

CHAPTER-3: PROJECT IMPLEMENTATION

3.1 PROJECT EXECUTION

3.1.1 PROGRESS OF THE PROJECT

The capacity expansion of RINL was at various stages of execution and yet (as of August 2014) to reach the stage of commercial production. Progress of capacity expansion indicating the approved implementation schedule as well as revised schedule of commissioning (as of August 2014) was as under :

Table-5

| Project/ Facility | Zero Date (GoI approval) | Original Schedule | Revised Schedule as per RCE (July 2011) | Present status as on August 2014 (MPR) | Delay/ likely delay w.r.t original schedule (Months) | Delay/ likely delay w.r.t revised schedule (Months) |
|-----------------------------|--------------------------------|----------------------|---|--|--|--|
| <i>Stage – I</i> | | | | | | |
| BF-3 | October 2005 | September 2008 | October 2011 | April 2012 (*) | 43 | 6 |
| SMS-2 | October 2005 | September 2008 | October 2011 | March 2014 (*) | 66 | 29 |
| WRM-2 | October 2005 | October 2008 | October 2011 | March 2014 (*) (#) | 65 | 29 |
| <i>Stage – II</i> | | | | | | |
| Special Bar Mill | October 2005 | July 2009 | October 2012 | December 2014 | 65 | 26 |
| Structural Mill | October 2005 | Oct 2009 | October 2012 | February 2015 | 64 | 28 |

(*) Month of Commissioning

(#) Date of commissioning of Line 2 is taken as date of commissioning

Thus, as per the progress report of August 2014, the total time taken from the zero date to commissioning date of Stage-I units was 101 months and 112 months for the Stage-II. The time overrun from the original completion schedule is 66 months for Stage-I and 65 months for Stage-II. The time overrun, however, from the revised completion schedule as per RCE which was approved by the BOD, is 29 months for Stage-I and 28 months for Stage-II.

Examination in Audit revealed the following broad reasons that contributed to delays in project implementation:

- Delay in finalization of contracts;
- Delay in clearing of drawings by the consultant;
- Failure to provide fronts in time to the civil and structural agencies and also for equipment erection;
- Delay in submission of basic engineering drawings by equipment suppliers for piling, civil and structural works;
- Delay in supply of indigenous and imported equipment and non-sequential supply of equipment by the equipment suppliers; and

- Other reasons like heavy rains and contractor's labour strikes.

All the major units of Stage-I were commissioned by March 2014. The balance Stage-II units were scheduled for commissioning between December 2014 and February 2015.

No single production unit was commissioned within the scheduled date of commissioning due to delays in award of contracts and various deficiencies in contract management which are discussed in the subsequent paras. Audit observed that delayed execution of all 66 contracts²³ selected for review involved time overrun ranging between 3 months and 63 months (except one contract which was completed with a delay of less than a month).

RINL in its reply (April 2014) attributed the following reasons for the delays:

- Delay in appointment of Consultant resulted in delay in issue of specifications for various packages;
- Shifting of Effective Date of Contract from date of issue of FAX letter of acceptance (LOA) to date of signing of agreement which was agreed on insistence of almost all technological equipment suppliers;
- Shortage of skilled manpower due to vibrant market demand, heavy attrition rates etc. and inadequate mobilization of Erection Equipment like Cranes by Structural Contractors;
- Non availability of fronts due to improper sequence of activities which were inter dependent on other agencies.

RINL further stated that the following remedial measures were taken to minimise the delays:

- To give thrust to the pending issues by directly taking up with CEOs of various organizations and commitments made by various agencies were being regularly followed up;
- Monitoring at various levels was continuously being taken up by RINL and, depending on the criticality, it was also taken up through MoS with other Ministries of GoI and relevant Embassies;
- Change in execution strategy to improve pace of work through innovative way of execution;
- Making available fronts for erection of inter dependent agencies on much faster pace by strategizing the activities; and
- Offloading of jobs from failing contractors etc.

The reply of RINL needs to be viewed against the fact that the delays as stated were controllable, such as timely appointment of consultant, rightly formulating the terms and conditions of the contract in co-ordination with the consultant, effective monitoring of contractors in deployment of sufficient manpower and ensuring timely availability of the fronts to the contractors. In spite of remedial measures stated to have been taken by RINL, the fact remained that no single major unit of the capacity expansion was commissioned within the approved time schedule.

²³ Excluding the contract of new SLTM under tender process, consultancy contract, thus the balance contracts were 66

Detailed audit observations relating to tender finalisation and execution of capacity expansion are discussed in paras 3.3 and 3.4 respectively.

3.1.2 DELAYS IN INSTALLATION OF MAJOR UNITS OF CAPACITY EXPANSION

The major units proposed to be installed in the capacity expansion of Phase-II were by and large similar to the units established in Phase-I. It was envisaged to increase the hot metal production by 2.5 MTPA by installing BF-3 along with required raw material processing units to feed BF-3 like Raw Material Handling Plant (RMHP) and Sinter Plant-3 (SP-3). A new Steel Melt Shop-2 (SMS-2) of 2.8 MTPA capacity was included in the capacity expansion to process the hot metal into liquid steel. In order to achieve the optimum benefit of capacity addition, synchronization in commissioning of the three major units i.e., SP-3, BF-3 and SMS-2 was essential. But RINL could not ensure commissioning these three units sequentially. There was a gap of 14 months between the commissioning of BF-3 (April 2012) and SP-3 (July 2013) and 2 years in commissioning of BF-3 (April 2012) and SMS-2 (March 2014). Therefore, RINL was unable to reap the benefit of establishing BF-3 during the period, April 2012 to March 2014.

A review of the planning of the project in terms of the actual costs, cost estimates, delays in tendering process, delays in execution, delays in entering into contract agreement, overall delay in commissioning, expenditure incurred etc., in respect of the major units²⁴ of Stage -I and Stage -II of the capacity expansion indicated the following position:

Table-6

| Sl.No. | Particulars | Unit | RMHP | SP-3 | BF-3 | SMS-2 | WRM-2 | SM | SBM | |
|--------|--|------------|-----------------|---------|-----------------|------------------|-----------------|------------------|-----------------|---------|
| 1 | Installed capacity | MTPA | | | 2.50 | 2.80 | 0.60 | 0.70 | 0.75 | |
| 2 | No. of contracts selected in the review | No | 12 | 1 | 2 | 11 | 5 | 5 | 3 | |
| 3 | Total estimated cost as per original estimates | ₹ in crore | 550.24 | 639.00 | 1309.00 | 1220.54 | 543.70 | 430.56 | 314.00 | |
| 4 | Total revised estimates at the time of opening of tenders | ₹ in crore | 566.41 | 698.00 | 1596.18 | 1326.43 | 677.03 | 584.15 | 594.12 | |
| 5 | Awarded value of contracts | ₹ in crore | 548.32 | 728.35 | 1550.99 | 2107.40 | 814.13 | 1113.65 | 833.90 | |
| 6 | Percentage of increase of LOA to original estimates | per cent | -29.15 to 87 | 14 | 18 to 173 | 13.58 to 119.07 | 17.33 to 73 | 10.71 to 1465 | 137.59 to 1969 | |
| 7 | Percentage of increase of LOA to revised estimates | per cent | -35.46 to 26.90 | 4.35 | -10.64 to -2.80 | -18.85 to 102.57 | -13.30 to 25.05 | -24.80 to 122.29 | -18.83 to 52.97 | |
| 8 | Placement of order scheduled to be completed by | Month | 04/2006 | 04/2006 | 04/2006 | 04/2006 | 04/2006 | 04/2007 | 04/2007 | |
| 9 | Actual placement of orders for the contracts | From | Month | 12/2006 | 02/2007 | 03/2007 | 03/2007 | 11/2006 | 03/2008 | 09/2008 |
| | | To | Month | 12/2010 | - | 10/2008 | 03/2008 | 01/2008 | 05/2011 | 09/2010 |
| 10 | Delay in placement of order (The number of days taken beyond 70/80 days * for placement of LOA from the date of NIT) | From | Days | 69 | 290 | 254 | 104 | 130 | 54 | 283 |
| | | To | Days | 331 | - | 314 | 572 | 386 | 502 | 487 |
| 11 | Scheduled period of commissioning | Month | 08/2008 | 09/2008 | 09/2008 | 09/2008 | 10/2008 | 10/2009 | 07/2009 | |
| 12 | Actual / Proposed date of commissioning | Month | 11/2014 | 07/2013 | 04/2012 | 03/2014 | 01/2014 | 02/2015 | 12/2014 | |
| 13 | Delay in commissioning of the unit | Months | 75 | 58 | 43 | 67 | 64 | 65 | 66 | |
| 14 | Amount of expenditure incurred by the end of March 2014 | ₹ in crore | 433.79 | 643.75 | 1412.61 | 1865.99 | 686.86 | 901.01 | 684.30 | |

* 70 days in the case of indigenous tenders and 80 days in the case of foreign tenders

RINL attributed (April 2014) the delays to contractors / tenderers for various reasons like lack of adequate response or major deviations from the tender document. RINL's attribution of the entire delay to the contractor does not absolve it of several deficiencies / lapses on its part as well as its consultant in the execution of the capacity expansion project as discussed in subsequent paras.

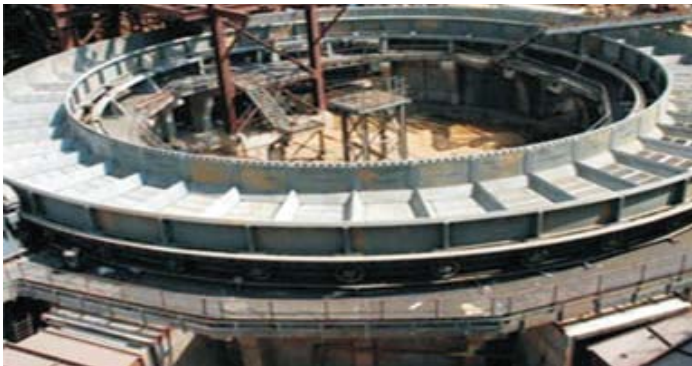
²⁴ RMHP, SP-3, BF-3, SMS-2 and WRM-2 of Stage -I and SM and SBM of Stage - II of the capacity expansion Phase -2

3.1.2.1 RAW MATERIAL HANDLING PLANT (RMHP)

The steel processing industry requires various raw materials in huge quantities. RMHP along with necessary facilities caters to the needs of unloading, storage and distribution of various raw materials required to be processed in major units of the steel plant. To handle the additional raw materials required for the capacity expansion, RINL envisaged a new RMHP to be commissioned by August 2008. Though placement of work orders was initiated in December 2006, erection of the same was yet to be completed (August 2014). Since RMHP was the primary unit to cater to raw material for processing units like SP-3 and BF-3, delay in its completion had adversely impacted the supply of feed material to SP-3 and BF-3. The main reasons for delay were (i) RINL protracted the correspondence with bidders for clarifications/documents which were not submitted by bidders along with the PQC bids, (ii) extension of time to accommodate the commercial deviations sought by the bidders, and (iii) delays in issue of drawings, handing over of fronts for civil, structural works, supply of equipment & materials etc.

RINL replied (May 2014) that recipient departments were not ready by the time the particular stream of RMHP expansion unit was ready for commissioning. RINL's contention ignores the fact that BF-3 was already commissioned in April 2012 and owing to delay in commissioning of RMHP, all the three BFs ran in throttled condition during the period, April 2012 to October 2013.

3.1.2.2 SINTER PLANT – 3 (SP-3)



Sinter Plant

New Sinter Plant with 400 sq.m area to produce sinter of 36.11 lakh tonne per annum was proposed in the capacity expansion to feed raw material to BF-3. The scheduled date of completion of SP-3 was September 2008. The contract was awarded at a cost of ₹ 728.35 crore to consortium of M/s TPE, Russia and M/s MBE on 22 February 2007. The overall

delay in execution of SP-3 was 58 months (October 2008 to July 2013).

Examination in Audit revealed that the main supply contract was finalized with a delay of 220 days. The reasons for the said delay were as under :-

- the foreign supplier M/s TPE, Russia had abnormally delayed the execution of the contract.
- there was delay in completion of civil works due to non-availability of drawings from the consultant.

As a result, sufficient sinter could not be provided to BF-3 for carrying out trial run and subsequent regular operation. In order to keep operation of BF-3, the sinter produced in the

existing SP-I and II was distributed among the three BFs. As a result, all the three BFs operated below the capacity.

3.1.2.3 BLAST FURNACE-3 (BF-3)



Blast Furnace – 3

As per project planning, the BF-3 to be commissioned by September 2008 was finally commissioned in April 2012 without Pulverized Coal Injection (PCI) system (likely to be commissioned by September 2014) with a delay of 42 months from the schedule completion date. The delay was due to revision in commercial conditions, change in GCC terms and delayed supply of

plant & equipment by the supplier.

It was envisaged in the project report that against the normal consumption of 521 Kg of coke per tonne of hot metal in the existing BFs, the coke consumption for the BF-3 was estimated at 385 Kg. As it was supposed to be equipped with PCI system, saving of 136 kg of coke consumption per tonne of hot metal processed²⁵ was envisaged. Due to delay in installation of PCI system and running of BF-3 in throttled mode till March 2014, BF-3 had consumed excess coke of 4.91 lakh tonne valuing ₹ 981.61 crore (August 2014). After considering the cost of ₹ 346.86 crore on PCI coal at the rate of 168 kgs per tonne of hot metal which might have been incurred for consumption of coal in PCI in last two years ending March 2014, RINL had incurred avoidable extra expenditure of ₹ 635.16 crore. This expenditure is likely to increase further during the year 2014-15 as PCI is yet to be installed.

RINL in its reply stated (April 2014) that because of serious accident in SMS-2 (PRS), commissioning of Convertors got delayed and the Blast Furnace-3 was to run on throttled mode in order to keep all the three furnaces in running condition. RINL further replied (May 2014) that the implication on account of delay in commissioning of PCI System was about ₹ 98 crore only for the two year period without considering any operating costs.

Ministry in its reply stated (December 2014) the following :-

- In the PCI system, the actual coal injection can be started when the Blast Furnace is operating under prescribed regime, including Hot Metal production at a level of 5,500 t/day.
- Commissioning of Convertors got delayed due to accident and the BF-3 had to be run on throttled mode in order to keep all the three furnaces in running condition and the production of BF-3 was raised in October 2013 only and the loss worked out to ₹ 15.05 crore only.

²⁵ Source: Workings of input cost considered in the RCE submitted to the Board.

The reply of RINL/MoS attributing the non-commissioning SMS-2 to the fire accident of June 2012, and operating BFs in throttled condition needs to be viewed in the light of the fact that even in case there was no fire accident in SMS-2, it was not feasible to operate BF-3 and SMS-2 at their rated capacities because the main upstream unit, i.e., SP-3 was commissioned in August 2013, i.e., after 14 months of fire accident. Thus, there was no bearing of accident that occurred in SMS-2 on the throttled operation of all 3 BFs. Further, the excess consumption of coke was mainly due to operating of BF-3 in throttled mode due to delayed commissioning of SP-3 combined with delay in installation of PCI system. The Ministry's working does not include the cost of excess consumption of coke due to operating the BF-3 in throttled mode for 18 months and the avoidable expenditure worked out to ₹ 635.16 crore.

3.1.2.4 STEEL MELT SHOP (SMS-2)



Steel Melt Shop

Installation of new SMS-2 with two converters²⁶ and three casters²⁷ to produce 2.8 MTPA of liquid steel was envisaged in capacity expansion and was scheduled for commissioning by September 2008. However, SMS-2 was commissioned with one convertor and one caster in October 2013 and remaining convertor/casters were commissioned in March 2014. The major reasons for delay in

commissioning were delayed tender process because of time extensions to accommodate the commercial deviations sought by bidders, repeated techno-commercial discussions and execution delays like delay in issue of drawings, delay in handing over of fronts for civil and structural works and delay in supply of equipment and materials. The fire accident of June 2012 further delayed the commissioning of SMS-2.

Examination in audit revealed the following:

- Initially SMS-2 was set for commissioning in September 2008 and rescheduled for commissioning in October 2011 by BOD due to the reasons stated above. In spite of rescheduling, commissioning of SMS-2 was finally planned for June 2012 and trial runs were commenced. While taking the first heat in the converter in SMS-2 on 13 June 2012, due to inadequate pressure in the oxygen blowing process in the Pressure Reducing Station (PRS) a fire accident occurred. GoI decided to conduct independent inquiry into the cause of accident and appointed a committee under the chairmanship of Ex-chairman of SAIL to investigate the incident, to determine the cause of accident, soundness of start-up procedures, built in mechanism of the system to prevent the incident, fix responsibilities and recommend steps for prevention of recurrence of such incidents in future.

²⁶ 150 tonne each.

²⁷ Six strand continuous casting machines.

- As per the committee report when there was inadequate pressure in PRS, instead of taking corrective action, the action to open the second stream and change the settings manually resulted in the blast. The committee recommended proper training to personnel associated with the project and care be taken while taking the trial run of hazardous equipment.
- Thus there were deficiencies in RINL in ensuring proper training to project operating personnel, adequate safety measures etc., which led to a major accident causing loss of valuable time and human lives. This had a cascading impact on overall project completion schedule of Stage-I which was effected by seven months (i.e., from August 2013, the date of commissioning of upstream unit of SP-3 to March 2014, the date of commissioning of SMS-2).

RINL did not furnish reply. However, MoS in its reply stated (December 2014) that the High Level Committee appointed by GoI, while making several recommendations for prevention of similar accidents, also recommended for imparting training to RINL project operating personnel as well but did not cite the deficiency in training and safety measures as the reason for fire accident.

The reply of MoS needs to be viewed considering the fact that the expert committee reported that when there was inadequate pressure in PRS, the action to open the second stream and change the settings manually resulted in the blast. This indicates lack of proper training to the employees of RINL. The Committee also recommended for imparting training to RINL project operating personnel on adequate safety measures etc.

3.1.2.5 ROLLING MILLS - WIRE ROD MILL-2, STRUCTURAL MILL (SM) AND SPECIAL BAR MILL (SBM)

The downstream units of the steel industry are rolling mills which produce finished steel of rods, beams, channels etc.,. Though the commissioning of WRM-2 was planned to be taken up in October 2008 and the other two mills of SM and SBM in July / October 2009, none of the mills was commissioned to date and was planned for commissioning between March 2014 and February 2015. The major delays in commissioning of mills were in finalising tenders because of revision in commercial conditions, change in GCC terms relating to CIF / FOB, LC, BG and format of Integrity Pact, delay in approval of the competent authority, delay in issue of LOA in respect of Civil works. Further, the execution of the mills was delayed due to delay in issue of drawings, delay in handing over of fronts for civil and structural works, delay in supply of equipment and materials, poor deployment of man power by contractor, delay in entering into contract agreement etc., and delay in issue of drawings by the equipment supplier.

RINL in its reply attributed (April 2014) the delays to entering into contract agreement, issue of drawings by Consultant, poor deployment of manpower by Contractor, delay in commissioning of upstream plants, unprecedented rains in 2010, etc. RINL agreed that there was delay in entering into contract / agreement. The reply of RINL for delay in execution of the mills indicates the lack of proper planning, control over the contractors and inefficiency of the consultant.

As a result of abnormal delay in commissioning of rolling mills, RINL was compelled to sell semi finished steel (Billets) with lower margin and is likely to incur loss of gross margin of ₹ 7.74 crore²⁸ per month during the intervening period of commissioning of SMS-2 and commissioning of rolling mills i.e. between the period of August 2013 and till commissioning of rolling mills.

3.1.3. COST IMPACT

3.1.3.1 COST OVERRUN

The project cost estimates worked out to ₹ 7,738 crore, after exclusion of the cost of SLTM (₹ 954 crore) dropped from approved project cost of ₹ 8,692 crore (Base June 2005). RINL had revised the cost estimates to ₹ 12,291 crore (base February 2011). The revised cost did not include the cost of PP-I & PP-II of ₹ 853.82 crore which were taken up by RINL under AMR Schemes instead. The revised cost should be at ₹ 13,144.82 crore²⁹(including the cost of PP-I & II). The total cost overrun works out to ₹ 5,406.82 crore³⁰ which includes ₹ 2,664 crore towards the variations allowable during the schedule period of completion. Thus, the net increase in the capital cost excluding allowable variations worked out to ₹ 2,742.82 crore (representing an increase of 35.44 *per cent*³¹). Consequent to cost overrun, the specific investment went upto ₹ 52,706³² per tonne of saleable steel representing an increase of 52 *per cent* over ₹ 34,745 per tonne of saleable steel envisaged at the time of project approval. The effect of delays in obtaining approval to RCE is discussed in chapter- 4 (para 4.10).

Audit, observed that in case of civil, structural and piling works alone other than the supplies, the increase in cost, over and above the first RCE was ₹ 430 crore. Further, at the time of approval of the first RCE itself, RINL had anticipated likely increase in the cost of supply of imported and indigenous materials, the completion cost would be around ₹ 12,840 crore due to exchange rate variation and escalation on supplies and erection. Thus, increase in cost other than civil works anticipated by RINL was ₹ 549 crore (₹ 12,840 crore – ₹ 12,291 crore). Thus, total increase in the cost of capacity expansion over and above the first RCE was ₹ 979 crore (₹ 430 crore + ₹ 549 crore).

As per OM No.1(3)/PF-II/2001 dated 18 February 2002 issued by MoF, RINL must make a ‘mandatory review’ of the cost estimates with a view to making sure that revision would be required at the stage when funds to the extent of 50 *per cent* of the approved cost were released. Even though, RINL had incurred expenditure of ₹10,259.80 crore as on 31 March 2014 (i.e., 83 *per cent* of the approved RCE of ₹12,291 crore), RINL had not initiated proposal for second revision of cost estimates of capacity expansion.

RINL in its reply stated (April 2014) that while putting up a proposal for obtaining RCE to BOD, it had clearly brought out that cost of SLTM had not been considered in the amount of ₹ 12,291 crore. RINL further replied (May 2014) that Power Plant which was included in the

²⁸ At the difference of gross margin between MMSM (₹2,334) and Billets (₹1,559) ₹ 775 per ton X 5.99 lakh tonne = ₹46.42 crore/6 months = ₹7.74 crore

²⁹ ₹ 12,291 crore + ₹ 853.82 crore = ₹ 13,144.82 crore

³⁰ ₹ 13,144.82 crore - ₹ 7,738 crore = ₹ 5,406.82 crore

³¹ 35.44 *per cent* = 100/ ₹ 7,738 crore * ₹ 2,742.82 crore

³² ₹ 13,144.82 crore/24.94 lakh tonne = ₹ 52,706

original project approval as BOO item remained a separate project all the time and was clubbed with 6.3 MTPA expansion only for the purpose of obtaining approval in the shortest possible time

MoS in its reply stated (December 2014) the following :-

- Including the ₹ 854 crore towards the cost of PP-I & II in the Revised Cost Estimates is not in order as they were envisaged as separate projects.
- It was further replied that as per the discussions with Planning Commission, variance in the cost estimate is to be worked out considering the approved project cost of ₹ 8,692 crore instead of derived approved cost as ₹ 7,738 crore. Thus, the Revised Cost Estimates worked out to ₹ 12,291 crore including value of additional items of ₹ 1,145 crore for enhancing operational flexibility and to suit the site conditions. In case of reducing this amount from the revised cost estimates, the variation is ₹ 2,454 crore only (₹ 12,291 crore – ₹ 1,145 crore – ₹ 8,692 crore), while the variation on account of allowable factors was ₹ 2,664 crore. Thus, there was no cost overrun.
- Even if cost of SLTM was to be deducted from the Original Cost Estimates for comparison purposes, the cost overrun would only work out to ₹ 744 crore as against ₹ 2,742 crore as stated by Audit. This would work out to 9.61 *per cent* over and above the project cost of ₹ 7,738 crore (excluding cost of SLTM) but not 35.4 *per cent* as worked out by Audit. Accordingly, additional specific investment per tonne of saleable steel would be ₹ 3,055 only and not ₹ 17,961 crore (₹ 52,706 crore – ₹ 34,745 crore) as worked out by Audit.

The reply of MoS needs to be viewed in the light of the following:-

- Regarding inclusion of power plants, Planning Commission opined that ‘in the absence of any serious intention from promoters for power plant which was envisaged on BOO basis, the same should be accounted for in the project and IRR to be calculated accordingly.’ Therefore, it is clear that the audit observation of including the cost of PP-I and II is in line with the opinion of Planning Commission.
- MoS had also opined in line with Audit that the cost of dropped SLTM should be reduced from the original cost estimates for comparison between original and revised estimates. The value of additional items of ₹ 1,145 crore as replied by MoS is not correct and as per approved RCE, the amount was ₹ 313 crore. Since this amount was not included in the original cost estimates (₹ 8,692 crore) and RINL agreed to incur the expenditure based on techno commercial discussions, the audit had considered it as cost overrun.

In view of the above calculation of cost overrun of ₹ 744 crore is not acceptable and cost overrun as calculated by Audit stands.

3.1.3.2 DEFICIENCIES IN EVALUATION OF REVISED COST ESTIMATES (RCE)

On review of RCE containing the production build up of base case and production after capacity expansion, Audit noticed irregularities in assessing the production build up as detailed below:

RINL had considered the liquid steel production of base case (existing plant) at 3.25 MTPA and at the time of achieving the 100 percent production in the year 2014-15, at 3.7 MTPA for base case and 6.3 MTPA for both the base case plus expansion plant (3.7 MTPA + 2.6 MTPA). In fact, though RINL had placed purchase order for 2.8 MTPA capacity of liquid steel (SMS-2) all along while working out the financials for the 15 years of operations, RINL had considered liquid steel production for the base case at 3.25 MTPA and after expansion at 6.3 MTPA. Thus RINL considered the incremental production at 3.05 MTPA as against the SMS-2 capacity of 2.8 MTPA only. Further RINL had never achieved the production beyond 3.5 MTPA of liquid steel by the time the project report was prepared. Considering liquid steel production at 3.7 MTPA for the base production from the year 2014-15 thus lacks justification.

As per the production flow chart of RINL, the standard conversion rate for every one ton of liquid steel, 88.53 *per cent* ton of saleable steel for the existing plant and at 92.23 *per cent* as per the project report for the expansion plant was considered by Audit. Based on this assumption, the production of saleable steel for the base case (existing plant) and after expansion including the base case are as follows:

- At the liquid steel production of 3.5 MTPA, the saleable steel could be 3.10 MTPA whereas RINL had considered the production of saleable steel at base case as 2.84 MTPA only as production of liquid steel was considered as 3.25 MTPA. Thus, the production build-up of saleable steel in the base case was understated by 0.26 MTPA.
- At the level of 100 *per cent* capacity utilization from the year 2014-15, RINL had estimated the production of saleable steel at 5.82 MTPA from the production of liquid steel of 6.3 MTPA. At the standard conversion rate of 88.53 *per cent* from liquid steel to saleable steel for the existing plant and at the conversion rate of 92.23 *per cent* for the expansion plant against the production of liquid steel at 3.5 MTPA and 2.8 MTPA respectively, the production of saleable steel worked out to 5.68 MTPA only. The production build-up of saleable steel after capacity expansion was considered on higher side by 0.14 MTPA.

Inaccurate consideration of quantity of saleable steel in base case and post expansion would have an adverse impact on cash flow, PAT, IRR etc.

The management did not furnish their reply. However, MoS in its reply (December 2014) stated the following :

- Considering the observations of Audit, RINL revised the workings of RCE by adjusting the Base Case for ramp up of production from 3.25 Mt to 3.7 Mt from Existing Units. Thus, the incremental production from Expansion is limited to 2.6 Mt Liquid Steel only. The revised workings with an IRR of 12.96 *per cent* justified the yield rates adopted by RINL for base case production as well as for capacity expansion units at 91.4 *per cent* and 93.7 *per cent* respectively due to technological variations in the actual production activity / project implementation process.

The fact remains that IRR envisaged in the Project Report as well as RCE was not based on correct figures, as RINL had to revise its IRR estimates from 14.02 *per cent* to 12.96 *per cent*. Further, yield rates adopted are far removed from the technical parameters provided in the respective project report. Output in the base case taken as 3.7 MTPA was also not correct

as the same was not achieved by RINL even as on date. Though production was taken as 2.6 MTPA for expansion units based on gross figure in the post expansion calculations, the base case revenue and cost were not rationally assessed. Thus IRR calculation was not realistic and not achievable.

3.2. CONTRACT MANAGEMENT

3.2.1. OVERVIEW

RINL had adopted three-bid system for tendering process: (i) Preliminary qualification criteria (PQC) (ii) Techno-commercial bids and (iii) price bids. The contracts were generally awarded to/on L₁ bidder after duly considering price negotiations, if any. However, there was no internal time frames for finalization of tenders and clear procedure for managing the contracts. This made it impossible to determine accountability of consultant / officials for delays in contract implementation.

RINL replied (April 2014) that it had fixed internal time frames of 70 / 80 days for finalization of domestic / global tenders with a view to match the schedule of 36 and 48 months envisaged for completion of Stage-I and Stage-II of the project respectively. It was also replied that the delays were inescapable. Further, MoS replied (December 2014) that the internal time frames for finalising the open / global tenders though not formally communicated to the Consultant, were discussed / reviewed from time to time during various meetings at various levels in which, the need to adhere to the time lines committed to GoI has been emphasised. MoS further stated that clauses for levy of penalties and LD existed in the GCC / SCC of consultancy contract.

The reply of RINL and MoS needs to be viewed against the fact that since RINL was undertaking a mega project, it should have evaluated the time frames for each activity involved in the process of finalisation of tenders like (i) freezing the specification, (ii) finalizing PQC, (iii) issue of NIT, (iv) tender opening, (v) finalization of technical specifications, (vi) tender negotiations and (vii) placement of orders to have better control over the project implementation and the same should have been communicated to all relevant agencies for their adherence and control. In this connection, it is also pertinent to note the strictures passed by BOD and Committee on Management (COM) on the officials of RINL for not adhering to the overall tendering schedule of 70 / 80 days. It could not be denied that time frames were necessary for each sub-activity of tender processing in order to identify the specific activity / area where the delays occurred.

3.2.2 PRE-TENDERING ACTIVITIES

3.2.2.1 COST ESTIMATES PREPARED BY THE CONSULTANT

As per the terms of the consultancy contract, one of the responsibilities of the consultant was to prepare package wise cost estimates. The consultant prepared the package wise estimates at the base price of June 2005 for obtaining the project approval. In addition, the consultant updated the cost estimate based on technical discussions held with the tenderers, where revision in scope of work if any and escalations were involved and furnished to contracts section of

RINL in sealed cover to be opened along with the price bids of the tenderers. Therefore, the estimates prepared by the consultant were expected to be credible, reliable, and reasonable duly reflecting the market trend. However, examination in Audit revealed that there were wide variations between the updated cost estimates prepared by the consultant and awarded values. The updated estimates after techno commercial discussions were not expected to have much variation as the consultant was expected to consider all additions/ deletions and escalations while finalising the same. In spite of the above, the variation between the L₁ prices and the updated estimates ranged from (-) 47 per cent to (+) 122 per cent. Out of 65 contracts³³, in respect of 20 contracts only, the variation was within 10 per cent, i.e. generally accepted variation.

RINL in its reply stated (April 2014) that major part of the estimates was based on data available with consultant for similar projects executed earlier and the estimates based on base prices as on June 2005 was given only for the purpose of fixing up of EMD and issuing NIT.

The reply of RINL stating that the estimates prepared by the consultant were confined to the purpose of fixing EMD and issue of NIT without explaining as to why and how the cost estimates were not credible, reliable and reasonably reflecting the market value of the cost of components of the project only underscores the fact that the estimates were deficient and contributed to delays in finalization of tenders.

3.2.2.2 TENDER CONDITIONS AND SPECIFICATIONS

A. Delay in release of specifications

Orders for all packages of capacity expansion were to be completed within six months, i.e. 180 days from the zero date (28 October 2005), out of which, 70 / 80 days (Indigenous / Foreign Orders) were earmarked for finalisation of tender after issue of NIT. Therefore time available for release of specifications i.e. the first sub-activity before issue of NIT was only 110 / 100 days (Indigenous / Foreign Orders) from the zero date.

Audit observed that in all the 58 contracts of Stage-I of capacity expansion selected for examination of Audit, the specifications were released with delays ranging between 61 and 2145 days over and above 110 / 100 (Indigenous / Foreign Orders) days available for release. In respect of Stage-II, out of the 8 contracts selected for examination in Audit, except in one case, there were delays in release of specifications ranging from 1 day to 1014 days.

RINL constituted (November 2005) a committee for finalizing the tender conditions like Instructions to Tenders (ITT), General Conditions of Contract (GCC), Special Conditions of Contract (SCC) etc. for various kinds of tenders like Total Turnkey, Discrete Turnkey, and Non-Turnkey exclusively for the capacity expansion. The said committee could finalise the tender conditions and got the same approved by the competent authority in June 2006. The delay in release of specification caused irrecoverable loss of valuable time with cascading impact on avoidable time overrun. Since the preparation of technical specifications like indicating the plant configuration including necessary facilities etc., was within the scope of consultancy contract, the delays could be attributed to the failure of the consultant. The accountability for

³³ Out of 68 contracts, excluding the consultancy contract, SLTM contract under tender stage and one contract not furnished to audit. Thus total 65 contracts

such avoidable delays was not possible to be clearly established in the consultancy contract in the form of adherence to milestones and, therefore, the consultant would appear to have got away without being penalized in this regard.

RINL in its reply stated (April 2014) that in the consultancy contract, there were 16 milestone activities, penalty had been envisaged and it had already withheld amount towards milestone penalties from the fee payable to the consultant. MoS in its reply (December 2014) further stated that the specifications of major packages of Stage-I were issued by the consultant between April and May 2006.

The reply of the RINL / MoS needs to be viewed against the fact that as per the project implementation schedule, the placement of orders was to be completed by April 2006 and not mere release specifications i.e. a sub-activity before issue of NIT. Further, the sixteen milestones referred to in the reply pertain to the completion of the zone wise activities. RINL did not fix internal time frame for various activities involved in the process of placement of orders like finalisation of specifications etc and no delays were attributed to Consultant. Further, mere withholding of amount towards penalty did not constitute recovery towards penalties.

B. Incorrect preparation of bill of quantities (BOQ), tender conditions and price schedules.

Audit observed variations between the estimated and actual BOQ in respect of civil and structural contracts resulting in delays in completion of works and contributed to time overrun as well as cost overrun. Out of the eighteen civil works reviewed from the audit sample, in six civil contracts, the estimated cost was varied by ₹ 158.64 crore and the percentage variation works out between 31.76 *per cent* and 47.96 *per cent* of estimated costs which indicates the failure of the consultant while estimating the BOQ.

RINL replied (April 2014) that it would take two years time to prepare a civil tender with correct quantities and thus there would have been variations in quantities of civil contracts. It was further replied (May 2014) that consultants generally relied on in-house data to a large extent for arriving at rough estimated quantities to avoid wastage of time waiting for finalization of technological packages from equipment suppliers. This indicated that the service rendered by the consultant were not reliable. Further, RINL failed to safeguard its own interest through the mechanism of appointment of consultant at great cost.

3.2.2.3 INADEQUACY IN TENDER CLAUSES

As per clause 5.1 of schedule 5, of the contract with the consultant, the latter was required to prepare package-wise tender documents including technical specifications, drawings, GCC, SCC, NIT, cost estimates etc. Though the tender documents were finalized by April / June 2006, the terms and conditions of tenders were not frozen in respect of global tenders relating to major equipment packages. RINL had to revise majority of the tender / commercial conditions of the contract by issuing 2 addenda in November 2006 and December 2006, at the behest of some tenderers. In spite of revision of terms of the contract, again at the request of the global bidders, RINL had to accept further changes in commercial conditions and issued revised text to terms and conditions of the contract in March 2007. This caused delay in finalization of the

contract conditions by 16 months from the zero date (28 October 2005) and, meanwhile, the validity of the tenders expired. Thus, there was failure of the consultant to finalize the terms and conditions with relevance and reliability.

RINL replied (April 2014) that in spite of having a committee which recommended the Terms and Conditions (T&C) after studying the position in other companies like SAIL and interaction with various people / industries of the above, the tenderers proposed several changes to the terms and conditions. MoS in its reply stated (December 2014) that almost all technological equipment suppliers were having heavy order bookings when expansion tenders were floated by RINL as such the suppliers were not willing to agree to the tender terms & conditions and insisted for revised commercial terms & conditions. The reply of RINL and MoS is not convincing since it elucidated the efforts made by it in finalisation of terms and conditions of contract and attributed delays to monopolisation and ‘ruling the roost’ by tenderers of big packages, and continued to defend the consultant without initiating any penal action against the consultant for failure to sufficiently address the terms and conditions in respect of global tenderers as more than 50 *per cent* of the T&C were revised at the instance of the tenderers.

3.2.2.4 MOBILISATION ADVANCE

At the time of formulating the tender conditions of 6.3 MTPA capacity expansion, the prevailing CVC guidelines³⁴ on payment of mobilization advance were that the advance payments are to be generally discouraged. Whenever the payment of advance was considered unavoidable, the same should be interest bearing, so that the contractor does not draw undue benefit. Contrary to the CVC guidelines, RINL paid interest free advance of 5 to 10 *per cent* of total contract value subject to maximum of ₹ 75 crore indiscriminately. Subsequently CVC issued revised guidelines in April 2007, where the interest free advance was allowed at the discretion of the Board along with recovery within a specified time schedule. Review of interest free mobilization advances in audit revealed the following:

1. The interest free mobilization advance of ₹ 745.40 crore was paid in respect of 110 contracts and the overall percentage of advance paid vis-à-vis original cost estimates worked out to 8.58 *per cent*. Though the interest free advance was to be paid on need basis in only specific cases, RINL had paid the same to all contractors. Further, though the recovery should have been effected in a specified time, RINL, however, linked the recovery of advance to progress of work. Thus payment of interest free mobilization advances contrary to CVC guidelines resulted in extension of undue benefit to private contractors. The loss of interest suffered by RINL worked out to ₹ 156.02 crore, based on the lowest PLR (11.50 *per cent*³⁵) of State Bank of India during the period of project execution.
2. As per the terms of the contract, mobilization advance could be recovered from each “Running account Bill” on pro-rata basis of work done and the entire amount of such advance could be recovered within the 80 *per cent* progress payments within the

³⁴ OM No.NU/POL/19 dated 08 December 1997.

³⁵ Actual SBI PLR ranging from 11.50 *per cent* to 14.50 *per cent*.

Contractual time schedule for completion of supply / delivery of all Plant, Machinery and Equipment, instead of in a fixed time frame. Thus, in all the cases, where the completion of work was delayed, the period of recovery of advance was prolonged and the actual period of recovery ranged between 159 days and 2013 days (Up to 31 March 2013). Thus, most of the contractors in the capacity expansion were unduly benefited by enjoying interest free advance for prolonged periods.

3. Further, there was no provision in the contract regarding period within which the recovery of advance was to commence. Thus, in the cases of delay in commencement of work, the commencement of recovery of advance was also postponed and there was abnormal delay in starting the recovery of advance. Out of 110 cases, only in 11 cases, recovery had commenced within a month. In the remaining 99 cases, the delay in first recovery ranged between 48 and 1638 days.
4. CVC guidelines clearly restricted the payment of mobilization advance to the extent of supply of goods wherever the contracts were split for supplies, erection and others. Contrary to CVC guidelines, RINL paid ₹ 149.94 crore interest free mobilization advance on other than supplies portion of goods like Design & Engineering, erection, civil works, training, supply of maintenance spares. Thus payment of interest free advance was irregular and RINL lost interest to the tune of ₹ 38.68 crore.

RINL in its reply stated (April 2014) that keeping in view the tight schedule for the project and market conditions, it was felt better to offer interest free advance. Therefore, a provision was made in the GCC/SCC for turnkey and discrete turnkey contracts to extend interest free advances. It further stated that since the recoveries would be effected in time bound manner, no provision for charging interest on account of delayed recoveries was envisaged and supported its action by stating that CVC guidelines of April 2007 allowed extending need based interest free advances with prior approval from the Board.

MoS replied (December 2014) that RINL, while issuing the tenders for 6.3 MTPA, stipulated for interest free mobilization advance in the NIT itself in a fair and transparent manner with due approval of the competent authority considering the past experience with the tenderers, prevailing market conditions and based on the reasonable assumption that the tenderers would possibly load the interest on mobilisation advance in their quoted price, if interest free mobilisation advance is not offered. Thereafter CVC also reviewed the prevailing guidelines on interest bearing mobilisation advance in April 2007 and allowed need based interest free mobilization advance.

The reply of RINL and MoS needs to be viewed against the fact that RINL has accepted that in view of the tight schedule for the project and prevailing market conditions, it offered interest free advance. The action of RINL to extend interest free advance was a clear violation of the CVC guidelines existing prior to April 2007. Especially payment of interest free advance to other than supplies portion of contracts like Design & Engineering, erection, civil works, training, supply of maintenance spares was in contradiction to that of the CVC guidelines issued in April 2007 also. Thus, the payment of mobilization advances was contrary to the CVC guidelines as well as financial propriety, which resulted in extending undue favour to the

contractors besides loss of interest to an extent of ₹ 156.02 crore on mobilization advances including loss of interest ₹ 38.68 crore on other than supply contracts like D&E, erection, civil works, training, supply of maintenance spares etc.

3.3 AWARD OF CONTRACTS

1. Contract Management plays a vital role in implementation of capacity expansion within the timeframe and approved cost. Though the key activity of 'awarding contracts' has six sub-activities, RINL did not fix sub-activity wise time frames. Hence, there was no benchmarking for each activity in the process of awarding of contracts commencing from zero date to release of specifications excepting the 30 days' time fixed for signing of the contract from the date of issue of LOA. In order to speed up the total process of awarding contracts for capacity expansion, RINL had fixed the total time frame of 70 days for indigenous tenders and 80 days for Global Tenders to complete the process of subsequent five sub activities i.e., from the date of NIT to issue of LOA. The actual time taken was ranging between 34 and 893 days as detailed in the table given below:

Table-7

| Sub-activity | From | To | Actual Duration range |
|--|--|--|-----------------------|
| 1. Release of specification | Zero date | Release of specification | 161-2245 days |
| 2. Invitation of Bids | Release of Tender Specifications | Issue of Notice Inviting Tenders (NIT) | 4 - 883 days |
| 3. Tender Opening | Issue of Notice Inviting Tenders (NIT) | Opening of Pre-Qualification Criteria (PQC) i.e., Env-I | 8 -126 days |
| 4. Evaluation of eligibility criteria | Opening of Envelope-I | Opening Techno-Commercial bid i.e., Env-II | 5 - 236 days |
| 5. Evaluation of Techno-Commercial bids | Opening of Envelope-II | Opening of Price bid or Revised bid/ Revision in price bid i.e., Env-III | 2 - 534 days |
| 6. Evaluation of Price Bids | Opening of Envelope-III | Issue of Letter of Acceptance (LOA) | 2 - 318 days |
| 7. Finalization of contract | Issue of LOA | Signing of the contract/ Effective date of Contract | 12-409 days |
| Duration of time from issue of NIT to issue of LOA | | | 34-893 days |

Audit noticed various deficiencies in Contract Management leading to the abnormal delays in awarding contracts due to the following reasons:

- Delay in release of specifications by the consultant;
- Extension of tender opening date (TOD) due to deficiencies in tender conditions;
- Delay in opening technical bids due to delay in finalization of PQC by the consultant;
- Resolving commercial deviations for major technological process packages due to deficiencies in framing the GCC / SCC resulted into prolonged discussions and delay in order placement; and
- Inadequate draft specifications prepared by the consultant resulted in revisions of technical specifications, additions to plant requirements etc., during techno commercial discussions.

Examination in audit revealed that in all the 67³⁶ contracts of audit sample, except in one contract in Stage-II, in the other 66 contracts, there were delays ranging from 61 days to 2145 days in Stage-I and 1 day to 1014 days in Stage-II in release of specifications.

RINL in its reply stated (April 2014) that despite best efforts, there were delays at every stage of finalization of the tenders like tenderers asking for postponement of TOD, submitting conditional offers requiring repeated discussions, protracted price negotiations, delay in signing of agreements. All these reasons either singly or cumulatively added to delays because of limited vendors / parties.

The reply of RINL attributing the delays exclusively on tenderers needs to be viewed against the fact that there were failures on the part of RINL / consultant in properly framing GCC / SCC and failure to fix time frame for each sub-activity. RINL should have taken suitable measures with the prime object of completing the entire key milestone activity within the envisaged time frame by expediting subsequent sub-activities at each stage in order to off-set the slippages noticed in the previous activity. In the absence of sub-activity wise time frames, lack of continuous close project monitoring by designated Director for a substantial length of time and by BOD / MoS, major delays in the progress of the project were not possible to be avoided. Details of these deficiencies are discussed in Chapter-4.

2. Role of the Consultant

As per clause 1.6 (Schedule 5) of the consultancy contract, though the assistance of the consultant was mandated in the consultancy contract in respect of furnishing recommendations on eligibility criteria, techno-commercial bids, finalizing the various stages of the tenders etc., RINL however had not indicated the clear timeframes for furnishing complete recommendations by consultant in the terms of contractual obligations. Consequently, though there were abnormal delays at every stage of tender finalization in the most of the cases examined in Audit, the specific lapses and delays attributable to consultant could not be pin-pointed on time.

RINL in its reply stated (April 2014) that in practice it may not be feasible to fix time frame for each activity due to the fact that generally to a large extent consultants' activity is dependent on inputs to be provided by the external agencies which are beyond the control of the consultant. The reply is to be viewed against the fact that without time frames, no project can either be initiated or completed on time.

3.3.1 INVITATION OF TENDERS

Timely invitation of tenders is essential for timely implementation of the expansion project. Out of 67³⁷ contracts of audit sample, global tenders were issued in respect of 22 contracts and open tender mode was adopted in 42 contracts, two contracts on Limited tender basis and one contract on nomination basis. In this context, audit noticed that delayed release of NIT was one of the reasons for delay in completion of awarding of the contracts within approved timeframe. Normally NIT has to be issued immediately after releasing the tender

³⁶ *Excluding SLTM contract*

³⁷ *Excluding SLTM*

specification since the tendering process begins from issue of NIT. Even after allowing one week grace period, actual time taken for issuing NIT was in the range of 4 to 883 days in 61 contracts selected in audit sample.

RINL in its reply stated (March 2014) that the maximum time taken for issue of NIT was 24 days. The reply needs to be viewed against the fact that date of issue of NIT was worked out from the date of receipt of proposal at the Project office whereas the audit observation took into account the delay from the date of release of specification to the date of NIT.

3.3.2 DELAYS DUE TO EXTENSION OF TENDER OPENING DATE (TOD)

Extension of tender opening date (TOD) was another reason for delay in completing the process of awarding the contract within 70 / 80 days from the date of issue of NIT or first milestone within six months from the zero date as approved by Government. Audit observed that in 44 out of 68 contracts of audit sample, RINL extended TOD, 1 to 4 times and the excess time beyond the original period allowed for opening of tenders was in the range of 4 to 96 days. Reasons for such extension of TOD were not consistent. TOD was postponed due to change in eligibility criteria (9 contracts) revision in GCC (13 contracts) and also revision at the request of tenderers (40 contracts).

Instances of such avoidable delays in TOD noticed in audit are given below:

- a) RINL issued NIT for supply of BF-3 on 26 April 2006 with scheduled TOD on 6 June 2006. TOD was however postponed at the request of the tenderers and also due to change of certain contract clauses of GCC / SCC, TOD was extended to July 2006. Due to participation of two more agencies and at their request, TOD was again postponed to 14 August 2006. Thus after postponing the TOD twice, with overall delay of 76 days, the tenders were opened. In spite of extending TOD on the grounds of reduction in the scheduled period of completion, RINL finally agreed to a completion period of 30 months.

RINL replied (April 2014) that delay in opening of the TOD was mainly due to the fact that all probable bidders requested for extension and addendum had to be issued to Technical Specifications.

The reply needs to be viewed against the fact that TOD of BF-3 was postponed because of revision in completion schedule from 27 months to 26 months which was attributable to RINL. Finally during the techno commercial discussions, the completion schedule was revised from 26 to 30 months. Thus failure to assess the scheduled period of completion of BF-3 was the main cause for postponement of TOD.

- b) For supply of WRM-2, the NIT was issued in May 2006 with schedule tender opening date in June 2006. The TOD was postponed twice till August 2006 at the request of the bidders and also revision of PQC by RINL due to incorporating the turn-over criteria and second time due to a public holiday. Thus the tenders were opened after 100 days of issue of NIT with overall delay of 70 days.

RINL in its reply stated (April 2014) that majority of bidders / suppliers had sought extension and while extending TOD, RINL had also issued amendments to PQC / modifications

in certain statutory clauses of GCC / SCC. However, the fact remained that as against overall completion schedule of tender finalization of 80 days, RINL took 100 days for completion the sub-activity 'tender opening' in the tender finalization process.

- c) For procurement of Captive Power Plant – II, RINL issued (November 2008) global NIT. After 103 days of issue of NIT, RINL continued to issue amendments / addendum / corrigendum to the tender documents making revisions to all key factors like eligibility and evaluation criteria, checklist, certain parts of technical specification etc. The due date of opening tender was extended thrice³⁸ and finally after 126 days from NIT, PQC bid was opened (16 March 2009) with a delay of 96 days.
- d) In the case of NIT for water supply system for SMS-2, the scheduled date of TOD was 5 April 2007. This was postponed four times on the grounds of revision of conditions of contracts and at the request of the tenderers and finally on 20 June 2007 the PQC was completed with a delay of 76 days.

RINL replied (April 2014) that TOD was postponed twice due to inclusion of CVC guidelines on unconditional acceptance of integrity pact (2007) and mobilization advance (2007) to the tender condition by issue of corrigendum.

The reply of RINL needs to be viewed against the fact that the CVC guideline on integrity pact was issued in December, 2007 and not in the month of March, 2007. Likewise a CVC guideline on mobilization advance already existed even prior to April, 2007.

3.4 EVALUATION OF TENDERS

3.4.1 EVALUATION OF PRE-QUALIFICATION CRITERIA (PQC)

After finalizing the preliminary qualification criteria (PQC), based on supporting documents furnished by the bidders, the consultant would evaluate the bids and furnish list of tenderers qualified along with recommendations. The consultant was required to submit its recommendations without loss of time so as to complete the tender process within the scheduled time.

Audit, however, observed during review that some of the recommendations of the consultant / RINL on selection of parties based on PQC evaluation were not consistent leading to rejection of eligible parties and recommending ineligible parties for opening the techno commercial bids.

In case of civil work for WRM-2, three tenderers were technically qualified and the consultant recommended opening of the price bids in October 2006. Six weeks after recommendations, the consultant informed RINL (November 2006) not to open the price bids of one of the technically qualified parties Bridge & Roof (B&R) on the grounds of insufficient capacity to undertake the civil works of WRM-2 as the tenderer was already L₁ in two other civil contracts relating to RMHP and SLTM in the capacity expansion. RINL had issued (18 November 2006) LOA to B&R for undertaking SLTM work. RINL called for the spare capacity

³⁸ As per NIT – 20 December 2008, First extension, 30 January 2009 (corg.1), second extension, 23, February 2009, (corg. 2&3), third extension 16 March 2009 (corg.4)

of the B&R who had indicated on 21 November 2006 that as on that date, in any particular location in India, it had spare capacity of 1.20 lakh cum. Thus from B&R letter it was clear that B&R could execute 1.20 lakh cum in Visakhapatnam area. The concrete works to be undertaken in the civil works of RMHP, SLTM and WRM-2 on annualized basis (per annum) worked out to 1.52 lakh cum. The required annual spare capacity (as per the evaluation of spare capacity) for opening of the price bids was 75 percent of annual concrete capacity which worked out to 1.14 lakh cum and therefore M/s B & R had surplus capacity of 0.06 lakh cum even after considering the civil works of WRM-2. Thus B&R should not have been disqualified. The B&R was L₁ in the civil works of SLTM and RMHP with 6 per cent and 9.5 per cent above the estimates respectively. After excluding the prospective bidder i.e. B&R, RINL finalized contract and placed order on L&T at ₹ 80.28 crore, 48.12 per cent over the estimate of ₹ 54.20 crore.

Examination in Audit revealed the following :-

- RINL deviated from a standard practice i.e. either to enquire regarding the capacity of all parties or to ignore that aspect for all. Thus insisting on availability of spare capacity exclusively from a public sector company is contrary to the tender conditions.
- Though the final price offered by the L&T was 48.12 per cent over the estimates, RINL instead of going for re-tender placed order on a private party with huge variation.

RINL in its reply stated (April 2014) that after considering the effective concrete period, the shortage of spare capacity of B&R for the four works put together was 1 lakh cum and the combined concreting work of SLTM and RMHP packages itself is beyond the capacity of B&R which may link to failure in fulfilment of the completion schedules.

MoS in its reply stated (December 2014) that the price bid of B&R for SMS & WRM-2 civil works packages were not opened on the ground that they might not be able to execute the work as two other packages of VSP expansion (i.e., RMHP & SLTM) were already awarded to them leading to limitation on their capacity to execute further jobs. B&R confirmed (21 November 2006) that they would be in a position to carry out 1,20,000 cum of concrete work in a year in any one location in the country. It was further replied that the other qualified tenderers in the civil works packages had not become L₁ in any of the tenders of VSP at that point of time. Hence, assessment of their capacity to take up civil works of expansion was felt not necessary.

The reply of RINL/MoS needs to be viewed in the light of the following :

- The audit para was on concrete works to be undertaken in the civil works of RMHP, SLTM and WRM-2 (but not SMS-2) by B&R. The annual concrete capacity of the three works was within the spare capacity to execute the concrete works by B&R in particular location i.e., 1,20,000 cum.
- MoS's reply that the price bids of B&R for SMS & WRM-2 civil works packages were not opened on the ground that they might not be able to execute is not acceptable since RINL called for the spare capacity of the prospective bidder B&R alone without calling for similar information from the other tenderers.

Hence, MoS's contention that they did not consider the available spare capacity of the other tenderers and calling for spare capacity of B&R alone was not prudent and justified.

3.4.2 DELAY IN OPENING OF TECHNICAL BIDS

Audit observed that there were delays in finalization of PQC resulting in delay in opening of the technical bids. Out of 67³⁹ contracts of audit sample in 60 contracts there was delay in opening of technical bids ranging from 5 to 236 days. The reasons for the delay in finalization of techno-commercial bids included delay in obtaining the approval of competent authority, issue of addenda to tender conditions to accommodate the commercial deviations sought by the bidders, which are discussed below :-

- a) In case of tender for supply and commissioning of Thermal Power Plant and Blower House-2, RINL took 236 days for finalising the lone techno-commercial bids due to delay in obtaining the approval from the competent authority (BOD of RINL) for selecting bids of the lone tenderer, i.e. M/s BHEL which was avoidable.

RINL replied (April 2014) that it was not fully aware of the latest technological development and advantages at the time of initial issue of tender resulting in some mid-term changes.

The reply of RINL needs to be viewed against the fact that the consultant appointed by RINL was expected to be aware of the features of the project before issuing NIT.

- b) In the case of 'Makeup water (Zone-14)', RINL took 130 days to open the technical bids and TC ultimately recommended M/s VA TECH WABAG Ltd (VWL) which was not qualified as per the legal opinion obtained by RINL. In spite of the above, TC recommended VWL on the grounds of better competition. The TC recommendation was, finally rejected by the competent authority on the ground that sufficient tenderers had participated in the bids. In this process, more than two months time was lost and three out of the five tenderers had refused to extend their prices as there was delay in finalization of tenders. In spite of availability of two valid price bids, RINL called for revision in price bids without availing the valid price bids. Finally, RINL placed order on M/s Tata Projects Limited at a cost of ₹ 79.14 crore. Thus, by ignoring the valid L₁ price bid of Technophobe Engineering Limited of ₹ 53 crore, RINL incurred an avoidable additional expenditure of ₹ 26.14 crore (₹ 79.14 crore – ₹ 53 crore).

RINL in its reply stated (April 2014) the following :-

- The BOQ issued along with the tender document did not have the bifurcation for BOQ quantities of CENVARIABLE and NON-CENVARIABLE hence called for revised reduced price bids.

³⁹ 68 contracts excluding one of the contract SLTM project.

- The price of M/s Technofab was valid only up to 27 April 2008. The other bidder M/s L&T had also sought to allow them to submit Revision in price or allow escalation clause. Revised Reduced Price bids were sought on 29 April 2008 and opened on 08 May 2008 and the same were considered for evaluation and order placement. Ministry endorsed (December 2014) the views of RINL.

The reply of RINL/MoS needs to be viewed in the light of the following :

- The reply of the MoS was silent regarding two months delay in finalization of tenders due to protracted deliberation between the decision making agencies which led the three tenderers intended to furnish revised price bids out of the five tenderers.
- Prior to one and half month before the date of issue of NIT itself the finance department had clarified that part of the work would get CENVAT credit. In spite of above, the BOQ was not prepared based on CENVATABLE and NON-CENVATABLE. Thus, RINL had not worked out detailed BOQ before issue of NIT.
- MoS's reply that Revised Reduced Price bids were sought on 29 April 2008, hence, M/s Technofab cannot be construed as valid L₁ bidder is factually incorrect since the RINL had called for revised price bids on 25 April 2008 itself, i.e. well before expiry of validity of the price bids of two tenderers.

Thus the protracted deliberation between the decision making agencies has resulted in abnormal loss of time in finalization of contract and unwarranted extra expenditure of ₹ 26.14 crore.

3.4.3 DELAY IN ENTERING INTO AGREEMENTS

It was stipulated in the tender conditions relating to the project that date of commencement of work would be reckoned from the date of LOA in some contracts and from tenth day from the date of LOA in other contracts. Further, within 30 days from the date of LOA, the agreement has to be concluded. In spite of the above in all the major equipment supply contracts, at the instance of the tenderers, the date of commencement of contract was reckoned as the date of signing of the contract instead of date of LOA. In spite of revising the condition, RINL could not conclude the contracts within the stipulated time of 30 days from the date of LOA due to delayed submission of contract specification, post revision of GCC, change in consortium members by the L₁, revision to source of supply of materials etc. Further, because of relaxation in date of commencement of contract, GoI approved period of 30 months from the date of order placement for completing the installation of major equipment, was stretched. Out of 15 turnkey contracts from the audit sample, in 14 contracts, the period of concluding contract was delayed beyond the stipulated period of 30 days ranging between 12 to 281 days (between the date of LOA and signing of agreement). This led to delay in approved project implementation schedule even before commencement of work.

In other than main contracts, as per terms and conditions of LOA relating to the contracts, the contractor has to submit various documents such as labour license, insurance, SD at

prescribed limits of the awarded value within 30 days from the issue of LOA for concluding formal agreement. However, Audit observed that the contractors furnished required documents as well as SD after expiry of the stipulated 30 days period. Consequently, out of 53 other than turnkey contracts from the audit sample, in 49 contracts there were delays in signing of agreement ranging between 1 day and 379 days beyond the prescribed 30 days. The contractors would derive financial benefit by not submitting SD / insurance / labour license. There was no safeguard in the contract either to prevent such delays or any disincentive for delays.

RINL in its reply stated (April 2014) that despite the change in GCC conditions as desired by the bidders, the parties were not coming forward to sign the agreements. Therefore there were lot of delays in commencement of contracts after finalization of bids due to non-stipulation of condition for certain formalities like obtaining labour licenses, collection of Security Deposits (SD). The contention of RINL that they did not make any payment before the collection of SD is not relevant as Audit pointed out the failure of RINL regarding not giving time frames for collection of SD and fulfilling other formalities like production of labour licenses by the contractors.

MoS replied (December 2014) that in respect of 94 *per cent* of the total expansion contracts, the effective date of contract commences from the date of issue of Fax LOA, based on which LD and recovery for non-achievement of milestone penalties are made. Since the contractual payments would commence only after signing of the agreement, the contractor would not get payments for the work already executed and on the other hand LD etc would be levied for delayed performance/non-performance.

The reply of MoS needs to be viewed against the fact that even though less in number, it could be observed that in respect of 53.27 *per cent* of cost of expansion, the date of commencement of contract is the date of signing of the contract and not from the date of issue of LOA. The company could have incorporated a clause by fixing up time limit to the contractor for submission of SD, licenses etc., in the terms and conditions of the contract to safeguard the interest of RINL for early completion of work and mere levy / collection of milestone penalties for delayed commencement of work did not serve the purpose.

3.4.4 PENDING RECOVERIES UNDER RISK PURCHASE

During the execution of the contracts, the contractors failed to execute / supply within the scheduled time, as per the terms of the agreement. As a result, RINL had off loaded the supplies / work to other contractors duly invoking the risk clause. Examination in Audit revealed that though RINL invoked the risk clause, no efforts were made by it to recover the additional expenditure incurred from the original tenderers as detailed below:-

Table-8

| ₹ in crore | | | | | |
|------------|-------------------------------|---|----------------|------------------------|------------------|
| Sl.No | Name of the party | Name of work | Amount of risk | Amount of risk claimed | Amount recovered |
| 1 | M/s. Jessop & Co | Special Purpose Double Girder EOT Cranes for Structural Mill (08-ELC-002) | 0.89 | 0.89 | NIL |
| 2 | M/s. Jessop & Co | General Purpose Double Girder EOT cranes for Structural Mill (08-ELC-001) | 1.67 | 1.67 | NIL |
| 3 | M/s. Real Fab India Pvt. Ltd. | Structural steel & cladding works for RMHS | 6.98 | 6.98 ⁴⁰ | Nil |
| 4 | M/s. Vision Ventures | Civil Work for RMHP Area-2 (Zone-1) (01-CVL-004) | 6.98 | NIL | NIL |

a. In the first two cases, RINL placed order (November 2009) for supply of cranes on L₁ basis on M/s Jessop & Co. Prior to issue of LOA, there was specific complaint against the supplier about their poor performance from SAIL. The committee constituted to review the performance of the contractor also reported that the contractor was not in a position to supply the cranes within the scheduled contract period. In spite of the above, RINL had issued LOAs. However, the contractor had not fulfilled contractual obligations like payment of SD and execution of contract. RINL after 10 months placed the orders on other suppliers at the risk & cost of the M/s Jessop & Co.

RINL in its reply stated (April 2014) that it took a decision to place the order on M/s Jessop & Co. based on the assurances given by the contractor regarding the improvements made in their manpower capabilities in various spheres of the work besides compressing the delivery schedule from 14 months to 12 months. Depending only on the assurances from the party and ignoring a negative report from SAIL and its own internal committee resulted in unwarranted extra expenditure of ₹ 2.56 crore.

b. In the above third case relating to M/s Real Fab India Limited, RINL already initiated arbitration for ₹ 5.31 crore and also decided to go for arbitration for the balance amount of ₹ 1.67 crore. Besides the above, the contractor had not returned free steel of 935.55 MT valuing ₹ 4.97 crore⁴¹ issued between May 2007 and February 2011. As the steel was issued more than three years back, the value of the same might have been totally eroded. In addition, the contractor was facing financial crisis, hence the chances of recovery of ₹ 11.95 crore (₹ 5.31 crore + ₹ 1.67 crore + ₹ 4.97 crore) from the contractor was remote.

RINL noted (April 2014) the audit observation.

c. In the case of M/s Vision Ventures (VV), while executing the contract, RINL on the pretext of urgency of work, on its own had withdrawn (March 2009) part of the work worth ₹ 9.36 crore and offloaded it to another contractor, viz., M/s SEW infrastructures (SEW) with 40 per cent enhancement of price at the risk and cost of VV. The final value of the offloaded work became ₹ 24.45 crore after allowing escalations and increase of works. RINL opined later (April 2009) that no risk and cost clause could be invoked on VV, as the off loading was not attributable

⁴⁰ Out of ₹ 6.98 crore, RINL filed an arbitration against the contractor to the extent of ₹ 5.31 crore and balance yet to be filed.

⁴¹ 935.55 MT of steel at the rate of ₹ 53,131 per MT = ₹ 4.97 crore

to the failure of VV. Thus due to failure of RINL to invoke the risk purchase clause, it was burdened with additional expenditure of ₹6.98 crore⁴² on the part of the contract offloaded.

RINL stated (April 2014) that on the grounds of urgency, decision was taken in March 2009 to withdraw a part of the work from VV that was offloaded to SEW in April 2009. VV had categorically agreed in April 2009 that they were ready to execute the entire job provided the fronts were made available by RINL. The contention of urgency for withdrawing part of work from VV lacks justification as SEW could not execute the work within the time frames in which RINL wanted to complete the work. Therefore, offloading the work to SEW at higher rates (40 per cent) resulted in avoidable expenditure of ₹ 6.98 crore.⁴³

3.4.5 IMPROPER GRANT OF TIME EXTENSIONS

In the mega projects like capacity expansion, particularly when the project was running behind the schedule with cost overrun, there was a need to establish the exact failure of the each party / RINL / consultant etc., within the terms of contract before according approval to time extensions by the competent authority. As per RINL's circular (November 2007), RINL as well as the consultant had to furnish delay analysis, record hindrances and liquidate them so that the capacity expansion was completed without further slippages. However, no such exercise was done by the consultant. Even the authority approving such time extensions, did not insist for details of delay analysis. At later stage in August 2009, RINL directed that the consultant should analyze the delays within two months of grant of extension. Meanwhile, RINL appointed a committee to study uniform procedure to recover LDs, penalties, time extensions etc., in August 2009. Based on the committee's report, COM had taken a decision (September 2009) that consultant should prepare delay analysis within two months of achieving the respective milestones. RINL had granted extension of time (one to 23 times) with period of extension ranging from 10 days to 1887 days.

Examination in Audit revealed the following:

- In none of the cases, RINL had carried out delay analysis;
- Competent authority allowed time extension with price escalation and without recovery of liquidated damages (LD) indicating lack of proper accountability for delays. The right to levy LD was, however, reserved in cases of supply contracts only;
- In five civil contracts of RMHP, PP, WRM-2, SMS-2, water supply to Zone -14, though RINL mentioned that third agency was responsible for delays like non-receipt of electrical feedback data / load data from electrical / equipment suppliers within time, ultimately, while recommending the time extension, third party's responsibility was, however, not established;
- As per delegation of powers, if LD was to be waived and escalation was allowed for delays, it could be done only as per the delegated authority, with finance concurrence and by recording the reasons in writing. Audit, however, observed that extension of time

⁴² $24.45 / 140 * 100 = ₹ 17.46 \text{ crore}$ – additional expenditure = ₹ 24.45 crore – 17.46 crore = ₹ 6.98 crore

⁴³ ₹24.4 crore x 40/140 = ₹ 6.98 crore

was granted by waiving LD and allowing escalation though required delay analysis duly fixing the responsibility had not been done till date. The amount of LD waived against the 18 civil works worked out to ₹ 31.30 crore.

The following cases substantiate the fact that time extension was irregularly allowed without LD and with price escalation:

- a) Civil engineering works for WRM-2 were awarded to M/s L&T at 48.12 *per cent* above the estimates. The scheduled date of completion of contract (December 2008) was extended nine times up to April 2012 with escalations without LD and the entire delay was attributable to RINL. The main reasons for delay in execution were release of drawings, non-availability of fronts, low deployment of labour by the contractor, increase of work other than in the BOQ etc.,. Though it was mentioned that the delay was due to consultant's failure to release the fronts for under-deck insulation, false ceiling etc., while approving time extensions, the specific responsibility on the consultant was mentioned as 'Nil'. Further, though one of the reasons for delay was low deployment of labour by the contractor that could be attributed to contractor, no single day of delay was indicated against the contractor. Out of the total escalation of ₹ 24.74 crore paid (30.82 *per cent* in the contract value ₹ 80.28 crore) the amount of escalation paid for the extended period itself was ₹ 22.82 crore. Further, the LD amounting to ₹ 4.01 crore was also waived.
- b) In the case of civil engineering works for Structural Mill though delay was attributed to the contractor i.e. M/s GDC, in terms of non-deployment of adequate resources like manpower, equipment and non-functioning of equipment etc., while extending contract completion schedule by 1308 days, not even a single day of delay was attributed to the contractor. As a result, the contractor was allowed the benefit of price escalation (up to October 2013) and was spared from liquidated damages. RINL had paid escalation of ₹ 27.95 crore (42 *per cent* in the contract value ₹ 66.4 crore) for the extended period between July 2010 and March 2013. The payment of escalations would increase further due to extension of the contract up to February 2014. Further, the LD amounting to ₹ 3.32 crore was also waived.
- c) In the case of civil engineering works for SMS-2 awarded to SEW, the contractor had not adhered to the quarterly completion schedule of concreting work due to deployment of insufficient labour. However, RINL extended the contract seven times up to September 2011 as against the scheduled date of completion in December 2008 with escalations without LD. Though the defaults existed on the part of the contractor, the entire delay was owned up by RINL which had paid (up to March 2013) total price escalations of ₹21.43 crore (30.32 *per cent* in the contract value of ₹ 70.68 crore) including the price escalation for the extended period ₹ 19.41 crore. Further, LD amounting to ₹ 3.53 crore was also waived.

RINL in its reply stated (April 2014) that wherever extensions had been granted, the same had been made as per the existing / laid down procedures of RINL duly indicating the reasons for delay, period of delay on each account along with responsibility for delay, whether

the recommendation was with LD / without LD / reserving the right to levy LD. RINL further replied (May 2014) that the delay analysis had been done for the contracts which had been completed and analysis for contracts under execution would be carried out after completion of remaining jobs. RINL further replied that in Project Management, issue of letters to contractors increasing manpower and other resources were routine in nature to expedite the job and delays could not be attributed to civil agencies.

MoS in its reply stated (December 2014) that wherever extensions had been granted, the same have been made with due approval of the competent authorities as per the laid down procedures of RINL. Most of the main technological packages could be awarded after the award of civil works and there was delay in issuing the Engineering drawings to the respective civil contractors. Thus, in cases where the delays were found to be clearly not attributable to the civil contractors, extensions were granted as per internal systems without LD and price adjustment was allowed as per contractual terms & conditions.

The reply of RINL/MoS needs to be viewed against the fact that RINL had failed to take up the delay analysis at the time of recommending extensions and RINL could do delay analysis in respect of only completed contracts. Thus, recommending for time extensions based on internal procedures without preparing the delay analysis was not correct. Further, RINL's statement that issue of letters to contractors to increase manpower and other resources were routine in nature to expedite the job was a clear indication that RINL extended undue favour to the contractors by extension of time with escalations and without LD. Therefore, the fact remains that extensions were given to contractors which resulted in payment of price escalations of ₹ 162.63 crore without proper analysis / reports which could identify the responsibility for delays. Besides, RINL has failed to recover LD to the extent of ₹ 31.30 crore which were waived due to non availability of delay analysis reports before waiver of LD.

Recommendations :-

- 2. RINL may put in place a time bound programme to complete the work of capacity expansion by dovetailing the same with the revised scheduled dates of completion.**
- 3. RINL may critically review the role of and value addition achieved with the engagement of the consultant in expediting the project of capacity expansion.**