras 8.4.1, 8.4.2 and 8.4.4).***
- Natural calamities and geological surprises ***(paras 8.5.2.2, 8.5.2.5 and 8.5.2.6)***.
- Handing over of projects to the private developers by one of the State Governments ***(para 8.5.4)***.
- Law and order problems and lack of effective co-ordination among the multilateral agencies including State Governments ***(Annexure-XXVI)***.

8.3. Procedure for clearance of Hydro-electric power projects

The guidelines issued (June 2001) by the MOP envisaged three stage development of new Hydroelectric Power Project. Stage-I involved vetting of estimates, Ministry of Environment and Forests' (MoEF) clearance, commercial viability and Stage-II involved preparation of DPR, completion of Environment Impact Assessment (EIA) and Environment Management Plan (EMP), Techno-Economic Clearance (TEC), land acquisition and infrastructure works, Public Investment Board (PIB) meeting and submission of Cabinet Committee of Economic Affairs (CCEA) note. Stage I and Stage II were to be completed within one year and one and a half years respectively. Actual project execution would be done during Stage-III, which begins with the approval of CCEA, which specifies sanctioned cost and the scheduled time for completion of the project.

It was observed that total time taken for two stage clearances of the four ongoing projects in ER and NER of NHPC under 10th Plan ranged between 37 months and 63 months[2]. Scrutiny revealed that the delays occurred as NHPC submitted incomplete proposal forms, delay in examination of proposals by clearance authorities, raising of multiple set of queries in phases by different project clearance authorities[3] and Management's delay in submission of compliance report to MoEF for final forest clearance ***(Annexure–XXVII)***. The delays would have been considerably reduced if the Management had submitted their application form complete in all respects and the statutory authorities had raised their respective queries at one go. Further, simultaneous processing of forest and

[2] ***From handing over of projects to the Company to the date of Forest clearances / CCEA Clearance.***
[3] ***Central Electricity Authority, Ministry of Environment and Forest, Central Public Investment Board and Cabinet Committee of Economic Affairs.***

environmental clearances with preparation of Feasibility Report (FR), EIA and EMP study would have saved the time taken for getting final forest clearance.

It was also observed that time taken for two stage clearance of the two ongoing projects under 10th Plan of NEEPCO ranged between 46 to 68 months. Scrutiny revealed that the delays occurred due to failure to complete pre-construction and infrastructure activities in time, delays in signing of Power Purchase Agreements (PPA) by State Governments, delays in forest clearance and submission of DPR with inadequate data ***(Annexure–XXVIII, paras 8.4.1 and 8.4.3)***.

Recommendation No. 8.1

The process of acquiring clearances needs to be reviewed in view of delay in obtaining environmental clearances. The Companies should also request MOP to conduct EIA and EMP through MoEF's institutional arrangements to ensure expeditious clearance of hydro electric projects.

8.4 NEEPCO

The audit finding regarding the execution of the projects by NEEPCO and the reasons for delay are discussed in the subsequent paragraphs.

8.4.1 Design changes

Before executing any project, survey and investigation (S&I) to ascertain the geological features likely to be encountered are conducted. DPRs are prepared on the basis of S&I and submitted to CEA for TEC and thereafter to CCEA for final approval. Once CCEA approval is accorded, actual execution of the project commences. CEA/CCEA approval is necessary in case of subsequent changes in the project parameters. DPRs for Kameng HEP (600 MW) and Tuirial HEP were prepared by CWC in 1982 and 1991 respectively.

Audit observed that in Kameng HEP, NEEPCO during the pre-construction stage conducted further geological investigations and modified the drawings and design envisaged in the DPR. This necessitated the shifting of Bichom Dam, Tenga Dam and the power house as well as reduction in the height of the dam and live storage of the reservoirs. However, the NEEPCO failed to suitably apprise the CEA at the time of submission (August 2003) of the revised cost estimate. NEEPCO informed (October 2003) CEA that project parameters and salient features of the project, as approved earlier, were unchanged. Thus, CCEA approval (December 2004) for the revised cost of Rs.2,496.90 crore was obtained for project parameters which were no longer valid. CEA noticed the alteration in design parameters in September 2005. MOP thereafter constituted (January 2006) a committee to examine reasons for the changes in design. The committee also suggested (April 2006) lowering of crest level of the dams and increase of live storage of both Bichom and Tenga Reservoirs. As a result of failure to inform CEA of modifications to original plan, work of Bichom Dam was suspended in April 2006 and was resumed only in April 2008 after finalisation of revised design.

The Management stated that modification was incorporated in the PIB Memo and Note to CCEA.

The reply of the Management was not tenable as the committee constituted by MOP observed that it was a major lapse on the part of NEEPCO.

Similarly in Tuirial HEP, instead of reviewing the project features on the basis of updated data before seeking clearances, NEEPCO merely updated the cost and obtained TEC (August 1998) and CCEA approval (July 1998) for Rs.368.72 crore. After receiving CCEA clearance, NEEPCO undertook fresh investigations which resulted in revision of design and consequential change in the cost. Thereafter the project feasibility report was finalised (December 1999). It was observed that in violation of laid down procedure, NEEPCO did not inform CEA and CWC regarding design changes and cost variations. Consequently, cost was increased by 25 *per cent* from the original estimate of Rs.368.72 crore. NEEPCO placed Letters of Intent (LOI) for Lots I, II and III only between September 2001 and December 2002. The work was suspended due to law and order problem (June 2004), only 30 *per cent* of the work was completed. After the improvement of law and order situation, NEEPCO submitted in December 2007 a proposal to MOP seeking a decision on continuance or closure of the project. The project cost was revised to Rs.705.17 crore at January 2008 price level. CEA, however, observed (May 2008) that the completion of the project including claims of the contractors for stoppage of work was estimated to cost Rs.1,100 crore. On the basis of revised project cost, the project has become economically unviable. Thus, on account of delay the future of Tuirial HEP was in jeopardy even after an investment of Rs.266 crore.

The Management accepted (October 2008) that proper planning in investigation was lacking.

8.4.2 Contract management

8.4.2.1 Selection of contractor

Review of placement of work orders for 15 packages/contracts of Kameng HEP and Tuirial HEP revealed that LOI for civil packages (I, II and III) of Kameng HEP were placed with Patel Engineer Limited (as Joint Venture in case of package-I) in December 2004 with the stipulation to complete the work in 51 months. Progress of work was, however, unsatisfactory ***(Annexure-XXIX and paras 8.4.3.1 and 8.4.3.2)***. The distance between the three main work sites, namely Kimi, Tenga and Bichom ranged between 45 kilometre (km) to 154 km. Considering the need to deploy resources simultaneously in the widely dispersed sites and the magnitude of individual civil packages (Rs.116.40 crore to Rs.143.81 crore) the Management should have avoided selection of common bidder for all the three packages.

Accepting the audit observation, the Management agreed (October 2008) to avoid selection of common contractor for more than one package in future projects.

8.4.3 Inadequate survey and investigation

8.4.3.1 Head Race Tunnel (HRT)

To ensure timely execution of projects, detailed S&I should be carried out and works of critical importance should be executed on priority basis by mobilising adequate men and material. It was observed that detailed investigations before starting boring work of HRT were not carried out in Kameng HEP. Consequently, geological surprises like shear zone[4], thrust zone, entrapped water, gas and loose muck in the area of HRT were encountered during construction which resulted in deviation in quantities and increase in

[4] ***Shear zone is a wide zone of distributed shearing in rock.***

the value of works executed from Rs.31 lakh to Rs.1.28 crore. Further, though the work of HRT initially started in March 2005, actual work was delayed by about one year due to delay in deployment of construction equipment by the contractor. Therefore, to complete the excavation within the scheduled time (June 2008), the rate of excavation should have been increased to 660 metre per month. The actual progress, however, was 31 metre per month on an average. NEEPCO thereafter, decided (December 2007) to induct additional tunneling equipment to enhance the rate of tunnel boring with grant of additional interest free advance of Rs.18.50 crore. However, the additional tunnelling equipment had not been commissioned till September 2008. As a result, the completion schedule of the HRT had to be extended till April 2010. It was also observed that the Management did not invoke penal clauses against the contractor as provided for in the agreement.

The Management accepted (October 2008) that despite all round efforts progress was not as per target.

8.4.3.2 Change in penstock profile

On the basis of inadequate geological data, the penstock[5] was envisaged to be fully underground with inclined shaft at two stages. Accordingly, locations of Adit[6]-V and Adit VI were selected. Construction of Adit-VI, taken up in January 2005, was frequently hindered by a series of heavy and continuous rock fall, chimney formation and heavy ingress of water at different points. On the basis of further geological study and also considering the inability of the contractor to excavate shafts and tunnels successfully, it was decided (May 2005) to convert the underground penstock to surface penstock. Accordingly, the work of Adit-V and Adit-VI was abandoned after incurring an expenditure of Rs.3.17 crore. Moreover, the modified penstock scheme would require extra works for open excavation and other related items estimated (June 2008) to cost Rs.7.40 crore.

The Management stated (October 2008) that HPT layout under revised parameters had been firmed up and boring work of underground pressure shaft had already been taken up.

8.4.4 Time over-run of completed project

The 25 MW Kopili HEP Stage-II was cleared by CCEA in July 1999 at an approved cost of Rs.76.09 crore (1998 price level) with commissioning schedule of July 2003. The project was completed in December 2003 at a cost of Rs.95.02 crore. Analysis revealed that time over-run was mainly due to irregular flow of funds to the site as a result of which payments to the contractors were often delayed affecting the progress of work, delays in settlement of rates of supplementary items of work and discrepancy in construction drawings. It was also noticed that equipment and accessories supplied by Bharat Heavy Electricals Limited were not in conformity with the approved drawings and thus required modifications. Audit also observed that by the time the unit was test synchronised in December 2003, the rainy season was over and the water available was not adequate for 72 hours' trial operation before commercial operation. Therefore, commercial operation started only from July 2004.

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[5] *Pipe which carries water from reservoir to turbines in the power house.*

[6] *Adit is a type of entrance to underground tunnels (under construction) which is horizontal or nearly horizontal.*

The Management stated (October 2008) that delay was also due to adverse law and order problem, water problem, adverse geological formation and shifting of transmission tower. Thus, poor fund and contract management delayed completion of the project, with consequential deferment of commercial operation.

Recommendation No. 8.2

(i) In view of cost involved, NEEPCO and MOP need to take early decision regarding continuation of the Tuirial project. Further, future DPRs should be prepared on the basis of adequate investigation to avoid major deviations during execution of projects.

(ii) NEEPCO should ensure that CEA/MOP are kept informed of any expected changes in design parameters to avoid delays in completion of project.

8.5 NHPC

8.5.1 Contract management

The total number of major packages for implementation of Teesta-V, TLDP-III, TLDP-IV and SLP were six, three, three and four respectively. The observations of audit on the process of tendering from issue of Notice Inviting Tender to final selection of contractors of these 16 packages are dealt with in the succeeding paragraphs.

8.5.1.1 Selection of contractors

(i) Civil works for Teesta Stage–V were executed in four packages. For each of these packages, pre-qualification of bidder was made by the Tender Committee by August 2000. GIL[7] along with its JV partner was pre-qualified only for package four. On the representation of three bidders including GIL, NHPC revised the list of pre-qualified bidders for the other three packages. GIL was not included. On further representation by GIL, the NHPC considered (September 2000) GIL for the third package though GIL had failed to pre-qualify twice for this package.

The Management's reply offered no justification for this. NHPC in this process took 60 days for revision of the list. Thereafter, bid documents were issued to nine pre-qualified bidders, six of whom submitted bids and were found technically suitable. On opening of price bids (February 2001), Sikkim JV became the L1 bidder. The Tender Committee, however, disqualified Sikkim JV as it sought to change the Joint Venture partner. As the bid document did not have a suitable penal clause, there was no deterrent to prevent exit of the qualified L1 bidder. Consequently, the contract of Rs.349 crore went to GIL, the L2 bidder, though they had failed to pre-qualify twice on various grounds.

(ii) Pre qualification (PQ) documents for electromechanical work of TLDP–III were sold even after expiry of the validity period.

The Management stated (June 2008) that this was done at the request of three internationally reputed firms as well as for obtaining better competitive rates.

The Management's contention is to be viewed in the light of the fact that 13 firms had purchased PQ documents within the due date.

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[7] *Gammon India Limited*

(iii)As per June 2004 circular tendering activities from the date of publication of NIT to the date of issue of letter of award were to be completed within 9.5 months. It was observed that out of 16 major packages, tendering activities of 15 packages took 14.5 months to 31.5 months.

The Management stated that extensions during tendering did not have any impact on the award of work, which was linked with CCEA approval.

The contention of the Management was not tenable because even after CCEA approval, the tendering process took 13 to 33 months in 10 cases out of 16 cases.

8.5.1.2 Short comings in contract documentation and monitoring

It was observed that:

(i) Contract conditions of FIDIC[8] were adopted with certain modifications. These modifications, however, failed to keep a balance between rights and obligations of the NHPC and the contractors. As a result, 74 claims (March 2008) amounting to Rs.905.16 crore were lodged by the contractors.

The Management replied that GOI has constituted (March 2008) a task- force for development of Model Contract Documents for hydro projects.

(ii) As per sub-clause 52.2 of the contract document, in case of deviation of Bill Order Quantity (BOQ) beyond 25 *per cent* to 30 *per cent* and more than two *per cent* of contract sum, contractors would get revised rates for the deviated quantities. The mechanism for working out revised rates for deviated quantities and extra items, however, was not clearly specified. As a result, the rate submitted by the contractor was not accepted by NHPC leading to delay in finalisation of revised rates as well as disputes with the contractors.

The Management replied that recommendation made by a committee formed for developing the mechanism of working out revised rates for deviated quantities and extra items in December 2006 was yet to be approved.

(iii)Contract document relating to the BOQ rates for concrete/short-crete[9] indicated that payment to contractor shall be adjusted upward or downward at the rate of cement stipulated in schedule 'B'. It was observed that schedule 'B' was missing from the contract document. As a result, when a dispute arose with contractors in respect of fixation of rates for reimbursement of claim of Rs.12.05 crore (March 2008) for use of cement more than nominal content[10], the same could not be settled. The arbitration award went in favour of the contractors.

The Management accepted that absence of schedule 'B' in the contract document was responsible for arbitration award in favour of the contractor.

8.5.1.3 Improper monitoring of claims

As per contractual provisions, in case of any damage contractors were solely responsible for lodging and persuasion of claims with insurance companies. In the event of part settlement and disallowance by insurance companies, the loss was to be borne by the

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[8] ***Federation Internationale Des Ingenieurs Council***
[9] ***Concrete applied by spraying***
[10] ***Prescribed cement content used in different class of concrete.***

NHPC and the contractors in proportion to their responsibilities. Further, to monitor the follow up of claims by the contractors, project heads were required to appoint a Nodal Officer who would send quarterly report to Corporate Office. Respective engineers-in-charge were also required to maintain a register containing details of insurance claims made by contractors for each major contract package and to complain to Insurance Regulatory Development Authority (IRDA) in case of delay in settlement of claims. Scrutiny revealed that these instructions of the Corporate Office were not followed. As a result, under insurance, contractors' delays in lodging claims, poor follow up with insurance companies; delay in submission of information sought by surveyors, failure to contest the surveyors' final report, and to take up the issue of delayed settlement with IRDA could not be effectively monitored. This led to a loss of Rs.37.19 crore (March 2008) on account of disallowance or part settlement of insurance claims. The Management stated (October 2008) that the observations of Audit had already been acted upon.

Recommendation No. 8.3

(i) To ensure transparency in the bidding process, date of submission of Pre-Qualification documents and technical bid should be specified and prequalification of bidders should be finalised within the specified date.

(ii) Evaluation criteria should be incorporated in bid document in clear and unambiguous terms as this criterion is very important to evaluate bids in a transparent manner.

8.5.2 Project execution

8.5.2.1 As indicated in para 8.2, one project had been completed and three projects were under execution. Teesta Stage–V, commissioned in April 2008, sustained a time over run of about 13 months with consequent cost over run of Rs.450 crore. Other projects were also lagging behind the CCEA approved schedule as indicated below:

Table 8.2

Name of the project	Commissioning schedule	Actual/ anticipated commissioning	Major reasons for delay
Teesta -V	February 2007	April 2008	Geological surprises and variation in Bill order quantities ***(Paras 8.5.2.2 and 8.5.2.3)***
TLDP-III	March 2007	September 2009	Delay in settlement of Net present value issue, delayed in availability of drawings and flash flood ***(Annexure-XXVII, paras 8.5.2.4 and 8.5.2.5)***
TLDP-IV	September 2009	August 2010	Delay in handing over fronts, delayed availability of drawings and flash flood ***(Annexure–XXVI, paras 8.5.2.4 and 8.5.2.5)***
Subansiri Lower	September 2010	January 2012	Delay in settlement of NPV issue and landslides ***(Paras 8.5.3.1 and 8.5.2.6)***

8.5.2.2 Geological surprises

NHPC had executed 11 hydel projects in the Himalayan range facing geological surprises like collapses and rock falls, heavy ingress of water under artesian conditions and perched underground reservoirs. Likelihood of geological surprises not anticipated at the

time of preparation of DPR results in increase in the project cost as well as delay in completion of scheduled works. Such geological surprises can be considerably minimised provided adequate S&I is carried out during preparation of DPRs.

Audit observed that despite the frequency of geological adversities, NHPC did not maintain records detailing these occurrences. Because of this, the NHPC also could not develop data bank compiling experiences gathered in course of execution of projects, which could have helped in understanding the critical issues for future reference. It was further observed that the actual expenditure (Rs.38.48 crore) on S&I fell short of the approved cost (Rs.62.56 crore). This was an activity which needs to be done thoroughly since it would have very serious implications on project execution.

The consultants engaged by NHPC for conducting Business Process Re-Engineering and Re-Structuring also opined (October 2008) that the time and money expended for carrying out S&I was on the lower side compared to global standards. The consultants felt that the NHPC needed to enter into international tie-ups for increasing the effectiveness of S&I and to bring internationally adopted methods and techniques to the projects.

It was also seen that most of the NHPC projects, which were delayed, had been affected by geological surprises. For instance, in case of lot-3 and lot-4 in Teesta-V more than 90 *per cent* of time extension (495 days and 1029 days respectively) was due to geological surprises. The magnitude of geological delays was due to either deficiency in S&I at DPR stage or relaxation of condition stipulated in the DPR during execution.

In case of Lot 4 work, in terms of the DPR, the HRT was anticipated to have a length of 35 *per cent* poor to very poor rock. Actually more than 90 *per cent* of the length had poor to very poor rock indicating inadequate S&I. In case of Lot-3, time extension was given to the contractor (GIL) on account of geology without imposition of liquidated damages. The Management's contention that time extension was given on account of formation of cavities and collapses was not tenable as there was no negative variation of rock classification compared to prediction for Lot 3 work.

Audit also observed that in violation of terms and conditions of TEC clearance, NHPC did not request the MOP to constitute an expert committee consisting of representatives of the Government of West Bengal, Geological Survey of India, CWC and CEA for recommendation of enhanced cost due to geological surprises. The Management replied (October 2008) that NHPC would take up the case of geological surprises with the MOP after basic compilation of the information. Further, in the absence of systematic maintenance of record of geological surprises, NHPC may face difficulties in getting the enhanced cost approved by the technical committee.

8.5.2.3 Wide variations in Bill Order Quantity (BOQ)

There were wide variations in BOQ in civil works ranging from (-)100 *per cent* to 39,900 *per cent* (39,680 *per cent* and 39,900 *per cent* at one occasion each) at Teesta–V. Deviations led to additional expenditure of Rs.200.90 crore (upto April 2008). NHPC additionally incurred expenditure of Rs.39.65 crore for the extra items of work not covered in BOQ. Further, there were also wide variations in BOQ at Subansiri Lower, which ranged between 2 *per cent* and 9993 *per cent* leading to additional expenditure of Rs.45 crore. Such wide variations in BOQ quantities and extra items of work led to considerable delays in execution of works. The main reasons for deviations with

consequent increase in scope of work were unforeseen circumstances arising out of change in geological conditions not envisaged in the DPR ***(refer to para 8.5.2.2)***, change in construction design and drawings, technical specification and site requirement and inadequate provisions in the contract. The Management stated (August and October 2008) that the extent to which variation can be reduced through S&I remained a point of debate and that the extra items and variations in BOQ quantities were unavoidable in the hydro projects due to non-homogeneity of the strata in the Himalayas. While it is accepted that variations in BOQ quantities cannot be eliminated altogether, scope for such variations could have been considerably reduced through adequate survey, investigation and geological exploration at the DPR stage ***(refer to para 8.5.2.2).***

8.5.2.4 Delay in availability of drawings

Drawing and Design (D&D) Division is required to deliver construction drawings to the contractor 90 days prior to commencement of civil work. Audit, observed that NHPC could not issue civil drawings in TLDP–III and IV within the scheduled date resulting in stoppage of work. Scrutiny revealed that the main reasons for such delays were delay in furnishing required information to D&D Division by the project, dearth of staff in D&D Division and lack of inter-sectional co-ordination. The Management stated that the time limit of 90 days was not a contractual requirement. However, the fact remained that there was stoppage of works due to non-availability of drawings.

8.5.2.5 Flash flood

TLDP-III and IV experienced two flash floods of above 5000 cubic metre per seconds (cumecs) in July 2007 resulting in a loss of Rs.42.90 crore on damage of project works and cost of restoration thereof. The project authorities took six months to restart work. It was observed that NHPC had planned diversion structure at both the projects based on 10 years' monsoon flood values of 5000 cumecs considering the discharge records at Coronation Bridge down stream of TLDP–IV. NHPC had not taken into account flood values of 5650 cumecs and 5250 cumecs recorded up stream of TLDP-III and TLDP–IV in July 2003. Further as per contract, flood of more than 5000 cumecs in the river Teesta at barrage site was kept under excepted risk exempting the contractor from responsibility. NHPC did not take any insurance cover for the excepted risk. Thus, NHPC could not claim compensation from the insurance company for flood magnitude of more than 5000 cumecs. CEA observed after the flash flood that projects should consider data for 25 years or even more instead of ten years' data for designing diversion structure.

8.5.2.6 Landslides in Subansiri Lower

Subansiri Lower faced landslide at Surge Shaft in August 2005 due to non-implementation of recommendations (April 2005) of geologist. The Management stated that the contractor did not attend to the recommendations of the geologist despite communication from time to time. For this breach of instructions, NHPC did not impose any penalty; rather it paid an amount of Rs.1.99 crore towards claims of the contractor for idling of resources due to landslides and short settlement of claim by insurance company. Subsequently, there were further landslides at the powerhouse of the project in January 2008. This was attributable to non-implementation of support measures suggested (January 2007) by Design Division, non-availability of data on rock movements due to lack of proper calibration of the installed instruments and non-installation of survey targets and slope movement monitoring instruments. Further, the excavated slope behind

the powerhouse was high considering the shear parameters. The Management replied (October 2008) that additional support measures confirmed by Design Division to the project were in the process of implementation when the landslide of January 2008 took place. Thus, delay in extending additional support measures by the contractor led to the mishap.

Recommendation No.8.4

(i) NHPC may consider entering into strategic tie-ups with reputed international survey agencies for increasing the effectiveness of S&I.

(ii) The time and money stipulated for carrying out S&I may be suitably enhanced in line with global standards.

(iii) NHPC should expedite compilation of data bank of geological surprises encountered in various projects and ensure compliance with conditions stipulated in TEC/ CCEA clearances.

8.5.3 Environment and ecology management

Construction of hydro-projects involves submergence of land, reservoir induced seismicity, forest degradation and soil erosion, adverse impact on public health and necessitate rehabilitation and resettlement of project affected families (PAFs). To mitigate the environmental impact, funds were allocated out of project cost. The funds allocated were unevenly utilised. Scrutiny also revealed that Catchment Area Treatment (CAT) Plan essential to check upstream soil erosion, forest degradation and to meet the basic needs of the people was not implemented (June 2008) in TLDP-III due to dispute with State Government over fund requirement. Work on Catchment Area Treatment (1,663 hectare) in Subansiri Lower Project scheduled to be completed in three years from July, 2003 had not been taken up by the State Forest Department in spite of the issue being brought to the notice of MoEF. In Teesta-V, site for muck disposal as stated in the contract agreement could not be fully acquired by the Management. The quantity of disposable muck was also not assessed realistically. This led to unauthorised dumping of muck on the left bank of river at dam site and encroachment on river-bed for which forest department demanded (November 2002) Rs.15 crore as compensation for environmental loss. It was also observed in TLDP-IV that scattered dumping beyond designated areas caused riverbed pollution.

The Management stated (October 2008) that total CAT cost of Rs.6.85 crore had been intimated by the Sikkim State Government (Rs.3.44 crore) and the West Bengal State Government (Rs.3.41 crore) and Rs.1.37 crore was released to the Sikkim State Government in September 2008.

8.5.3.1 Net Present Value (NPV)

In pursuance of the Supreme Court decision, MoEF issued guidelines in September 2003, which stated that power companies would pay NPV of forestland before final forest clearance of projects cleared after October 2002. The Management deposited (March 2004) NPV for TLDP-III within three months of receiving the demand from the State Government. But in case of SLP, they sought waiver of payment of NPV as pre-condition for forest clearance. The Supreme Court directed (September 2004) NHPC to deposit Rs.300 crore. Due to delay in depositing NPV, the final forest clearance was delayed leading to commencement of work in Subansiri Lower 12 months after the scheduled

date. On account of such delays the Management had to pay Rs.24.86 crore to the contractor as idle charges. The Management stated that after vigorous efforts by the project authority with the Government of Arunachal Pradesh, there was revision of NPV rates resulting in saving of Rs.54.11 crore (September 2004). The reply was to be viewed in the light that delays in payment of NPV resulted in delays in the execution of the project and escalation of the cost of the project.

8.5.3.2 Rehabilitation and Resettlement (R&R) packages

The approved cost of implementation of R&R packages of PAFs in four ongoing projects was Rs.8.61 crore, out of which Rs.4.61 crore has been utilised (March 2008). It was observed that no expenditure was incurred (March 2008) in TLDP-III and IV due to demand for revision of the compensation package by the PAFs (TLDP-III) and non-constitution of R&R Monitoring Committee (TLDP-IV). In Teesta–V and Subansiri Lower, R&R packages were partly implemented due to non-development of infrastructural facility like training centre, primary health centre and shopping sheds. It was also observed that existing R&R packages do not provide adequate funds for welfare schemes on a sustained and continuous basis over the life of the projects and that existing packages do not have a suitable grievance redressal mechanism. These packages were also not based on common guidelines but were project specific. These concerns had since been addressed by NHPC which had adopted (February 2008) a comprehensive R&R Policy, which was amended (May 2008) to comply with the National Rehabilitation and Resettlement Policy (NRRP) 2007 framed by the GOI. However, this policy was applicable to all future projects and not for on-going projects.

Recommendation No. 8.5

(i) The Management should request MOP for constitution of a special cell to liaise with MoEF for expeditious implementation of environmental plans.

(ii) NHPC may consider extending the benefits of the new R&R policy to the on-going projects.

8.5.4 Handing over of projects

Siang and Subansiri Basin Projects were transferred to NHPC by Brahmaputra Board (BB) in March 2000 in compliance with the decision of Ministry of Water Resources. Thereafter, MOP issued (May 2000) a notification authorising NHPC to establish, operate and maintain these projects in the Central Sector. Accordingly, NHPC carried out detailed S&I for these projects and deployed resources in terms of money, manpower and knowledge base. Though MOP had approved the MOU in March 2003, the Government of Arunachal Pradesh (GOAP) did not sign the MOU, despite repeated persuasion by NHPC. Audit observed that there was lack of consensus among the State Governments on the issue of flood moderation and types of hydro schemes (run-of-the river projects or storage schemes) which affected implementation of these projects.

Subsequently, in February 2006 the GOAP unilaterally allotted the Siang Middle Project to Reliance Energy Limited (REL) and Lower Siang Project to Jaiprakash Associates. The State Government also asked (March 2006) NHPC to handover the Pre-feasibility Report, DPR along with other documents to the developers concerned. The GOI Power Policies 1998 and 2003, however, lay emphasis on basin-wise development of hydro

potential; and stipulate that allotment of all the hydel projects above 100 MW are to be decided jointly by the Central and State Government.

This would indirectly affect the continuity of Siang Upper/Intermediate project on which the NHPC had already incurred an expenditure of Rs.32.16 crore. Besides, there would be further delays in execution of the projects due to updating of DPR, obtaining various clearances and mobilisation of resources. In fact, mere change in ownership of projects may not accelerate harnessing hydel power unless contentious issues like moderation of flood and types of hydro schemes to be implemented are sorted out.

The Management stated that handing over of projects to private developers would not affect the perspective plan of the NHPC.

The Management's reply was not tenable because with almost complete withdrawal of NHPC from Siang Basin, the capacity addition programme of NHPC during 11th and 12th Five Year Plan would be considerably affected with consequent deferment of revenue generation.

Recommendation No. 8.6

(i) The Companies may also request MOP to resolve contentious issues like flood moderation, type of the projects (run-of the river or storage scheme) prior to allotment/taking-up of a hydel project.

(ii) With the changing policies/rules in allotment of hydel projects, the companies need to vigorously pursue with the MOP, the GOI as well as State Governments to avert the loss of potential and attractive sites. The Companies may also forward strategic proposal to the GOI for clubbing the relatively easy sites with tougher ones for development by them.

8.6. Conclusion

Despite a mandate for developing hydel projects in the NER blessed with huge hydro power potential, NEEPCO could commission only 755 MW of hydropower during its 32 years of existence due to its poor track record in execution of projects facing time over-run up to six years. It could also add only 25 MW capacity against the 10th Plan hydel capacity addition target of 85 MW while it utilised Rs.983 crore (March 2008) against 10th Plan outlay of Rs.2,509 crore. NHPC also got mandate for execution of a number of projects in the NER and ER. NHPC could not make any capacity addition in the NER and ER against the proposed hydel capacity addition of 642 MW in the 10th Plan. However, Teesta Stage –V of 510 MW had been added subsequently in April 2008. Further, NHPC could utilise only Rs.5,165 crore (March 2008) against the 10th Plan outlay of Rs.12,755 crore for 13 hydel projects to be executed in these regions. Such under-performance was largely attributable to delays in environmental and forest clearance coupled with delays in investment decisions and signing of MOU, MOA with the State Governments, natural calamities, geological surprises and law and order problems and handing over some of the projects to the private developers by the Government of Arunachal Pradesh.

NEEPCO was also responsible for non-achievement of 10th Plan targets due to preparation of deficient DPRs with inadequate and invalid data leading to substantial changes in drawings and design during execution. Further, NEEPCO did not keep the CEA/MOP informed of the expected changes in the design parameters of the projects taken up for execution leading to subsequent complications.

As delay in obtaining requisite clearances had affected most of the projects, the Companies should work for adoption of a fast track mechanism for obtaining the requisite clearances as non-achievement of Plan targets for hydel projects not only affects energy security of the nation but also limits the economic growth of the country. Also geological surprises due to lack of adequate thrust on thorough S&I at the DPR stage being the major concern, the Companies need to focus on providing adequate resources and time for carrying out investigations in detail.

The matter was reported to the Ministry in January 2009; reply was awaited.

MINISTRY OF TEXTILES

CHAPTER IX

National Textile Corporation Limited

Sale of surplus land and buildings

Highlights

System issues

The prescribed criterion for fixation of reserve price was followed in 27 cases only out of 79 cases of sale of land examined in audit. This had resulted in fixation of lower reserve price.

(Para 9.7.2.1)

Absence of system for vetting of 'Minimum Assured Return' reports resulted in under-fixation of reserve price by Rs.493.46 crore in five cases.

(Para 9.7.2.1B)

Defects in the tender documents resulted in the loss of Rs.185.10 crore in three cases.

(Para 9.7.3)

Compliance issues

The Government of India (GOI) directives of not selling below the prevailing registration/circle rates were not followed resulting in loss of opportunity to earn Rs.10.43 crore in six cases.

(Para 9.7.5)

Land and buildings were sold below reserve price in contravention of the GOI directions.

(Para 9.7.6)

Land was sold without following the tender process in contravention of guidelines of Board for Industrial and Financial Reconstruction (BIFR).

(Para 9.7.7)

Fixation of earnest money deposit (EMD) at a rate lower than that prescribed in the BIFR guidelines resulted in loss of opportunity to earn Rs.89 lakh in case of Aurangabad Textile Mill.

(Para 9.7.8(a))

Non-receipt of EMD in demand drafts in contravention to BIFR guidelines resulted in loss of revenue of Rs.57.70 lakh in 19 cases.

(Para 9.7.8(b))

Extension of 96 to 1371 days for payment beyond 60 days from the due date of payment resulted in loss of interest of Rs.46.79 crore in four cases. Interest of Rs.1.34 crore was recovered less in six cases while granting extension within 60 days.

(Para 9.7.8(c))

Summary of recommendations

1. ***Specific guidelines, for sale of surplus land and buildings not considered in the revival schemes approved by BIFR, may be framed.***
2. ***The valuation by Central Board of Direct Taxes should be obtained in all cases and given due consideration in fixation of reserve price.***
3. ***The GOI may lay down guidelines for valuation of building structures/materials and the same may be applied uniformly in all the sub-offices.***
4. ***The Company may establish a proper system for verification of all the facts included in tender documents to avoid defects in tender documents.***
5. ***The internal controls in accounting system be strengthened.***
6. ***All the properties identified should be sold through public tender to fetch the maximum value.***
7. ***The Company should adhere to the guidelines prescribed by the BIFR.***
8. ***The GOI may consider specifying modalities where the delay in payment exceeds 60 days.***
9. ***The schedule of sale of surplus assets should be synchronized with the fund requirements for modernisation. The Management may ensure that fund realised from the sale is accounted for as per BIFR guidelines.***

9.1 Introduction

National Textile Corporation Limited (Company) was incorporated in April 1968 with the main objective of managing the affairs of sick textile undertakings taken over by the GOI. The Company was managing 119 textile mills through its nine subsidiaries. All these subsidiaries were declared sick (eight between 1992 and 1994 and one in December 2005) under the Sick Industrial Companies (Special Provisions) Act 1985. Revival schemes (2002) and a modified revival scheme (2006) were approved by the Board for Industrial and Financial Reconstruction (BIFR)/GOI which envisaged closure of unviable mills and revival of viable mills. According to these schemes, 77 unviable mills were to be closed, 40 viable mills to be revived (22 through modernisation and 18 through public private partnership) and two mills in Pondicherry[1] to be transferred to the State Government. The scheme was self-financing, the funds realised from sale of surplus assets were to be utilised for revival/modernisation. Asset Sale Committee (ASC) was constituted for each subsidiary to take decisions regarding sale of surplus assets. With effect from 1 April 2006, all the nine subsidiaries were merged into the Company and a single ASC was constituted (July 2008). The erstwhile subsidiaries exist as sub-offices of the Company.

[1] ***Now Puducherry.***

9.2 Scope of Audit

The performance audit covered the sale of surplus land and buildings from 1 April 2002 to 31 March 2008 in six[2] of the nine sub-offices of the Company. Performance audit on sale of surplus land and buildings by the sub-office (Andhra Pradesh, Kerala, Karnataka and Mahe) was included in C&AG Audit Report No.4 of 2005. Sale of surplus land and buildings by sub-office Uttar Pradesh (17.01 acres) and sub-office Madhya Pradesh (35.33 acres) were not significant and therefore, not included in the performance audit.

The main issues considered in performance audit were identification of surplus land and buildings, fixation of reserve price, tender process, receipt of sale proceeds, internal control system and fund management.

9.3 Audit objectives

The performance audit was conducted to examine:

- the existence and effectiveness of the system for identification of surplus land and buildings, fixation of reserve price, tender process, receipt of sale proceeds, internal control system and fund management (System Issues);
- the extent of compliance of BIFR/GOI guidelines and instructions issued by the Company for sale of land and buildings (Compliance Issues);
- that the whole process of sale, systems and procedures were designed and operated in a manner that promotes transparency and the decisions were taken in the best interests of the Company.

9.4 Audit criteria

The following criteria were adopted to examine whether:

(i) BIFR/GOI guidelines were followed regarding:

(a) Fixation of reserve price.

(b) Fixation of Earnest Money Deposit and its forfeiture.

(c) Drafting of the tender documents.

(d) Receipt of sale proceeds and recovery of interest in cases of delayed receipts.

(e) Accounting of sale proceeds.

(ii) Instructions issued by the Company were in compliance with the BIFR/GOI guidelines.

9.5 Audit methodology and sample size

9.5.1 After a preliminary study and collection of background information, an Entry conference was held with the Management on 28 February 2008 to discuss the audit objectives, scope of audit and audit criteria. Based on the examination of records relating to identification, valuation, tender and sale of surplus land and buildings, a preliminary

[2] ***NTC (Delhi, Punjab and Rajasthan), NTC (Maharashtra North), NTC (Maharashtra South), NTC (West Bengal, Assam, Bihar and Orissa), NTC (Tamil Nadu and Pondicherry) and NTC (Gujarat).***

report was issued to the Management on 18 August 2008. Exit conference to discuss the audit findings was held on 9 September 2008. The Management's reply to the performance audit report was received in September 2008.

9.5.2 Total surplus land of 2737.99 acres and buildings of 286.70 acres were identified for sale in the revival scheme. Of this, the Company sold 1354.80 acres of land and 257.85 acres of buildings upto 31 March 2008. In the six sub-offices selected for Audit, there were 110 cases (***Annexure – XXX***) of sale upto March 2008 covering 790.68 acres of land and 100.25 acres of buildings. An amount of Rs.3819.44 crore was realised upto 31 March 2008 by sale of surplus assets. All 110 cases (79 cases of land and 31 cases of buildings) were reviewed in Audit.

9.6 Acknowledgement

Audit acknowledges the cooperation and assistance extended by the Management at various stages of performance audit.

9.7 Audit findings and recommendations

System Issues

9.7.1 Sale of surplus land and buildings not identified in the revival scheme

Certain parcels of land which were not identified as surplus in the revival schemes were sold by the Company. A few cases are:

Table 9.1

Sl. No.	Name of the property	Land identified (in acres)	Actually sold (in acres)	Difference (in acres)	Remarks
1.	Jyoti Weaving Mills, Kolkata	4.29	4.94	0.65	Increase was due to mutation done at a later date.
2.	Shree Mahalaxmi Cotton Mills, 24 paragana	11.24	11.34	0.10	Reasons for sale of land more than identified were not on record
3.	Model Mill, Nagpur	40.33	42.09	1.76	
4.	Central Cotton Mill, Howrah	11.67	12.06	0.39	
5.	Bungalow of New City Mill, Worli Mumbai	---	0.16	0.16	Approval of BIFR was obtained
	Total			**3.06**	

There were no specific guidelines for sale of land and buildings beyond those included in the revival schemes approved by BIFR. Approval of BIFR was not obtained for sale of such land and buildings (except in the Sl. No. 5)

Recommendation No. 9.1

Specific guidelines, for sale of surplus land and buildings not considered in the revival schemes approved by BIFR, may be framed.

9.7.2 System of valuation of properties and fixation of reserve price

Out of 110 cases of sale, the reserve price was fixed only in 66 cases of land and 31 cases of buildings. Two mills were transferred to the Government of Pondicherry at the price agreed in the Memorandum of Understanding. In the remaining 11 cases, the sale was made without following the tender process.

9.7.2.1 System of fixation of reserve price of land

According to the methodology for fixation of reserve price devised (November 2002) by the Company, reserve price was to be determined on the basis of average of three valuations, namely, valuation in draft revival scheme (DRS) approved by BIFR, valuations given by property consultants and valuation by Central Board of Direct Taxes (CBDT). The GOI further directed (November 2004) that in case of Mumbai, where marketing consultants (consultants) had quoted Minimum Assured Return[3] (MAR), the reserve price should not be less than MAR.

It was observed in Audit (April 2008) that out of 79 cases of sale of land, only in 27 cases all the three valuation factors were considered. In 37 cases either two or only one valuation factors were considered while in 15 cases none of the prescribed valuation factors were considered while fixing the reserve price. Further, in 26 cases out of 79 cases, reserve price fixed was less than 30 *per cent* of the sale value though the GOI had specifically directed (April 2005) that reserve price should be nearer to the market value. It was also noticed that there was wide variation between the actual sale value and valuation done under the three factors used for reserve price fixation.

The Management stated (September 2008) that the reserve price was only an indicative figure for decision making. Moreover, there was no relation between the reserve price fixed and the price bid. In sale of properties in Mumbai, the Company had realised 180 *per cent* to 350 *per cent* higher than the reserve price fixed because of location and demand of the property. Also, in case of no response or less response than the reserve price in three repeated attempts of tender, the Company had confirmed the sale for the value that was best available at that point of time.

The reply of the Management was not convincing. Though the reserve price was only indicative it should not be less than the valuation as per guidelines of the Company. Further, wide variation between reserve price and sale realisation in Mumbai indicates that there was no system to assess the demand and market value of the properties despite the GOI directives in April 2005. Also, the Company should have built the mechanism for change in the methodology for fixation of reserve price in case response was unsatisfactory.

Deficiencies in different factors used for fixing reserve price were as follows:

[3] ***The value of the land was derived from the value of built-up area after deducting cost of construction and development and other ancillary charges.***

(A) DRS valuation

In 66 cases of sale of land through tender, valuation in DRS was made upto 2002 whereas the sales were made between April 2002 and March 2008. This had resulted in fixation of lower reserve price due to timing difference between the date of valuation in DRS and the date of fixation of reserve price.

(B) MAR valuation

The Company had no system of vetting valuation reports and MAR given by the consultants. Further, the Company had obtained MAR for five land parcels only (sold upto March 2008) against the 25 land parcels identified for sale in Mumbai. While quoting MAR for these five parcels, the consultants had stated (February 2005) that it was not a valuation of the property and the Company may take a conscious decision to fix reserve price on the basis of valuation of the property or on the basis of MAR. A comparative position of MAR *vis-à-vis* reserve price fixed and actual sale value in the five cases is given below:

Table 9.2

(Rs. in crore)

Sl. No.	Name of the mill	Highest MAR quoted by consultant	Valuation of building structures	Reserve price fixed	Sale value	Variance between MAR and sale value (percentage)
1	2	3	4	5	6	7 (Col 6-Col 3)/Col 3 x100
1.	Jupiter Mill	142.32	12.22	155.00	276.60	94.35
2.	Elphinston Mill	120.00	3.51	125.00	441.75	268.12
3.	Kohinoor Mill No.3	111.00	1.15	120.00	421.00	279.28
4.	Mumbai Textile Mill	260.00	5.28	270.00	702.22	170.08
5.	Apollo Textile Mill	90.00	5.99	100.00	180.00	100.00
	Total	723.32	28.15	770.00	2021.57	179.49

It was observed that the variation between sale value realised and MAR quoted by the consultants ranged between 94.35 *per cent* and 279.28 *per cent*. The purpose of obtaining MAR was not achieved as it did not give the realistic market value of the land parcels being offered for sale.

A test check of MAR had revealed the following:

(i) During valuation of MAR in 2005, market rates of Rs.5400 *per* square foot in one case (Sl. No.1) and Rs.7000 *per* square foot in other cases (Sl. No.2 to 5), prevailing

during 2002-03 in the area where these mills were situated were adopted. The real estate market was sluggish in 2002-03 but had started booming in 2005; as such market rates were much higher in 2005 than in 2002. This deficiency in MAR was not observed by the Company. In case the market rates of 2002 were upgraded by charging the interest at the rate of State Bank of India Prime Lending Rates (SBI PLR) *plus* four *per cent* for time difference the MAR would have increased by Rs.336.34 crore.

(ii) While calculating saleable floor space index (FSI)[4] for estimating revenue realisation, the consultants had increased the allowable FSI by 20 *per cent* available for lift, stairs, balcony, *etc.*, under the Development Control Regulations for Greater Bombay, 1991 (DCR) but had not considered additional FSI allowable for car parking and basement under Regulation 35 of DCR. Due to this the MAR was understated by Rs.19.77 crore.

(iii) Cost of construction for arriving at MAR was considered as Rs.13,988 *per* square metre in respect of four cases (Sl.No.2 to 5) and Rs.13,450 *per* square metre for one case (Sl.No. 1), whereas ready reckoner rate[5] (2005) for the best construction was Rs.8,500 *per* square metre. There was, thus, over estimation of cost of construction and under estimation of MAR by Rs.137.35 crore.

Thus, absence of any system for vetting MAR reports by the Company had resulted in under fixation of reserve price by Rs.493.46 crore in the above five cases.

The Management while accepting (September 2008) that vetting of MAR was not considered by the Company stated that MAR was obtained to determine the best price/reserve price. Further, price realised was much higher than the reserve price fixed for these land parcels.

The reply of the Management was not acceptable. Best price/reserve price could not be determined from unrealistic MAR reports. Also, high realisation could not be taken as a plea for acceptance for such MAR reports.

(C) CBDT valuation

It was observed in Audit that out of 66 cases of sale of land through tender, CBDT valuation was considered in 29 cases only. In 28 cases CBDT valuation of 1994-95 was considered and in one case valuation of 1998-99 was considered for fixation of reserve price during April 2002 to March 2008. The CBDT valuation was not indexed (based on capital gain index of CBDT) to the year of fixation of reserve price for arriving at realistic value.

The Management stated (September 2008) that the CBDT valuation was done only in 1997 and subsequently CBDT was not willing for any valuation.

The reply of the Management was not tenable. Even the valuation of 1997 was not relevant during the year of fixation of reserve price and should have been indexed to the

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[4] ***Floor Space Index (FSI) in Mumbai = Carpet Area x 1.33***

[5] ***Ready reckoner is a compilation of prevailing market rates in various areas of Mumbai. This is compiled by a group of government approved valuers and forewarded by the Deputy Inspector General of Registration Mumbai Division.***

year of fixation of reserve price. Further, the Management could not produce any record in support of their reply that CBDT was not willing for any valuation.

The following cases highlight the impact of deficiencies in the system of fixation of reserve price.

(i) Udaipur Cotton Mill

The reserve price of land of Udaipur Cotton Mills was initially fixed (October 2002) at Rs.51.97 crore based on DRS valuation. This was reduced to Rs.12.57 crore in July 2005 based on prevailing registration rates in the district whereas, in accordance with the Company's guidelines, the reserve price comes to Rs.32.28 crore[6]. The reserve price fixed was thus, lower by Rs.19.71 crore as compared to the reserve price based on the Company's guidelines. The land was sold at Rs.15.12 crore to private party in October 2005.

The Management stated (May 2008) that values of property had dropped considerably due to slow down of the economy and land could not be used for residential/commercial purpose.

The reply was not tenable. The real estate market was booming in 2005 when reserve price was re-fixed.

(ii) Rajkot Textile Mill

The reserve price of land of Rajkot Textile Mills was fixed at Rs.36.00 crore (February 2003) based on DRS valuation. It was re-fixed at Rs.27.68 crore[7] (July 2003) on the basis of Company's guidelines but was further reduced to Rs.23.00 crore in May 2005 at the prevailing registration rate. The land was sold at Rs.18.20 crore (July 2006). The reserve price fixed was thus, lower by Rs.4.68 crore as compared to the reserve price based on the Company's guidelines.

(iii) Himadri Textile Mill

The reserve price of Himadri Textile Mill was fixed (January 2007) at Rs.8.80 crore considering the highest value given by the three government approved valuers. Due to revision of registration rates in February 2007, the reserve price was increased to Rs.14.00 crore (April 2007). In contravention of the Company's guidelines, the DRS and CBDT valuations[8] were not considered. The land was sold at Rs.11.20 crore in August 2007.

Recommendation No. 9.2

The valuation by CBDT should be obtained in all cases and given due consideration in fixation of reserve price.

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[6] The average of DRS valuation (Rs.51.97 crore), indexed CBDT valuation to the year of sale (Rs.18.31 crore) and valuation by government approved valuer (Rs.26.57 crore).

[7] The average of DRS valuation (Rs.35.30 crore), CBDT valuation (Rs.30.15 crore) and valuation by valuers (Rs.17.60 crore).

[8] DRS valuation (Rs.8.77 crore) and CBDT valuation (not available).

9.7.2.2 System of valuation of building structures/materials

Sub-offices were adopting different methodology for valuation and consequent fixation of reserve price of buildings structures/materials identified for sale. In all the 31 cases of sale of buildings during April 2002 to March 2008 in six sub-offices selected for audit, it was observed that DRS valuation and valuation by the government approved valuers were considered for fixation of the reserve price as given in the table below:

Table 9.3

Sub-office	Total cases	Higher of the two	Lower of the two	Above both	Between two
Delhi, Punjab and Rajasthan	2	--	1	1	--
Gujarat	11	5	2	2	2
West Bengal, Assam, Bihar and Orissa	9	1	--	8	--
Tamil Nadu and Pondicherry	8	4*	--	2	2
Maharashtra North	1	--	--	1	--

DRS valuation was not done in three cases. Out of these, in one case reserve price was fixed at the valuation given by the registered valuer and in two cases the same was fixed at above the valuation given by the valuer.

It was noticed that no uniform system for fixation of reserve price of buildings was adopted.

The Management stated (September 2008) that buildings were always sold on the basis of retrievable items like bricks, wooden items, steel structures, wires, *etc*. The system was to go by professional experts, which was followed in all cases.

The Management reply was not convincing as the reasons for adopting different criteria for valuation of different buildings were not clarified.

Recommendation No. 9.3

The GOI may lay down guidelines for valuation of building structures/materials and the same may be applied uniformly in all the sub-offices.

9.7.3 Defects in the tender documents

It was observed in Audit that in the tender documents issued for sale of land and buildings the information disclosed was either incorrect or ambiguous or vital information was not disclosed. Further, the Company had not established any system for verification of the contents of the tender documents. Due to non-existence of such system, the Company had suffered a loss of Rs.185.10 crore.

The cases in which the Company incurred loss are discussed below.

(A) Mumbai Textile Mill, Mumbai

The tender document for sale of land of Mumbai Textile Mill stated (June 2005) that the mill area consisting of 67,293.17 square metre bearing Cadastral Survey (CS) No.464 and 4/464 was offered for sale. The mill plot consisted of only CS No.464 admeasuring 65,993.17 square metre. The CS No.4/464 admeasuring 1,300 square metre consisted of Marwari chowka chawl. The land was sold for Rs.702.22 crore (July 2005).

It was observed in Audit that the Company had no intention for sale of the land of Marwari chowka chawl (CS No.4/464). It was wrongly included in the tender document. This was evident from the fact that in the layout map enclosed with the tender document, only mill land (CS No.464) was depicted. Also, in the terms and conditions of the tender document there was no mention of providing alternative accommodation to the occupants of Marwari chowka chawl as per Development Control Regulations for Greater Bombay, 1991. Further, the sale deed (October 2005) and the possession letter specified the boundaries of the land sold which did not include area of Marwari chowka chawl.

In September 2006, the purchaser asked for possession of Marwari chowka chawl (CS No.4/464) also since it was included in the tender document. The ASC accepted the fact (October 2006) that this parcel of land of 1,300 square metre was wrongly included in the tender document but decided to rehabilitate the occupants of the chawl to another plot of land. The possession and ownership of 1,300 square metre of land worth Rs.13.56 crore was given to the private party without any consideration besides the liability of about Rs.5.23 crore to rehabilitate 24 occupants of chawl was owned by the Company. This had resulted in loss of Rs.18.79 crore to the Company.

The Management stated (September 2008) that though there was mistake in the tender that information regarding Marwari chowka chawl was not incorporated, however, the land was sold on "as is what is" basis. Further, the responsibility of rehabilitation of 24 occupants of Marwari chowka chawl was on the purchaser and hence any expenditure on that account was to be borne by the purchaser.

The Management had accepted the mistake in the tender document. However, as the liability of rehabilitation was not disclosed in the tender document, the purchaser could not be forced to own the liability. Further, the ASC had decided (October 2006) that the Company may rehabilitate the occupants of the Marwari chowka chawl.

(B) Apollo Textile Mill, Mumbai

Surplus land on rear side of Apollo Textile Mill admeasuring 30073.30 square metre with existing structures and permissible FSI of 39314.58 square metre was sold in July 2005 to the highest bidder at Rs.180 crore. This portion did not have direct access to the main road (N.M. Joshi Marg). Tender document did not disclose about any prospective access to the main road. Instead, it was specified in the tender document that access to Jivraj Boricha Marg (small road on rear side) could be made available. The Jivraj Boricha Marg was heavily encroached and was not motorable. It was observed in Audit that ASC had allowed (October 2006) access of 40 foot approach road to the main road (N.M. Joshi Marg). This had enhanced the value of land (October 2007) to Rs.1,05,448 *per* square metre (based on the valuation done by government approved valuer after the access to the main road was allowed) from Rs.45,784.54 *per* square metre. Normal enhancement due

to timing difference (the Company charged SBI PLR plus four *per cent per annum* for timing difference) worked out to Rs.16,535.09 *per* square metre, the abnormal enhancement due to access to the main road (not disclosed in the tender document) worked out to Rs.43,128.37 *per* square metre. Thus, by not disclosing the feasibility of access to the main road (which was allowed later on) in the tender document, the Company had received lesser amount in tendered bids. This had resulted in loss of Rs.165.80 crore after deducting consideration received for right to access to main road.

The Management stated (September 2008) that due to improper access through Jeevraj Boricha Marg, ASC accepted the proposal of purchaser to grant them right of way on 22 foot (and not the 40 foot) through the retained land of Apollo Mill on payment of appropriate consideration. Subsequently, the DP Road network of 40 foot and 60 foot in and around Apollo and Sitaram mills were incorporated by Municipal Corporation Greater Mumbai (MCGM).

The reply of the Management was not convincing. By giving access from the main road, the value of the land had increased substantially (more than 94 *per cent*). While preparing the tender document, the possibility of access from the main road should have been considered, which was given subsequently.

(C) Chalisgaon Textile Mill, Chalisgaon

Six plots of land of Chalisgaon Textile Mill were sold (December 2002) to the highest bidder at the negotiated price of Rs.3.34 crore. The purchaser did not pay second and final instalment of Rs.2.50 crore which was due in January 2003 on the plea that in the tender document the Company had wrongly mentioned the land to be in residential zone though it was in industrial zone. The purchaser asked (February 2003) for extension for payment till industrial zone was converted into residential Zone. The Company decided (July 2003) that purchaser may be permitted to make payment without interest after change of zone. The payment was received in August 2004. Further, it was decided to retain one plot due to resistance from local people and after adjusting the amount receivable for that plot, the net receivable was worked out to Rs.1.90 crore. Thus, incorrect information in tender document resulted in delay in receipt of sale proceeds amounting to Rs.1.90 crore for 18 months for which no interest was recovered. The Company lost interest of Rs.51 lakh calculated on the basis of 18 *per cent per annum* for the period from 13 February 2003 to 21 August 2004.

The Management stated (September 2008) that the State Government/MCGM were not granting approval for conversion. The sale of land was critical for survival of the Company and implementation of revival scheme. Hence, sale was confirmed before change of zone.

The reply of the Management confirmed the Audit contention.

The other nine cases are discussed in ***Annexure – XXXI***.

Recommendation No. 9.4

The Company may establish a proper system for verification of all the facts included in tender documents to avoid defects in tender documents.

9.7.4 Weaknesses in internal controls of accounting system

It was observed in Audit that the Company did not have any Control Register to monitor the receipt and deposit of Demand Drafts (DDs)/Pay Orders (POs) received as Earnest Money Deposit (EMD). The DDs/ POs received with the tenders were kept in Technical Division and DDs/POs of unsuccessful bidders were returned in original without knowledge of Finance Division.

Recommendation No. 9.5

The internal control in accounting system be strengthened.

The Management had accepted (September 2008) the recommendation.

Compliance Issues

9.7.5 Sale below registration rates

The GOI directed (November 2004) that the reserve price fixed (or re-fixed) for any property should not be less than the circle rates/registration rates fixed by the District Collector. It was observed in audit (April 2008) that in contravention of the GOI directions; sale was made below the prevailing registration rates in the following cases.

Table No 9.4

(Rs. in crore)

Sl. No.	Name of the mill	Valuation as per registration rates	Reserve price fixed by the Company	Actual Sale price	Loss
1.	Edward Mill	10.55	4.00	5.85	4.70
2.	Shree Bijay Cotton Mill	3.79	1.92	1.95	1.84
3.	Jahangir Textile Mill	26.83	25.00	25.00	1.83
4.	Coimbatore Murugan Mill	3.04	1.73	1.89	1.15
5.	Kishnaveni Textile Mill	5.50	4.80	5.20	0.30
6.	Sri Rangavilas Mill	8.61	3.33	8.00	0.61
Total					10.43

The Company lost an opportunity to earn Rs.10.43 crore due to fixing reserve price and sale below the prevailing registration rates.

9.7.6 Sale below reserve price

The GOI directed (November 2004) that no sale should be confirmed where the highest bid falls below the reserve price. In all such cases, the tenders should be called again. It was observed in Audit that in contravention of the GOI directions, sale was made below the reserve price. This could be seen from the sale of building of Om Parasakthi Mills, Kishnaveni Textile Mills and Somasundaram Mill.

The reserve price for demolition of the buildings of Om Parasakthi Mills, Kishnaveni Textile Mills and Somasundaram Mill and carting away of debris was fixed (April 2003) for Rs.54 lakh, Rs.46 lakh and Rs.90 lakh respectively based on the highest of the salvage value (as per valuation done by government approved valuer), six *per cent* of the cost of replacement as assessed by the said valuer and Rs.40 *per* square foot. The highest offers received (June 2003) was Rs.28.25 lakh for Om Parasakthi Mills, Rs.25.20 lakh for Kishnaveni Textile Mills and Rs.52.20 lakh for Somasundaram Mill. Though the bids were lower than the reserve price the ASC approved (June 2003) the sale resulting in loss of potential revenue of Rs.84.35 lakh. The ASC had justified its decision stating that value arrived based on six *per cent* of the cost of replacement would be appropriate for comparison and bids received were more than that criteria. The contention of ASC was not in conformity with the GOI directions.

9.7.7 Sale without following tender process

As per BIFR guidelines, sale of assets was to be affected by way of sale through public tender.

It was observed in Audit that in case of Apollo Textile Mills, Mumbai, five parcels of land were sold without following the tender process. In addition to the surplus land (39,314.58 square metre of FSI) sold to M/s Macrotech Constructions in July 2005 by following the tender process, 10,105.68 square metre[9] of FSI was also sold to the same party during April 2006 to March 2008 without following the tendering process.

Four other cases are discussed in ***Annexure XXXII***.

Recommendation No. 9.6

All the properties identified should be sold through public tender to fetch the maximum value.

9.7.8 Inconsistencies in the guidelines

In the revival scheme, guidelines to be followed by ASC for the sale of surplus assets were issued by the BIFR and the GOI. Accordingly, the Company laid down (July 2002) the procedure for sale of surplus assets to be adopted by ASC. This was amended in November 2002 and March 2003. It was observed in Audit that there were inconsistencies among the guidelines issued by the BIFR/GOI and the procedures laid down by the Company. Some of the inconsistencies were as follows:

(a) The BIFR guidelines provided that bidders should deposit the EMD equal to 10 *per cent* of the offer so that the reserve price fixed by the Company was not indicated to the intended bidders. However, the Company fixed (July 2002) the amount of EMD equivalent to five *per cent* of the reserve price which was increased to 10 *per cent* in March 2003. Due to this, reserve price became indicative. Besides, wherever offer was more than the reserve price, less EMD was received by the Company and consequent guarantee cover for performance of the sale contract was reduced.

[9] ***242.91 sq. mt + 3850.28 sq. mt. +1932.21 sq. mt. +441.40 sq. mt. +3638.88 sq. mt.***

It was observed in Audit that in case of sale of land of Aurangabad Textile Mills, EMD was fixed at Rs. one crore (being 10 *per cent* of the reserve price) by the Company. The highest bid was offered for Rs.18.90 crore. As *per* BIFR guidelines EMD should have been Rs.1.89 crore. The party failed to pay the instalments even within the extended period as such the deal was cancelled and EMD of Rs. one crore only was forfeited. Thus, the Company lost the opportunity to earn Rs.89 lakh due to non-observance of BIFR guidelines.

The Management stated (September 2008) that the Company could not recover more EMD than fixed by ASC.

The reply was not acceptable. The EMD should have been fixed at 10 *per cent* of the offer as *per* BIFR guidelines instead of 10 *per cent* of reserve price.

(b) The BIFR prescribed that the Company should receive Bank Draft for the EMD. However, the Company provided (July 2002) that in case EMD was above Rs. one crore unconditional and irrevocable Bank Guarantee (BG) could be accepted in lieu of the Bank Draft.

It was observed in Audit that in 19 cases of sale, 49 bids (30 unsuccessful and 19 successful) were received with BG as EMD. Amount of Rs.429.85 crore received in BG could not be deposited in the bank. In case the amount was received in bank draft as *per* BIFR guidelines and deposited in the bank, the Company could have earned the interest of Rs.57.70 lakh at the rate of 3.50 *per cent per annum* for 14 days (the time available for refund of EMD after tender opening).

The Management stated (September 2008) that EMD received from the bidders, either by way of bank draft or bank guarantee, was returned to them immediately after opening tender, keeping the EMD of highest bidder in custody. The bank guarantee was immediately converted into bank draft through the highest bidder and the Company received EMD amount by bank draft and deposited the same in Escrow Account.

The Management, however, did not clarify the reasons for deviating from BIFR guidelines

(c) BIFR guidelines provided that the Company should charge interest at the rate of 18 *per cent per annum* on the delayed payments. However, the Company instructed (March 2003) the sub-offices to charge interest at the rate of prevailing SBI PLR plus four *per cent per annum* on delayed payments. It was stipulated in the tender document that if the successful bidder did not pay the balance amount of consideration within the payment schedule, the ASC could forfeit the EMD and any other deposits made and can proceed to resell the property. However, the ASC could extend the payment schedule upto 60 days.

It was observed in Audit that there were deviations from these provisions in 10 cases as discussed below:-

(i) In four cases[10] extension beyond 60 days for instalments receivable of Rs.630.21 crore was granted by ASC. The extension ranged from 96 days to 1371 days, thus, giving undue benefit of the price escalation to the private parties. Besides, interest of Rs.46.79 crore (upto 31 March 2008) leviable on delayed payments as per BIFR guidelines was not charged on different grounds. Further, in one case (bungalow of Apollo Textile Mill at Napean Sea Road, Mumbai), the title was passed (March 2007) without receiving the full consideration of Rs.281.71 crore (including interest), against the BIFR guidelines.

The Management stated (June 2008) that ASC was fully empowered to extend the period beyond 60 days.

The reply of the Management was contrary to the decision of ASC (February 2008) taken in the case of Ahmedabad Jupiter Textile Mill, where it was clearly mentioned that they could not extend the period of payment beyond 60 days.

(ii) In six cases[11] extension upto 60 days was granted by ASC. In two cases (Kohinoor Mill No.3 and Old labour chawl of Model Mill), the interest of Rs.1.20 crore chargeable as per BIFR guidelines was not levied on the delayed payments. In other four cases, the total interest of Rs.1.94 crore was charged against the leviable interest of Rs.2.08 crore. This resulted in non recovery/under recovery of interest on delayed payment by Rs.1.34 crore.

The Management stated (September 2008) that ASC was an empowered body to decide the issues relating to the sale of surplus assets and to decide the guidelines depending upon the situation and circumstances.

The reply was not tenable. ASC was not empowered to take any decision in contravention of BIFR/GOI guidelines. Interest should have been charged on the delayed payments.

(d) As per BIFR guidelines the purchaser was required to pay the purchase consideration after adjusting the EMD received in two instalments of 50 *per cent* before the end of 60 days and 40 *per cent* of the sale value before the end of 90 days from the date of intimation of acceptance of the bid. However, the Company provided (July 2002) that in case sale value was less than Rs.100 crore, the payment should be made in two instalments of 25 *per cent* (after adjusting EMD) within 15 days and 75 *per cent* of the sale value within 60 days from the date of issue of acceptance letter by the Company. For sale value of more than Rs.100 crore, the Company provided that the payment should be made in three instalments of 25 *per cent* (after adjusting EMD) within 15 days, 40 *per cent* within 45 days and 35 *per cent* of the sale value within 90 days respectively from the date of issue of acceptance letter by the Company.

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[10] ***Elphinstone Spinning & Weaving Mill, Panipat Woollen Mill, bungalow of Apollo Textile Mill at Napean Sea Road and Tata Textile Mill.***

[11] ***Kohinoor Mill No.3, Old labour chawl of Model Mill, Rampuria Cotton Mill, Bengal Fine Spinning & Weaving Mill No.1, Gaya Cotton & Jute Mills, Bangasri Cotton Mill.***

Recommendation No. 9.7

(i) The Company should adhere to the guidelines prescribed by the BIFR.

(ii) The GOI may consider specifying modalities where the delay in payment exceeds 60 days.

The Management stated (September 2008) that in the light of recommendations made by the Audit, this matter will be placed in the Central ASC meeting for consideration.

9.7.9 Fund management

According to the BIFR guidelines, all the funds generated from sale of assets were to be credited to a separate account and all expenses related to Modified Voluntary Retirement Scheme and modernisation were to be debited to that account. As on 31 March 2008, Rs.3819.44 crore was generated by the Company from the sale of surplus assets (including machinery). Surplus fund of Rs.1,452.60 crore was invested in term deposits with Banks and an interest of Rs.430.43 crore was earned as on 31 March 2008.

It was observed in Audit that:

- No separate account was maintained for deposition of sale proceeds of surplus assets and subsequent utilisation of money received which was against BIFR guidelines.

- There was delay of 2 to 25 days in remitting the sale proceeds from one of the sub-offices (West Bengal Assam Bihar and Orissa) to the Corporate office resulted in locking of fund.

- The GOI had provided Rs.1,321.34 crore only for wage support against which the Company had expended Rs.1,362.53 crore for shortfall in wages and Rs.13.00 crore for back wages upto 31 March 2008. This had resulted in irregular expenditure of Rs.54.19 crore from the funds generated from the revival scheme.

Recommendation No. 9.8

The schedule of sale of surplus assets should be synchronized with the fund requirements for modernisation. The Management may ensure that fund realized from the sale is accounted for as per BIFR guidelines.

9.8 Conclusion

After analysing the whole process of sale and disposal of land and buildings, it was observed that:

- The GOI/BIFR guidelines for determination of reserve price were followed in 27 cases only out of 79 cases of sale of land examined.

- Reports of consultants were not evaluated and the tender documents had certain irregularities.

- Properties were sold below registration/circle rates; below reserve price and without following the tender process.
- No prescribed procedure for valuation of building structures was in existence.
- There were inconsistencies among the guidelines issued by BIFR/GOI and the procedure laid down by the Company.

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

(A.N. CHATTERJI)
Deputy Comptroller and Auditor General
(Commercial) and Chairman, Audit Board

New Delhi
Dated:
26 JUN 2009

Countersigned

(VINOD RAI)
Comptroller and Auditor General of India

New Delhi
Dated: 29 JUN 2009

ANNEXURES

Annexure – I

(Referred to in paragraph 1.1)

Sectors				
Standard Policies & Transfer Guarantees	Policies – Project and Term Exports	Factoring	Guarantees - Short Term Exports	Guarantees – Project and Term Exports
Types of Policies and Guarantee products				
Shipment (Comprehensive Risks) Policy [SCR]	Construction Works Policy	Maturity Factoring (scheme revised from April 2007 and named Full Fledged Factoring)	Export Credit Insurance for Banks (Individual Packing Credit) [ECIB (INPC)]	Export Credit Insurance for Banks (Export Finance Overseas Lending)
Small Exporters Policy	Specific Policy for Supply Contract		Export Credit Insurance for Banks (Whole Turnover Packing Credit) [ECIB (WTPC)]	Overseas Investment Guarantee
Specific Shipment Policy – Short Term	Specific Policy for Specific Service		Export Credit Insurance for Banks (Sector-wise Individual Packing Credit) [ECIB (SIPC)]	Exchange Fluctuation Risk Cover
Export (Specific Buyers) Policy	Specific Shipment Policy		Export Credit Insurance for Banks (Bank-wise Individual Packing Credit) [ECIB (BIPC)]	Overseas Borrowing Guarantee
Export Turnover Policy			Export Credit Insurance for Banks (Whole Turnover Post-Shipment) [ECIB (WTPS)]	Export Credit Insurance for Banks (Export Performance)
Buyer Exposure Policies			Export Credit Insurance for Banks (Individual Post-Shipment Credit) [ECIB (INPS)]	Insurance Cover For Buyer's Credit And Line Of Credit
Consignment Exports Policy - (Stockholding Agent and Global Entity)			Export Credit Insurance for Banks (Export Performance) [ECIB (EP)]	
Service Policy			Export Credit Insurance for Banks (Export Production Finance) [ECIB (EPF)]	
Software Project Policy			Export Credit Insurance for Banks (Export Finance) [ECIB (EF)]	
IT - Enabled Services Policies				
Export Credit Insurance for Banks (Transfer Risk)				

Sectors/ Policies and Guarantee Products covered by Performance Audit highlighted in red

Annexure-II

(Referred to in Paragraph 1.4)

Sampling techniques used for selection of the units and data

1. Export Credit Insurance for Banks - Packing credit and Post-shipment

1.1 ECIB(WTPC) and ECIB(WTPS) guarantees *renewed*[+] during 2005-08 totalling 223[°] in number were examined[#].

1.2 The claims paid under the above two guarantees at the three selected Bank Business Branches (Mumbai –Nariman Point Branch, Kolkata and Delhi) during 2005-06, 2006-07 and 2007-08 accounted for 44, 53 and 31 *per cent* of the total claims paid under both these guarantees by the ECGC in these years. These were checked *cent per cent* in respect of claims paid out above Rs. one crore while those less than Rs. one crore were checked to the extent of 10 *per cent* on random sampling basis using IDEA[@] software. The extent of audit check worked out as below:

Amount (Rs. in crore)

Bank Business Branch	Year	Claim Paid > Rs.One crore				Claim Paid < Rs.One crore				Total	
		ECIB (WTPC)		ECIB (WTPS)		ECIB (WTPC)		ECIB (WTPS)			
		Number of claims checked	Amount	Number of claims checked	Amount	Number of claims checked	Amount	Number of claims checked	Amount	Total claims checked	Amount
Mumbai	05-06	10	24.16	8	21.14	3	1.55	3	0.35	24	47.20
	06-07	11	30.86	13	39.46	2	0.23	2	0.83	28	71.38
	07-08	5	10.98	7	18.30	1	0.05	1	0.36	14	29.69
Delhi	05-06	5	12.55	0	0.00	2	0.58	1	0.06	8	13.19
	06-07	6	16.81	1	1.00	3	0.20	2	1.02	12	19.03
	07-08	3	4.66	0	0.00	2	0.67	1	0.12	6	5.45
Kolkata	05-06	4	11.68	4	8.03	1	0.36	1	0.66	10	20.73
	06-07	2	2.77	1	6.60	2	0.11	1	0.18	6	9.66
	07-08	9	20.38	1	1.00	3	1.23	1	0.19	14	22.80
Total		**55**	**134.85**	**35**	**95.53**	**19**	**4.98**	**13**	**3.77**	**122**	**239.13**

2. Shipment (Comprehensive Risks) policy

2.1 For operational purposes, the ECGC has five regions in the country. The check of the SCR policies was carried out in one Exporters Branch Office (EBO) located in each of the five regions *viz.*, Bangalore, Chennai, Kolkata, Delhi and Mumbai EBOs. The sample check of SCR policies issued/renewed during 2005-08 was as under:

[+] ***no ECIB(WTPC) or ECIB(WTPS) guarantees were issued during 2005-08.***

[°] ***82, 74 and 67 in 2005-06, 2006-07 and 2007-08 respectively.***

[#] ***Renewals of ECIB(WTPC) and ECIB(WTPS) guarantees are done only at ECGC Head Office, Mumbai.***

[@] ***IDEA – Interactive Data Extraction & Analysis software.***

(Risk value – Rupees in crore)

Exporter Branch Offices selected for audit	**Total No. of SCR policies issued/ renewed during 2005-08 by the Exporters Branch Offices**		**Top five *per cent* of SCR policies in terms of risk value issued/ renewed during 2005-08 checked *cent per cent***		**Balance 95 *per cent* of SCR policies issued/ renewed during 2005-08 checked to the extent of five *per cent* on random sampling basis using IDEA software**		**Total number of policies selected**
	No.	Risk Value	No.	Risk Value	No.	Risk Value	No.
Kolkata	1373	6941	69	3921	65	167	134
Bangalore	478	4364	24	2270	23	64	047
Chennai	752	4642	38	1945	36	104	074
Mumbai	286	4936	14	1786	14	80	028
Delhi	228	3118	11	1022	11	142	022
Total (5)	3117	24001	156	-	149	-	305
Others (38)	10684	55121					
Total (43)	13801	79122					

The above sample size (305) seen in audit represented 2.21 *per cent* of the total SCR policies (13801) issued/renewed by the ECGC during 2005-08 and 9.78 *per cent* of the total SCR policies issued by the five selected EBOs (3117) during the same period.

2.2 With respect to claims paid under the SCR policy, the five selected EBOs accounted for 12.05 *per cent* of the total claims paid by the ECGC under this policy during 2005-08. Claims paid out above Rs.50 lakh were scrutinised *cent per cent* while those less than Rs.50 lakh were checked to the extent of 20 *per cent* on random sampling basis using IDEA software. The numbers were as below:

Amount (Rs. in crore)

Exporter Branch Offices selected for audit	Year	Claim Paid > Rs. 50 lakh		Claim Paid < Rs.50 lakh		Total	
		Number of Claims Checked	Amount	Number of Claims Checked	Amount	Total Claims Checked	Amount
Bangalore	05-06	-	-	1	0.02	1	0.02
	06-07	2	2.71	4	0.26	6	2.97
	07-08	-	-	5	0.86	5	0.86
Chennai	05-06	2	2.81	5	0.54	7	3.35
	06-07	1	1.28	7	0.53	8	1.81
	07-08	-	-	1	0.07	1	0.07
Kolkata	05-06	1	1.19	1	0.02	2	1.21
	06-07	-	-	2	0.03	2	0.03
	07-08	1	0.51	8	1.50	9	2.01
Mumbai	05-06	3	4.42	2	0.08	5	4.50
	06-07	1	1.04	3	0.30	4	1.34
	07-08	2	1.77	3	0.16	5	1.93
Delhi	05-06	1	1.95	2	0.04	3	1.99
	06-07	1	1.82	4	0.50	5	2.32
	07-08	2	1.50	5	0.34	7	1.84
Total		**17**	**21.00**	**53**	**5.25**	**70**	**26.25**

Annexure – III

(Referred to in paragraph 2.5)

List of circles and SSAs selected for carrying out performance audit

Sl. No.	Name of the Branch Audit Office	Name of the circle	Total no. of SSAs or sub - regions in the circle	No. & name of the SSAs or Divisions in the circle selected for audit
1	Ahmedabad	Gujarat territorial circle	17 SSAs	4 SSAs (Ahmedabad,Surat, Vadodara & Rajkot)
2	Bangalore	Karnataka territorial circle	19 SSAs	4 SSAs (Tumkur, Kolar, Mandya & Mysore)
3	Chennai	Southern Telecom Region	4 Sub-regions	1 Sub-region (Chennai)
4	Cuttack	Orissa territorial circle	13 SSAs	3 SSAs (BBSR, Baripada, Bhawanipatnam) & one CMTS
5	Delhi	Corporate Office	----	-----
		Northern Telecom Region	9 Sub-regions	1 Sub-region (Delhi)
6	Kolkata	Eastern Telecom Region	7 Sub-regions	3 Sub-region (Kolkata, Guwahati & Shillong)
7	Lucknow	UP (West) territorial circle	16 SSAs	3 SSAs (Meerut, Bareilly & Bulandshahar)
8	Mumbai	Western Telecom Region	11 Sub-regions	4 Sub-regions (Mumbai, Thane, Nagpur & Pune)

Annexure-IV

(Referred to in paragraph 3.6)

Sampling techniques used for selection of the units and data

1. In the first stage, the Corporate Office of BSNL and the Head Offices of all four TPCs (*i.e.*, WTP, ETP, STP and NTP) were selected for performance audit.
2. Maharashtra, Tamil Nadu, West Bengal and Uttar Pradesh (West) Territorial Circles were selected for detailed examination of the planning process adopted for the identification of different telecom projects to be got executed through concerned TPCs.
3. Fifty *per cent* of the divisions under each TPC were selected on the basis of expenditure incurred by them during the last five years.
4. All sub-divisions executing the identified projects under each selected division of each TPC were taken up for detailed examination.
5. 100 *per cent* of projects costing Rs. one crore and above under each TPC were selected for data collection, so as to give a complete picture of each TPC.
6. 25 *per cent* of the entire projects costing Rs. one crore and above under each TPC were selected on random basis for detailed checking.

Annexure- V

(Referred in paragraph 3.8.3.9)

Loss of potential revenue due to delays in commencement, completion and commissioning of projects by Telecom Project Circles

Sl. No.	Telecom Project Circle	Number of projects delayed	Period of execution of projects	Delays in execution of projects (in months)	Loss of potential revenue (Rs in crore)	Reasons for delays in execution of projects
1	WTP (Mumbai, Pune, Nagpur, Ahmedabad, Bhopal and Jabalpur Divisions)	105	1999-00 to 2007-08	1 to 84	296.00	The delays were on account of delayed/non-receipt of equipment, delays in obtaining permission for right of way from different authorities, *etc.*
2	NTP (National Capital Region, Satellite Communication Project, Jodhpur, Jalandhar, Dehradun and Lucknow Divisions)	59	2003-04 to 2007-08	3 to 36	201.72	The delays were on account of delays in receipt of equipment, delays in obtaining permission for right of way from different authorities, non-allocation of Satellite frequency, *etc*
3	STP (Eranakulam, Bangalore, Madurai and Salem)	89	2003-04 to 2007-08	3 to 60	99.48	The delays were on account of non-availability of equipment, delays in obtaining permission for right of way from different authorities,

						lack of coordination between STP and STR for taking over of completed projects, *etc.*
4	ETP (OFC Kolkata, Circle Office, Bhubneswar, Patna and Ranchi Divisions)	41	2003-04 to 2006-07	1 to 31	35.53	The delays were on account of non-availability of equipment, lack of coordination between ETP and ETR for taking over of completed projects, *etc.*
Total		**294**	**1999-00 to 2007-08**	**1 to 84**	**632.73**	

Annexure-VI

(Referred in paragraph 3.8.4.3)

Microwave Schemes lying idle

Sl. No.	Circle	Scheme /Equipment lying abandoned	Date of commissioning	Value (Rs. in crore)	Reasons for lying idle
1	WTP	5 Microwave Schemes (Gwalior – Agra 6 GHz, Jhansi – Gwalior 6 GHz, Sagar – Jhansi 6 GHz, Jabalpur – Katni 6 GHz, and Katni – Rewa 6 GHz	November 2003 to April 2004	22.39	These schemes were lying idle due to availability of alternative OFC routes and microwave technology now being obsolete.
2	NTP	3 Microwave Schemes (Lucknow – Kanpur 6 GHz, Lucknow – Sitapur 6 GHz, Sitapur – Shahajahanpur 6 GHz)	Not commissioned	10.34	Microwave systems received between February 1998 to March 2001 could not be put to use due to deficiencies in the systems. Local Management had proposed for scraping these schemes on the ground that better transmission media on OFC was available.
3	ETP	3 Microwave Schemes (a) Sambalpur – Jharsuguda- Sundergarh 34 mb/s 7 Ghz	Not commissioned	0.58	Project was sanctioned on 19 May 1998 by CGM (TP) Kolkata and scheduled to be commissioned within two years. The equipment received for Sambalpur –Jharsuguda route was faulty. However, it was tried to commission the system, but failed. In the mean time OFC connectivity between Sambalpur –Jharsuguda was available. Hence, local Management proposed to drop the scheme after incurring expenditure of Rs.58 lakh.
		(b) Bhubaneswar-Kalupara 6 GHz	July 2005	5.59	Project was sanctioned in Sept 1997. The scheme was targeted to be completed within two years from the date of receipt of stores. This scheme, after its commissioning in July 2005, was taken over by ETR in September 2005 for emergency use during failure of other advanced sophisticated STM/DWDM system installed between these stations. However, the same has not been utilised by ETR so far. Thus the scheme was lying idle since its commissioning.

Sl. No.	Circle	Scheme /Equipment lying abandoned	Date of commissioning	Value (Rs. in crore)	Reasons for lying idle
		(c) Ranchi-Daltonganj system	Not commissioned	5.60	The Scheme was approved in November 1993 and project estimate was sanctioned in November 1997. The Scheme could not be commissioned due to deficiencies in the systems. Now the stations proposed to be covered under this Scheme, are covered with STM rings, there was no need to commission the same as it may not suffice the traffic needs of present requirement. The Scheme was now outdated. So, this scheme after incurring of expenditure of Rs.5.60 crore was lying idle.
Total		**11 Microwave Schemes**		**44.50**	

Annexure-VII

(Referred in paragraph 3.8.5)

Non/improper maintenance of prescribed books of projects/schemes/works

Sub-units of NTP	Details of works	Details of shortcomings noticed
Ghaziabad, Noida, Faridabad, Gurgaon, Panipat, Hissar, Yamuna Nagar, Karnal and Ambala	Measurement Books	Exact location of 10 *per cent* checks of OAN works
DGM (TP), Jodhpur and DEs (TP), Lucknow and Kanpur	Measurement Books	Exact location of 10 *per cent* checks
DGMs (TP), Lucknow and National Capital Region	Works Registers	Date of commencement of works, target date of completion and actual date of completion of works were not noted
DEs (TP), Lucknow and Kanpur	Hindrance Registers	Not maintained
DGMs (TPs) Lucknow and National Capital Region	Agreement Registers	Name of the contractor, details of work along with quantity and value thereof, date of agreement and periodicity of agreement.

Annexure-VIII

(Referred to in paragraph 4.11.1.)

Consumption of steam						
Year	**Crude processed (in MTs)**	**Steam consumed (in MTs)**	**Consumption as per norms (87.52 ton per 1000 MT)**	**Excess consumption over norms (in MTs)**	**Cost/MT Rs.**	**Excess cost Rs.**
2004-05	742,239	62200	64961	–2761	537.73	0
2005-06	681,777	58906	59669	–763	814.39	0
2006-07	617,994	66064	54087	11977	845.72	10129188
2007-08	464,227	43960	40629	3331	1210.82	4033241
Total						**14162429**

Consumption of power						
Year	**Crude processed (in MTs)**	**Power consumed (in Mwhr)**	**Consumption as per norms (5.26 Mwhr/ 1000 MT)**	**Excess consumption over norms Mwhr**	**Cost/Mwhr Rs.**	**Excess cost Rs.**
2004-05	742,239	5085.470	3904.177	1181.293	5332.54	6299292
2005-06	681,777	4554.000	3586.147	967.853	6544.31	6333930
2006-07	617,994	4016.000	3250.648	765.352	7008.14	5363694
2007-08	464,227	3267.000	2441.834	825.166	10052.17	8294709
Total						**26291625**

Annexure - IX

(Referred to in paragraph 6.7.1)

Details of Nomination blocks

Sl. No.	Block Name	Acreage (km2)	Date of acquisition	Date of expiry of PEL
I	**Western Onshore basin**			
1	AHMEDABAD EAST EXT-I	12.83	06.05.2002	05.05.2009
2	CHARADA	35.50	07.10.2002	06.10.2009
3	DABKA-SARBHAN	229.93	01.12.2003	30.11.2010
4	GANDHAR EXT-IX	215.53	24.10.2003	23.10.2010
5	NORTH BALOL PART A&B	2.00	27.12.2001	26.12.2008
6	NAVSARI WEST	312.00	30.11.2004	29.11.2011
7	LIMBODRA EXT-III	11.45	06.05.2002	05.05.2009
8	KARJAN EXT-II	550.60	24.10.2003	23.10.2007
9	KARJAN EXT-I	25.94	24.10.2002	23.10.2009
10	KADI-ASJOL	133.00	28.08.2003	27.08.2010
11	KADI EXT-III	19.50	25.11.2003	24.11.2010
12	JOTANA EXT-III	7.22	07.07.2003	06.07.2010
13	HANSALPUR	27.96	07.07.2003	06.07.2010
14	WEST BAOLA	195.00	04.05.2004	03.05.2011
15	VASOD-KATHOL	307.56	24.11.2003	23.11.2010
16	VARSODA-HALISA	478.50	25.11.2003	24.11.2010
17	VALOD EXT-I	190.26	25.11.2003	24.11.2010
18	VALOD	45.41	10.12.2005	09.12.2012
19	TANKARI	54.45	23.12.2005	22.12.2012
20	TADKESHWAR-SACHIN	528.45	27.11.2003	26.11.2010
21	SOUTH DAHEJ	48.75	01.12.2003	31.11.2010
22	SISODRA-KOSAMBA	133.49	27.11.2003	26.11.2010
23	SAYAN	283.56	24.10.2003	23.10.2010
24	SAROD-JAMBUSAR	364.75	27.11.2003	26.11.2010
25	SAJALI	18.00	23.12.2004	22.12.2011

26	RAJPARDI	1251.00	26.03.2004	25.03.2011
27	PATAN-THARAD	18.16	04.09.2005	03.09.2012
28	OLPAD-DANDI	166.20	27.11.2003	26.11.2010
29	PATAN	243.25	07.10.2004	06.11.2010
30	DHINOJ – CHANASMA	309.25	03.11.2003	02.11.2010
31	CHARADA – MANSA EXT-I	282.75	03.11.2003	02.11.2010
32	CHAKLASI-RASNOL	279.30	24.11.2003	23.11.2010
33	ANKLAV	26.90	12.03.2003	11.03.2010
34	MALPUR-DEGAM (CB-ON-6(A)	165.67	26.03.2004	25.03.2011
35	BALASAR	18.00	23.09.2002	22.09.2009
36	MIAJLAR EAST	1590.00	27.08.2002	26.08.2009
37	SOUTH OF KHARATAR	181.39	01.08.2003	31.07.2010
II	**Frontier basin**			
1	KANGRA-MANDI	2,848.00	10.11.2003	09.11.2010
2	RAMPUR-PACHMARHI-ANHONI	2,457.00	31.03.2004	30.03.2011
3	DAMOH-JABERA-KATNI	4,208.00	10.11.2003	09.11.2010
III	**A&AA basin**			
1	LARGE AREA	942.00	01.01.2004	31.12.2010
2	NORTH AGARTALA	375.00	20.03.2003	19.03.2010
3	WEST TRIPURA	2,361.00	15.09.2003	14.09.2010
4	SECTOR-IX	785.00	01.04.2004	31.03.2011
5	CACHAR DISTRICT	1,100.00	01.04.2003	31.03.2010
6	HAILAKANDI DISTRICT	52.00	01.04.2003	31.03.2010
7	SECTOR-5C	1,116.00	01.04.2004	31.03.2011
8	SECTOR-X	150.00	01.04.2004	31.03.2011
9	KARIMGANJ DISTRICT	577.00	01.04.2003	31.03.2010
10	GOLAGHAT DISTRICT	84.00	20.01.2001	19.01.2008
11	TITABAR	101.00	01.01.2002	31.12.2008
12	SIVASAGAR DISTRICT	737.00	01.04.2002	31.03.2009
13	MERAPANI	80.00	01.10.2001	30.09.2008
14	KARBIANGLONG	465.00	01.10.2003	30.09.2010
15	GOLAGHAT EXT.IIA	192.00	01.01.2003	31.12.2009

16	BHAGTYBHANDARI	620.00	28.04.2006	27.04.2013
17	SINGHPHAM	320.00	28.04.2006	27.04.2013
18	DIMAPUR	650.00	28.04.2006	27.04.2013
IV	**Bengal basin**			
1	CONTAI	610.00	22.08.2003	21.08.2010
V	**KG-PG basin**			
1	1A	2,159.00	28.12.2003	27.12.2010
2	1B	2,936.90	13.01.2004	12.01.2011
VI	**Cauvery basin**			
1	L-I	1,346.50	01.04.2004	31.03.2011
2	L-X	261.00	01.01.2004	31.12.2010
3	L-II	2,204.02	01.04.2004	31.03.2011
4	L-I EXTN.	444.00	01.08.2003	31.07.2010
5	L-XI	172.80	20.11.2003	19.11.2010
6	L-XII	239.50	19.11.2003	18.11.2010

Annexure - X

(Referred to in paragraph 6.7.1.1)

Details showing shortfall in drilling under nomination blocks

Sl. No.	Block Name	Acreage (km^2)	Date of acquisition (Current grant period of four years.)	No. of wells committed in current PEL cycle	No. of wells drilled in current PEL cycle (4 years)	Shortfall	Maximum period upto which PEL can be extended	PEL fee (Rs.in lakh) paid by March 2007 to obtain extension of time beyond initial period of four years	Remarks
I	**Western Onshore**								
1	CHARADA	35.50	07.10.2002	2	0	2	06.10.2009	0.53	API completed in August 2007 and location was released in November 2007. Location is yet to be drilled. Second location not released so far (November 2008)
2	LIMBODRA EXT-III	11.45	06.05.2002	1	0	1	05.05.2009	0.17	Planned for drilling in 2008-09 (sixth year of PEL cycle)
3	KARJAN EXT-II	550.60	24.10.2003	2	1	1	23.10.2010	--	API completed in February 2008, civil works complete in July 2008 and spudded in August 2008 (fifth year of PEL cycle).
4	KARJAN EXT-I	25.94	24.10.2002	1	0	1	23.10.2009	0.39	API completed in March 2007, location released in May 2007 and location was spudded in February 2008 (sixth year of PEL cycle)
5	JOTANA EXT-III	7.22	07.07.2003	1	0	1	06.07.2010	--	API completed in August 2008, location released in September 2008. Not taken up for civil works/drilling so far (November 2008).
6	HANSALPUR	27.96	07.07.2003	1	0	1	06.07.2010	--	API completed in August 2007, location released in October 2007. Civil works completed in August 2008 and location spudded in January 2008 (fifth year of PEL cycle).
7	VASOD-KATHOL	307.56	24.11.2003	2	1	1	23.11.2010	--	Location Vasad-2 planned for drilling in 2008-09 (fifth year of PEL cycle)
8	TADKESHWAR-SACHIN	528.45	27.11.2003	2	0	2	26.11.2010	--	One location MVAB released in May 2007 (fourth year of PEL cycle) and spudded in February 2008 (fifth year PEL cycle). For other location acquisition of seismic data is planned in 2008-09 (sixth year of PEL cycle)
9	ANKLAV	26.90	12.03.2003	1	0	1	11.03.2010	0.41	Planned for drilling in 2008-09 (sixth year of PEL cycle)

II	**Frontier**								
1	KANGRA-MANDI	2,848.00	10.11.2003	2	1	1	09.11.2010	28.48	Party was deployed for data acquisition during field season 2005-06. The data could not be acquired due to failure of shot hole drilling contractor. The location is yet to drill.
2	RAMPUR-PACHMARHI-ANHONI	2,457.00	31.03.2004	1	0	1	30.03.2011	24.57	API completed in 2004-05, location released in May 2005 and civil works completed in October 2007. The location is planned for drilling in November 2008 (fifth year of PEL cycle).
3	DAMOH-JABERA-KATNI	4,208.00	10.11.2003	1	0	1	09.11.2010	42.08	Location released in February 2008 and civil works completed in August 2008. The location was spudded in October 2008 (fifth year of PEL cycle).
III	**A&AA**								
1	CACHAR DISTRICT	1,100.00	01.04.2003	2	1	1	31.03.2010	11.00	Location released in May 2005 and well spudded in June 2008 (sixth year of PEL cycle).
2	HAILAKANDI DISTRICT	52.00	01.04.2003	1	0	1	31.03.2010	0.52	Location released in June 2007 and well spudded in March 2008 (fifth year of PEL cycle).
3	KARIMGANJ DISTRICT	577.00	01.04.2003	2	0	2	31.03.2010	5.77	Location released in December 2005 and well spudded in September 2007 (fifth year of PEL cycle).
Total				**22**	**4**	**18**		113.92	

Annexure - XI

(Referred to in paragraph 6.7.2.1)

Details of NELP blocks

A). Blocks awarded to the Company in onshore area

Rounds	Total onshore blocks awarded by the GOI	No. of blocks the Company bid for	Total onshore blocks awarded to the Company
NELP-I	1	1	1
NELP-II	7	5	2
NELP-III	8	8	7
NELP-IV	10	9	3
NELP-V	12	10	0
NELP-VI	25	18	10
Total	**63**	**51**	**23**

B). Phase-wise details of onshore NELP blocks-awarded to the Company

Sl No	NELP Round	Participating Interest (PI) in percentage	Phase/ No of years	Period dates	Expenditure (Rs in crore) upto 31.03.07	Commitments			Actual			Basin/Block name
						Well (Nos)	2D (LKM)	3D (Sq Km)	Well (Nos)	2D (LKM)	3D (Sq Km)	
1	I	ONGC-40 IOC-30 CEIL-15 CEEPC- 15	Phase-I (2 years)	20.04.01 to 19.04.03	15.84	0	200	0	0	320	0	Frontier basin, GV-ONN-97/1
			Phase-II (3 years)	20.04.03 to 19.10.06*		1	150	0	1	221	0	
			Phase-III (2 years)	20.10.06 to 19.04.08		1	0	0	1 (under drilling)	0	0	
2	II	ONGC-85 IOC- 15	Phase-I (2 years)	28.08.01 to 27.08.03	2.82 (upto 31.03.08)	0	100	0	0	100	0	MBA basin WB-ONN-2000/1
3		ONGC-85 IOC-15	Phase-I (2 years)	11.12.01 to 10.12.03	4.19	0	260	0	0	453	0	Frontier basin, GV-ONN-2000/1

4	III	ONGC-80 IOC-20	Phase-I (2 years)	29.07.03 to 28.01.06*	7.99	0	40	0	0	65	0	Assam & Assam Arakan basin AA-ONN-2001/2
			Phase-II (3 years)	28.01.06 to 28.07.08		1	100	0	0	108	0	
5		ONGC-100	Phase-I (2 years)	04.07.03 to 03.01.06*	1.47	0	50	0	0	66	0	KG-PG basin PG-ONN-2001/1
			Phase-II (3 years)	04.01.06 to 03.07.08		1	0	0	0	0	0	
6		ONGC-100	Phase-I (2 years)	10.06.03 to 09.06.05	38.53	0	50	0	0	345	0	Frontier basin HF-ONN-2001/1
			Phase-II (3 years)	10.06.05 to 09.06.08		1	60	0	0	120	0	
7		ONGC-70 CEIL-15 CED- 15	Phase-I (3 years)	19.08.03 to 28.02.07#	46.60	4	0	120	4	0	173	Western Onshore basin CB-ONN-2001/1
			Phase-II (2 years)	01.03.07 to 30.08.08		2	0	0	0	0	0	
8		ONGC-100	Phase-I (3 years)	01.05.03 to 30.04.07$	17.97	1	60	0	1	70	0	Assam & Assam Arakan basin AA-ONN-2001/1
			Phase-II (2 years)	01.05.07 to 30.04.08		1	0	0	0	0	0	
9		ONGC-85 OIL-15	Phase-I (years)	19.12.03 to 02.06.09	17.19	5	150	60	0	0	128	Assam & Assam Arakan basin AA-ONN-2001/3
10		ONGC-100	Phase-I (2 years)	28.04.06 to 27.04.08	0.63	0	40	0	0	0	0	Assam & Assam Arakan basin AA-ONN-2001/4
11	IV	ONGC-60 BPCL-40	Phase-I (2 years)	31.08.04 to 30.08.06	9.69	0	0	60	0	0	223	Cauvery basin CY-ONN-2002/2
			Phase-II (3 years)	31.08.06 to 30.08.09		1	0	0	0	0	0	
12		ONGC-70 CEGB-30	Phase-I (3 years)	18.10.04 to 17.04.08*	30.37	3	0	120	0	0	205	Western Onshore basin CB-ONN-2002/1

13		ONGC-90 OIL-10	Phase-I (2 years)	28.04.06 to 27.04.09	0.66	0	40	0	0	0	0	Assam & Assam Arakan basinAA-ONN-2002/4
14	VI	ONGC-50 GSPC-40 HERAMEC-10	Phase-I (4 years)	20.10.07 to 19.10.11	-	2	60	32	0	0	32	Western Onshore basin CB-ONN-2004/1
15		ONGC-50 GSPC-40 S R Ltd-10	Phase-I (4 years)	19.12.07 to 18.12.11	-	8	839	600	0	0	172	Western Onshore basin CB-ONN-2004/2
16		ONGC-40 GSPC-35 ENSEARCH-25	Phase-I (4 years)	05.02.08 to 04.02.12	-	8	267	200	0	0	126	Western Onshore basin CB-ONN-2004/3
17		ONGC-50 GSPC-40 HERAMEC-10	Phase-I (4 years)	05.02.08 to 04.02.12	-	2	140	70	0	0	14	Western Onshore basin CB-ONN-2004/4
18		ONGC-80 BPCL-20	Phase-I (years)	PEL awaited	-	3	220	214				Cauvery basin CY-ONN-2004/1
19		ONGC-80 BPCL-20	Phase-I (years)	PEL awaited	-	3	390	375				Cauvery basin CY-ONN-2004/2
20		ONGC-100	Phase-I (5 years)	12.11.07 to11.11.12	-	2	1375	610		483		MBA basin PA-ONN-2004/1
21		ONGC-100	Phase-I (5 years)	28.09.07 to 27.09.12	-	1	1285	200				Frontier basin, GV-ONN-2004/1
22		ONGC-100	Phase-I (5 years)	17.01.08 to 16.01.13	-	1	1485	100				Frontier basin, VN-ONN-2004/1
23		ONGC-100	Phase-I (5 years)	17.01.08 to 16.01.13	-	1	875	100				Frontier basin, VN-ONN-2004/2

**** including extension of six months as per the provisions of the PSC, adjustable in the next phase.***
 # including extension of six months and 11 days as per the provisions of the PSC, adjustable in the next phase.
$ including extension of 6 + 6 months as per the provisions of the PSC, adjustable in the next phase.

C. NELP blocks where the Company had participating interest but other consortium partners were the operators

Sl No.	NELP round	Block Name	Expenditure upto 31.03.07 (Rs in crore)	Participating Interest in percentage	Operator	Name of the area
1	NELP-II	MN-ONN-2000/1	16.54 (upto 31.03.08)	ONGC-20 OIL-40 GAIL-20 IOC-20	OIL	Mahanadi
2	NELP-III	RJ-ONN-2001/1	37.00	ONGC-30 OIL-70	OIL	Rajasthan
3	NELP-IV	RJ-ONN-2002/1	5.47	ONGC-40 OIL-60	OIL	Rajasthan
4	NELP-IV	AA-ONN-2002/3	1.68	ONGC-70 OIL-30	OIL	Assam Arakan
5	NELP-V	GV-ONN-2003/1	-	ONGC-51 CEIL-49	CEIL	Ganga Valley
6	NELP-V	VN-ONN-2003/1	0.83	ONGC-51 CEIL-49	CEIL	Vindhyan
7	NELP-V	RJ-ONN-2003/1	62.21	ONGC-36 ENI-34 Cairn Expl-30	ENI	Rajasthan
8	NELP-V	KG-ONN-2003/1	-	ONGC-51 CEIL-49	CEIL	KG

Annexure -XII

(Referred to in paragraph 6.7.2.1)

Time taken in completion of Environment Impact Assessment studies

Name of block/ NELP Round	Date of award	Date of completion of pre-drilling EIA studies (time taken)
AA-ONN-2001/1 NELP-III	01.05.2003	October 2006 (42 months)
AA-ONN-2001/2 NELP-III	29.07.2003	Awaited by July 2008 (60 months)
AA-ONN-2001/3 NELP-III	19.12.2003	September 2005 (21 months)
PG-ONN-2001/1 NELP-III	04.07.2003	May 2008 (59 months)
CB-ONN-2002/1 NELP-IV	18.10.2004	March 2008 (41months)

Annexure -XIII

(Referred to in paragraph 6.7.3.4)

Details of contracts awarded for shot hole drilling and job services for seismic data acquisition work and delays in placement of order in three basins

Basin	Field Season	GP	Name of the NELP/ Nomination block	Date of award of contract	Date of mobilisation	Delay w.r.t. 1 November to mobilisation date (in days)	Target for data acquisition	Achievement	Shortfall	Idling expenditure (Rs in crore)
MBA	2003-04	GP-84	AA-ONN-2001/1	14.11.03	08.01.04	69	100 GLK	70.16 GLK	29.84 GLK	0.31
Frontier	2004-05	GP-91	Damoh-Jabera PEL	03.12.04	19.12.04	49	250 GLK	139.10 GLK	110.90 GLK	0.13
Frontier	2004-05	GP-83	Damoh-Jabera PEL	03.12.04	16.01.05	77	250 GLK	183.70 GLK	66.30 GLK	0.18
A&AA	2005-06	GP-90	South of Geleki-Sibsagar District PEL	01.12.05	30.12.05	60	55 SKM	47.43 SKM	7.57 SKM	0.19
A&AA	2005-06	GP-10	Bhubandar-Cachar District PEL	01.12.05	31.12.05	61	40 SKM	25.26 SKM	14.74 SKM	0.31
A&AA	2005-06	GP-88	South of Manikya Nagar-Sonamora Large area PEL	08.12.05	14.01.06	75	42 SKM	27.95 SKM	14.05 SKM	0.30
MBA	2005-06	GP-17	West Tripura PEL	13.12.05	11.01.06	72	40 SKM	27.07 SKM	12.93 SKM	0.43
Total						**463**				**1.85**

Annexure - XIV

(Referred to in paragraph 7.1.1)

A. Brief of production and surface facilities

Production facilities

- *Group Gathering Stations (GGS)*: Collection of liquid produced from nearby wells and its treatment for separation of gas, removal of water and BS&W through Separators, Heater Treaters and Bath Heaters.

- *Central Tank Farm (CTF)/Central Processing Unit (CPU)*: Storing of oil gathered from group gathering stations before transfer to consumers. The critical equipment in the installations are Bath Heaters, Heater Treaters, Separators, Pumps, Compressors and Storage Tanks.

- *Desalter Plant*: The processed oil is collected for final processing for removal of salt and BS&W before dispatched to refinery. The critical equipment are Desalter Vessels, Tanks, Pumps and Feed Heaters.

- *Gas Compressing Station (GCS)*: Gas flowing from individual wells is brought to a common facility – Gas Compressing Stations (GCS), from where after compression supplies are made.

- *Early Production System (EPS)*: Akin to a GGS used in the field which is newly discovered and where further developmental work is awaited

- *Liquefied Petroleum Gas Plant (LPG Plant):* Natural Gas is cooled to a critical temperature of minus 40^{o} C to extract C3-C4 in liquefied form as LPG.

- *In-situ Combustion Plant (ICP):* It is a thermal enhanced oil recovery technique used to recover oil from heavy oil reservoir. In this technique part of the reservoir oil is burnt to reduce the viscosity of remaining oil. Compressed air is injected to the reservoir to facilitate ignition process.

- *Combined Cycle Power Plant (CCPP):* Power is generated by use of gas for running the gas turbines which are hooked to power generators.

Facilities for reservoir pressure maintenance

- *Water injection:* Process whereby water is injected into an oil producing reservoir to supplement the natural energy of reservoir and to improve the oil producing characteristics of the field. The critical equipment are water injection pumps.

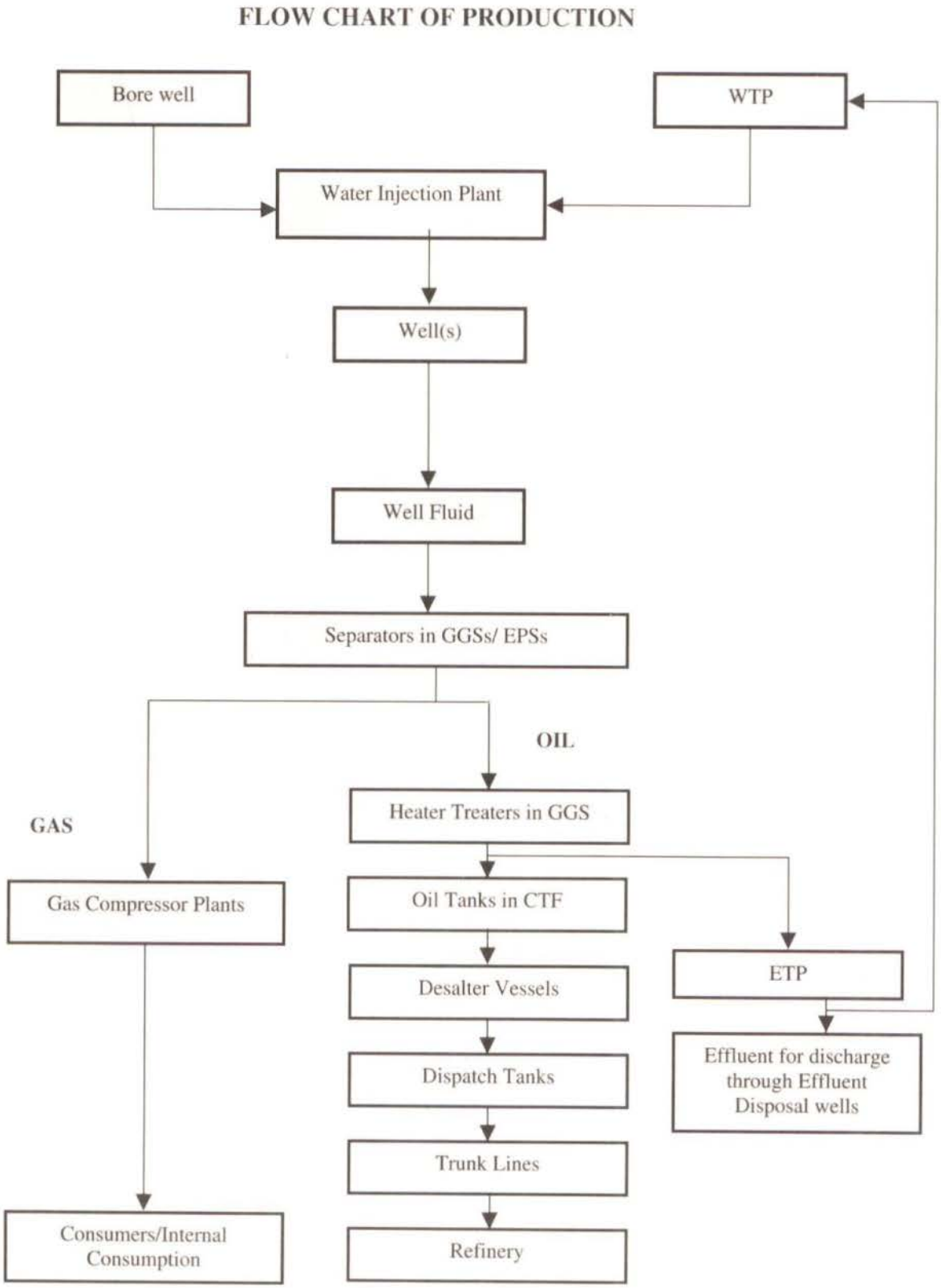
- *Gas injection:* Process whereby compressed gas is injected into an oil producing reservoir to supplement the natural energy of reservoir.

- *Water Treatment Plant (WTP):* Plant for treatment of water to a required specification for further usage for injection etc.

Facilities for treatment and disposal of effluent

- *Effluent Treatment Plant (ETP):* To process the effluent received from GGS/CTF installation before disposal of effluents as per pollution control norms. The critical equipment are pumps and tanks.

B. Flow chart of production, processing and transportation of oil and gas



Annexure - XV

(Referred to in paragraph 7.5)

List of production and surface installations test checked

Sl. No.	Name of Installations		
	Ankleshwar	**Ahmedabad**	**Mehsana**
1	CTF, Ankleshwar	Desalter Plant Nawagam	Nandasan GGS-I
2	WTP Kathor	Nawagam GCP	Balol GGS-2
3	ETP, Ankleshwar	Sanand GCP	Jotana GGS
4	GGS-I, Ankleshwar	Kalol GCS	North Kadi GGS-1
5	GGS-III, Ankleshwar	Jhalora ETP	Lanwa GGS-2
6	GGS Motwan	Kalol ETP	Langej EPS
7	GCS Motwan	South Kadi CTF	North Santhal ETP
8	GCP Ankleshwar	Nawagam CTF	North Kadi ETP
9	GGS-I, Gandhar	Gamij GGS	South Santhal GCP
10	GGS-VI, Gandhar	Limbodra GGS-II	Santhal Main ICP
11	GGS Jolwa	Jhlora GGS-II	Mehsana CTF
12	EPS-253	Viraj GGS	Sobhasan CTF
13	WTP Zanor	Nawagam GGS-I	-
14	ETP Gandhar	Sanand GGS-I	-
15	GGS Kathana	Kalol GGS-IV	-
16	-	Kalol GGS-I	-

GGS – Group Gathering Station; ETP – Effluent Treatment Plant; GCP/GCS – Gas Compressor Plant;
EPS – Early Production System; CTF – Central Tank Farm; WTP – Water Treatment Plant;
ICP – *In situ* Combustion Plant

Annexure - XVI

(Referred to in paragraph 7.7.1.1)

Status of production and surface facilities as of October 2008

Sl. No.	Name of installations	Ahmedabad (Nos.)		Ankleshwar* (Nos.)		Mehsana (Nos.)		Total
		<25 years old	> 25 years old	< 25 years old	> 25 years old	< 25 years old	> 25 years old	
1	Group Gathering Station (including water injection facility)	10	17	17	10	13	7	74
2	Central Tank Farm/Central Processing Facility	--	3	1	1	2	3	10
3	Desalter Plant	1	--	--	--	--	--	01
4	Gas Compression Plant & Gas Collection Station	3	1	5	1	1	--	11
5	Early Production System	--	--	2	1	2	--	05
6	Effluent Treatment Plant	4	--	1	1	5	1	12
7	*In situ* Combustion Plant	--	--	--	--	3	--	03
8	Combined Cycle Power Plant	--	--	1	--	--	--	01
9	LPG Plant	--	--	1	--	--	--	01
10	Water Treatment Plant	--	--	1	1	--	--	02
	Total	**18**	**21**	**29**	**15**	**26**	**11**	**120**

** Include two GGS and one EPS at Cambay Sub-Asset*

Annexure - XVII

(Referred to in paragraph 7.7.1.2)

Utilisation of budget

(Rs. in crore)

Assets	2004-05	2005-06	2006-07	2007-08
Ahmedabad				
Budget	31.73	30.20	47.84	44.54
Actual	32.84	20.25	38.23	29.44
Percentage	103	67	80	66
Ankleshwar				
Budget	47.82	21.15	55.68	52.00
Actual	43.03	15.29	56.73	20.79
Percentage	90	72	102	40
Mehsana				
Budget	37.19	54.20	55.00	51.60
Actual	14.78	47.09	46.22	57.32
Percentage	40	87	84	111

Annexure - XVIII

(Referred to in paragraph 7.7.3.1)

Details of transit loss

Particulars	2004-05	2005-06	2006-07	2007-08
Ahmedabad				
Oil production (in MT)	1704613	1740395	1782585	1800170
Transit loss (in MT)	53496	20559	28987	28815
Percentage of transit loss	3.14	1.18	1.63	1.6
Excess percentage	2.14	0.18	0.63	0.6
Excess loss in quantity above one *per cent* (in MT)	36450	3155	11161	10813
Loss of revenue (Rs. in crore)	6.69	0.55	2.24	2.83
Mehsana				
Oil production (in MT)	2302574	2354097	2233330	2101177
Transit loss (in MT)	16886	59853	96166	82604
Percentage of transit loss	0.73	2.54	4.31	3.93
Excess percentage	--	1.54	3.31	2.93
Excess loss in quantity above one *per cent* (in MT)	--	36312	73833	61592
Loss of revenue (Rs. in crore)	--	7.15	21.96	22.49
Ankleshwar				
Oil production (in MT)	1927175	1918276	1933319	1979486
Transit loss (in MT)	17786	26843	41751	30988
Percentage of transit loss	0.92	1.4	2.16	1.57
Excess percentage	--	0.4	1.16	0.57
Excess loss in quantity above one *per cent* (in MT)	--	7660	22418	11193
Loss of revenue (Rs. in crore)	--	1.08	5.26	3.13
Total loss of revenue (Rs. in crore)	**6.69**	**8.78**	**29.46**	**28.45**

Annexure - XIX

(Referred to in paragraph 7.7.3.6)

Shortfall in water for fire safety requirement in six installations of Mehsana Asset

Sl. No.	Name of the installations	Water requirement (in M^3)	Present Water availability (in M^3)	Shortfall (in M^3)	Management's reply (October 2008)
1.	NK GGS cum CTF	683	500	183	Water storage capacity would be augmented by constructing new fire water tank.
2.	NK GGS-I	576	200	376	New fire water storage tank of 600 M^3 capacity was under construction.
3.	NK GGS-II	576	292	284	A new fire water storage tank of 600 M^3 capacity had been constructed and was in use.
4.	Jotana GGS-I	576	118	458	A new fire water storage tank of 600 M^3 capacity had been constructed and was in use.
5.	Lanwa-GGS-II	576	230	346	New fire water storage tank on 600 M^3 capacity was under construction.
6.	Unawa MTS	40	-	Shortage 40	The MTS had been given to M/s GSPC on contract.

Observations of the OISD in Ahmedabad Asset

- Only four double headed hydrants were in operation against requirement of 17 double headed hydrants as per OISD standard code 117.
- There were only nine fire monitors system which were not adequate for fire protection coverage for the total tank area as per the fire safety requirements. Further, out of the nine available monitors, four monitors were very old and not suitable for use. As per the review of Fire Protection Facilities carried out (January 2007) by Fire Section of Ahmedabad Asset, seven additional monitors and four replacement monitors are found essential for adequate fire protection coverage in the tank area.
- Out of 15 Hose boxes available at the installations, condition of 10 boxes was very poor due to corrosion and broken glass and were unsafe for operations.
- Drain valve were not provided in any of the foam tanks to transfer the compound in case of any leakage or any other requirement.
- Water monitors provided in the tank form area were not having adequate range and jet throw.

Annexure - XX

(Referred to in paragraph 7.7.1.1 and 7.7.3.8)

Inadequacy of facilities for processing of oil in production installations

Name of the Installation	Audit observations	Implications	Management's reply (October 2008)
Ahmedabad Asset			
Jhalora GGS	Safety release valves of separators and Heater Treaters were not connected to flare through common header which was in violation of OISD requirement.	In the event of discharge from safety release valve, the gas would not be routed through flare line and would be discharged to atmosphere without being flared.	The job was in progress.
Jhalora GGS	Safety manual of the Company had prescribed measurement of thickness of critical vessels as monitoring tool for ensuring safety of vessels and for monitoring of deterioration that had been caused due to corrosion. Test check at Jhalora GGS revealed that though the thickness were being measured, base data for comparison was not available for any of the separators or oil storage tanks. Consequently the purpose of measurement lost its significance.	Safe maintenance of the installation was affected as with age reduction in thickness occurs.	Base data for vessels was available with Central Workshop (CWS), Baroda. However, thickness measurement was done as per schedule and values were compared with previous measurement.
Nandej GGS	Heater Treater installed in 1999 was not being used for the purpose for separation of water and oil but was only used for heating of water which was being utilised for declogging of choked lines.	Idling of the critical equipment meant for separation of oil and water.	Nandej had no ETP and disposal facilities. However, hot water produced from Heater Treater was being used for de-clogging choked lines and well bores.
Ankleshwar Asset			
CTF ANK, GGS-I GDR, GGS-	Internal cleaning/bottom cleaning of the storage	Unsafe maintenance of	Work order issued for internal/bottom

Name of the Installation	Audit observations	Implications	Management's reply (October 2008)
Jolwa	tanks had not been carried out during last 10 years as per the requirements of OISD standard code 129, section 9.	the storage tanks.	cleaning of the storage tanks including inspections and repairs by Engineering Services.
GGS-III ANK, GGS Motwan.	The flare knockout drums to separate liquid from gas stream which was routed to the flare stack was not available.	Safe operation of the installation gets affected.	---
GGS I & III ANK, GGS Motwan, GGS I GDR, GGS Jolwa, GCS Motwan	The flare package system in GGS/CTF did not have auto ignition system.	In case of electricity failure the gas would not get flared till such time fire was ignited manually and during the interim period, gas would continue to be discharged in the atmosphere without being flared.	---
GGS-I ANK, GGS Jolwa, GGS Dahej	The SCADA system was being implemented in all the installation, but officials had not been trained in operating of the SCADA system to ensure data integrity.	The new control system of handling of production was not effectively put into use.	All personnel had been trained in SCADA.
CTF ANK	The remote ignition system had not been installed on bath heaters and Heater Treater.	In the event of electricity failure, manual intervention would be necessary affecting critical quality parameters.	The job of remote ignition system was being carried out by CWS, Baroda.

Name of the Installation	Audit observations	Implications	Management's reply (October 2008)
GGS-GNAQ	None of the three storage tanks had been cleaned since their commissioning in 1990, as also the storage tanks had not been colour coated since the installation, consequently they remained exposed to environmental deterioration and corrosion.	Safe maintenance of the storage tanks got affected.	All the tanks had been painted. The tanks would be cleaned when the requirement was felt necessary.
Mehsana Asset			
Nandasan GGS-I, Jotana GGS-I, Langej EPS, Mehsana CTF, Lanwa GGS-II, Sobhasan CTF	The flare knockout drums to separate liquid from gas stream which routed to the flare stack was not available.	Safe operation of the installation got affected.	Would be implemented in the forthcoming revamp of installations.
All seven GGS/CTF test checked	The flare package system in GGS/CTF did not have auto ignition system.	In case of electricity failure the gas would not get flared till such time fire was ignited manually and during the interim period, gas would continue to be discharged in the atmosphere without being flared.	Would be implemented in the forthcoming revamp of installations.
Nandasan GGS-I, Jotana GGS-I, NK GGS-I & Lanwa GGS-II	The pipelines had not been colour coated for segregation for flare gas, water, effluent and for high pressure and low pressure lines.	Unsafe operation of the installation.	Colour coding would be incorporated during fresh painting of remaining pipelines.
All 12 installations GGS/CTF/EPS/GCP & ETP test checked	The SCADA system was being implemented in all the installations, but no official had been trained in operating of the SCADA system to ensure data integrity.	The new control system of handling of production was not effectively put into use.	Personnel were being imparted training.
NK GGS-I, Sobhasan CTF and Mehsana	The remote ignition system had not been installed on bath heaters	In the event of electricity failure, manual	Case was under tendering stage.

Name of the Installation	Audit observations	Implications	Management's reply (October 2008)
CTF	and Heater Treaters.	intervention would be necessary affecting critical quality parameters.	
Nandasan GGS-I, Jotana GGS-I, Balol GGS-II & Lanawa GGS-II	The individual vessels had not been painted regularly for prevention of corrosion.	Unsafe maintenance of the vessels exposing them to environmental degradation.	Contract for painting was being finalised.
Lanwa GGS-II and Balol GGS-II	Breakdown hours particularly of critical equipment had not been maintained.	Decision making on maintenance requirements of critical equipment got affected.	Running hours were being maintained in log books; breakdown hours would also be maintained.
Nandasan GGS-I	Storage capacity was inadequate (1090 M^3) as compared to the daily liquid handling of 1200 M^3.	Unsafe operation of the storage tanks.	Storage capacity enhancement was under tendering process.
North Santhal ETP	Stock of sludge/waste material had been very high at 300 MT in dry form and 600 MT in liquid form awaiting disposal as per GPCB norms.	This affected the health and environment and also non-compliance to GPCB regulations.	A new contract was under tendering stage for safe disposal off sludge.

Annexure - XXI

(Referred to in paragraph 7.7.1.1 and 7.7.3.10 (i))

Non-compliance to Director General of Mines Safety observations

Name of the Installation	DGMS observation/ Month of observation	Implications	Management's reply (October 2008)
Ahmedabad Asset			
GGS-I, II & III Nawagam, GGS-III & VIII Kalol, GGS Wasna, GGS-WIP Nandej, GGS Nandej	Adequate number of electricians were not appointed at 8 different production installations. (February 2003)	The effective maintenance of the installation may get jeopardised and in the absence of a qualified electrician safety of the installation was jeopardised.	Adequate number of electricians was now posted. *(compliance to this observation after over five years)*
GGS-I & II, Nawagam, GGS-I, Sanand, GGS-III & V, GGS-Ramol.	Pipelines were laid to transport the crude oil from wells to GGS without obtaining permission from DGMS. (May 2007)	DGMS requirement of prior approval had not been ensured.	Cases with reference to Motera, Kalol GGS-I, Ramol, Nandej, Wasna, Limbodra GGS –I, II & Gamij were under approval and action for remaining installations was in hand.
GGS-II, Nawagam, GGS-I, Kalol & GGS-I, Sanand	Suitable type of transformer considering the hazardous zone had not been installed in the heater treater. (June 2005)	Transformers suitable for hazardous duty were required to be installed in absence of which safety of the installation was put to risk.	All heater treaters are made by Central Workshop, Vadodara. Design modification had already been done and all new heater treaters were now equipped with flameproof transformers. In view of the limited capacity of CWS, old cases would also be taken up.
GGS-Motera & GGS-Ramol	The cold flare discharge from flare line was being collected at a pit. (May 2006)	The practice followed was unsafe from health and environment point of view.	Indent for Motera GGS and Ramol GGS for installation of complete flare system had been placed on Engineering Services.
GGS-II, Kalol	Online gas detection system had not been installed for the heater treater. (December 2004)	In case of abnormal leakages of hazardous gases, safety and health of the operating staff would be put to risk.	Applied for exemption from DGMS.

Name of the Installation	DGMS observation/ Month of observation	Implications	Management's reply (October 2008)
GGS-Motera, GGS-II, Limbodra, GGS-VII, Kalol	Permission for laying of GGS had not been renewed. (February 2008)	Mandatory and statutory requirement of DGMS had not been complied.	Applied for renewal of permission. GGS-MTR 23.03.2008 GGS-II LMB 01.04.2008 Application for other installation was in progress.
Ankleshwar Asset			
GGS 03, 04 & 06, Ankleshwar	Fire hydrant ring was not provided. (January 1999)	The safe operation of the installation may get jeopardised.	Fire hydrant ring was provided. *(Compliance after eight years)*
GGS-6 & GGS-3, Ankleshwar, GGS-7, Gandhar	Copy of the plan showing the details of all connected Wells of the GGS and the pipeline lay out along with location of various Wells were not maintained and displayed at the Installation. (March 2003)	The safe maintenance of the pipeline and quick identification and repair of leakages got difficult and delayed.	Was being maintained.
GGS-1 & GGS-3, Ankleshwar, GGS-3, Gandhar	Gas Detection System with audio visual alarm was not found at Installation. (December 2003)	In case of abnormal leakages of hazardous gases, safety and health of the operating staff would be put to risk.	Gas was being measured by portable gas detectors. DGMS also agreed to drop this observation during preparation of draft OMR. Once draft OMR was approved, this observation would be dropped.
GGS-1, 5 & 6, Gandhar, GGS-GNAQ, EPS-Jambusar, Jolwa GGS-1	No Electrical Supervisor was appointed in the GGS to supervise the electrical installation. (December 2003)	The effective maintenance of the installation may get jeopardised and in the absence of a qualified electrician safety of the installation was jeopardised.	Now posted.
GGS-Dabka, EPS-Jambusar, GGS-5, Gandhar	Medium voltage equipment such as oil dispatch pumps, effluent pumps and fire pumps installed were found in operation without reporting safety provisions of equipment to DGMS. (December 2003)	Equipment suitable for hazardous duty were required to be installed in absence of which safety of the installation was put to risk.	Fresh approval would be obtained after revamping.

Name of the Installation	DGMS observation/ Month of observation	Implications	Management's reply (October 2008)
Mehsana Asset			
North Kadi GGS-III, Sobhasan GGS-II	Four numbers HT transformer and junction boxes were found installed in hazardous area near North Kadi GGS-III and Five numbers HT transformers and junction boxes near Sobhasan GGS-II. (August 2004)	Transformers and junction boxes suitable for hazardous duty were required to be installed in absence of which safety of the installation was put to risk.	Asset was also taking initiative to cover all such equipment (installed in hazardous zones) in flame proof enclosure. The case had also been taken up with CWS, Baroda for getting DGMS approval.
North Kadi GGS/CTF	The gas being burnt through flare on the ground level without providing remote control electrical ignition device. (March 2005)	In case of electricity failure the gas would not get flared till such time fire was ignited manually and during the interim period, gas would continue to be discharged in the atmosphere without being flared.	9m high flare stack installed. Remote controlled ignition device would be installed during forthcoming revamping.
13 Installations	As per Oil Mines Regulations 1984 vide chapter-VIII clause 75, no electrical appliances, equipment, machinery including lighting apparatus should be used in zone "O" hazardous area without specific approval of DGMS. This requirement had been violated as observed by DGMS. There were 13 observations issued by the DGMS highlighting the use of transformer, DG sets and other electrical equipment, which were in operation in various installations without having approval from the DGMS (July 2005 to January 2006)	Mandatory and statutory requirement of DGMS had not been complied.	Asset was also taking initiative to cover all such equipment (installed in hazardous zones) in flame proof enclosure. Application had been submitted to DGMS.

Age-wise analysis of pending DGMS observations as on March 2008

Year	No. of pending observations		
	Mehsana (as on March 2008)	Ahmedabad (as on March 2008)	Ankleshwar (as on March 2008)
Earlier to 2004-05	--	10	39
2004-05	07	07	23
2005-06	26	08	29
2006-07	13	12	12
2007-08	21	53	--
Total	**67**	**90**	**103**

Annexure - XXII

(Referred to in paragraph 7.7.1.1 and 7.7.3.10 (iii))

Non-compliance status of Oil Industry Safety Directorate observations

Name of the Installation	Observations/Month of Observation	Implications	Management's response as of October 2008
Ahmedabad Asset			
Jhalora GGS-II	Safety release valves of separators and heater treater had not been connected to flare through common header in line with OISD –STD-106. (March 2007)	Unsafe operation of the installation.	The job was in progress.
Jhalora GGS-II	Earthing of manifold was not proper and safe. (March 2007)	Unsafe operation of the installation.	New earthing pits had been constructed.
GGS Nandej	The fire monitoring system was not adequate in line with OISD-STD-189. (April 2007)	Safe operation of the installation got jeopardised.	Action for procurement of jockey pumps was in hand.
Nawagam CTF	All single headed fire hydrants to be replaced with double headed fire hydrants. (November 2006)	Safe operation of the installation got affected.	Requirement of double headed fire hydrants had been covered in revamping of F/F system at CTF.
Ankleshwar Asset			
Ankleshwar CTF	Heavy rusting was observed in the lower portion of shell of all the active tanks for which remedial action had not been taken. (May 2003)	Effective maintenance of the tanks had been overlooked.	Surface preparation and painting had been taken up for all the CTF tanks.
GGS – GNAQ	Remote ignition system not fitted to heater treater. (February 2002)	Unsafe operation of the installation.	The task of installing remote ignition system and heater treaters had been assigned to CWS, Vadodara and they were taking up this issue on priority basis.
GGS-03 – GAN	No record of tank inspection was available. Thickness etc. to be recorded and checked with the base date. (October 2002)	Requirement of OISD was not complied.	Was being taken up by an external agency hired for this purpose.
GGS-02 – GAN	Level indicator of crude storage tank was not operating. (June 2004)	Unsafe operation of the installation.	Level indicator had been made functional.

Name of the Installation	Observations/Month of Observation	Implications	Management's response as of October 2008
GGS – DABKA	Remote Ignition System on Emulsion Heater was not provided. (January 2005)	Safe operation of the installation got affected.	The task of installing remote ignition system and heater treaters had been assigned to Central Workshop, Vadodara and they were taking up this issue on priority basis.
EPS – ANDADA	Remote ignition system on indirect bath heater was not provided. (January 2005)	Safe operation of the installation got affected.	Was being taken up by CWS, Vadodara.
EPS – ANDADA	Internal inspection, NDT and hydro test not conducted on bath heater. (January 2005)	Requirement of OISD was not complied.	It would be taken up shortly. This was a single well installation and production from this well was not continuous during the past. Presently it was running.
GGS-01 – ANK	Inspection of tanks as per OISD-STD-129 was not done. (May 2001)	Requirement of OISD was not complied.	Being taken up by an external agency hired for this purpose.
GGS -06 – ANK	Internal inspection of tanks not done in line with OISD-STD-129. (July 2002)	Requirement of OISD was not complied.	Was being taken up by an external agency hired for this purpose.
Mehsana Asset			
Sobhasan GGS/CTF	No jockey pump (firefighting pumps) was available on the fire main system and hence the fire ring main was not under pressure. Fire water network was not kept pressurised as per OISD-STD-117. (August 2002)	Unsafe operation of the installation.	Jockey pump had been installed and working since March-2008. (Delay of six years in implementation)
Sobhasan GGS/CTF	Tanks were not being inspected in line with OISD-STD-129. (August 2006)	Requirement of OISD was not complied.	Rolling plan was being prepared. However, few tanks were being inspected during their cleaning and repair. These tanks were inspected during need base R&M jobs.

Name of the Installation	Observations/Month of Observation	Implications	Management's response as of October 2008
Becharaji GGS-III	Flame arrestor on heater treater No. 51-V-002-C was blinded completely. Flame arrestor should be replaced. The compliance to the observation was completed only in December 2007 as against the observation which was issued in July 2003, after a delay of four years. (July 2003)	Requirement of OISD was not complied.	Flame arrester replaced in December 2007. The delay occurred due to delay in procurement of fire tube from CWS, Baroda.
North Santhal ETP	Ultrasonic thickness gauging of tanks and pipelines of the ETP was done in February 2004. Reports indicated pinholes in chemical tanks and appreciable thickness reduction. (February 2004)	Unsafe operation of the installation.	Chemical tanks were replaced in June 2008 and were in operation.
Balol Main	Ultrasonic thickness measurement had not been done for water storage tanks and pressure vessels. (June 2005)	Requirement of OISD was not complied.	Next thickness measurement was due in June 2008. Contract for thickness measurement was being finalised. Measurement in Balol Main would be done on priority.
North Santhal CTF	Maintenance and internal inspection of crude storage tank had not been done as per OISD-STD-129. (August 2007)	Requirement of OISD was not complied.	Tanks could not be inspected internally as storages capacity was limited and it was very difficult to spare a tank for long.
North Santhal CTF	Hydro test of pressures vessels had not been carried out in line with OMR guidelines. (August 2007)	Requirement of OISD was not complied.	Awarding the job to third party for hydro testing was in planning stage.
Lanwa ETP, North Santhal CTF, North Kadi CTF	Records of training matrix had not been maintained at the installation to monitor the requirement of training to person, including refresher training. (August 2007)	Requirement of OISD was not complied.	Was being done.

Name of the Installation	Observations/Month of Observation	Implications	Management's response as of October 2008
North Kadi CTF	All six tanks (D=12m and H=8m) having storage capacity of 900 M^3 each were located in a single dyke without provision of firebreak walls. Moreover, slope of dyke was in the centre leading to accumulation of oil and water below the piping manifold inside the dyke. Dyke drainage system had not been routed through slop tank to handle oil spillage. (August 2007)	Unsafe operation of the installation.	Since the installation was very old and having lot of piping in the tank area, feasibility was being studied to construct fire break wall inside the dyke. Slope had been reversed towards dyke wall.
North Kadi CTF	Cooling for exposure protection of other crude oil storage tanks falling outside a radius of (R+30)M from centre of the tank on fire and situated in the same dyke should be at the rate of one lpm/m^2 or three lpm/m^2 water spray density. This requirement had not been complied till date. (August 2007)	Unsafe operation of the installation.	Re-tendering was being done for revamping of fire water system.

Age-wise analysis of pending OISD observations as on March 2008

Year	No. of pending observations (as on 31 March 2008)		
	Mehsana	Ahmedabad	Ankleshwar
Earlier to 2004-05	01	--	18
2004-05	--	01	09
2005-06	06	--	--
2006-07	18	09	09
2007-08	59	--	11
Total	**84**	**10**	**47**

Annexure-XXIII

(Referred to in paragraph 8.2)

Status of NEEPCO projects

Project Name	Capacity (MW)	Scheduled Date of Commissioning	Actual Date of Commissioning	Status
1.Kopili H.E. Project Stage-II	25	July 2003	July 2004	Completed
2.Tuirial H.E. Project	60	July 2006	-	Construction activities suspended from June 2004 initially due to agitation by TCCA and then due to price escalation. . The balance work was proposed to be completed within three years from the date of resumption of the works.
3.Kameng H.E. Project	600	November 2009/ March 2011	-	Under execution.
4.Tipaimukh H.E. Project	1500	*	-	TEC at Rs 5164 crore was accorded by CEA in July 2003. However, CCEA approval is awaited as forest clearance from MoEF is pending.
5.Ranganadi H.E. Project Stage-II	130	*	-	TEC is pending and MOA has not been signed by the state government.
6.Pare H.E. Project	110	*	-	TEC at Rs. 553 crore was accorded by CEA in September 2007. However, CCEA clearance is awaited as note to CCEA has not been submitted by MOP till July 2008.
7.Tuivai H.E. Project	210	*	-	Partially Handed over to Govt. of Mizoram in July 2008.
8.Lower Kopili H.E. Project	150	*	-	To be handed over to the Govt. of Assam as decided in November 2006.

**** Approval of CCEA, which indicates date of commissioning, not yet received***

Annexure-XXIV

(Referred to in paragraph 8.2)

10th Plan outlay *vis-a–vis* actual expenditure of NEEPCO projects

(Rs. in crore)

Sl. No.	Project	10th Plan outlay	Actual expenditure upto 31.03.2008	Expenditure upto 31.03.2007	
				Budgeted	Actual
1.	Tuirial HEP (60 MW), Mizoram	255	194.38	272.72	112.76
2.	Kopili H.E.-2nd Stage (25 MW), Assam	33.49	88.91	54.19	30.23
3.	Kameng H.E. Project (600 MW), Arunachal Pradesh	1000	660.13	1018.38	529.26
4.	Tuivai HEP (210 MW), Mizoram	790.20	17.50	56.00	-
5.	Tipaimukh HEP (1500 MW), Manipur	250.00	7.51	165.00	4.08
6.	Lower Kopili HEP (150 MW), Assam	50.00	1.59	17.23	-
7.	Pare HEP (110 MW), Arunachal Pradesh	30.00	5.83	68.00	6.64
8.	Ranganadi HEP St-II (130 MW)	100.00	7.58	55.00	8.35
Total		**2508.69**	**983.43**	**1706.72**	**691.52**

Annexure – XXV

(Referred to in paragraph 8.2)

Statement showing status of utilisation of funds allocated in 10th Plan (NHPC)

Rs. in crore

Sl. No.	Project	10th Plan Outlay	Expenditure upto 31.03.07		Expenditure (2007-08)	
			Budgeted	Actual	Budgeted	Actual (Prov.)
1	Teesta-V (510 MW)	1856.59	1810.13	1846.12	304.00	302.45
2	TLDP-III (132 MW)	854.19	628.10	391.36	240.00	266.45
3	TLDP-IV (168 MW)	894.70	318.26	95.82	153.00	137.47
4	Subansiri Lower (2000 MW)	4825.00	1709.96	1505.01	454.00	452.19
5	Subansiri Middle (2000 MW)	967.26	79.38	22.30	1.00	0.82
6	Subansiri Upper (2500 MW)	50.00	62.75	21.60	2.00	1.63
7	Siang Lower (1700 MW)	606.73	52.88	30.50	-	2.26
8	Siang Middle (1000 MW)	525.49	345.43	37.18	-	2.04
9	Siang Upper	50.24	32.58	19.90	-	1.06
10	Loktak Downstream (90 MW)	150.00	37.90	11.95	5.00	0.78
11	Koel Karo (710 MW)	471.16	45.46	14.95	-	-
12	Farakka Barrage (125 MW)	1108.31	11.00	1.06	-	-
13	Purulia PSS (900 MW)	395.50	437.85	----	-	-
Total		**12755.17**	**5571.68**	**3997.75**	**1159.00**	**1167.15**

Annexure - XXVI

(Referred to in paragraph 8.2)

Status of NHPC Projects

Particulars	Capacity (in MW)	Scheduled date of commissioning	Anticipated/ actual date of commissioning	Remarks
1. Teesta V	510	February 2007	April 2008	The project was completed with a time over run of 13 months
2. TLDP - III	132	March 2007	September 2009	The progress of work was hampered due to delay in handing over land, slope failure in power house, flash flood and non-availability of civil/work fronts. 72 *per cent* civil work, 47 *per cent* H & M work and 60 *per cent* E & M work was completed upto 31-03-08
3. TLDP - IV	168	September 2009	August 2010	The progress of work was hampered due to delay in handing over forest land and flash flood. Only 24 *per cent* of civil work has been completed upto 31-03-08
4. Subansiri Lower	2000	September 2010	January 2012	The progress of the work was badly hampered due to delay in handing over land, for non-availability of MoEF clearance, landslides at surge shaft adit portal and powerhouse. No MOU has also been signed with the GoAP. 24 *per cent* of Lot 1, 15 *per cent* of Lot 2, nine *per cent* of H & M and 22 *per cent* of E & M work was completed upto 31-05-08.
5. Lower Siang	1600	*	–	Handed over to private party
6. Siyom/ Middle Siang	1000	*	–	Handed over to private party
7. Koel Karo	710	(CCEA approval was in 1981)	–	Abandoned due to non-signing of PPA with Jharkhand Government after bifurcation of Bihar (November 2000) and agitation by project affected persons demanding adequate compensation leading to non-acquisition of land
8. Farakka Barrage	125	*	–	Abandoned due to unviability of project right from beginning.

9. Purulia Pumping Station	900	*	–	The scheme was dropped from capacity addition programme of NHPC as per the decision of Government of West Bengal
10. Subansiri Middle	2000	*	–	DPR not submitted as the proposal for stage –II site clearance was rejected on the basis of recommendation of Indian Board for Wild Life (IWBL), which was subsequently (April 2004) reaffirmed by the Hon'ble Supreme Court.
11. Subansiri Upper	2500	*	–	-Do-
12. Siang Upper/Intermediate	11000	*	–	Survey and Investigation work was badly hampered and ultimately stopped due to protest and threat by local residents and fate of the project is uncertain after transfer of Lower/Middle Siang to private developers.
13. Loktak Downstream	90	*	–	The construction work of the project was not commenced due to non-availability of adequate security. For arrangement of security, the project cost is likely to be increased by Rs.100 crore which eventually affected viability of the project. However it was decided (October 2006) to form a joint venture of NHPC and Government of Manipur to implement the project for which MOU was signed in September 2007.

* ***All these projects were not cleared by CCEA.***

Annexure – XXVII

(Referred to in paragraph 8.3)

Statement showing main reasons for delay in clearance

Name of the project	Date of handing over of the project to Company	Date of final clearance by CCEA / MoEF	Time taken for clearances	Approved project cost (Rs. in crore)	Reasons for delays
Subansiri Lower	March 2000	October 2004	40 months	6285.33	• CEA gave TEC clearance after 19 months against the norms of three months from the date of submission of DPR. This delay was due to submission of incomplete information by the Company. DPR was submitted in June 2001 while approval was accorded in January 2003. • Time taken by CCEA for according the approval from the date of PIB clearance was six months against norm of one month. This was due to delay in putting up the note to CCEA by MOP. • MoEF took 16 months from the date of 'in principle' Forest Clearance for according final Forest Clearance against norms of 2 months leading to delay of 14 months. This delay was due to delay in raising of queries by State Department (4 months), delay in submission of reply (4 months), revoking of Stage –I and Stage –II clearance given earlier and delay in giving final clearance (8 months)
Teesta –V	January 1997	February 2000	37 months	2198.04	15 months delay by CEA in according TEC
TLDP-III	November 2000	April 2004	46 months	768.92	Delay in forest clearance (17 months) due to NPV issue, delay in fixation of date of public hearing, delay in diversion of forest lands and incomplete form
TLDP-IV	November 2001	March 2006	63 months	1061.38	Time taken for stage II forest clearances was 26 months due to issues related to National Highway and Mahananda Wild life Sanctuary. This could have been reduced had the State Forest Department clearly indicated necessity of shifting the site initially instead of taking 18 months. MoEF gave final Forest clearance 13 months after 'in principle' approval of the project.

Annexure – XXVIII

(Referred to in paragraph 8.3)

Status of clearances for HEPs during 10th Plan

Sl. No.	Name of project	Date of handing over	Date of final clearance by CCEA/ MOEF	Project cost (Rs. in crore)	Time taken for clearance	Reasons for delays
1	Kameng HEP	March 1999	December 2004 (CCEA)	2496.90	68 months	CWC prepared the DPR in 1982. Initially the project was handed over to NEEPCO in August 1989. TEC was obtained from CEA in October 1991. In October 1992, the State Government handed over the project to private developer, but as there was no progress in execution, the project was again handed back to NEEPCO in March 1999. RCE was approved by CEA in April 2000 and in 2003 PPA with Governments of Arunachal Pradesh and Assam were signed in May 2004 and September 2004 respectively. PIB recommended in April 2004 but the Note for CCEA was prepared by MOP only in November 2004.
2	Tuirial HEP	May 1996	March 2000 (MOEF)	368.72	46 months	CWC prepared the DPR in 1991. In May 1996, the project was handed over to NEEPCO. NEEPCO submitted the revised DPR in December 1996. PIB recommended (January 1998) the proposal to CCEA and CCEA in turn approved in July 1998. TEC from CEA was obtained only on August 1998. Delay was mainly due to delay in receipt of 2nd Stage forest Clearance from MOEF.
3	Tipaimukh HEP	January 2003	Pending		---	TEC from CEA was received in July 2003. PIB cleared the project in January 2006 EIA/EMP reports needed additional information and recommendation of Govt. of Mizoram for forest clearance which was still pending.
4.	Ranganadi St II HEP		Pending		-	DPR submitted in March 2006 but TEC is pending since MOU was not signed with the state government. 2nd Stage MOEF clearance was received in August

						2003.DPR submitted in March 2006 was returned by CEA in April 2006 due to unviable high tariff. Authorization for S & I activities was extended upto March 2008.
5.	Pare HEP		Pending			DPR was submitted in December 2005, but TEC was received in September 2007 due to inadequacy in DPR and non-signing of MOU (September 2006) with State Government. PIB recommended (January 2008) to CCEA.
6.	Lower Kopili HEP	October 2002	Pending. Project handed over			Following a decision (June 1996) of Government of Assam, MOP authorised (October 2002) NEEPCO to establish, operate and maintain the 150 MW capacity Lower Kopili HEP project at a cost of Rs. 638.89 crore. However, on the request of Government of Assam (April 2006), NEEPCO decided (December 2006) to hand over the project to Assam State Electricity Board subject to recovery of expenditure of Rs.1.60 crore incurred by the company on survey and investigation and preparation of feasibility report. Handing over process has not yet (October 2008) been completed
7.	Tuivai HEP	May 1996	Pending Project handed over			For execution of the Tuivai HEP (210 MW), NEEPCO signed (May 1996) an MOU with the Government of Mizoram. For Stage-I activities, the company was given (March 2000) Rs.20 crore by the GOI. The company completed the infrastructural and S&I work in 2002 at a cost of Rs.17.46 crore. However, on a request by Government of Mizoram (June 2004), the company partially handed over documents and assets of the project in July 2008. The modalities for settlement of account with the

						State Government have, however, not been worked out (October 2008).
8.	Kopili Stage II HEP		July 1999	Original Cost Rs.76.09 crore and Actual Rs.95.02 crore.		-

Annexure - XXIX

(Referred to in paragraph 8.4.2.1)

Statement showing schedule & progress of works in Kameng HEP								
Particulars of Work	**Unit**	**Schedule**		**Quantity**		**Quantity to be executed till 31.03.2008 as per revised schedule**	**Actual quantity executed till 31.03.2008**	**Percentage (%)**
		Original	**Revised**	**Original**	**Revised**			
Bichom Dam -Excavation and Concreting	CUM	Aug-09	Dec-09	591035	726000	452038	294442	65.14
HRT -Face I to Face VIII	RM	May-09	Jul-10	14477.5	14477.5	6682	4520	67.64
Power House								
(a) Excavation	CUM	Aug-09	Sep-07	835000	1050000	1050000	952411	90.71
(b) Concreting	CUM	Aug-09	Aug-08	30600	30600	18831	104	0.55
Surge shaft								
(a) Boring	CUM	Aug-08	Mar-08	43000	43000	43000	26036	60.55
(b) Lining	RM	Aug-08	Jun-08	70	70	65	18	28.17
HPT								
(a) Supply and Fabrication	MT	Feb-09	Jun-10	16174	16174	To be commenced from Nov 08	0.00	0.00
(b) Boring	RM	Feb-09	Nov-08	596.16	596.16	298	343	115.02
(c) Penstock	RM	May-09	May-10	1440	1464.4	To be commenced from Aug 08	0.00	0.00
Tenga Dam	CUM	Nov-08	Oct-10	72600	165000	54396	25810	47.45
Package-IV (Hydro-mechanical works)		Progress of work is minimum.						
Package-V (Electro-mechanical works)		Work is under progress.						
Package-VI (switchyard)		Bid opened on 10/04/2007. Techno-commercial evaluation is under progress. Price bid opened on 09/06/2008.						
Package-VII (Transformer)		LOI was issued to BHEL on 28/03/2008.						

Annexure - XXX

(Referred to in paragraph 9.5.2)

A Sub-office-wise list of cases of sale of land

S. No.	Gujarat	36.	Kaleeswarar Mills - Parcel B
1	Rajkot Textile Mill	37.	Balarama Varma Textile Mills
2	Himadri Textile Mill	38.	Kothandarama Textile Mills
3	Jehangir Textile Mill	39.	Swadeshi Cotton Mills
4	Ahmedabad Jupiter Textile Mill	40.	Sri Bharathi Mills
5	Viramgam Textile Mill		**South Maharashtra**
	Delhi Punjab & Rajasthan	41.	Apollo Textile Mills - Main Portion
6	Ajudhia Textile Mills	42.	Apollo Textile Mills - Parcel 1
7	Edward Mills	43.	Apollo Textile Mills - Parcel 2
8	Udaipur Cotton Mills	44.	Apollo Textile Mills - Parcel 3
9	Shree Bijay Cotton Mills	45.	Apollo Textile Mills - Parcel 4
10	Kharar Textile Mills	46.	Apollo Textile Mills - Parcel 5
11	Suraj Textile Mills	47.	Apollo Textile Mills - Parcel 6
12	Panipat Woollen Mills	48.	Bungalow at Napean Sea Road
	West Bengal Assam Bihar & Orissa	49.	Mumbai Textile Mills
13	Laxmi Marayan Cotton Mills	50.	Mumbai Textile Mills - Mathura land
14	Orissa Cotton Mills	51.	Mumbai Textile Mills - New Jack Printing Press
15	Bengal Laxmie Mills	52.	Elphinstone Mill
16	Bengal Fine Mills, No.I	53.	Chawl of Elphinstone Mills
17	Bangasree Ctton Mills	54.	Six flats in the chawl of Elphinstone Mills
18	Central Cotton Mills	55.	Jupiter Textile Mills
19	Jyoti Weaving Mills	56.	Bungalow of New City Mill at Worli
20	Sree Mahalaxmi Cotton Mills	57.	Barshi Textile Mill
21	Gaya Cotton & Jute Mills	58.	Dhule Textile Mill
22	Rampuria Cotton Mills	59.	Chalisgaon Textile Mill
23	Kanoria Industries (part of Bengal Fine No.I)	60.	Nanded Textile Mill - Hingoli Land
	Tamil Nadu & Pondicherry	61.	Aurangabad Textile Mill - Parcel A
24	Pankaja Mills - Parcel A	62.	Aurangabad Textile Mill - Parcel B
25	Pankaja Mills - Parcel B	63.	Aurangabad Textile Mill - Parcel C
26	Pankaja Mills - Parcel C		**Maharashtra North**
27	Coimbatore Murugan Mills- Parcel A	64.	Tata Mills
28	Coimbatore Murugan Mills- Parcel B	65.	Kohinoor Mill No. 3
29	Sri Sarada Mills - Parcel A	66.	RBBA Mills, Hinghanghat
30	Sri Sarada Mills - Parcel B	67.	Savatram Ramprasad Mills
31	Sri Rangavilas Mills - Parcel A	68.	Model Mills, Nagpur - Main Portion
32	Sri Rangavilas Mills - Parcel B	69.	Model Mills, Nagpur - Part 1
33	Om Parasakthi Mills	70.	Model Mills, Nagpur - Part 2
34	Kishnaveni Textile Mills	71.	Model Mills, Nagpur – Part3
35	Kaleeswarar Mills - Parcel A	72.	Model Mills, Nagpur - Part 4

73	Model Mills, Nagpur - Part 5	77.	RSRG Mohta Mills - Part 3
74	Model Mills, Nagpur - Part 6	78.	RSRG Mohta Mills - Part 4
75	RSRG Mohta Mills - Part 1	79.	Vidarbha Mills
76	RSRG Mohta Mills - Part 2		

B Sub-office-wise list of cases of sale of buildings

	Gujarat	16.	Bengal Fine Mills, No.II
1.	Rajkot Textile Mill	17.	Bangasree Ctton Mills
2.	Himadri Textile Mill	18.	Central Cotton Mills
3.	Jehangir Textile Mill	19.	Jyoti Weaving Mills
4.	Ahmedabad Jupiter Textile Mill	20.	Sree Mahalaxmi Cotton Mills
5.	Viramgam Textile Mill	21.	Gaya Cotton & Jute Mills
6.	Petlad Textile Mill	22.	Rampuria Cotton Mills
7.	New Manekchowk Textile Mill		**Tamil Nadu & Pondicherry**
8.	Mahalaxmi Textile Mill	23.	Coimbatore Spinning & Weaving Mills
9.	RajNagar Textile Mill No.2	24.	Sri Rangavilas Mills - Parcel B
10.	Ahmedabad New Textile Mills	25.	Om Parasakthi Mills
11.	Fine Knitting Mills	26.	Kishnaveni Textile Mills
	Delhi Punjab & Rajasthan	27.	Kaleeswarar Mills - Parcel A
12.	Ajudhia Textile Mills	28.	Somasundaram Mills
13.	Edward Mills	29.	Swadeshi Cotton Mills
	West Bengal Assam Bihar & Orissa	30.	Sri Bharathi Mills
14.	Bengal Laxmie Mills		**Maharashtra North**
15.	Bengal Fine Mills, No.I	31.	RSRG Mohta Mills - Part 1

Annexure – XXXI

{Referred to in paragraph 9.7.3}

Cases of defects in tender document

Sl. No.	Name of the property	Audit Observation
1.	Plant and Machinery of Model Mill Nagpur with structural materials of various sheds	The highest bid of Rs.10.82 crore was accepted against the public tender in July 2005 with an EMD of Rs.90 lakh. Due to ambiguity in the tender document, bidder claimed certain items, which were denied by the Company. ASC observed (February 2006) that if the advantage of ambiguity in the tender document was allowed to the bidder, the Company would lose more than Rs.1.60 crore. As such, ASC decided to cancel the bid and refund the EMD of Rs.90 lakh.
2.	Plots of RSRG Mill, Akola and Model Mill, Nagpur	In both the cases, Floor Space Index of the plots was wrongly disclosed in the tender documents. This led to cancellation of tenders after acceptance of highest bid. This resulted in refund of EMD of Rs.1.03 lakh and Rs.45 lakh.
3.	Ginning & Pressing Factory of RBBA Mill, Hinghanghat	Rule 84 of the Maharashtra Land Revenue Code – Vol. II provides that in case of assignment of lease hold rights, 50 *per cent* of the sale proceeds should be paid to the State Government. However, the company finalised the sale of these three leased parcels of land from January 2003 to October 2003 without incorporating the condition in the tender for payment of this amount by the purchaser. On the demand being raised by the concerned District Collector and subsequent litigation on the issue, the Company could not receive the sale consideration. In case No. 3, the deal was cancelled and the sale value of Rs.40.07 lakh was refunded as per the Hon'ble High Court Order. The matter is sub-judice in Case No.4 and in Case No.5 the buyer agreed to pay additional premium of 50 *per cent* as finally determined by the Court.
4.	Plot with bungalow of RBBA Mill, Hinghaghat	
5.	Vacant area from Labour chawl of Model Mill, Nagpur	
6.	Tenders for sale of land in Rajasthan (three cases)	The Government of Rajasthan had exempted (July 2001) sale of land of NTC mills in Rajasthan from payment of stamp duty charges (11 *per cent* of sale consideration). In the tender documents for sale of land of three mills in Rajasthan *i.e.,* Edward Mill, Beawar, Shree Bijay Cotton Mill, Bijainagar Udaipur Cotton Mill, Udaipur, however, the Company mentioned that sale was not exempted from payment of stamp duty. The stamp duty in these mills was Rs.2.51 crore.
7	Coimbatore Murugan Mills, Coimbatore	As per the Company guidelines, with effect from March 2003, interest at SBI PLR plus four *per cent* was chargeable on delayed receipt of sale proceeds beyond due dates. However, in the tender document for sale of land of Coimbatore Murugan Mills (January 2004), the above clause was mentioned as SBI PLR minus four *per cent*. The successful tenderer did not settle the balance amount of Rs.68 lakh within the due date and got extension for payment. Against the chargeable interest of Rs.1,51,323/- in accordance with the guidelines only Rs.66,370/- was recovered as interest for the delayed period of 57 days.

Annexure – XXXII

(Referred to in paragraph 9.7.7)

Cases of sale without following the tendering process

Sl. No.	Particulars of the Property	Audit Observation
1.	4,080.30 square metre of land of Mumbai Textile Mill.	The land was sold to the existing occupier (M/s New Jack Printing Works) in March 2007 at Rs.17.50 crore. It was observed that the main land of the mill was sold at the rate of Rs.1.06 lakh per square metre in 2005. Even if this rate was considered, the valuation should have been Rs.43.25 crore. Thus, undervaluation of land had resulted in loss of Rs.25.75 crore. The Management stated (September 2008) that the property was leased and was solely in possession of Lessee. The matter for eviction was under litigation. So it was not possible to tender the property for sale since stay on sale would have been easily obtained by the occupier. The reply was not acceptable. In a similar case (Napean Sea Road Bungalow of Apollo Textile Mill) the property was sold through public tender. Besides, unauthorised occupation of the occupier was established by Estate Officer (April 2000). The Company also received Rs.2.12 crore on this account in January 2008.
2.	Elphinstone Mill Chawl consisting 832.41 square metre of land with built up area of 1,672.89 square metre.	The property was sold (September 2005) at a consideration consisting Rs.2.23 crore in cash and six self-contained flats (free of cost) of 750 square feet carpet area each. The builder had offered to buy these flats in February 2006. The Company had accepted (December 2006) the offer at Rs.3.55 crore. It was observed in Audit that value of these flats was Rs.7.30 crore at market rate in the area. This had resulted in loss of Rs.3.75 crore. The Management stated (September 2008) that in the absence of physical possession of the flats with the Company, it was not desirable to invite offers through tender. Since the issue was limited only to relinquishment of rights in those flats, it would have to be settled only with the purchaser of the chawl. The reply was not convincing because the Company was not under any obligation to relinquish right on six flats before having possession of these flats.
3.	762 square metre of land adjoining Labour Chawl of Model Mill, Nagpur.	M/s Kashmire Developers bought vacant area (4,453 square metre) out of Labour Chawl of Model Mill, Nagpur in June 2003. The purchaser offered (December 2006) to procure another plot (762 square metres) also at the rate paid for the earlier sale. ASC accepted the proposal subject to charge of interest at the rate of SBI PLR with effect from the date of sale deed of the earlier plot. It was observed in Audit that as per guidelines, the rate of interest chargeable on delayed payment was SBI PLR *plus* four *per cent*. However, in this case they levied only SBI PLR rate. This resulted in undercharging of interest by Rs.20.30 lakh. Further, there was a gap of more than three and a half years between the two sales and rate of land might have gone up substantially due to real estate boom of 2005 and 2006. Thus decision of ASC to sell this land at the rate of earlier sale and under charging interest was not justifiable.
4	40442 square feet FSI of Tata Textile Mill	At the time of nationalisation, Tata Textile Mill was holding rights to use FSI of 40442 square feet. This was sold to RBI (March 2004) at Rs.13.75 crore. The compensation was decided in the meeting of Ministry of Textiles and Ministry of Finance. It was observed in Audit that CPWD valuation of 1999 (Rs.18.20 crore) was not brought to the notice in this meeting. This resulted in the under-fixation of compensation by Rs.4.45 crore.

GLOSSARY OF ABBREVIATIONS

Sl No.	Abbreviation	Full Form
1.	A&AA	Assam and Assam Arakan
2.	API	Acquisition, Processing and Interpretation
3.	BCM	Billion Cubic Metre
4.	BEC	Bid Evaluation Criteria
5.	BHEL	Bharat Heavy Electricals Limited
6.	BS&W	Base Sediment and Water
7.	CFU	Condensate Fractionation Unit
8.	CPF	Central Processing Facility
9.	CRC	Corporate Rejuvenation Campaign
10.	CSU	Crude Stabilisation Unit
11.	CTF	Central Tank Farm
12.	CWS	Central Workshop
13.	DC-DC	Direct Current- Direct Current
14.	DGH	Directorate General of Hydrocarbons.
15.	DGMS	Director General of Mines Safety
16.	E&D	Exploration & Development
17.	EC	Executive Committee
18.	ED	Executive Director
19.	ED wells	Effluent Disposal wells
20.	EOR	Enhanced Oil Recovery
21.	EPC	Executive Purchase Committee
22.	EPS	Early Production System
23.	ETP	Effluent Treatment Plant
24.	FR	Feasibility Report
25.	GAIL	GAIL (India)Limited
26.	GCP	Gas Compression Plant
27.	GCS	Gas Collection Station
28.	GEOPIC	Geo-data Processing and Interpretation Centre
29.	GGS	Group Gathering Station
30.	GLK	Ground Line Kilometre
31.	GOI	Government of India
32.	GP	Geo-physical Party
33.	GPCB	Gujarat Pollution Control Board
34.	GSPC	Gujarat State Petroleum Corporation
35.	H_2S	Hydrogen Sulphide
36.	HP	High Pressure
37.	HSE	Health, Safety and Environment
38.	ICB	International Competitive Bidding
39.	ICE	Information Consolidation for Efficiency
40.	IOC	Indian Oil Corporation Limited
41.	IOGPT	Institute of Gas & Petroleum Technology
42.	IOR	Improved Oil Recovery
43.	IRS	Institute of Reservoir Studies
44.	KDMIPE	Keshava Dev Malviya Institute of Petroleum Exploration

45.	KG-PG	Krishna Godavari- Pranhita Godavari
46.	LD	Liquidated Damages
47.	LKM	Line Kilometre
48.	LOA	Letter of Award
49.	LP	Low Pressure
50.	LPG	Liquefied Petroleum Gas
51.	LSCMD	Lakh Standard Cubic Metres Per Day
52.	LSTK	Lump Sum Turn Key
53.	MBA	Mahanadi Bengal Andaman
54.	MM	Material Management
55.	MMM^3	Million Metric Cubic Metres
56.	MMT	Million Metric Tonnes
57.	MMTOE	Million Metric Tonnes Oil Equivalent
58.	MOU	Memorandum of Understanding
59.	MP	Medium Pressure
60.	MT	Metric Tonnes
61.	MWP	Minimum Work Programme
62.	NELP	New Exploration Licensing Policy
63.	NIT	Notice Inviting Tenders
64.	ODG	Onshore Design Group
65.	OEM	Original Equipment Manufacturer
66.	OGC	Off Gas Compressor
67.	OIL	Oil India Limited
68.	OISD	Oil Industry Safety Directorate
69.	OMR	Oil Mines Regulations
70.	ONGC	Oil and Natural Gas Corporation Limited
71.	PEL	Petroleum Exploration License
72.	PI	Participating Interest
73.	PLC/AC-SCR	Programmable Logic Controller/Alternate Current-Silicon Controlled Rectifier
74.	PME	Periodic Medical Examination
75.	ppm	parts per million
76.	PSC	Production Sharing Contract
77.	PWD	Public Works Department
78.	R&U	Refurbishment and Upgradation
79.	REXB	Regional Exploration Board
80.	SCADA	Supervisory Control and Data Acquisition
81.	SCM	Safety Committee of Mines
82.	SCMD	Standard Cubic Metres Per Day
83.	SHD	Shot Hole Drilling
84.	SKM	Square Kilometre
85.	TC	Tender Committee
86.	TPD	Tonne Per Day
87.	WI	Water Injection
88.	WTP	Water Treatment Plant

GLOSSARY OF TECHNICAL TERMS

Sl. No.	Technical Term	Meaning
1.	Reservoir	A naturally occurring discrete accumulation of Petroleum.
2.	Group Gathering Stations (GGS)	Collection of liquid produced from nearby wells and its treatment for separation of gas, removal of water and BS&W through Separators, Heater Treaters and Bath Heaters.
3.	Central Tank Farm (CTF)/Central Processing Unit (CPU)	Storing of oil gathered from group gathering stations before transfer to consumers. The critical equipment in the installations are Bath Heaters, Heater Treaters, Separators, Pumps, Compressors and Storage Tanks.
4.	Desalter Plant	The processed oil is collected for final processing for removal of salt and BS&W before dispatch to refinery. The critical equipment are Desalter Vessels, Tanks, Pumps and Feed Heaters.
5.	Gas Compressing Station (GCS)	Gas flowing from individual wells is brought to a common facility – Gas Compressing Stations (GCS), from where after compression, supplies are made.
6.	Water Injection	Process whereby water is injected into an oil producing reservoir to supplement the natural energy of reservoir and to improve the oil producing characteristics of the field. The critical equipment are water injection pumps
7.	Effluent Treatment Plant	To process the effluent received from GGS/CTF installation before disposal of effluents as per pollution control norms. The critical equipment are Pumps and Tanks.
8.	Blowout	An uncontrolled flow of reservoir fluids into the wellbore, and sometimes catastrophically to the surface.
9.	Injector wells	A well in which fluids are injected rather than produced, the primary objective typically being to maintain reservoir pressure. Two main types of injection are: gas and water.
10.	Enhanced Oil Recovery	Enhanced oil recovery also called as improved oil recovery or tertiary recovery is a technique used to increase or prolong production from oil and natural gas fields. .
11.	Floating roof tank	Floating roof is used in a tank structure and is floating on the liquid stored within the tank
12.	Hydrants	A hydrant is an outlet from a fluid main often consisting of an upright pipe with a valve attached from which fluid (*e.g.* water or fuel) can be tapped.
13.	Flue gas	When fuels are burned there remains, besides ash, a certain number of gas components. If these still contain combustion heat, they are called heating gases. As soon as they have conveyed their energy to the absorbing surfaces of a heat exchanger, they are called flue or stack gases.
14.	Condensate	Liquid hydrocarbons produced with natural gas, separately by cooling and other means
15.	Approved Work Programme and Approved Budget	A work programme or Budget approved by the Management Committee pursuant to the provisions of this Contract.
16.	Asset	It refers to an entity that is involved in production activities from the existing wells and transportation of oil

		and gas on onshore plants.
17.	Basin	A Depression in the earth's crust where sedimentary materials are accumulated over the years. With reference to the Company it refers to the entity that is involved in exploration related activities.
18.	Block	Area identified in a field which is offered by the Government of India to prospective bidders under New Exploration Licensing Policy, for the purpose of exploration of oil and gas.
19.	Delineation well	Delineation well refers to the well drilled in unproved area to determine the boundaries or the extent of reservoir.
20.	Development	Following discovery, drilling and related activities necessary to begin production of oil or natural gas.
21.	Development well	A well drilled for the purpose of increasing the production of oil/natural gas from an established field.
22.	Directorate General of Hydrocarbon	An organization, including its successors under the Ministry of Petroleum and Natural Gas.
23.	Hermetical testing	Hermetical testing refers to the closed cycle pressure testing of casings of wells completed by pumping water at steady rate to detect leakage before handing over the well for production testing
24.	Exploration	Searching for oil and/or natural gas, including topographical surveys, geological surveys, seismic surveys and drilling wells.
25.	Exploratory well	A Well drilled for the purpose of searching for undiscovered Petroleum accumulations on any geological entity (be it of structural, stratigraphic, faces or pressure nature) to at least a depth or stratigraphic level specified in the Work Programme.
26.	Management Committee	The Committee constituted pursuant to Article 6 of PSC.
27.	Minimum Work Programme	With respect to each Exploration Phase, the Work Programme specified in the production sharing contract.
28.	New Exploration Licensing Policy (NELP)	New Exploration Licensing Policy was formulated by the Government of India in 1997-98 to provide a level playing field in which all the parties may compete on equal terms for the award of exploration acreage. This was for accelerating the pace of hydrocarbon exploration in the country through which various blocks including deep-water acreages were offered for competitive bidding.
29.	Object	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.
30.	Participating Interest	In respect of each party constituting the Contractor, the undivided share expressed as a percentage of such Party's participation in the rights and obligations under the PSC.
31.	Petroleum	Crude Oil and/or Natural Gas existing in their natural condition but excluding helium occurring in association with Petroleum or shale.
32.	Production Testing	Tests in an oil or gas well to determine its flow capacity at specific conditions of reservoir and flowing pressures.

		This Phase occurs after successful exploration and development drilling from which hydrocarbons are drained from an oil or gas field.
33.	Prospects	Prospects indicate the areas of hydrocarbon accumulation.
34.	Reservoir	A naturally occurring discrete accumulation of Petroleum.
35.	Rig Days	No. of days for which rigs were in operation/available during a particular period.
36.	Rigs	An assembled equipment used for drilling a well bore.
37.	Shot hole	For conducting the seismic surveys, shot holes of pre-determined depths are drilled for laying the explosives which are detonated to generate shock waves known as 'seismic waves'.
38.	Spud	Process of starting the well drilling process by removing rock, dirt and other sedimentary material with the drill bit.
39.	Well	A borehole, made by drilling in the course of Petroleum Operations, but does not include a seismic shot hole.
40.	Work Programme	A work programme formulated for the purpose of carrying out Petroleum Operations