

Chapter 5: Deployment of Vessels

Optimum deployment of vessels (hired/owned) for earmarked duties is necessary for economic, efficient and effective operation of marine logistics. Audit analysed the deployment of vessels by the Company to assess whether the deployment was optimum. The audit findings are given in the succeeding paragraphs.

5.1 Non-implementation of recommendation on scheduling of vessels led to increase in the cost of logistic operation

The Company appointed (April 2011) M/s Peterson SBS Ltd, UK as Consultant to suggest the best method of scheduling the vessels to achieve optimum utilisation and economic operation. The Consultant observed that the existing system was not based on a fixed schedule, but was a reactive response to the demands from various duty stations. The Consultant concluded that in the absence of fixed schedule, the installations were not aware of the schedule of arrival of vessels and therefore, they were not in a position to discharge or backload¹⁶ the cargo upon arrival of vessels. The Consultant recommended (September 2011) implementation of a fixed sailing schedule and division of offshore regions into smaller and more manageable regions (clusters). This recommendation was expected to reduce the turnaround time per voyage through reduction in number of visits and more centralised routings.

The Company assessed the requirement of vessels for the period after April 2012, based on the recommendations of the Consultant¹⁷. However, Audit observed that the Company had not implemented the fixed scheduling of vessels and continued with the practice of dispatching materials on the basis of daily requirements. Another Consultant, M/s McKinsey appointed by the Company¹⁸ had also recommended (April 2016) fixed scheduling of vessels for delivery of materials to the rigs and platforms and suggested setting up a seven days 'look ahead' plan for optimizing the usage of vessels.

During each trip, PSVs visited multiple duty stations (installations/ rigs) to deliver cargo/ take backload. Average trips undertaken by the supply vessels were 1400 per year. Audit test checked the voyage report details to assess the number of times vessels visited the rigs during 2016-17, which is presented in Chart 3 below:

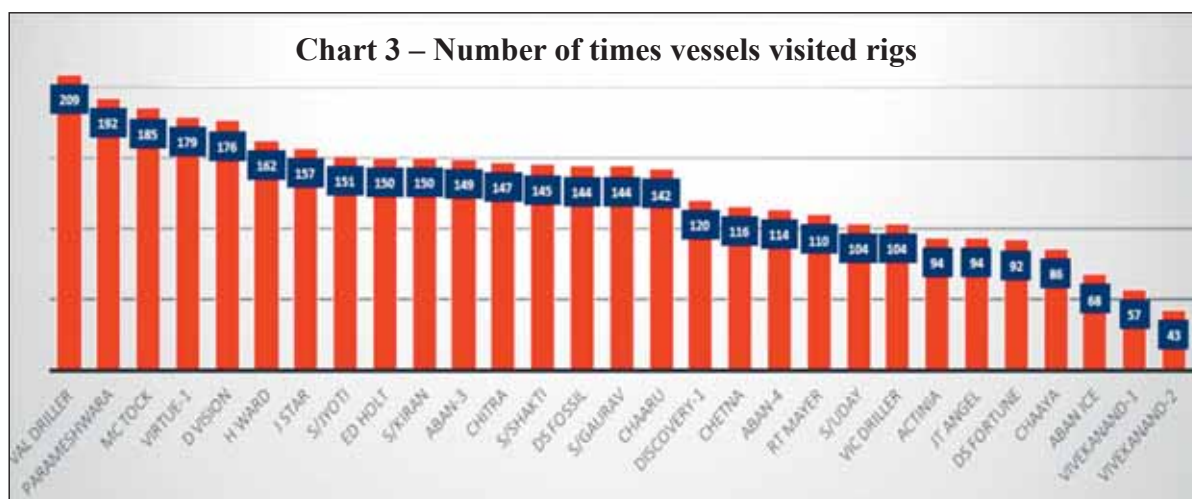
The number of visits of vessels per offshore rig per week ranged from 1.56 to 4.01 for 29 rigs with an average of 2.66. As compared to this, in the European waters where similar types of rigs are engaged, the average visit of vessels per rig per week¹⁹ was 2 to 2.50. The trips operated by ONGC in excess of the standard prescribed for rigs in European waters were 523 as given

¹⁶ Backload means undelivered cargo, scrap brought back by vessels from offshore duty stations to shorebase

¹⁷ The Consultant had worked out a requirement for 2011-12 at 66 vessels for 47 duty points (34 Rigs and 13 Platforms) in Western Offshore

¹⁸ The Consultant was engaged for improving 'Operational Efficiency and Cost Optimization for ONGC' in April 2016

¹⁹ M/s.Peterson SBS Consultant report



in **Annexure-III**. The indicative cost to the Company of these trips for the year 2016-17, considering the day rates of PSVs and the cost of HFHSD supplied by the Company for these additional trips was ` 376.10 crore as given in **Annexure- IV**.

The rigs have an inbuilt capacity for storing fuel and water. The storage capacity should have been considered while fixing the quantity of fuel and water to be supplied by each vessel. Audit assessed the requirement of vessel visits considering the fuel quantity that could be stored by rigs. Audit observed that against 301 visits required, the actual number of visits to deliver fuel was 2,875 in the year 2016-17. The details are at **Annexure- V**.

Management stated (June/September 2017) that cluster-wise clubbing of cargo was already in place²⁰ and that the Non-Productive Time (NPT) had reduced significantly. The vessels were also assigned duties for inter-field transfer of tools, delivery of potable water, drill water, cement, barite²¹ and HFHSD. These transfers and deliveries, which were not one-time jobs, increased the visits of vessels to the rigs/platforms.

Audit further observed that the scope of clusters mentioned by the Company consisted of fields²² whereas the ‘cluster’ as per the Consultant’s report comprised process platforms and drilling rigs. Management’s reply was silent on non-implementation of fixed scheduling of vessels as recommended by the Consultant. There was increase in duration of non-productive time of rigs from 39 days in 2015-16 to 224 days in 2016-17. Further, test check of voyage reports for the quarter April-June 2015 indicated that instances of transfer of bulk cargo from one rig to another were rare.

Audit recommended that Management may introduce fixed scheduling of vessels and improve the planning for prompt delivery of required cargo in coordination with the duty stations/users, thereby avoiding redundant vessel trips.

²⁰ like MH North Cluster; MH South Cluster and D1 cluster; Tapti Cluster; B& S Cluster involving BLQ I and II and B 193, Neelam and Heera Cluster and D1 cluster; Porbander Cluster

²¹ Barite is a mineral commonly used as a weighing agent for drilling fluids

²² Geographical area having a number of producing oil/gas wells and offshore installations

During exit conference (March 2018) with Ministry/Company, Management stated that Offshore Logistics Management (OLM) software was being implemented as part of the SAP system. A Committee was formed to examine the vessel scheduling software and its implementation which would take care of vessel scheduling requirements.

5.2 Deployment of Platform Supply Vessels (PSVs) for standby duty

PSVs are specifically designed to supply cargo to drilling rigs and offshore platforms. OSVs are primarily used for standby duty and occasionally for supply duties. PSVs are costlier to hire as compared to OSVs. The details of deployment of PSVs for various operations during the period 2012-13 to 2016-17 are given below.

Table 5.1: Table showing the PSV deployment hours for various operations

| Year | Standby duty | | Supply duty | | Duty with Modular Rigs ²³ | | Downtime | | Total | |
|---------|--------------------------|--------------------------|-------------|--------------------------|--------------------------------------|--------------------------|-------------|--------------------------|-------------|--------------------------|
| | No. of PSVs [^] | Percentage of deployment | No. of PSVs | Percentage of deployment | No. of PSVs | Percentage of deployment | No. of PSVs | Percentage of deployment | No. of PSVs | Percentage of deployment |
| 2012-13 | 3.33 | 31.17 | 6.45 | 60.26 | 0.31 | 2.94 | 0.60 | 5.62 | 10.69 | 100 |
| 2013-14 | 1.69 | 17.41 | 6.01 | 62.04 | 1.67 | 17.26 | 0.36 | 3.30 | 9.73 | 100 |
| 2014-15 | 3.52 | 25.51 | 8.32 | 60.21 | 1.00 | 7.24 | 0.97 | 7.04 | 13.81 | 100 |
| 2015-16 | 7.99 | 36.80 | 12.16 | 56.02 | 0.63 | 2.91 | 0.93 | 4.27 | 21.71 | 100 |
| 2016-17 | 7.74 | 37.78 | 11.28 | 55.06 | 0.00 | 0.00 | 1.47 | 7.16 | 20.48 | 100 |

Source: Annual report of Nhava Supply Base;

[^]Number of vessels is in fractions due to their partial availability in a particular year.

PSVs are specially designed to supply cargo to offshore installations/rigs. The Consultant, M/s Peterson SBS, had recommended (September 2011) that all standby support should be provided by OSV vessels thus making the PSVs available for supply duty. It was observed that though the availability of PSVs increased from 10.69 (2012-13) to 21.71 (2015-16), the supply duty hours declined from 62.04 *per cent* (2013-14) to 55.06 *per cent* (2016-17). The cargo loaded remained stagnant during 2012-13 to 2015-16 with less than 10 *per cent* variance.

Audit observed that the standby duty hours of PSVs increased from 17.14 *per cent* in 2013-14 to 37.78 *per cent* in 2016-17. However, as observed from the Annual report of NSB, the utilisation of other type of vessels (OSV/AHTS) for standby duty varied from 87.05 *per cent* of total available hours of vessels in 2012-13 to 74.15 *per cent* in 2016-17. Considering the difference in charter hire day rates of PSVs and OSVs, Audit observed that the extra cost of logistic operations to the Company due to deployment of PSVs for standby duty during 2012-13 to 2016-17 was ₹181.72 crore (**Annexure VI**). Audit also observed that the Company incurred idle rig cost of ₹395.28²⁴ crore during 2012-13 to 2016-17 for want of logistic and materials even while it deployed PSVs for standby duty.

²³ Compact and light weight rigs mainly used for work over operations for offshore area

²⁴ Details of idle rig cost (for want of logistics support) charged to Profit and Loss account – data furnished by the Company

Management stated (September 2017) that standby function was an important one and availability of a vessel at all times was more important than the kind of vessel deployed. Management, however, assured that remedial steps would be taken by assigning OSVs for standby duty.

Audit recommended deploying PSVs for supply duty in place of OSVs as the latter are better suited for standby duty.

Ministry accepted the Audit recommendation and stated (December 2017) that the mismatch between PSVs and OSVs would be addressed in future.

5.3 Higher Turnaround Time of vessels at Western Offshore

Turnaround Time (TAT) of vessels at offshore is the time taken by the vessel for one trip commencing from sailing of vessel from port after loading of cargo to the return of vessel at port after delivery of cargo to the installations. The field spread of western offshore which is served by vessels from Nhava Supply Base is as below:



The required TAT at various hydrocarbon fields as assessed by the Company is as under:

Table 5.2: TAT norm of vessels at offshore of the year 2016-17

| Area/field | Distance from NSB (in nautical miles) | Turnaround time for one trip based on Company's assessment (in hours) | Average TAT at Port (in hours) | TAT at offshore (derived) (in hours) | TAT at offshore (in days) |
|--|---------------------------------------|---|--------------------------------|--------------------------------------|---------------------------|
| A | B | C | D | E=C-D | E/24 |
| Tapti | 132 | 83.78 | 15.58 | 68.2 | 2.84 |
| Kutch | 383 | 150.71 | 15.58 | 135.13 | 5.63 |
| Bombay High North (BHN) | 107 | 77.11 | 15.58 | 61.53 | 2.56 |
| BHS, Neelam & Heera, Bassein & Satellite , D-1 | 80 | 61.43 | 15.58 | 45.85 | 1.91 |

Source: Extract of ONGC Executive Committee Agenda

The actual TAT taken by PSVs as against the required TAT at offshore assessed by the Company during the period 2012-13 to 2016-17 is tabulated below:

Table 5.3: Actual TAT of Platform Supply Vessels at offshore

| Particulars | Required TAT based on Company's assessment | Actual TAT | | | | |
|---------------------|--|------------|---------|---------|---------|---------|
| | | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
| Average TAT in days | 1.91 to 5.63 | 7.68 | 5.08 | 6.08 | 8.04 | 8.23 |

Source: Monthly Reports of NSB

The actual TAT of PSVs at offshore was higher than the required TAT assessed by the Company and showed an increasing trend. Audit observed that the main reason for the higher TAT was utilization of PSVs for standby duties and excess trips of PSVs due to non-implementation of the system of fixed scheduling of vessels as already pointed out in paragraphs 5.2 and 5.1 respectively. The standby duty as percentage of total PSV deployment hours is indicated below:

Table 5.4: PSV standby duty as percentage of PSV deployment hours

| Particulars | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|--|---------|---------|---------|---------|---------|
| PSV standby duty as a percentage of total PSV deployment hours | 31.17 | 17.41 | 25.51 | 36.80 | 37.78 |

Source: Annual Report of NSB

Ministry stated (December 2017) that ONGC had assured that the mismatch between PSV/OSV would be addressed in future tenders. During Exit Conference with Ministry (March 2018) Management stated that Offshore Logistics Management (OLM) software was being implemented as part of SAP system. A committee was formed to examine vessel scheduling software and its implementation which would take care of the vessel scheduling requirements.

5.4 Sub-optimum utilization of deck cargo space of Platform Supply Vessels

The Company hired PSVs exclusively for cargo supply duty. The tenders for PSVs prescribed a minimum clear deck space area of 500 square meters for carrying deck cargo. The operator was required to mention in their bid, the actual clear deck space area of their contracted vessel as against the minimum requirements in the tender. Review of deck cargo utilization indicated the following:

5.4.1 Western Offshore

The utilization of deck space is entered in the voyage reports by NSB. Audit reviewed the voyage reports on test check basis for the month of May 2015. It was observed that, as against the deck space mentioned in the contract document, NSB adopted a lesser clear deck space area in ten out of 22 PSVs deployed during that month. Out of these ten vessels, in four cases, the deck space was lesser than the eligibility criteria of 500 sq.mt.

This resulted in the voyage reports indicating a higher utilisation of deck space than the actual. Audit observed that if deck space specified in the bid by the bidder had been considered, the actual utilization of deck space would have been lower than the utilisation reported by NSB in their voyage reports and adopted for evaluation of performance of Offshore Logistics Group (OLG). NSB invariably showed 100 *per cent* utilization of deck cargo space. The Company informed that the deck space planning was done by Tally clerk (under stevedoring contract) with Master of the vessels and was dependant on the requirements on that particular day.

Audit also observed that the Consultants, M/s. Asian Supply Base (June 2006) and Peterson SBS (September 2011), had suggested containerization and utilization of Cargo Carrying Units (CCUs) for improved deck space utilization, quicker vessel loading/ unloading and for safe operations. In a meeting chaired by the Chairman & Managing Director (CMD) of the Company (January 2015), Director (Offshore) had opined that CCUs had to be utilized for sending material from NSB, as was being used by private contractors like Schlumberger, Sundowner who were also sending their material from NSB. However, the Company was not utilising CCUs.

Management did not offer (June/September 2017) any comment on the audit observations on reckoning of lower deck space area than specified by the operator in the contract. It stated that while loading plan was finalised by scheduling personnel of logistics group of the Company, the deck-map for loading of cargo was given by master of the vessel to Tally clerk who supervised the loading of vessels.

The reply is not acceptable since deck map prepared by the Master of the vessel and adhered to by the Tally clerk did not result in optimum utilisation of deck space.

5.4.2 Eastern Offshore

The utilization of deck space in KSB was measured in terms of weight of cargo i.e. tonnage. Audit observed that the average deck cargo loaded per voyage as against the deck capacity (MT) on two chartered PSVs in Eastern Offshore viz. SCI Nalanda (February 2014 to January 2016) and Lewek Altair (March 2015 to March 2017) was only 9.81 and 7.98 *per cent* respectively.

Management (July and September 2017) stated that when a vessel is loaded with bulk cargo, it could not avail maximum deck capacity in terms of weight. The parameter for optimum utilization of deck is space and not weight, since deck cargo is generally of lesser weight but occupied more space. Information on deck space utilization was available in the Daily Progress Report (DPR) of vessel and most often the deck space utilization was 90 to 100 *per cent*.

Management's contention about deck space utilisation of 90 to 100 *per cent* based on vessel DPR would have been acceptable had the DPR recorded the deck space utilisation at the end of each loading. But, it is done at a particular point of time and not necessarily at the end of loading.

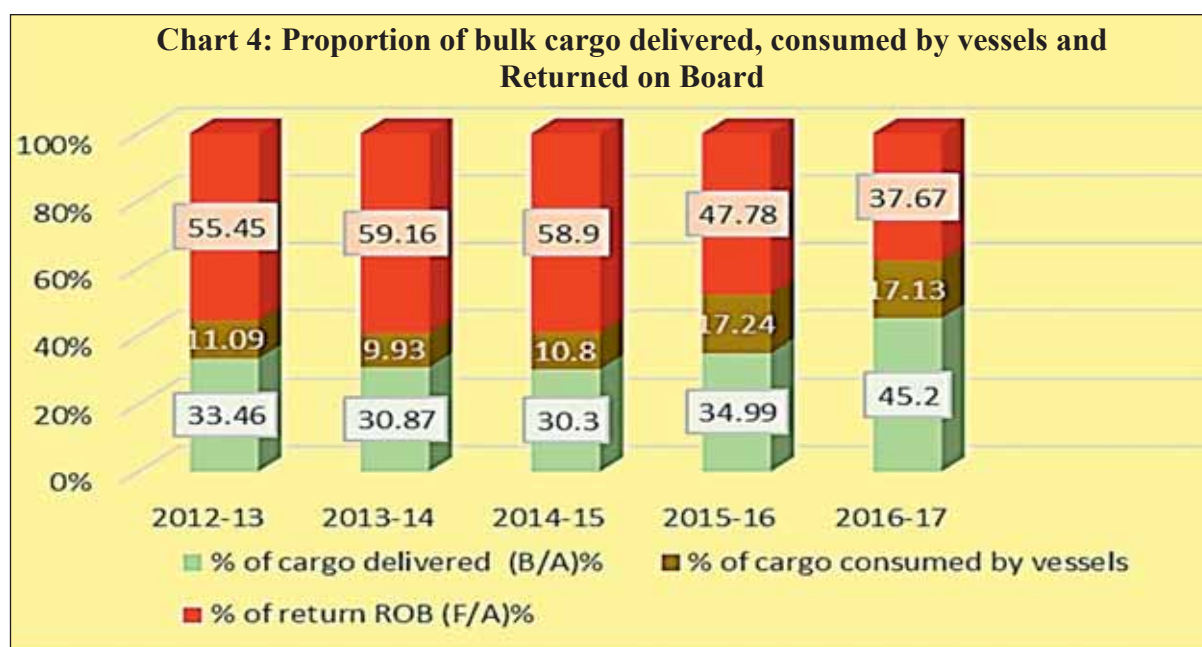
With regard to Para 5.4.1 and 5.4.2 Audit recommended:

- Use of CCUs for optimum deck space utilization may be considered. Deck space to be provided as per conditions of the contract should be reckoned for certification of deck space utilization and the certification should be done by the officials of the Company to make it more effective.
- To implement systems to ensure that both tonnage and deck space are taken into consideration while measuring the utilisation of the vessels and use of deck cargo planning software.

Ministry accepted the Audit recommendations.

5.5 Undelivered bulk cargo

Apart from deck cargo, the vessels also carry bulk cargo which comprises HFHSD, potable water, drill water, cement and barites, Synthetic Oil Base Mud (SOBM) and base oil. Undelivered cargo is returned as ‘Remained on Board’ (ROB). The existence of substantial ROB cargo was commented in Para 4.1.7.4 of CAG report No. 4 of 2002 and Para 2.3.2 (viii) of CAG report No. 6 of 2005. It was pointed out in these Reports that 36 to 58 *per cent* of bulk cargo loaded into the vessels were returned to NSB. In response, Ministry had stated (December 2003) that barites and cement were not regular consumables like fuel and water and hence it was not possible to ascertain the average monthly or daily requirement at a particular installation. Further, Ministry stated (December 2004) that as per industry practice the stability of vessel was maintained by cargo and hence the entire cargo could not be delivered.



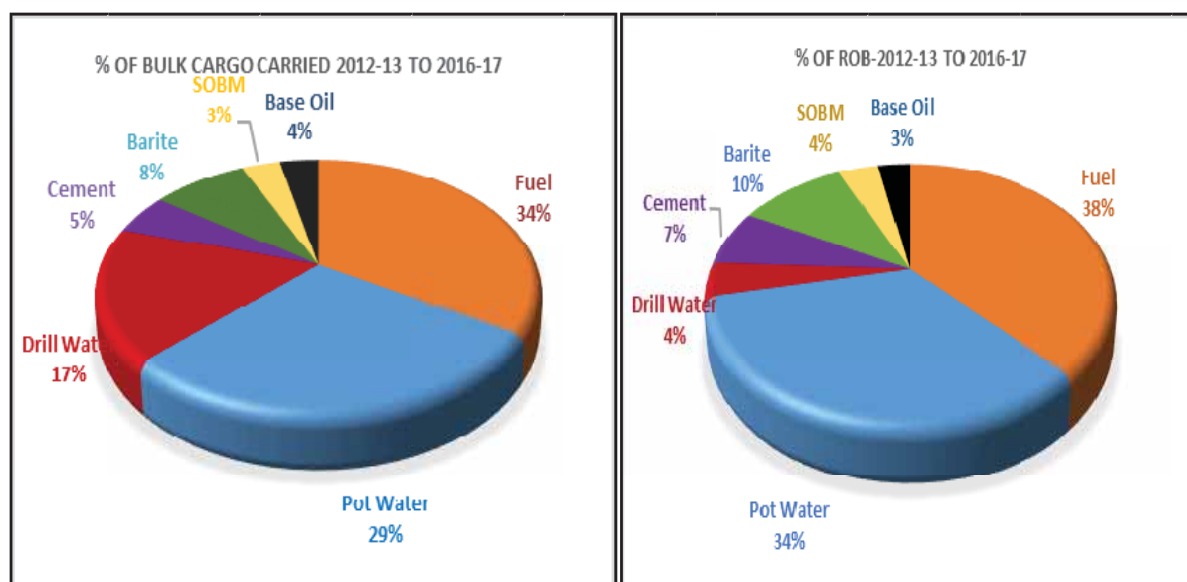
Analysis of undelivered quantity of bulk cargo (2012-13 to 2016-17) in audit revealed that out of every 100 tons of bulk cargo sent from NSB, an average of 35 *per cent* was delivered to installations, 13 *per cent* of total bulk cargo carried comprising of water and fuel was consumed

by the vessels and the remaining 52 *per cent* of bulk cargo carried was brought back to NSB as ROB as indicated in **Chart 4**.

Audit observed that bulk cargo was loaded onto the vessels irrespective of its requirement at the installations which the vessel was slated to visit during a particular voyage. This resulted in non-delivery of substantial bulk cargo. M/s Peterson, UK, the Consultants, engaged (April 2011) by the Company to study the ‘Optimization of OSV fleet strength and Supply Chain Management’ confirmed (September 2011) that all vessels were being loaded with bulk cargo up to 90 *per cent* where possible and that substantial part of the bulk cargo carried by supply vessels comprised of back and forth movement of bulk ROB. Thus, the excess loading of bulk cargo on vessels led to longer TAT at port and higher fuel consumption during voyage.

During 2012-13 to 2016-17, more than 60 *per cent* of fuel and potable water carried by vessels was ROB after adjustment for consumption by vessels. The undelivered cargo of cement and barite was to the extent of 70 *per cent* and 64 *per cent* respectively.

Chart 5: Percentage of Bulk cargo carried and ROB from 2012-13 to 2016-17



The value of stock of fuel in the vessels as on 31 March 2017 was ₹ 64.49 crore. Audit also observed that bulk cargo remaining in the vessels was not considered while planning the procurement of materials.

Management stated (June/September 2017) that bulk cargo was loaded as per the capacity of the vessel, loading berth available at jetty, stability and requirements of the field for which next voyage of the vessel had been planned. The vessels also carried some un-pumpable quantity that remained in the vessel always. The vessels also consumed water and HFHSD for remaining operations and the cargo continued to remain in the vessels on returning to the base. It further stated that efforts were being made to dispatch the bulk quantity nearer to actual requirement and minimize the ROB. As a result, ROB had reduced to 38 *per cent* in 2016-17 from 56 *per cent* in 2012-13 and hoped that it would be reduced further.

Audit noted that the substantial ROB of bulk material, particularly fuel and water, indicated that loading of bulk cargo in the vessels was in excess of the requirement at the installations. There was also wide variation in the quantity of undelivered cargo (ROB) of same vessel and also between vessels of similar capacities. The justification on the basis of the need for stability of vessels as stated by Ministry was not correct since vessels were designed to maintain stability even without any cargo on board. Ballast water in general is used to maintain stability in the absence of cargo. The reduction in percentage of ROB during the period from 2015-16 to 2016-17 was mainly due to reduction in bulk cargo carried by the vessels and increased consumption of fuel and water by vessels.

Audit recommended that loading of bulk cargo be restricted to field requirements and to meet consumption by the vessel so as to avoid unproductive carriage of ROB, reduce TAT of vessels at port and reduce fuel consumption.

Ministry accepted the Audit recommendation and advised (December 2017) the Company to prepare Standard Operating Procedure (SOP) for supply of material for offshore operations and ensure implementation thereof.

5.6 Higher downtime of new vessels operated on nomination basis through SCI

The Company did not have a separate marine cadre and therefore, the Company operated its own vessels through O&M contract. Pending finalization of a long-term contract, the Company awarded O&M contract to SCI on a short-term nomination basis. Seven of the own vessels delivered during 2013-14 to 2016-17 were under O&M contract with SCI.

Audit observed from the Annual reports of NSB, that the downtime of these seven new vessels was higher than that of the old chartered vessels, mainly due to operational breakdowns. Further, the cost plus contract entered into with SCI on nomination basis did not provide for performance linked penalties. In the absence of such penalty clause in the contract, it was not possible to enforce the O&M contractor to ensure availability of vessels. SCI deployed their own employees as crew for their fleet on charter with the Company while the temporary/contractor's crew were deployed for the ONGC's vessels under SCI's O&M contract leading to lower availability of vessels. The Consultant (i-maritime) appointed by the Company had also recommended (March 2014) that the Company may develop a core team of marine professionals to develop vessel related competency and to supervise the quality of service provided by the O&M contractors.

Delay in arranging spares in advance by SCI also resulted in more time taken for vessel repairs. As per regulatory requirements, even when the vessels are in anchorage for repairs, etc. they are required to be manned and all the running equipment were to be maintained for operation. The excess downtime of new vessels as compared to chartered AHTS, OSV and PSV resulted in extra expenditure on 'standing cost of vessels' by ₹7.36 crore during 2013-14 to 2016-17.

Management attributed (June/September 2017) this to the teething problems of new vessels during 2013 to 2016 and SCI's inability to employ permanent crew due to the limited contract period. It assured that induction of new people to strengthen Repairs and Maintenance section was in progress and the performance was likely to improve progressively.

Management reply needs to be viewed in the light of the fact that the downtime of new vessels (16 *per cent*²⁵) was higher than that of the chartered vessels (11 *per cent*) even after lapse of more than three to four years after induction. A technical audit²⁶ of new vessels pointed out failure to monitor equipment conditions as per schedule and non-adherence to preventive maintenance schedule by the O&M operator. The Company was unable to finalize a long-term contract for O&M of owned vessels even after ten years of operations of such vessels.

5.7 Non-monitoring of HFHSD consumption by vessels

The Company supplied HFHSD free of cost to hired vessels without imposing any ceiling for their consumption. The indicative cost of HFHSD consumed by both the owned and chartered vessels during one year (2016-17) amounted to ₹642 crore. In case of hired PSVs, the fuel consumption amounted to 53 *per cent* of the hiring cost.

Audit observed wide variation in consumption of HFHSD by similar type of hired and owned vessels deployed for similar types of duties. The consumption of hired OSVs at 6.69 KL per day was higher than that of owned OSVs at 1.91 KL to 4.47 KL per day. While the variance could be attributed to difference in engine power and brake horse power capacities (BHP), Audit observed that no analysis of consumption of HFHSD by the vessels was carried out while evaluating the bids for hiring of vessels. Further, the Company did not record actual consumption of HFHSD, but arrived at the consumption figures by deducting from fuel loaded on the vessel at the time of commencement of voyage, the fuel delivered to installations plus fuel remaining on Board. This system of accounting prevented proper assessment of the fuel efficiency of vessels.

Further, the Company provided HFHSD free of cost to the vessels even during compensable²⁷ downtime. Audit observed that during the audit period (2012-13 to 2016-17) there was wide variation in fuel consumption ranging from 0.54 KL/day to 7.18 KL/day²⁸ during the compensable downtime.

In the past (2006/2009), external Consultants/Auditors²⁹ had suggested fuel consumption norms for different types of operation and maintenance of vessels. They further suggested carrying out periodic monitoring of fuel consumption, identifying reasons for abnormal consumption pattern and formulating remedial action plan.

²⁵ As per Annual report of Nhava Supply Base

²⁶ Technical audit carried out by Company once in two years to assess the status of health of equipments and systems of the vessels

²⁷ According to the contract provisions, one day in a month is allowed as compensable down time during which the vessel is eligible for payment of charter day rates.

²⁸ Observed during test check at Eastern Offshore

²⁹ M/s. PCRA and M/s E&Y

Management stated (July/September 2017) that owned vessels were engaged predominantly on standby duties for longer spells and also for duties with Offshore Defence Advisory Group (ODAG). Ministry stated (December 2017) that the Company had agreed to do away with supply of HSHFD during downtime of the vessels.

Audit recommended that cost and consumption pattern of HFHSD by the vessels be included as a parameter in evaluation of the bids for hiring of vessels to protect Company's financial interest.

During the exit conference (March 2018), Ministry/Management accepted the Audit recommendation and stated the same would be implemented on pilot basis and based on the outcome, would be extended to all vessels.

5.8 Idling of rigs due to lack of Offshore Logistics Support

Audit observed that the Company could not mobilize requisite number of vessels in the Eastern Offshore during the period from 2012-13 to 2014-15. The ratio of number of vessels engaged to number of rigs was low at 1.24, 1.01 and 1.15 during the years 2012-13, 2014-15 and 2016-17, respectively vis-à-vis the norm of 1.4 vessels per duty station. The downtime of vessels during the years 2012-13, 2014-15 and 2016-17 at 7.82 *per cent*, 7.80 *per cent* and 8.33 *per cent* respectively was higher than the normal period of 5.11 *per cent* allowed under the Charter Party³⁰. Further, the owned and chartered rigs operating in Eastern Offshore waited for vessels for a period of 2053.01 hours during the five years from 2012 to 2017 (the owned rigs waited for 496.67 hours and chartered rigs for 1556.34 hours). This resulted in idle hire-charges of chartered rigs amounting to ₹30.84 crore.

Management stated (July and September 2017) that requisite vessels could not be hired in initial years due to absence of age criteria for vessels and situation had improved with introduction of 21 years as age criteria in 2014-15. Further, the Company proposed to enter into a Service Level Agreement (SLA) with the Asset³¹ as marine operations at Eastern offshore area was poised to increase. During the Exit Conference (October 2017), the Company stated that it would enter into SLAs with all users.

³⁰ One day per month which can be accumulated upto 6 days in a half year and 20 days dry-dock period in span of three years.

³¹ Business unit that is involved in production of oil & natural gas from the existing wells and transportation of oil and gas for processing and supply to consumer.

An Anchor Handling Tug cum Supply Vessel (AHTS)

