Chapter III
Diversification Activities

As part of its diversification drive, the Company ventured into Diamond mining in Panna in the State of Madhya Pradesh as well as establishment of Steel Plants, Power Plant, Pellet Plant and acquisition of a Sponge Iron Plant, etc. The audit findings on the various diversification initiatives taken by the Company are discussed in this Chapter.

3.1 Setting up of Integrated Steel Plant at Nagarnar in Chhattisgarh (NISP)

National Steel Policy, 2005 projected a compounded annual growth rate of 7.3 *per cent* of annual steel production during the period 2004-2020. To tap the opportunities of steel growth in India, the Company signed (August 2007) a Memorandum of Understanding (MoU) with Steel Authority of India Limited (SAIL) and Rashtriya Ispat Nigam Limited (RINL) for setting up of a Steel Plant through a Joint Venture (JV) Company. In a review meeting held (13 March 2008) by the Ministry of Steel, it was projected that it would require capital of ₹12,000 crore with debt-equity ratio of 2:1 (₹8,000 crore for debt and ₹4,000 crore towards equity) for establishment of a 3 MTPA Steel Plant. After discussing various options for setting up of the Plant, it was decided (13 March 2008) that NMDC may set up the Plant on its own in view of its adequate cash reserves and easy access to the primary raw material i.e. Iron ore. The Company informed (20 March 2008) the Ministry that the entire cost of the Plant would be met through its internal sources. As decided, the Board approved (July 2008) the appointment of MECON Limited as Consultant for preparation of Techno Economic Feasibility Report (TEFR) for the project. MECON submitted (December 2008) the TEFR for the following product mix of various capacities:

Table 3.1 – Product mix of the proposed Integrated Steel Plant at Nagarnar

Sl. No.	Product Description	Size (thickness *width) in mm	Annual production capacity in tons
1	Hot rolled plates	5-10*1030-1650 mm	4,00,000
2	Hot rolled plates	5-10*1030-1650 mm	4,00,000
3	API–5L quality plates upto 80 mm	6-12*1550 mm	5,00,000
4	Hot rolled plates	2-4*1030-1650 mm	2,00,000
5	LPG cylinders	2.0-3.15*1000-1665 mm	2,00,000
6	Hot rolled coils	1.6-10*900-1650 mm	9,46,000
7	High carbon steel	205-11.5mm	50,000
8	Silicon steel	1.81-3.5 mm	1,00,000
9	Automotive steel		1,00,000
	Total		**28,96,000**

Subsequently, the Company awarded (March 2009) the work of carrying out due diligence of TEFR submitted by MECON to PricewaterhouseCoopers who submitted the due diligence Report in May 2009. Accordingly, NMDC Board accorded (January 2010) approval for setting up of the Integrated Steel Plant at Nagarnar, Chhattisgarh and

sanctioned an estimated amount of ₹15,525 crore, including interest during construction (IDC) of ₹403.65 crore with scheduled completion by March 2014. The Company was in possession of 884.189 hectares (2,184.83 acres[27]) of land for the project at Nagarnar. Basic raw materials required for the Plant were Iron ore, Coking Coal, Lime and Dolomite. Bailadila Deposit-4 was identified as a source for Iron ore. Coking Coal was planned to be imported from China, New Zealand and Australia. Lime and Dolomite were planned to be sourced domestically. Forest Clearance Stage-II involving the forest land of 36.483 hectares was received by May 2011.

The Company was new in the field of establishment of a Steel Plant and a DPR would have given a better insight and control to the Company in implementation of the project. The Detailed Project Report (DPR) is normally prepared based on the data and results obtained from studies. All vital aspects are covered in much greater detail in DPR. The basic difference between the TEFR and DPR is the level of accuracy and degree of detail.

We observed that the Company proceeded with the execution of project and awarded various packages based on the tentative details given in TEFR without preparing a DPR. As a result, the estimates were revised upwards and technical specifications were modified after the tenders were floated. This led to delay in tendering and award of packages as detailed in subsequent paragraphs.

The Management stated (March 2018) that TEFR provided a conceptual framework with assessment of available technologies, preparation of general layout with requirement of raw material, land, water, power and other infrastructure and would be the basis for investment decision. With passage of time, the concept of preparation of DPR had lost its relevance, as considerable time lapses on its preparation which ultimately leads to increase in project time schedule and thereby cost itself.

The contention of the Management that preparation of DPR leads to increase in time schedule and cost of the project is not acceptable as the DPR helps in effective control and monitoring of the project implementation. The TEFR is prepared to assess whether the proposed project is technically and economically viable and forms the basis for taking a decision to take up the project. The DPR provides details like scope of work, estimated cost of the project, details of packages, technology to be opted, technical specifications, etc., which are necessary for execution of the project along with the timelines for completion of each packages. A clear distinction of the purpose between TEFR and DPR, was imperative in the interest of the Company. The same was substantiated by the fact that the technical specifications were subsequently modified, cost estimates were revised upwards and a number of packages initially not envisaged at the time of TEFR were added later on and this had finally led to delay in awarding/execution of majority of the packages.

[27] *One hectare is equivalent to 2.471 acres*

While accepting our contention, the Ministry stated (July 2018) that preparation of DPR might be possible for simple projects where complexity was not there. Though DPR gives more in-depth estimate, it was difficult to finalize the scope, specifications etc., some of the facilities were mostly dependent on other packages, operational philosophy, maintenance and strategy. Further, some private players executed their expansion projects/new projects based on TEFR.

Had the Company prepared the DPR the cost and time overruns could have been minimized or avoided as discussed in the succeeding paragraphs.

3.1.1 Appointment of MECON Limited as Consultant for Engineering Services

The Company resolved in its 404 Board meeting (24 July 2008) to engage MECON on lump sum basis for Engineering, Procurement, Construction Management and Project Management (EPCM) services on nomination basis. Accordingly, consultancy contract was awarded (23 February 2011) at a cost of ₹351 crore with a completion period of 60 months from the effective date of 25 March 2009 i.e., March 2014. The terms of contract, *inter alia*, stipulated that 40 *per cent* of the contract value amounting to ₹140.40 crore would be paid in 60 monthly installments from the effective date and the balance amount of ₹210.60 crore (60 *per cent*) was to be paid on the achievement of the milestones set for completion of the engineering services. Against this, the Company had paid the entire 40 *per cent* payment of ₹140.40 crore towards monthly installments by March 2014 and as against ₹210.60 crore for 60 *per cent* milestone payments, the Company had paid ₹173.80 crore upto August 2017.

3.1.2 Performance of Consultant

As per the TEFR, the placement of orders for major technological packages was to be completed within 19 months of the effective date, and this was to be reckoned as the zero-date of the project. The project was to be commissioned in 42 months time from the zero-date. Further, awarding of auxiliary packages was to be completed within 17 months from the zero date. Accordingly, major packages were to be awarded by October 2010 (i.e. 19 months from the effective EPCM contract date of March 2009) and auxiliary packages were to be awarded by March 2012. The Company placed 44 work orders (March 2017) out of which 38 work orders valuing ₹5 crore and above were selected and examined by us as detailed below:

Table 3.2 – Details of packages awarded for construction of Nagarnar Integrated Steel Plant

Category of package	Total number of contracts	Value (₹ in crore)	No. of contracts selected	Selected contracts value (₹ in crore)
Major packages	9	11878.47	9	11878.47
Auxiliary packages	14	2316.23	13	2313.12
Infrastructure packages	7	311.69	5	304.62
Enabling packages	11	236.94	8	231.28
Railway packages	3	446.39	3	446.39
Total	**44**	**15189.72**	**38**	**15173.88**

The details of dates of issue of tender and award of contract, delay in award of purchase orders together with reasons for delay with reference to above implementation schedule in respect of 38 selected purchase orders are given in **Annexure-VII.**

3.1.3 Delay in awarding of major packages

The award of nine major packages was to be completed by the month of October 2010. It was observed that the Company could not float even a single Notice Inviting Tenders (NIT)/ Limited Tender Enquiry (LTE) till April 2010 though action for preparation of cost estimates and finalization of tender specification work was initiated way back in July 2009. The same were issued during the period from April 2010 to July 2011. Further, the Company placed purchase orders for nine major packages within a period of 9 months to 25 months post NIT/LTE. The delay was attributed to changes made to the Standard Bidding Documents, revision of cost estimates/price bids, changes in technical specifications, addition or deletion of certain facilities after discussion with prospective bidders, etc. The analysis of package-wise delay in placing the purchase orders is given in **Annexure-VII**. During the tendering stage, an amount of ₹1,211.80 crore was added to the estimated cost in respect of six out of nine packages on account of change in scope, change in volume/quantity, under-estimation. For instance, in case of Package-1 i.e. Raw Material Handling System (RMHS), estimated cost was increased by ₹279.35 crore due to change of specification of Wagon Tippler, Stream capacity and stock yard etc., and in respect of Package-2 i.e. Coke Oven Battery, the estimate was increased by ₹173.90 crore on account of increase in scope towards demineralisation water plant, pushing emission control system, refractories, etc. The fact that there was revision of estimates and technical specifications, addition/ deletion of facilities raises doubts on the efficiency and expertise in project formulation and cost estimation on part of the Consultant.

The Management/Ministry stated (March/July 2018) that it could get all the necessary clearances by February 2011. Accordingly, zero date was fixed as March 2011 with completion schedule of May 2015. Prior to clearances, as a parallel action, preparation of specifications and cost estimates for the major packages was done during 2009-10. All the nine major packages were finalized by May 2012 within 14 months from the zero date of the Project.

The reply is factually incorrect as the effective date of EPCM contract was declared as March 2009 and as per TEFR pre-ordering activities of major packages were to be completed within 19 months i.e., by October 2010 which should be reckoned as the zero date. As the major packages were finalized by November 2012, the time taken by the Company in awarding these packages was 44 months as against 19 months stipulated in TEFR.

3.1.4 Delay in award of auxiliary and other packages

The auxiliary packages were to be awarded by March 2012 i.e. within 17 months of the zero date. However, the Consultant floated NIT/EoI for these packages even till July 2016. Further, the Company took 5 months to 46 months for award of packages from the date of NIT/EoI (December 2010 and April 2017) as detailed in **Annexure-VII**. These delays were attributed to delay in finalization of specifications, revision of specifications, evaluation time taken by the Consultant/Tender Scrutiny Committee, retendering due to receipt of single bid, getting approval of Empowered Committee of Directors/Board where L1 prices were much higher than estimates, etc. During tendering stage an amount of ₹1,413.28 crore was added to the estimated cost of the packages on account of change in volume/quantity. For instance, in Power & Blowing Station package, there was increase in capacity of Steam Turbine & Generator, Electricals and Demineralised Water Plant etc., to the tune of ₹70 crore and in respect of Plant Power Distribution System package, due to change of technology of switch gears from Air Insulated Substation to Gas Insulated Substation facility, to the tune of ₹79 crore.

The Management stated (March 2018) that tendering of the auxiliary packages was to be planned based on the progress of execution of main packages as various inputs were required from the main technological package contractors to finalize the specifications for auxiliary packages. Further, some of the auxiliary/infrastructure packages were re-tendered due to poor response/ no bidders meeting the eligibility requirement/ high prices quoted by the L-1 bidder. The above processes took time in some of the tenders.

The TEFR envisaged awarding of auxiliary and other packages within 17 months from zero date. However, the works for these packages were awarded within a period ranging from 5 to 46 months. The delays could have been avoided had the Company prepared DPR which would have freezed the complete scope of work, technical specifications and cost estimates. Failure to prepare the DPR resulted in avoidable delays in tendering and award of the packages.

The Ministry stated (July 2018) that new facilities were added during tender stage considering ease of operations and maintenance of facilities. As such the observation made by Audit that failure to prepare DPR led to avoidable delay in tendering and award of packages was misleading, which is substantiated by the procedure followed in other steel PSUs where implementation of project was proceeded on TEFR basis.

The reply needs to be viewed in light of the fact that the total cost of auxiliary packages was revised from ₹1,557.05 crore to ₹3,333.30 crore indicating an increase of ₹1,776.25 crore. Of this, increase of ₹1,413.28 crore was towards change in volume/quantity of work. This indicates that inadequate projections were made in the TEFR. Had the Company prepared a DPR, the complete scope could have been more accurately estimated and the need for change of scope could have been avoided.

3.1.5 Revision of total project cost

The Board approved (January 2010) ₹15,525 crore as the project cost. However, in view of the increase in costs of awarded works, a proposal was submitted to the Board (December 2016) for approval of revision in cost estimates to ₹22,196 crore representing an increase of ₹6,671 crore (43 *per cent*) over the original estimate. The revision in estimated cost was on account of change in scope and increase or decrease of volume/quantity of work (₹3,842 crore) and price escalations, foreign exchange variations and change in duties and taxes (₹2,829 crore). The Revised Cost Estimate (RCE) was yet to be approved by the Board (March 2018). Further, the increase in volume/quantity of work included increase in the cost of External power transmission line from ₹70 crore to ₹404.96 crore (net increase of ₹334.96 crore) due to laying of 331 km length 400 KV line instead of 90 km length 220 KV line, Railway packages value from ₹134 crore to ₹557.71 crore (net increase ₹423.71 crore) due to increase of length from 40 km to 65 km and addition of new facilities at the behest of East Coast Railways, and Township packages from ₹300 crore to ₹1,870.27 crore (net increase ₹1,570.27 crore) due to inclusion of construction of quarters for all the employees (instead of 75 *per cent* of manpower as envisaged in TEFR) and cost towards public buildings like schools, hospitals and guest house.

The Management stated (March 2018) that the cost estimates were revised on account of firmed up prices with detailed final scope of work for awarded packages/ estimated cost for balance packages of various facilities which included technological/ auxiliary/ enabling packages, external infrastructure, townships, railway track & siding work, detailed engineering, consultancy fee & project management, land and site development, etc. In addition, RCE consisted of Interest during construction (IDC), contingencies, preliminary & pre-operative expenses, provision for price escalation on INR (Rupee) portion and foreign exchange variation, social commitment towards Rehabilitation and Resettlement (R&R), etc. RCE worked out to ₹22,610.35 crore which was yet to be approved by the Board.

The increase in cost estimates could have been restricted to change in taxes and duties and foreign exchange variations had the Company prepared the DPR.

The Ministry stated (July 2018) that audit observation is not clear as future changes in taxes and duties, and foreign exchange variations cannot be foreseen at initial stage.

While variations in cost estimations on account of volatile nature of taxes/duties and Foreign Exchange variations/fluctuations cannot be discounted, the major revisions on project cost estimates could have been minimized had the Company formulated a DPR.

3.1.6 Execution of Project

As per TEFR, the entire project (tendering, execution and commissioning) should be completed within 60 months i.e., by March 2014 (effective date being March 2009). In order to execute the project, the Company awarded two consultancy contracts viz., EPCM contract, awarded in February 2011, for tendering and awarding of packages, and Project Management and Construction supervision services (PMC) contract awarded in April 2012. Both the contracts were awarded to MECON. In line with the timeline stipulated in TEFR, the scheduled completion period of EPCM contract was March 2014. However, the scheduled completion period of PMC contract was provided upto March 2015 which was beyond the scheduled completion period of March 2014.

The PMC contract provided for payment of 40 *per cent* of the contract price (₹244 crore) amounting to ₹97.60 crore on monthly basis (from January 2011 to December 2014) from the effective date (07 January 2011) and the balance amount of ₹146.40 crore (60 *per cent*) to be paid on the milestone completion of the project. The Company so far (17 February 2018) paid ₹161.48 crore to the Consultant towards execution of PMC Contract which included ₹97.60 crore towards monthly payments without linking to actual progress.

3.1.6.1 Execution of major packages

The Company awarded nine major packages during the period from January 2011 to November 2012 with scheduled completion period between November 2013 and April 2015 as detailed in **Annexure-VIII**. We observed that, none of the major packages was completed (as on 31 December 2017) even after delays ranging from 32 months to 49 months beyond the scheduled completion dates. The physical progress achieved ranged between 85 *per cent* and 98 *per cent* except for Package-8 (Lime and Dolomite Plant) which was 45 *per cent* only. Submission and approval of civil/structural drawings was not completed in full for any of the packages. As per the latest Project Evaluation and Review Technique (PERT) network schedule prepared (December 2017) by the Consultant, these packages were expected to be completed by August 2019 in all respects. The delay in completion was attributed to slow progress on account of inadequate deployment of manpower and material, non-sequential supply of materials by suppliers and non-availability of work fronts. The Contracts contained penal clauses such as imposition of penalty/ LD upto a maximum of 10 *per cent* and risk and cost clause towards delay/lapses attributable to contractors. Action will be taken according to these clauses after completion of contracts based on delay analysis done by the Consultant. Major audit findings in execution of these packages are discussed in the subsequent paragraphs.

The Company did not offer (March 2018) any remarks on execution of major packages in respect of time delays.

The Ministry, while accepting the audit observation, stated (July 2018) that the delay in completion of such packages would be dealt with as per the provisions in the contract.

(a) Package–1 Raw Material Handling System (RMHS)

BHEL, the main contractor of RMHS package awarded the works relating to sub-packages of Conveyor and Junction house (to M/s. Tecpro Systems) and Civil and Structural works for buildings (to M/s Prasad & Co.). Due to stoppage of execution of Conveyor and Junction house work by M/s. Tecpro Systems in June 2013, BHEL divided the remaining scope of work into six sub-packages and re-tendered (December 2013) and awarded (between September and November 2014) to six different contractors. This took 17 months of time leading to overall delay in execution of works apart from slow progress of work due to inadequate deployment of manpower and material and non-sequential supply of equipment by the contractors.

The Management did not respond on efforts made to reduce the delays in re-tendering of unexecuted portion of Conveyor and Junction house work by M/s Tecpro.

The Ministry stated (July 2018) that untimely exit of M/s Tecpro to a large extent created mismatch/ unavailability of mechanical and structural design inputs which had delayed the finalization and award of subsequent multiple contracts against the Tecpro's scope of work despite best efforts.

(b) Package-8 Lime and Dolomite Calcination Plant

As per the contract (April 2013), the work was divided in parts and was to be executed by Consortium of Sinocalci Corporation, China, Chongqing Chuanyi Automation Co Ltd, China and Laxsons Automation Private Limited, Mumbai. As the work pertaining to supply of electrical equipment by Chongqing Chuanyi Automation Co Limited, China was not initiated by the contractor even after several reminders, the Company issued termination notice to the contractor in December 2015. The contractor contested against the termination notice and sought for arbitration. The work was transferred to another consortium partner (11 November 2016) viz. Sinocalci Corporation, China (supplier of mechanical works), without re-tendering. This process took nine months and was one of the main reasons for delay, apart from slow progress of work.

The Management stated (March 2018) that the delay was on account of delayed submission of credentials for similar works executed by Sinocalci and its scrutiny by MECON.

The Ministry stated (July 2018) that the delay would be appropriately dealt with at the time of final delay analysis as per the provisions of the contract.

3.1.6.2 Execution of auxiliary packages

Audit reviewed 13 auxiliary packages (like power blowing, compressed air system and water for supply to Plant and outside the Plant etc.) awarded during the period from November 2012 to January 2017. The scheduled completion period of these 13 packages ranged between December 2014 and July 2018 as detailed in **Annexure-VIII**. Of these, nine packages were to be completed by February 2017. It was observed (31 December 2017) that none of these nine auxiliary packages were completed even after a delay ranging from 10 months to 36 months. The physical progress achieved ranged between 68 *per cent* and 98.5 *per cent.* As per the latest PERT network schedule prepared (December 2017) by the Consultant, these packages were expected to be completed between August 2018 and April 2019 in all respects. Further, it was observed that the Company was to place orders for some of the packages like Ambient Air Monitoring System, Plant Wide Networking etc., and the time estimated for completion of these works as per PERT chart was upto March 2020. However, the Company had committed to the Ministry to commission the project by December 2017 which appeared to be unrealistic.

The Management stated (March 2018) that the delays were on account of inadequate resources and manpower deployed by contractor, delay in Engineering, delay in supply in sequential manner, wash out of coffer dam during construction of intake well and delay in making available the work fronts to contractors etc.

We observed that the delays on account of Engineering, non-sequential supply of material, making available the work fronts etc., are factors which were controllable in nature, and which could have been addressed or curtailed with proper co-ordination and monitoring by PMC Consultant/Company.

The Ministry stated (July 2018) that presently works in most of the packages were progressing at a good pace. Regular high-level meetings, discussions across the table between MECON and contractor, day to day follow up at site were some of the efforts made to control the delay by execution team/Consultant.

3.1.6.3 Execution of Infrastructure packages

Five infrastructure packages awarded during the period from June 2011 to April 2017 with a schedule completion period from June 2012 to September 2018 were examined. One of the package i.e., Studio Apartment-2 which was due for completion by June 2012 was not completed as the contractor did not initiate construction works despite extension of time upto November 2015. The issue was under arbitration and the work was yet to be entrusted to another contractor. Two out of remaining four packages which were scheduled to be completed before October 2017 were still pending and the progress achieved was only 52 *per cent* upto December 2017.

The Management/Ministry stated (March/July 2018) that in respect of Studio Apartment-2, on termination of the contract and engagement of new contractor, the balance works were expected to be completed by December 2018.

3.1.6.4 Execution of enabling packages

Eight enabling packages awarded during the period from December 2010 to August 2016 were reviewed. The scheduled completion period of these eight packages ranged between December 2011 and September 2017 as detailed in **Annexure-VIII** and three packages were completed with a delay ranging from 12 months to 41 months. One package i.e., construction water contract was terminated in June 2016 after completion of 95 *per cent* of works. The Company was yet to the award balance work to another contractor. Another package i.e. construction of boundary wall and watch tower was terminated in May 2015 after completion of 64 *per cent* of work. The award of work for completion of remaining work was yet to be done. The progress of the remaining three package works ranged between 29 *per cent* and 52 *per cent* even after delays in targeted completion dates ranging from 3 to 16 months.

The Management stated (March 2018) that work orders in respect of construction water and boundary wall were terminated and re-tendering was in progress. The Management did not offer any remarks on delay in execution of the remaining three packages.

The Ministry stated (July 2018) that the delay in completion of such packages would be dealt with as per stipulation in the respective contracts.

3.1.6.5 Execution of Railway packages

Three railway packages awarded during the period from September 2015 to April 2016 were to be completed by May 2017 as detailed in **Annexure-VIII**. It was seen that none of these packages were completed as on 31 December 2017. The physical progress of work ranged from 35 *per cent* to 51 *per cent* only.

The Management stated (March 2018) that the railway packages were delayed due to site clearance to be given by Railways, delay in handing over of work fronts due to water logging during monsoon and change in design and foundation drawings as per site conditions.

The Ministry stated (July 2018) that the execution delays attributable to contractors would be appropriately dealt with as per the provisions of contract.

3.1.7 Incorrect assessment of construction power for NISP

Based on the suggestion of the Consultant, the Company approved (May 2009) an assessment of maximum construction power requirement at 27 Mega Volt Amperes (MVA) for erection and fabrication works and 17 MVA for erection works alone and entered (March 2010) into a contract with Chhattisgarh State Power Distribution

Corporation Limited (CSPDCL) for drawing of power of 27 MVA progressively through 132 Kilo Volt (KV) line as detailed below.

Table 3.3 – Phase-wise construction power proposed to be drawn for Nagarnar Integrated Steel Plant

Phase	Units of power to be drawn	Date of commencement
1st phase	5 MVA	Agreement date
2nd phase	10 MVA	After two months from Agreement date
3rd phase	27 MVA	After 11 months from Agreement date

CSPDCL informed the Company (July 2013) that the energy meter had been installed on 24 July 2013 and therefore power would be made available in accordance with the agreement, and failure to draw electricity by 23 October 2013 would entail levy of minimum guarantee charges effective from the date following the date of expiry of the notice. CSPDCL raised bills for the contracted demand for 5 MVA (October 2013 to December 2013), and 10 MVA (January 2014 to October 2016). However, actual power drawn for construction ranged between 1.08 MVA and 2.70 MVA during the period from December 2013 to November 2016. In view of the above stipulation by CSPDCL, NMDC directed (February 2014) the Consultant to review the power requirement for construction. Based on the Consultant's advice, NMDC requested (March 2014) for reduction of contracted demand for power from 27 MVA to 8 MVA. However, CSPDCL informed (April 2014) that in terms of contractual agreement/ supply code regulations of Central Electricity Regulatory Commission (CERC), NMDC could seek downward reduction only by 50 *per cent* i.e., only upto 13.5 MVA, during the initial period of two years from the date of commencement of agreement. NMDC, therefore, entered into (November 2014) a Supplementary Agreement with maximum contracted demand of 13.5 MVA with effect from 01 October 2014. Later, the maximum contracted demand was reduced from 13.5 MVA to 5 MVA with effect from December 2016.

We observed that the actual consumption of power for construction during the period from December 2013 to November 2016 ranged from 1.08 MVA to 2.70 MVA. There was glaring inaccuracy in projecting the power requirement for construction by the Company which is corroborated by the fact that NMDC sought to reduce its power requirement down to 5 MVA from initial projection of 27 MVA eventually. Consequently, the Company incurred an avoidable expenditure of ₹8.91 crore[28] towards minimum demand charges for the period from December 2013 to November 2016.

The Management/ Ministry stated (March/July 2018) that power demand of 27 MVA was assessed by MECON (Consultant) considering the peak demand based on the previous experiences in similar projects. However, due to various reasons, the project execution period were extended over longer period of time resulting in reduction of peak power

[28] *Difference between minimum chargeable demand i.e. 75 % of Contracted Maximum Demand(CMD) as per agreements (i.e 10 MVA, 13.5 MVA) and the minimum chargeable demand on CMD of 4 MVA required to be fixed as per Tariff notification on the basis of supply voltage drawn from 132 KVA sub-station.*

demand for construction work. As per CERC supply code, the minimum power demand was reduced to 5 MVA gradually based on the re-assessment of MECON.

The above contention of the Company notwithstanding, the Company had the option to enter into agreement with CSPDCL with minimum contracted demand of 4 MVA[29] as the code provides for any subsequent increase in the power demand could be allowed on payment of additional security deposit and entering into a supplementary agreement. By not utilizing the opportunity, the Company had to incur an avoidable expenditure of ₹8.91 crore towards minimum demand charges.

3.2 Diamond mining in Panna, Madhya Pradesh

Apart from sale of Iron ore, the Company also undertakes Diamond mining at Majhgawan village in Panna district of Madhya Pradesh State with a production capacity of one lakh carats of Diamonds per year. The Diamonds produced consist of Gem individual/ packets, off-colour individual/ packets, industrial individual/ packets. The Diamond Mining Project (DMP) consisted of a Main Mining Lease (113.332 hectares) and a Supplementary Lease (162.631 hectares including 74.018 hectares of forest land). Both the leases were under the Wildlife sanctuary area i.e. Panna Tiger Reserve. Extraction of 'Tuff[30]' was from main mining lease area and Tuff processing plant and other infrastructure facilities were located in the supplementary lease area. The mining activities in DMP commenced from 15 July 1965. The main lease and the supplementary lease were valid upto 14 July 2025 and December 2020 respectively. Thus, though the Company may be able extract Tuff from main mining lease area up to July 2025, it would not be able to process the same beyond December 2020 as the validity of supplementary mining lease would be valid up to December 2020.

3.2.1 Physical Performance

The table below indicates the physical targets set vis-à-vis actual performance during the period from 2012-13 to 2016-17:

Table 3.4 – Physical targets and Actual Achievement in Diamond Mining

Year	Overburden (Cubic Meter)		Tuff (Ore) in Tons				Production of Diamonds (in carats[31])	
			For Mining		For Treatment			
	Target	Actual	Target	Actual	Target	Actual	Planned	Actual
2012-13	Nil	213379	Nil	240604*	Nil	187128*	Nil	31533.39
2013-14	Nil	873	500000	225057*	450000	200499*	45000	37081.70*
2014-15	Nil	64518	500000	269764*	450000	199239*	45000	35085.46*
2015-16	Nil	687	350000	278522*	350000	300693*	35000	35558.31*
2016-17	Nil	167	350000	298993*	350000	280752*	35000	35611.07*

(*) Actuals are taken from the Financial Statements

[29] *Chhattisgarh State Electricity Supply Code provides for a minimum and maximum power supply of 4 MVA to 40 MVA on 132 KV power supply system (which is operated in the plant)*

[30] *Run of Mine extracted during diamond mining is called Tuff. On processing of Tuff, Diamonds are obtained.*

[31] *One Carat is equal to 0.2 grams*

We observed that targets were not fixed for removal of overburden. The unit could achieve the targeted Diamonds production during 2015-16 and 2016-17 only and had not achieved the targets fixed for mining and treatment of Tuff in any of the years.

The Management/ Ministry stated (March/ July 2018) that no targets were fixed for overburden removal during 2014-15 to 2016-17 as no waste mining was required in view of the fact that there was no scope for periphery/lateral expansion of the pit as per the restrictions imposed by the Monitoring Committee appointed by the Hon'ble Supreme Court and hence mining was done only in the lower benches of the pit. Hence, the project could not achieve the targets in respect of mining and treatment of Tuff although the targets of Diamonds production were achieved.

3.2.2 Heavy accumulation of closing stock

The following table indicates the details of unsold stock of Diamonds and unprocessed quantity of Tuff lying at the end of each year:

Table 3.5 – Year-wise details of closing stock of Diamonds and Tuff

Year	Diamonds In Carats				Value of unsold stock ₹ in crore	Tuff (in tons)		
	Production	Sales	Unsold stock	% to production		Production	Quantity Processed	Un-processed stock
Opening Balance	---	---	11603.06					
2012-13	31533.39	17862.57	25273.88	80	25.27	239925	187128	528273
2013-14	37081.70	43487.63	18867.95	51	25.03	225057	200499	552831
2014-15	35085.46	38788.58	15164.83	43	27.19	269764	199239	623356
2015-16	35558.31	36682.93	14040.21	39	26.02	278522	300693	601185
2016-17	35611.07	25631.46	24019.82	67	32.94	298993	280752	619425
	Average quantity of tuff processed per annum						**233662**	

It could be seen that considerable quantity of unsold stock of Diamonds ranging between 39 *per cent* and 80 *per cent* of their production, apart from unprocessed quantity of Tuff were lying at the end of each year. The annual average rate of processing of Tuff during the five years was 2.33 lakh tons and it requires two years eight months of time to process the quantity of Tuff available as at the end of 31 March 2017.

The Management/Ministry stated (March/July 2018) that:

- In view of poor off-take of Industrial grade Diamonds and surplus availability of lab grown Diamonds in the market, the unsold quantity available in stock had increased.
- On account of existing old technology and sticky nature of white Tuff, the unprocessed stock of white Tuff was high (67 *per cent* of the total closing stock) and action was being taken to implement an alternative technology for processing the same.

Our view is that the Company needs to strengthen its processing plan so as to complete the processing of all the remaining Tuff extracted before the termination of supplementary mining lease in 2020.

3.2.3 Financial Performance

As a result of non-achievement of targets, the average production cost of Diamonds remained higher than the net realizable value (NRV) in all the years under review. In view of this, the net loss of the Diamond Mining Project (DMP) as at the end of 2016-17 was ₹27.16 crore which was the highest loss as compared to the losses sustained during the period 2012-13 to 2016-17 as detailed below:

Table 3.6 – Year-wise Average Cost of Production and Net Realized Value of Diamonds

Year	Average Cost of production per carat (₹)	Net Realized Value per carat (₹)	(Loss)/ Profit per carat (₹)	Net Profit/ (Loss) (₹ In lakh)
2012-13	16,820	15,960	-860	237.05*
2013-14	16,725	11,463	-5,262	(1679.75)
2014-15	15,816	12,906	-2,910	116.07*
2015-16	16,829	14,341	-2,488	(1274.73)
2016-17	20,420	16,505	-3,915	(2716.34)

(*There was a net profit during 2012-13 and 2014-15 due to the positive impact of non-operational income and expenses and adjustments for changes in the inventory of finished goods and work-in-progress)

The net loss was mainly because of lack of consistent policy in conducting the auctions for sale of Diamonds. The DMP conducted 26 auctions during the five year period ending 31 March 2017. Further, the quantity sold during the last 5 years ranged between 22,006 carats and 40,831 carats as against the quantity offered which ranged between 36,606 carats and 51,071 carats indicating meager sales. No efforts were made for conducting periodical auctions (i.e. monthly/quarterly etc.). Only three auctions were conducted during the year 2015-16.

We observed that:

(i) As on 31 March 2017, there was unsold stock of 24,019.82 carats with the Company comprising individual, off colour, dark brown colour Diamonds.

(ii) In order to make Diamond sales more transparent and ensure wider participation and increase in sales, the Company decided to conduct sales through e-auctions from March 2015 onwards instead of conducting the conventional physical auctions by engaging e-auction service provider on Limited Tender Enquiry (LTE) basis. It was observed that despite implementation of e-auction sales, the sales during 2015-16 and 2016-17 were indicating a declining trend due to the reasons of availability of lab grown Diamonds (artificial Diamonds) with uniform quality at cheaper rate than the natural Diamonds.

(iii) The recommendations (October 2014) made by the Board on SOP (Standard Operating Procedure) prepared in October 2014 with regard to sale of unsold

stock through tenders/special tenders and re-fixation of reserve price, if the same stock remains unsold repeatedly in 5 successive auctions, were not implemented.

(iv) Based on the suggestions of the Vigilance Department for benchmarking and comparative assessment of internal valuation of Diamonds, the Commercial Department proposed (April 2014) to seek the assistance of third party in valuation of rough Diamonds. Based on the suggestions of the Gem & Jewellery Export Promotion Council, the Company decided to opt for Expression of Interest (EOI) for empanelment of independent valuers. The outcome of this move was, however, not taken to its logical end.

The Management stated (March 2018) that:

- The reasons for lesser e-auctions were due to delay in appointment of service provider and other factors like availability of rough Diamond, market demand including sale cycle. Considering these, four to five auctions are conducted in a year.
- The Board level sub-committee appointed for reviewing the existing SOP (2012-14) suggested various measures on frequency, venue of e-auction, maintaining optimum level of 10,000 carats and valuation by third party valuer.
- The independent valuers could not be finalized due to difficulties in ensuring non-participation of employee/relative of the valuer and difficulty in maintaining confidentiality of reserve price.

We are of the opinion that the Company needs to evolve a procedure duly incorporating suitable safeguarding clauses for maintaining confidentiality which ensures selection of reliable third party Diamond valuers.

The Ministry stated (July 2018) that the Company was in the process of implementing the revised SOP for Diamonds. The SOP would address the issues of transparency and confidentiality in the auction and valuation process.

3.3 NMDC-CMDC Limited

The Company formed (June 2008) a Joint Venture Company viz., NMDC-CMDC Limited (NCL) with Chhattisgarh Mineral Development Corporation Limited (CMDC), a State Public Sector Undertaking (PSU) of Chhattisgarh with shareholding of 51**:**49 respectively for development of Deposit-13 situated in Bailadila Iron ore range in South Bastar District. The purpose of development of Deposit-13 was to meet the Iron ore requirement/ demand for Steel, Sponge and Pellet Plants located in the State. The Company applied for mining lease in March 2004 for which Forest Clearances were received only in January 2017 after a delay of 13 years. The SMP envisaged production of 2 MTPA from this mine from 2018-19. The reasons for the delay in obtaining Environment and Forest Clearances for Deposit-13 are discussed in the subsequent paragraphs.

3.3.1 Delays in getting Forest Clearance Stage-I for Deposit-13

The Company submitted application (January 2003) for Stage-I Forest Clearance for 613.24 hectares of land. Against the stipulated period of 90 days as provided in Rule 6 of Forest Conservation Rules, 2003, DFO, Dantewada took more than 15 months for attending to the deficiencies pointed out (May 2003) by the Additional Principal Chief Conservator of Forests (APCCF), Raipur. Submission of Indian Bureau of Mines (IBM) approved mine plan was a pre-requisite as per MoEF&CC directions (February 1999). Upon the State Government's insistence (November 2004) of this requirement, the Company could submit the same in October 2008 only i.e., after a delay of four years. Further, after submission of wildlife conservation plan in January 2010, the proposal was forwarded (November 2010) by PCCF/State Government after 10 months to MoEF&CC. There was a delay of 9 months on part of MoEF&CC in processing/forwarding the proposal to Forest Advisory Committee (FAC) in August 2011 against the stipulated time line of three months. The proposal was rejected on the ground that the area is located deep in the undisturbed forest area with high biodiversity value and hilly terrain. The rejection was communicated by MoEF&CC in January 2012 after a delay of 135 days against the stipulated 60 days period. Despite the initial rejection, the Company re-submitted its case to FAC during April 2014 after which Stage-I FC was issued in November 2014. The FAC while evaluating the Stage-II FC proposal observed non-compliance of certain conditions in Stage-I Forest Clearance. After carrying out field inspections by Regional Office, Nagpur of MoEF&CC, the Department imposed penalty in the form of penal compensatory afforestation charges of ₹14.31 crore for improper management of overburden dump of Deposit-11 and Deposit-14 which had resulted in damage to adjoining forest land. On payment of afforestation charges in July 2016, Stage-II Forest Clearance was finally granted by MOEF&CC in January 2017. Thus, due to delays on the part of the Company, the State Forest Department and MoEF&CC, it took nearly 14 years for obtaining mining lease for Deposit-13.

3.3.2 Delays in Environment Clearance for Deposit-13

The Company could obtain the Environmental Clearance (EC) in May 2015. Though the issue of EC was recommended by the Expert Appraisal Committee (EAC) of MoEF&CC way back in February 2011, the EC was issued only on securing Stage-I Forest Clearance which was received in November 2014. Thus, the delay in obtaining the Stage-I Forest Clearance had resulted in delay in obtaining Environment Clearance. The Company had transferred the mining lease in the name of NCL. However, transfer of all other permission such as EC/FC in the name of NCL was yet to be made. Further, at the time of audit, it was observed that the JV Company was yet to obtain Consent for Establishment and Consent to Operate from Chhattisgarh Environment Conservation Board. Also the action to appoint Consultant for preparation of Detailed Project Report (DPR) for the proposed mine was still pending. As a result, the prospects of achieving the targeted production of 2 MTPA of iron ore from Deposit-13 by 2018-19 as envisaged in the SMP–Vision 2025 appear to be bleak.

The Management stated (March 2018) that:

- The penal compensatory afforestation charges in respect of Deposit-13 were paid to fulfill the condition (iii) of Stage-I FC on insistence by Director General of Forests, MOEF&CC that Forest Conservation Act, 1980 will prevail over IBM rules and regulation, the area being Forest Land.
- The Consent for Establishment in respect of Deposit-13 was obtained on 17 October 2017 and the mining lease was transferred to the JV Company. The application for transfer of EC was submitted to MoEF&CC and the JVC would obtain consent to operate after transfer of EC and consent to establish.
- Appointment of Mine Developer cum Operator was under process and mining operations were likely to start in FY 2018-19 and the existing Iron ore mines at Bailadila would cater to the Iron ore requirement for Steel Plant at Nagarnar.

The reply is not acceptable as the payment of penal compensatory afforestation charges was made for violation of provisions of FC Act which was an outcome of the site inspection carried out by the RO, Bhopal and Nagpur, MoEF&CC. The penal charges could have been avoided had the overburden dumps been properly managed. Further, the Company applied (September 2015) for statutory clearances (EC/FC) in respect of land measuring 99.466 hectares for creation of infrastructure facilities. As these clearances were pending, it is unlikely that the mine developer-cum-operator would be able to commence operations without the infrastructure facilities being provided for. Also, non-completion of evacuation facilities such as doubling of KK Line and Slurry pipe line would have an adverse impact on supply of ore from existing mines.

The Ministry stated (July 2018) that Bailadila area was prone to high rainfall and erosion of material from waste rock dumps had taken place during rainy season inspite of all efforts made to contain the same within lease area. Mine Developer cum Operator (MDO) being appointed was for a period of 25 years and within initial 5 years infrastructure facilities would be created by MDO. Till such period, production through small scale Mining would be carried out.

3.4 Sponge Iron Unit at Paloncha, Telengana

The Company at the instance of Ministry of Steel, acquired (July 2010) loss making Sponge Iron India Limited (SIIL) a CPSE established with an installed production capacity of 60,000 tons per annum of Sponge Iron. The Sponge Iron production turned unviable due to higher cost of production, lower realization, aging of the plant and poor marketability and losses of Sponge Iron Unit (SIU) accumulated to the tune of ₹194.77 crore as on 31 March 2017. On account of these reasons, the SIU stopped production from November 2016 onwards. The Company in its turnaround plan (01 October 2015) proposed to conduct a study by the Committee of Directors for reduction in production cost by reducing the transportation cost of Iron ore to SIU from Bailadila sector of the Company, reducing the repairing and maintenance cost and aggressive marketing for Sponge Iron, etc. Further, it was intended to utilize the

available land (428.98 acres) for setting up of Thermal and Solar Power Plants which was yet to take off. It was noticed that the Company had not implemented the turnaround plan as envisaged and as of July 2017 the unit had idle staff strength of 167 (both executive and non-executive).

The Management stated (March 2018) that stock of Iron ore at SIU was exhausted and ore could not be supplied due to cancellation of transportation contractor. The appointment of new contractor was in process. In respect of existing idle staff, it was stated that efforts were on to gainfully utilise manpower by either reassigning or deploying them to other units. Voluntary Retirement Scheme for surplus manpower was also contemplated.

The reply was, however, silent on the implementation of turnaround plan for SIU Paloncha.

The Ministry stated (July 2018) that as per the discussions held at Ministry of Steel in November 2017, a technical Consultant was being appointed for preparation of feasibility report for setting up of a Steel Plant or steel related unit for the revival of the unit.

3.5 Karnataka Vijayanagar Steel Limited (KVSL), Bellary

As an expansion measure and with the motive of securing Ramandurg Iron ore deposit, NMDC entered into an MoU with Government of Karnataka (GoK) in June 2010 for setting up a green field Steel Plant with 2 MTPA capacity initially and expandable upto 5 MTPA. State High Level Clearance Committee (SHLCC) chaired by the Chief Minister of Karnataka approved (August 2009) allotment of 5,000 acres of land by Karnataka Industrial Areas Development Board (KIADB- a channelizing agency), Bangalore in a Special Industrial Zone to be set up by Vijayanagar Area Development Authority (VADA). The Company deposited (till March 2017) an amount of ₹639.61 crore with KIADB towards 2,857.54 acres of land in Janekunte and Veniveerapura villages near Bellary. Meanwhile, the Company incorporated (29 December 2014) a wholly owned subsidiary Company in the name of 'Karnataka Vijayanagar Steel Limited (KVSL)' as a Special Purpose Vehicle (SPV) in Karnataka and the proposed project was transferred (June 2015) in the name of the SPV. We observed that the Company spent ₹639.61 crore for acquisition of land without ensuring the grant of Ramandurg Iron ore mining lease. Considerable time of eight years (i.e. from August 2009 to date) had lapsed since the land acquisition process was initiated with no tangible results due to public interest litigations filed by the land owners. The Company was also yet to secure permission for drawl of water for the proposed Steel Plant which was pending with the Water Resources Department of Government of Karnataka since August 2011.

The Management/Ministry stated (March/July 2018) that:

- Fresh application for allocation of Ramandurg Mine was submitted in February 2017 and request for reservation of Iron ore blocks for the SPV was made through Ministry of Steel in October 2017.

- The possession of private land (2,857.54 acres out of total land of 2,975 acres) was made in favour of the Company on 11 January 2018 and the possession of balance 117.46 acres of government land was under consideration for allotment by the district authorities.
- Formal approval for permission to draw water from proposed drawl point for the Steel Plant was still awaited from Government of Karnataka.

3.6 Pellet Plant at Donimalai

In order to utilize the available (six million tons) and expected additional (16 million tons) quantity of slimes (low grade ore containing more than 50 *per cent* Fe) that are generated during wet screening of Iron ore from both the Iron ore mines of Donimalai sector, the Company proposed (May 2009) to set up 1.2 MTPA Pellet Plant at Donimalai for production of Pellets by utilizing slimes (1.59 MTPA) and fines (0.30 MTPA) through beneficiation and pelletisation process. The process of manufacture of Pellets includes conversion of slimes into high grade ore through the process of beneficiation. The ore so beneficiated would be converted into Balls and Pellets in the kilns. In principle approval for investment of ₹572 crore was accorded (29 May 2009) as per the TEFR prepared by the Consultant, M.N.Dastur & Co. and the approved estimated cost of the project was ₹545.27 crore, which was inclusive of foreign exchange component of ₹98.88 crore. The project was divided into six packages. Further, the consultancy work for Engineering, Procurement, Construction and Management (EPCM) of the project was also awarded (16 June 2009) to Dastur & Co. for ₹13 crore (subsequently revised to ₹13.74 crore) with scheduled completion by March 2012 including performance guarantee test. However, on account of reasons attributable to the contractors, the project work could not be completed as scheduled. The package wise details of contracts awarded and its latest status are given below:

Table 3.7 – Package-wise details of contracts awarded for Pellet Plant and their present status

Description of package	Name of the contractor	Contract value (₹ in crore)	Date of award & Scheduled date of completion	No. of extensions and revised date for completion	Remarks
Site leveling work	AMR Constructions Ltd.	1.06	05.10.2010 04.02.2011	**(2)** / 30.11.2011	Completed on 30.11.2011
Miscellaneous building including boundary wall works	IVRCL Infrastructure & Projects Ltd.	15.80	01.12.2010 31.12.2011	**(8)** / 30.04.2014	Completed on 30.04.2014
Construction of 1.2 MTPA capacity Pellet Plant	Tata Projects Ltd.	288.53*	17.01.2011 16.07.2012	**(13)** / 30.06.2017	Partly (99 *per cent*) commissioned on 31.01.2017
Construction of Beneficiation Plant	Hindustan Dorr Oliver Ltd. (HDOL)	128.77#	08.06.2011 07.11.2012	**(11)** / 31.12.2016	96 *per cent* work completed till April 2016, but erection and commission was due.
Construction of 110/6.6 KV Main Receiving and	Larsen & Toubro Ltd.	35.68	18.12.2010 17.04.2012	**(10)**/ 30.06.2016	Commissioned on 30.09.2016 and Performance Guarantee

Description of package	Name of the contractor	Contract value (₹ in crore)	Date of award & Scheduled date of completion	No. of extensions and revised date for completion	Remarks
Step down Substation (MRSS) and Plant Communication System					test on 10.11.2016.
Consultancy Services	MN Dastur & Co.	13.74 (revised)	16.06.2009 15.03.2012		
Mobile equipment					100 *per cent* delivered.

(*) Include foreign component of US $2,06,10,000 excluding customs duty & other taxes
(#) Include foreign component of US $5,41,433 excluding customs duty & other taxes

We noticed that due to non-synchronization of major package works, commissioning of the project was abnormally delayed as detailed below:

- The consortium of contractors of beneficiation package (M/s HDOL and others) could not complete the work awarded (08 June 2011) within the scheduled date of 07 November 2012 mainly due to their financial crisis. The Company arranged financial assistance to the contractor by issuing comfort letters and made payments directly to their sub-vendors/contractors for executing the work and recovering the same from the running bills of HDOL with interest. Despite this, the contractor turned insolvent and the National Company Law Tribunal (NCLT), Mumbai Branch had ordered (April 2017) the commencement of Corporate Insolvency Resolution against HDOL.
- As the Beneficiation Plant was not ready, at the insistence of the contractor for Pellet Plant, trial run was conducted in June 2015 using fines purchased through e-auction after which the certificate of commissioning was issued to the contractor (31 January 2017).

We further observed that:

- The Pellet Plant was proposed to be set up on the strength of slimes available free of cost. However, in view of the directions of the Hon'ble Supreme Court regarding Iron ore sales in Karnataka State through e-auction under the supervision of the Monitoring Committee appointed by Central Empowered Committee, the Company had to procure the slimes/ fines through e-auction at market price at par with others. On account of this, the production cost of Pellets was bound to increase which, in turn, had a negative impact on the viability of the project.
- The Company had periodically made payments in excess amounting to ₹11.42 crore (as on May 2017) to the sub-contractors of Beneficiation Package contractor, the recovery of which was doubtful given the insolvency status of the contractor.

- On account of abnormal delay in completion of the project, all the contractors (except contractor of Beneficiation Package) of the project including EPCM Consultant made extra claims amounting to ₹132.57 crore (July 2017) which were yet to be settled.
- The Company entrusted (07 January 2015) the Operation and Maintenance (O&M) contract of Pellet Plant to KIOCL Limited, Bangalore for a period of three years in view of their expertise in this field. The contract included undertaking of pre-commissioning, commissioning services (including integrated commissioning), operation and maintenance including training to the staff of the Company in addition to imparting of training and induction of NMDC employees. The Company paid ₹82.87 crore to KIOCL towards commissioning and O&M from August 2015 to June 2018.

The Management stated (March 2018) that:

- Nearly 70,500 tons of Pellets have been produced till date of which 62,000 tons had been sold.
- Though the TEFR envisaged utilization of slimes free of cost for manufacture of Pellets, NMDC had to procure the slimes/fines through e-auction as per the directives of Hon'ble Supreme Court applicable for Karnataka State.
- The amount recoverable from HDOL was ₹2.49 crore, that too after levying liquidated damages of ₹5.52 crore towards delay in completion of works. The same would be recovered from the contractor through legal procedure after completion of the balance works.
- The delay analysis for miscellaneous building and MRSS Package was finalized and liquidated damages were imposed on both the package contractors. The extra claims in respect of other contractors of other packages would be finalized after completion of delay analysis.

The production level of 70,500 tons of Pellets stated by the Company only accounted for a meagre 5.88 *per cent* of the annual capacity of 12 lakh tons of the Pellet Plant. Further, an amount of ₹11.42 crore recoverable from HDOL includes cost towards unexecuted portion of works apart from liquidated damages and advance payments made to HDOL. The Company did not prepare cost sheet pertaining to the manufacture of pellets and hence, we could not comment upon the cost benefit analysis.

The Ministry, while reiterating the views of Management, further stated (July 2018) that the Company could produce 1,05,000 tons of Pellets so far.