Chapter – 3
Evacuation Facilities

Evacuation refers to transporting iron ore from mines to the buyers' sites/ ports. The evacuation capacity of the Company was 30 MTPA (23 MTPA at Bailadila sector and 7 MTPA at Donimalai sector) as against the total installed production capacity of 32 MTPA. This chapter deals with the evacuation bottlenecks affecting the production.

NMDC had an evacuation capacity of 30 MTPA as against the production capacity of 32 MTPA. The shortfall was at Bailadila sector in Chhattisgarh.

***

Though the evacuation capacity turned inadequate in 2007-08, the three options available to enhance the capacity were not pursued swiftly by NMDC.

***

The Board approved laying of a slurry pipeline (capacity of 8 MTPA) from Kirandul to Visakhapatnam in July 2008 but only 'due diligence' could be completed by March 2012.

***

Another option of doubling of Kirandul – Jagadalpur railway line to enhance the capacity by 3 MTPA was taken up in JCM with Railways only in February 2010 and not pursued vigorously thereafter.

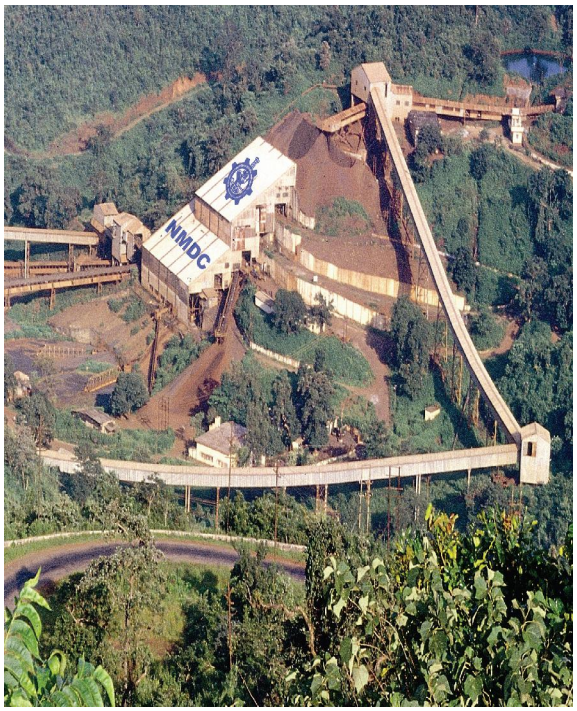

Fig 2: Aerial view of downhill conveyor at Bacheli

3.1 We observed that while the evacuation capacity matched with the production capacity at Donimalai sector, there was a mismatch between evacuation vis-à-vis production capacity at Bailadila sector to the extent of 2 MTPA as discussed below:

Bailadila Sector: Inadequate evacuation capacity

3.2 The evacuation of the production is carried out mainly through Railway line called KK Line (Kirandul –Kothavalasa line). The capacity of the railway line as assessed by the Company in 2003 was 16 MTPA. A small quantity was transported through road. In addition, seven million tonnes per annum was despatched through a slurry pipe line laid and owned by ESSAR Limited (a customer) from 2005-06. Thus, the total evacuation facilities available at Bailadila sector were 23 MTPA against installed capacity of 25 MTPA since 2007-08. Therefore, there was a mismatch in the evacuation facilities vis-à-vis production facilities at Bailadila sector to the extent of two MTPA.

3.3 The table below indicates the installed capacity, the actual production facilities and actual evacuation capacity vis-à-vis quantity dispatched through different modes for the past seven years ending 31 March 2012 at Bailadila sector.

Table 8: Table indicating the evacuation capacity and the actual dispatches (Bailadila Sector)

(in MTPA)

Details	Years						
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Installed capacity	17.22	18.00	25.00*	25.00	25.00	25.00	25.00
Actual production	17.42	20.56	22.97	22.15	18.08	20.90	21.65
Annual production-plan	18.55	21.00	23.80	26.12	23.90	20.20	20.50
Evacuation capacity:							
through rail	16.00	16.00	16.00	16.00	16.00	16.00	16.00
through pipeline	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Total evacuation capacity	**23.00**	**23.00**	**23.00**	**23.00**	**23.00**	**23.00**	**23.00**
Actual Dispatches:							
1. by rail	16.50	14.28	14.73	14.27	15.42	17.40	16.73
2. by road	00.12	00.24	00.24	00.24	00.26	01.18	01.02
3. by slurry pipeline	01.98	05.86	06.82	06.39	02.24	02.86	03.84
Total Dispatches	**18.60**	**20.38**	**21.79**	**20.90**	**17.92**	**21.44**	**21.59**

* *The increase was due to increase in the installed capacity in 2007-08 at Bacheli from 11 MTPA to 13 MTPA and at Kirandul from 7 MTPA to 12 MTPA.*

3.4 As can be seen from above, the evacuation capacity turned inadequate with reference to the installed capacity in the year 2007-08 and continued to be inadequate thereafter. The evacuation capacity further suffered a setback when the slurry pipe line of ESSAR (capacity 7 MTPA) was damaged in May 2009. This was restored in December 2010, but was again damaged in October 2011. The same is yet to be restored (March 2012).

3.5 Evacuation capacity determines the quantum of production and should match with the production capacities in existence as well as to those envisaged. Any mismatch in evacuation facilities with production capacities leads to piling up of stocks, resulting in not meeting the demand of customers. The production for 2003-04 at Bailadila sector was 13.66 MT and the Company sold 16.37 MT (including stock) which was in line with the evacuation facilities. With the gradual increase in production from 13.66 MT in 2003-04 to envisaged production of 24.45 MT by 2009-10 as per Corporate Plan, there was every need to augment the existing evacuation capacity. However, this area was neglected. The following measures were/ are available to the Company to optimize and enhance the evacuation capacity:

A. using the existing rail evacuation capacity optimally;
B. laying of uni-flow system at Bacheli;
C. establishing a new pipeline; and
D. doubling of railway line between Kirandul and Jagdalpur.

3.6 The Company also faced constraints during 2006-09 when the adequate number of rakes were not made available by Railways. The performance of evacuation through Railways improved during 2009-10 and remained at satisfactory level thereafter. A uni-flow system at its Bacheli complex, envisaged to bring about smooth movement of rakes and increase the capacity by 4 MTPA, was delayed. The system slated for completion by June 2007 was completed only by May 2012, the benefits of which would accrue in the years to come. The performance in respect of C and D above has not been satisfactory.

3.7 *Ministry in its reply (July 2012) while accepting that augmenting evacuation capacity is a strategic requirement for bringing about its future production plans to realization, stated that the dispatch for the year 2011-12 was more than 27 MT compared with 25 MT during 2010-11 despite the fact that the ESSAR pipeline was not operational in substantial parts of both the years*. The dispatches, as stated by the Ministry, pertained to both Bailadila and Donimalai sectors and the audit observation was only on dispatches made from Bailadila sector. The combined installed production capacity for both Bailadila and Donomalai sector was 32 MTPA.

3.8 The progress made by the Company in respect of above measures is discussed below.

Establishing a new pipeline

3.9 As the evacuation by Railways was a constraint during 2006-08, the Company had another option of going in for a new pipeline to evacuate production from Bailadila to Visakhapatnam. The pipeline was estimated to have an evacuation capacity of eight MTPA. The Board of Directors accorded (July 2008) in-principle approval for laying of a slurry pipeline from Kirandul to Visakhapatnam at an estimated cost of ₹ 2500 crore. Though approval was accorded in July 2008, it remained pending at the Commercial Department till November 2009. Technical wing initiated steps afresh for award of work relating to Techno Economic Feasibility Report (TEFR) in November 2009. Given the constraint on evacuation front, this delay of 16 months was avoidable.

3.10 In spite of constraints on evacuation front, the Company did not handle the matter of establishment of a new pipeline with required urgency. As a result, even after four years since the in-principle approval was given by the Board, the project is yet to take off. The delay was avoidable.

3.11 *The Ministry in reply (July 2012) stated that initially TEFR was prepared by MECON and due diligence on the TEFR was carried out by IFCI. The phasing of the project is envisaged to be completed in three phases. This was later modified as follows: Phase I to include construction of beneficiation plants to produce two MTPA Pellet Feed Concentrate from Bacheli Complex along with a slurry pipeline from Bacheli to Nagarnar and a pellet plant at Nagarnar to produce Blast Furnace grade pellets. Phase II consists of augmentation of production facilities for production of pellets to 4 MTPA at Bacheli and setting up another beneficiation plant at Kirandul Complex to produce 4 MTPA Pellet Feed Concentrate along with a slurry pipeline from Kirandul to Bacheli and from Nagarnar to Vizag and Filtration*

Plant at Visakhapatnam. Phase III consists of addition of 2 MTPA beneficiation plant at Kirandul. Further, RINL was keen to increase its off-take of iron ore in view of its capacity expansion from 3 MTPA to 6 MTPA and an MoU was signed with RINL in May 2012 to explore and firm up the finer details.

3.12 The reply only states the contents of TEFR but not the reasons for delay in establishment of a new pipeline.

Doubling of line between Kirandul and Jagdalpur

3.13 The iron ore is transported by rail between Kirandul and Visakhapatnam. The distance between Kirandul and Visakhapatnam is 472 KM. This is mostly single line except at some intermediary stations where loop lines are provided. Doubling of line between Kirandul and Jagdalpur (distance 150 KM out of 472 KM) would reduce the turnaround time and thus would help increase evacuation capacity by three MTPA.

3.14 The Company accorded (December 2010) in principle approval to bear the actual cost which would be provided as interest free advance to Railways and forwarded (December 2010) a draft MoU for processing at the Railway Board level. The cost at 2010 prices was estimated at ₹ 850 crore. Negotiations are being held for signing of MoU (March 2012). The Company has not spent any amount so far (March 2012).

3.15 Thus, the matter is pending with Railways since December 2010. In the interim, the Company addressed to the Railway Board in April 2011 for early clearance.

3.16 *In reply (July 2012) the Ministry stated that discussions were in progress with Railway Head Quarters in Delhi on the terms of MoU before signing the same. Further, Ministry has also taken up the matter at the level of Chairman, Railway Board and a letter has been sent in June 2012 from Secretary (Steel) to Chairman, Railway Board for giving due priority to the project of NMDC for doubling of KK line.*

Recommendation # 3

3.1 The Board should regularly monitor the progress of laying of a slurry pipeline.

3.2 The issues relating to doubling of K-K line should be taken up at the Railway Ministry level and pursued so as to expedite its completion.