Ministry of Mines
National Mineral Exploration Trust

Minutes of the 20th meeting of Technical-cum-Cost Committee (TCC), NMET

(Date: 4th & 5th April, 2019)

The 20th meeting of Technical-cum-Cost Committee (TCC) of National Mineral Exploration Trust (NMET) was held under the chairmanship of Shri D. Mohan Raj, Addl. Director General & Head, National Mission-II, GSI on 4th & 5th April, 2019 at Fermor Conference Hall, GSI, Nagpur. The list of participants is as per **Annexure-1A & 1B**.

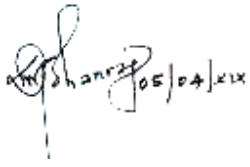
Shri Pradeep Singh, Director, NMET welcomed all the participants and informed that Shri Manoj Kumar, Director, DGCO and Member Secretary, NMET could not attend the meeting due to some personal exigencies. Also, Shri R.K. Sinha, Dr. Manoranjan Mohanty, Shri/s P. Mahrana and H.K. Verma, Members, NMET TCC could not attend the meeting due to election duty and personal reasons. The Committee granted leave of absence to these members. It was also highlighted that the issue of time overrun on projects is a serious matter and all implementing agencies have to manage project execution in such a way that large time overrun on projects could be avoided. Director, NMET informed that the report on Schedule of Charges for NMET funded projects has been finalized will be approved in the next Executive Committee meeting.

Shri D. Mohan Raj, ADG and Chairman, TCC also welcomed the participants and reiterated the objectives of NMET with thrust on regional and detailed exploration for strategic and critical metals, facilitating greenfield regional exploration, including high risk exploration for deep seated mineralization, promoting G2 level exploration in the areas already explored up to G3 level exploration and facilitating geophysical surveys in the country and facilitating National Core repository for encouraging research etc. Therefore, all the NEAs shall submit more and more projects as per NMET objectives.

NMET Secretariat has hired the commodity specific experts for mentoring and monitoring of the ongoing projects of NMET funded projects. It is suggested that the work carried out by different exploration agencies funded by NMET be physically monitored the nature and quantum of work done in individual projects by these experts. This committee is not aware of the work actually done in those projects which were recommended by TCC based on that the EC, NMET has accorded approval.

Dr. Ranjit Rath, Chairman-cum-Managing Director, MECL also attended the meeting on 5th April, 2019 as an invitee.

The Committee decided that the technical aspects of new project proposals shall only be evaluated in present meeting and the cost aspects of these project proposals shall be finalized in the next TCC meeting after the approval of NMET SoC by the Executive Committee. The agenda-wise discussion followed.



20.1. Evaluation of new proposals:

20.1.1. General Exploration (G2) of Gold Ore Resources in **C. K Halli North Block**, District- Chitradurga, Karnataka. (to be executed by **MECL**)

- The project was evaluated in the 19th meeting of TCC held on 18-19th January, 2019 and it was informed by DGM Karnataka that there is overlap issue of Deccan Gold's lease hold area in C. K. Halli Main block and C. K. Halli North Block. It is to be mentioned that the committee had recommended the project proposal of C. K. Halli Main block for G2 level exploration for Gold at an estimated cost of Rs. 579.71 Lakhs in 18th TCC meeting held on 26th and 27th November 2018. Hence, the Committee decided to put on hold these proposals till the overlapping issues are resolved.
- The DGM Karnataka informed that the issue of lease overlapping has not been resolved so far and the Committee will be informed once the issue is resolved. However, the C. K Halli South Block is a freehold area where MECL can take up exploration work.

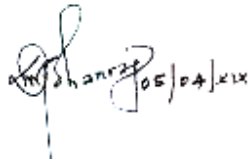
Committee recommended that MECL shall prepare a project proposal for C. K Halli South Block in consultation with DGM Karnataka and submit in next TCC meeting.

20.1.2. General Exploration (G2) of Copper Ore Resources in **Baraganda Block**, District- Giridih, Jharkhand. (to be executed by **MECL**)

- The project was evaluated in the 19th meeting of TCC held on 18-19th January, 2019 and the Committee advised to submit the proposal in next TCC after updating geological map.
- MECL proposed an area with strike length of 1.3 to 1.4 Km and 30 boreholes will be with 60m interval for 5395m drilling to demarcate the continuity of the lodes both along the strike and dip; to define the geometry of the ore body and to ascertain the amenability of the copper ore through beneficiation studies.
- The Committee evaluated the proposal and advised that the recent stratigraphic nomenclature of Singhbhum belt shall be followed.
- For each section, the shallow (first) level boreholes shall be drilled first and the project will be reviewed on the basis of analytical result of these boreholes. The further exploration work in deeper level boreholes will be decided on the basis of review of analytical results of borehole cores of first level.
- The Committee suggested that the scanning of drilled core by UV lamp may be provisioned to locate tungsten (scheelite) mineralization if any.
- The sample length of 1m may be considered for analysing for copper.

Committee recommended the proposal for in-principal approval subject to cost ratification as per the SoC of NMET in the next TCC meeting.

20.1.3. Reconnaissance Survey (G4) for Diamondiferous deposits in **Sailaya Block**, District- Katni, Madhya Pradesh. (to be executed by **MECL**)



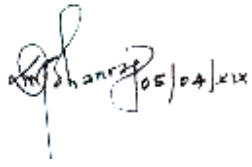
- The project was evaluated in the 14th meeting of TCC held on 21st & 22nd May, 2018 and the Committee advised that as the block area is very small for G4 level exploration, the DGM Madhya Pradesh can take up exploration in this block in collaboration with GSI.
- MECL informed that the State Govt. has once again requested to take up the exploration in this block. The representative of DGM MP also informed the Committee about the decision of State Govt.
- MECL proposed to carry out geological mapping on 1:12,500 scale and demarcate the rock types of Diamond bearing formations with the structural features to identify the surface manifestations and lateral disposition of the probable ore body. The stream sediment/geochemical soil samples will be collected for heavy mineral separation and analysis. On the basis of positive analytical results, the future course of exploration will be decided.
- The Committee evaluated the proposal and advised that the field visit must before the finalisation of the project.
- pitting/trenching work may be carried out in G4 stage.
- Geophysical surveys by gravity and magnetic surveys may be carried out to delineate the kimberlitic affinity rocks.

Committee recommended that MECL shall visit the area to finalize the work components and the possibility for increase in the survey area may also be explored in consultation with the State Govt. The proposal may be put up in next TCC meeting for further evaluation.

20.1.4. Baseline Environmental studies in Tamiya, Rengali, Babja, Biarapalli & Dungarpalli Blocks, District- Bolangir, Odisha. (to be executed by **MECL**)

- The EC, NMET has approved projects for G2 level exploration of Manganese Ore, to be executed by MECL, in Tamiya, Rengali, Babja, and Biarapalli Blocks, District- Bolangir, Odisha. It is to be mentioned that the proposal of G2 level exploration in Dunguripalli Block has been recommended in the 19th TCC meeting. The EC in its 11th meeting observed that the new project proposals of MECL would be approved after assessing the performance of MECL.
- MECL proposed to baseline environment studies at and around the Manganese ore Blocks, District- Bolangir, Odisha keeping in view the guidelines laid down by Ministry of Environment and Forest. MECL proposed that the study area of the present study includes a zone of 10 km. radius from the centre of the exploration block and core zone which is the zone within 3 km radius from the centre of the exploration block. This is based on the assumption that impact of mining would be maximum within 3 km radius zone and would be absolved within 10 km radius zone in case mining comes up on the basis of present exploration program.

Committee recommended the proposal for in-principal approval subject to cost ratification as per the SoC of NMET in the next TCC meeting.



20.1.5. Seamless transition from G3 to G2 level exploration based on the encouraging results of present exploration at **Diggaon and Udagi Blocks**, District- Kalaburagi, Karnataka. (to be executed by **MECL**)

- MECL is carrying out G3 level exploration for limestone in Diggaon and Udagi Blocks, District- Kalaburagi, Karnataka under NMET funding.
- MECL proposed that the exploration projects in these blocks may be upgraded to G2 level as MECL has observed considerable zones of limestone in drilled cores.
- On the query of chemical analysis results of these blocks, MECL responded that the analytical results have not been received so far.

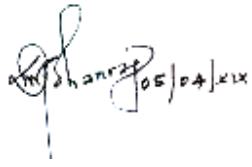
Committee recommended that the proposal of upgradation of exploration level for these blocks shall be submitted on the basis of chemical analytical results.

20.1.6. Reconnaissance Survey (G4) for limestone and dolomite in **Neerbudhihal Block-East (KAR_NLDB_3363_E),** District- Bagalkote, Karnataka. (to be executed by **KIOCL**)

20.1.7. Reconnaissance Survey (G4) for limestone and dolomite in **Neerbudhihal Block-West (KAR_NLDB_3363_W),** District- Bagalkote, Karnataka. (to be executed by **KIOCL**)

- KIOCL proposed two G3 level exploration projects for limestone and dolomite in Neerbudhihal Block as per the request of DMG Karnataka. The proposals were evaluated in the 19th meeting of TCC held on 18-19th January, 2019 and the Committee recommended that a block inclusive of above area, a larger area to the extent of 30 sq km, may be drawn in consultation with DMG, Karnataka for G4 level exploration initially including Detailed Geological & Structural Mapping and collection of samples and other geological activities to prove the consistent thickness of limestone in the area. Moreover, the geological data is also insufficient to support G3 level of exploration.
- KIOCL modified and resubmitted the proposal for G4 level exploration for limestone and dolomite in these blocks.
- The Committee evaluated the proposals and advised that latest end-use grade classification of IBM shall be followed in resource calculation.
- The Channel/Groove sampling is not required at this stage. The polish section preparation, whole rock analysis, XRD studies and moisture absorption & specific gravity determination are also not required.
- The Committee advised that G4 level exploration will be initiated with large scale mapping, trenching one each in the block with collection of BRS.
- In each block 5 boreholes will be drilled out of which 01 borehole in each block shall be drilled up to the depth of 100m and other 08 boreholes shall be drilled up to the depth of 60m. Hence, total drilling of 680m may be carried out in these two blocks.

Committee recommended the proposal for in-principle approval subject to cost ratification as per the SoC of NMET in the next TCC meeting.



20.1.8. General Exploration (G2) for limestone in **SGS-1 (Sutrapada Gir-Somnath Cluster-1) Block,** District- Gir-Somnath, Gujarat. (to be executed by **Commissioner of Geology & Mining, Gujarat**).

- The CGM Gujarat proposed G2 level exploration for limestone in 28.55 sq. km area. The limestone Dwarka and Mililitic formations is intermitantly exposed in the proposed block. The area is under cultivation. It was informed that there are five working mines are present near Sutrapada village. The proposed block is in the freehold area.
- The Committee evaluated the proposal and advised that the area may be divided into 4 to 6 blocks keeping in view large extent of proposed block.
- Accordingly, CGM Gujarat revised the proposal and divided the area in 6 Blocks (SG-1 to 6).
- The Committee advised that the Large scale (1:12,500) mapping of the complete area shall be carried out as cluster and a single map shall be prepared. The drilling may be carried out block-wise. A total of 12 boreholes (SG-1 Block- 01no.; SG-2 Block- 2nos.; SG-3 Block- 2nos.; SG-4 Block- 2nos.; SG-5 Block- 3nos. and SG-6 Block- 2nos.) upto 30m depth shall be planned initially. Based on the results, the infilling boreholes for G2 level exploration shall be planned after the review of the project by the TCC.

Committee recommended that the proposal shall be modified accordingly and resubmitted along with cost and time schedule as per SoC of NMET in the next TCC meeting.

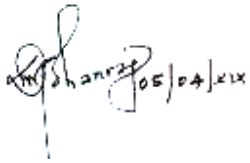
20.1.9. Reconnaissance Survey (G4) for Manganese ore in **Tentuliguda Block,** District- Koraput, Odisha. (to be executed by **Directorate of Geology, Odisha**).

- The Directorate of Geology, Odisha proposed G4 level exploration to locate potential Manganese bearing horizons in the contact region of Eastern Ghat Mobile Belt (EGMB) and Puranas. The area forms the eastern part of Indravati sedimentary basin and western margin of Eastern Ghat Mobile Belt (EGMB). Reconnaissance Survey in the area during FS 2003-04 reported sporadic boulders of manganiferrous shale & floats of Mn ore in the 1st & 2nd order nalas. The proposed work includes Large scale and Detailed mapping, geophysical survey and drilling.
- The Committee evaluated the proposal and suggested that initially Large-Scale mapping (1:12,500) shall be carried out in 121 sq. km area along with structural data, pitting/trenching and sampling work. The further course of exploration will be decided on the basis of review of the project.

Committee recommended that the proposal shall be modified accordingly and resubmitted along with cost and time schedule as per SoC of NMET in the next TCC meeting.

20.2. Review of work progress of NMET approved projects:

20.2.1. Udbur Gold Block (KAR_SR_07), District- Mysore, Karnataka (Implementing Agency: **KIOCL**)

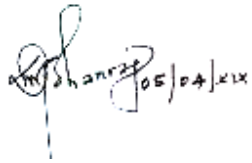


- The G4 level exploration work for Gold in the block was approved in 4th EC meeting held on 21st February, 2017.
- The TCC in its 14th meeting held on 21st & 22nd May, 2018 reviewed the project and advised that, there should be no further exploration for Gold as Gold values are not encouraging. However, Nickel & Chromium anomaly zones may be targeted for further investigation.
- The TCC in its 16th meeting held on 24th & 25th September, 2018 suggested that additional 50 cubic meter pitting & trenching along with sampling and analysis for Ni, Cr, Cu, As & Bi may be carried out in the block. The SEM and EPMA studies for identification of Ni phase shall also be carried out.
- KIOCL presented the chemical analytical results in the 19th meeting TCC held on 18th & 19th January, 2019. The maximum range of Ni concentration reported is 1000 to 1600 ppm. The TCC directed that an interim report may be submitted based on available exploratory data generated so far for further observations. Also, KIOCL may prepare a drill hole plan for further exploration to be carried out in phase-3 and submit to TCC in next meeting.
- Accordingly, KIOCL submitted proposal to carry out drilling in the block and informed the Committee that the SEM and EPMA studies are under progress. It was also informed that 600m drilling in the block was recommended in the 6th TC meeting held on 2nd & 3rd December, 2016 and approved in 4th EC meeting.
- The Committee evaluated the proposal and suggested that the borehole location shall be planned in such a way that the whole trench can be intersected through drilling. The borehole angle shall be kept at 45□ and the vertical depth may be kept as 60m. Initially, 05nos. of borehole shall be planned in the block. All the lithounits to be intersected in the boreholes may be sampled and analysed for Ni and associated elements.
- Accordingly, KIOCL modified the proposal and proposed 800m drilling and associated sampling work. It was informed that 600m drilling and associated sampling work was approved in the 4th EC meeting. The additional work components are as per following detail:

Sl. No.	Work component	Approved as per 4th EC	Revised as per 20th TCC	Additional quantity
1	Drilling (m)	600	800	200
2	Primary analysis (No.)	432	733	301
3	Check samples (No.)	40	73	33
4	Composite samples (No.)	40	73	33

- All the boreholes shall be drilled for additional 5m for exposing the lithology adjacent to the host rock.
- A total of 05nos. samples shall be analysed for PGE one sample from each borehole.
- The core logging shall be carried out carefully to observe composition layering in ultramafic rocks.

Committee recommended the proposal for in-principle approval subject to cost ratification as per the SoC of NMET in the next TCC meeting.



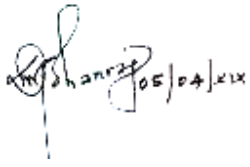
20.2.2. Khargone Block, District- Khargone**,** Madhya Pradesh (Implementing Agency: **NTPC**)

- The project of G4 level exploration for limestone/manganese in Khargone Block was approved in 7th EC meeting held on 12th March, 2019 with the cost of Rs. 99.62 Lakhs and the approval letter was issued on 19th April, 2018 with the time schedule of 12 months i.e. to be completed by 18th April, 2019. The project was to be executed by NTPC.
- NTPC representative informed the Committee that the project could not be started yet as there is no in-house set-up for carrying out non-fuel mineral exploration work. NTPC intended to engage a PSU working in the area of Mineral Exploration on single tender basis the agencies those are available in the market for taking up the exploration work. However, it could not be approved because of high quoted price. The possibility to award the work to NMET empanelled agencies was also explored. Thereafter, it was decided that the work would be awarded through Open Tender inquiry. The work for NIT is on hold due to announcement of elections and Model Code of Conduct. In view of this, NTPC proposed to revise the scheduled completion time from April, 2019 to August, 2020.
- ***Committee examined the proposal and directed that the process of awarding exploration work shall be expedited so that the work is completed up to the extended time period of August, 2020. No further time over-run approval would be accorded in this project.***

Committee recommended for approval of revision in the scheduled completion time from April, 2019 to August, 2020.

20.2.3. Review of projects executed by MERIT, Andhra Pradesh

- A total of 07 projects for G2 level exploration for limestone of DGM, Andhra Pradesh was approved in 7th EC meeting held on 12th March, 2019 with the cost of Rs. 1966.00 Lakhs and the approval letter was issued on 19th April, 2018 with the time schedule of 12 months i.e. to be completed by 18th April, 2019. The projects were to be executed by MERIT, AP.
- MERIT representative informed that the 03 blocks namely Bhimagundam, Gundlakunta and Dommaranandhyala-Veparala were made one cluster viz. Kadapa Cluster for tendering purpose in order to avoid differential rates as the blocks are adjacent to each other. The work in these 03 blocks was started on 15th September, 2018. The work in these blocks is being delayed due to resistance of local farmers for entering into the land till the harvesting of standing high value commercial crops. Therefore, time over-run approval would be required for 04 months in respect of Bhimagundam Block, 09 months each in respect of Gundlakunta and Dommaranandhyala-Veparala Blocks.
- *The Committee suggested that the composite samples should be analyzed for K_2O and Na_2O. The Committee advised that the boreholes in the Gundlakunta Block are planned keeping in view of thick soil cover in adjacent Bhimagundam Block.*
- The Committee was informed that the thickness of limestone varies from 10m to 95m in Dommaranandhyala-Veparala Block against the approved borehole depth of 40m. Therefore, the quantum of drilling has been increased.
- *The Committee suggested that the drilling should be carried out upto 1m below the limestone in respect of Dommaranandhyala-Veparala Block. Accordingly, the additional*



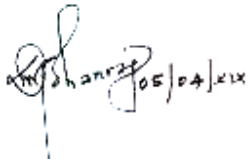
requirement of drilling and associated sampling work may be worked out along with cost and submitted in the next TCC meeting.

- MERIT representative informed that the 04 blocks namely Madinapadu, Mutyalampadu-Tangeda, Tangeda and Ramapuram were made one cluster viz. Guntur Cluster for tendering purpose in order to avoid differential rates as the blocks are adjacent to each other. The work in these 04 blocks was started on 5th December, 2018. The work in these blocks has been delayed due to failure of tendering process and resistance of local farmers for entering into the land till the harvesting of standing high value commercial crops. Therefore, time over-run approval would be required for 09 months each in respect of Madinapadu, Mutyalampadu-Tangeda, Tangeda Blocks and 06 months in respect of Ramapuram Block.
- MERIT informed that the approved work components and corresponding cost in these blocks need to be revised as per the quote received in the tender, charges towards 3D modelling and additional work. However, there is no additional fund requirement in this regard as MERIT is executing projects at cost less than NMET sanctioned cost.
- *The Committee accorded approval for revision of work component and corresponding cost. The details are at* ***Annexure-II****.*

Committee recommended for approval of time over-run of 04 months in respect of Bhimagundam Block, 06 months in respect Ramapuram Block and 09 months each in respect of Gundlakunta, Dommaranandhyala-Veparala, Madinapadu, Mutyalampadu-Tangeda and Tangeda Blocks.

20.2.4. Review of projects executed by TSMDC, Telangana

- A total of 03 projects for G4 level exploration for limestone and copper were approved in 7th EC meeting held on 12th March, 2018 with the cost of Rs. 320.00 Lakhs and the approval letter was issued on 19th April, 2018. The projects were to be executed by TSMDC, Telangana.
- TSMDC informed that the work could not be taken up in the Mailaram Copper Block, District- Bhadradri-Kothagudem, Telangana as the block is entirely falling in the Kinnarasani Wildlife Sanctuary. The matter was taken up with the Forest Department and it was informed that the prospecting in the National Parks, Wildlife Sanctuaries, Tiger Reserve etc. shall not be allowed as per MoEF & CC guidelines. TSMDC requested for withdrawal of exploration work in Mailaram Copper Block.
- TSMDC representative informed that the exploration work in 02 limestone blocks namely Jeteya, Buruborta & Dumurjowa Block, District- West Singhbhum, Jharkhand and Gupteswar Block, District- Koraput, Odisha has been carried out through outsourcing. It was informed that the 1:50000 scale map of GSI shows presence of limestone outcrops in the block. However, TSMDC team could not locate any limestone outcrop as the area is covered with cultivation field and water bodies. TSMDC representative claimed that Stage-I work (Large scale mapping and associated sampling work) has been completed, but failed to present any geological map. Only the old geological map overlain by photo-geological/sattellite data was presented.



- Similarly, interpreted maps for Gupteswar Block were presented. *The Committee makes a serious note of the fact that TSMDC has started drilling in the block without carrying out LSM as per the approved work plan.*
- *The Committee observed that the Stage-I work was completed in October, 2018. However, the Committee was not informed about the problems faced by the Implemnting Agency in execution of remaining work. The correspondence made with the respective State Government to sort out the local resitance matter shall be presented before the Committee. Moreover, the scheduled time schedule of these project was 06 months i.e. to be completed by 18th October, 2018. However, the approval of time over-run has not been taken so far from NMET EC.*

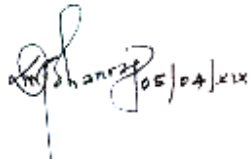
Committee recommended for dropping exploration work in the Mailaram Copper Block, Telangana. In respect of both the limestone blocks, proper geological map and associated work with justifications to discontinue the projects shall be presented in the next TCC. The bills, if any, submitted in respect of the limestone blocks shall not be processed till then and the matter may be brought in notice to EC, NMET.

20.2.5. Review of projects executed by MECL

20.2.5.1. Malangtoli Iron Ore Deposit 'H-sub Block', Districts- Sundargarh & Kendujhar, Odisha

- On the recommendation of 14th TCC meeting, the EC in its 8th meeting held on 12th June 2018 G3 level exploration work was approved in Malangtoli Iron Ore Deposit 'H Sub-block', Districts- Sundargarh & Kendujhar, Odisha with the cost of Rs. 1027.64 Lakhs. The approval letter was issued on 21st June, 2018 with the time schedule of 12 months i.e. to be completed by 20th June, 2019.
- MECL informed that the work in the block was commenced on 27th September, 2018. A total of 20nos. boreholes out of 111nos. boreholes have completed and 3nos. boreholes are under progress. The 14th TCC meeting recommended that all the boreholes shall be drilled up to shale. It was apprised that the thickness of iron ore zone is more in some boreholes, hence, additional drilling has been carried out. Therfore, approval of revised drilling plan is required.
- MECL also informed that more than 80% of the block area is covered under forest. Government of Odisha has been requested to provide forest permission without which further exploration is not possible.

Committee recommended that separate zones of haematite and Banded Haematite Jasper shall be marked. A total of 03nos. boreholes shall be drilled up to lower shale or 100m whichever is less in the non-forest area. The Govt. of Odisha/Forest Department may be pursued for getting forest clearance. The further course of exploration will be decided after receipt of permission from Forest Department. The date of receipt of the forest clearance shall be reckoned for the purpose of consideration time over-run.



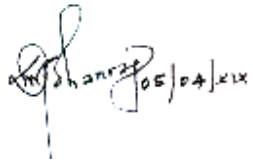
20.2.5.2. Review of Lakhasar sub-basin Block of Potash exploration, District- Bikaner, Rajasthan.

- MECL informed that as per the directive of 19th TCC meeting, the drilling of 5th BH has been taken up with simultaneously sampling and analysis of the core samples. A total of 4nos. boreholes out of 07nos. approved boreholes have been completed so far and chemical analyses of 3nos. boreholes have been received. The Halite Cycles are encountered at 542.00m, 533.10m, 542.00m & 539.65m in borehole MLP-01, MLP-02, MLP-03 and MLP-04, respectively and extended up to 646.00m,658.80m, 658.00 m & 674.70 m, respectively.
- The Committee was informed that the project is scheduled to be completed by 25th April, 2019 as per the approved time schedule of 16 months. However, the project may not be completed in scheduled time as drilling work in potash exploration is very slow because (i) it is a specialized work and slow recovery of potash/halite zones (ii) frequent jamming and collapsing during drilling due to clay formations (iii) formation caverns due to soluble nature of potash. To overcome the formation of caverns the boreholes have to be grouted with cement and after setting of cement, the grouted portion has to be re-drilled to reach the original depth to start the progressive drilling. Thus, a considerable time is lost in grouting/cementing, settling of cement and re-drilling the grouted portion. A new time schedule/action plan has been drawn in view of these constraints to complete the remaining work. As per the new work plan, it may take at least 8 months to complete the remaining boreholes with one rig @210m/drill/month. Therefore, MECL requested to consider time over-run of 10 months & five days for completion of exploration work and submission of geological report by 31st March, 2019. The revised time schedule is at **Annexure- III**

Committee accorded approval for taking up of drilling of remaining two boreholes and simultaneously sampling and analysis of the core samples. Committee also recommended approval of time over-run of 10 months in the project.

20.2.6. Review of projects executed by OMECL

- The EC in its 10th meeting held on 30th October, 2018 approved G4 level exploration in Khandadhar Block, District- Sundergarh, Odisha at the cost of Rs. 56.71 Lakhs.
- The OMECL representative informed that the Large Scale mapping (1:12,500 scale) has been completed and 200nos. chemical samples have been collected. However, the further work including pitting/trenching and geophysical survey could not be taken up in want of forest permission. OMECL requested to consider the date of forest clearance as the date for taking up further exploration.
- *Committee suggested that the geological map shall be updated with the complete field data-sets.*
- The representative of Directorate of Geology, Odisha informed that there is an overlap between blocks notified by State Govt. for exploration through GSI, OMECL and DG, Odisha in Khandadhar Block which needs to be resolved.
- *Committee advised that the matter of overlapping of blocks may be taken up with GSI and State Govt. The Committee shall be informed the status in this regard in the next meeting.*



Committee recommended for approval that the date of forest clearance may be reckoned as the date for taking up further exploration.

20.2.7. Review of projects executed by DGM Chhattisgarh

- The EC in its 8th meeting held on 12th June, 2018 approved G3 level exploration in 04 blocks for bauxite and 02 blocks of limestone and G4 level exploration in 08 blocks for iron ore to be executed by DGM Chhattisgarh.
- The representative of DGM Chhattisgarh informed that exploration in 03 bauxite blocks have been completed and 01 bauxite blocks could not be taken up due to law & order problem. The work in 02 limestone blocks is under progress. The work in 08 iron ore blocks could not be taken up as all the blocks fall in forest area. The Forest Department has directed to deposit Rs. 98 crores approx. towards NPV charges which is towards very high side as the approved cost of these blocks is Rs. 6.72 crores only. DGM requested that the exploration work in 08 iron ore and 01 bauxite Blocks may be dropped.
- The Committee observed that there is time over-run in the limestone and bauxite blocks which has not been approved so far.

Committee recommended that the proposals for dropping the exploration work in 08 iron ore and 01 bauxite Blocks along with proper justification and time over-run approval shall be submitted in the next TCC meeting. Also, the progress of work carried out so far in limestone and bauxite blocks will be reviewed in the next TCC meeting.

20.3. Approval of time over-run in the projects executed by MECL

- MECL informed that there is time over-run in the completed as well as ongoing projects due to various justified reasons and requested to consider the time over-run. The justifications submitted by are at **Annexure-IV**.
- ***Committee reiterated that the time over-run should be avoided at all the cost and if it is beyond the control of implementing agencies, the Committee should be apprised well before any departure from approved time-schedule.***
- ***Committee examined the reasons of time over-run and recommended for approval of time over-run as per following details:***

Sl. No.	Name of Block	Time Schedule	Sanction letter date	Date of start	Scheduled completion date	Completion date	Time Over-run
1	Agnigundala North Block (AP-09), Andhra Pradesh (G4)	11 months	23/02/2017	15/10/2016	14/09/2017	10/01/2018	4 months
2	Saraipani-Dadar Block, Chhattisgarh (G2)	08 months	19/04/2018	01/06/2018	18/12/2018	22/02/2019	3 months

3	Naubasta-Kolard Block, Madhya Pradesh (G2)	10 months	19/04/2018	01/05/2018	18/02/2019	31/10/2019	11 months
4	Jamodi-Mahanna Block (Part- B), Madhya Pradesh (G2)	10 months	21/06/2018	02/07/2018	20/04/2019	31/12/2019	11 months
5	Kuhi-Khobna Block, Maharashtra (G4)	08 months	21/06/2018	22/12/2018	20/02/2019	20/11/2019	9 months

- MECL informed that there is no time over-run in respect of Nahardih-Madhaipur Limestone Block, District- Raipur, Chhattisgarh. The project was started on 31st August, 2017 with the time schedule of 14 months i.e. to be completed by 30th October, 2018. The project was completed on 31st July, 2018.
- Director, NMET informed the Committee that MECL has mentioned time schedule of 07 months in the technical reports submitted along with all the bills.

Committee took a serious note on callous attitude of MECL while submitting the bills and directed MECL to submit clarification in this regard to NMET Secretariat.

20.3.1. Approval of time over-run in Recherla Coal Block, Godavari Valley Coal Field, Andhra Pradesh

- MECL informed that G2/G1 level exploration was approved in 4th EC meeting held on 21st February, 2017 at the cost of Rs. 1317.00 Lakhs. The approval letter was issued on 3rd April, 2017 with a time schedule of 24 months i.e. to be completed by 2nd April, 2019. The work in the block was commenced on 30th November, 2018. The delay in start of project was due to fund crunch and failure of drilling outsourcing tender many times. MECL requested to consider the time over-run of 23 months. It was also informed that additional drilling of 2000m and associated sampling work has also been approved in the 19th TCC meeting.

Committee took a serious note on the inordinate delay in commencing the work and recommended for approval of time over-run of 21 months, to be completed by 1st December, 2020, as per the Schedule of Rates prevailing in 2018-19.

20.4. EPMA studies in Kalyandurg-Timmasundaram (AP-02) Diamond Block, Agnigundala North Block (AP-09), District- Anantpur, Andhra Pradesh (Implementing Agency: **MECL**)

- MECL informed that the heavy mineral separation through dense media has been completed through outsourcing from NMDC. The cost has been borne by MECL as per the directive of 6th EC meeting held on 11th January, 2018.

- A total of 40nos. samples have been segregated for diamond indicator minerals which are required to be studied through EPMA. MECL has contacted IITs and other govt. agencies carrying out EPMA analysis. MECL requested to approve the additional cost towards this work.

Committee suggested that the work component and time line shall be finalized first in consultation with the Institute where the work is going to be completed. The proposal may be put up in the next TCC meeting for further consideration.

20.5. Reckoning of project start date of the projects executed by MECL

- MECL informed that the exploration work in Babja & Biarpalli Blocks, District- Bolangir, Odisha could not be taken up due local law & order problems. The District Administration has assured that the matter will be resolved after General Election.
- MECL also informed that the exploration work in (1) Sonrai phosphorite Block, District-Lalitpur; (2) BRH Iron Ore Mines, NEB Range M/s RMMPL, ML No. 2010, District-Ballari, Karnataka; and (3) Malangtoli Iron Ore blocks could not be started in want of forest clearance. Therefore, the start date of these blocks may be reckoned from the date of receipt of forest clearances.

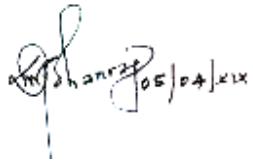
Committee recommended that the start date for these blocks shall be reckoned from date of receipt of letter regarding resolution local problems/receipt of forest permission. Committee advised that the matter may be pursued vigorously with State Govt./Forest Department.

20.6. Approval of additional work carried out in projects executed by MECL

- MECL informed that additional drilling and associated sampling have been carried out in the NMET approved projects and requested to approve the same.
- ***The Committee observed that the projects have been completed and approval of Committee has not been sought before taking up additional work. Committee directed that all the implementing agencies, henceforth, shall inform the TCC/NMET Secretariat before taking up any additional work along with proper justification.***

20.6.1. Additional drilling and associated sampling work in Deravad-Chargarhia-Bansra Area (Block-ID-Raj-02); District-Udaipur, Rajasthan

- MECL informed that G4 level exploration work for copper & gold was approved in 4th EC meeting held on 23rd February, 2017 at the cost of 276.93 Lakhs and the work was started on 15th October, 2016 with a time schedule of 11 months. The project could not be completed in time and the 21 months' time over-run was approved in 11th EC meeting held on 7th February, 2019.
- MECL informed that initially 600m drilling was approved in the block. However, on the recommendation of 12th TCC meeting held on 8th & 9th January 2018, drilling of 625m drilling in 9 boreholes was approved in the 6th EC meeting. A total of 675m drilling has been carried out in 9 boreholes. The additional drilling has been carried out to check the



continuation of mineralization and shifting of borehole due approach problem. In view of this, MECL requested for approval of cost incurred towards 75m additional drilling and sampling work.

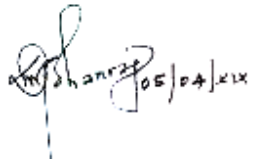
Committee observed that the 6th EC meeting approved the drilling of 625m without any financial implication. Hence, additional drilling of 50m is required to be approved as per following detail:

Sl. No.	Work Component	Unit	Rates (as on 31.03.2018)	Approved quantity	Additional quantity	Additional amount (in Rs.)
1	Geological party days (1 party) for drilling, core sampling)	days	8,083/-	90	2	16,166/-
2	Surface drilling (2 rigs)	meter	10,317/-	625	50	5,15,850/-
3	GI core boxes	No.	2,000/-	150	20	40,000/-
					Total	5,72,016/-
					GST@ 18%	1,02,963/-
					Grand Total	**6,74,979/-**

- MECL informed that an amount of Rs. 25,921/- was approved in the 6th EC meeting towards analysis of bed rock samples for gold. MECL further requested to approve the cost of additional sampling work as per following details:

Sl. No.	Work Component	Unit	Rates (as on 31.03.2018)	Approved quantity	Actual quantity	Additional amount (in Rs.)
1	Channel samples for Au by Fire Assay	No.	1,111/-	Nil	16	17,776/-
2	Channel samples Cu, Pb, Zn	No.	1,422/-	Nil	16	22,752/-
3	Channel samples for Au by Fire Assay	No.	1,111/-	Nil	20	22,220/-
					Total	62,748/-
					GST@ 18%	11,295/-
					Grand Total	**74,043/-**

Committee approved additional drilling of 50m with additional cost of Rs. 6,74,979/- (Rupees Six Lakh Seventy Four Thousand Nine Hundred Seventy Nine only) including GST and additional analysis work with additional cost of Rs. 74,043/- (Rupees Seventy Four Thousand Fourty Three only) including GST with a condition of no further additional approval in the block.



20.6.2. Additional drilling Ranigaon-Gondaiya Limestone Block (G3), District- Bilaspur, Chhattisgarh

- MECL informed that G3 level exploration work for limestone was approved in 10th EC meeting held on 30th October, 2018 at the cost of 123.61 Lakhs with a time schedule of 07 months. The project was started on 26th December, 2018 and a total of 674m drilling has been carried out against the approved drilling of 600m in 11 boreholes. The additional drilling has been carried out due to continuation of mineralized zone in some boreholes. In view of this, MECL requested for approval of cost incurred towards 74m additional drilling and associated work as per following detail:

Sl. No.	Work Component	Unit	Rates	Approved quantity	Additional quantity	Additional amount (in Rs.)
1	Surface drilling (2 rigs)	meter	7,028/-	600	74	5,20,072/-
2	GI core boxes	No.	2,000/-	150	20	40,000/-
					Total	5,60,072/-
					GST@ 18%	1,00,813/-
					Grand Total	**6,60,885/-**

Committee approved additional drilling of 74m with additional cost of Rs. 6,60,885/- (Rupees Six Lakh Sixty Thousand Eight Hundred Eighty Five only) including GST with a condition of no further additional approval in the block.

20.6.3. Additional drilling and associated sampling in Diggaon Limestone Block (G3), District- Kalaburagi, Karnataka

- MECL informed that G3 level exploration work for limestone was approved in 10th EC meeting held on 30th October, 2018 at the cost of 205.98 Lakhs with a time schedule of 11 months. The project was started on 18th January, 2018 and a total of 1265m drilling has been carried out against the approved drilling of 1170m in 13 boreholes. The additional drilling has been carried out due to continuation of mineralized zone in some boreholes. In view of this, MECL requested for approval of cost incurred towards 74m additional drilling and associated sampling work as per following detail:

Sl. No.	Work Component	Unit	Rates	Approved quantity	Additional quantity	Additional amount (in Rs.)
1	Surface drilling (2 rigs)	meter	7,028/-	1170	95	6,67,660/-
2	for 6 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	No.	2,670/-	910	90	2,40,300/-
3	for additional 2 radicals	No.	1,006/-	91	09	9,054/-

	SO3 & P2O5					
4	Check samples for analysis of for 6 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	No.	2,670/-	45	05	13,350/-
5	External Check (NABL) samples for analysis of for 6 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	No.	2,670/-	91	09	24,030/-
6	Composite Samples: for 12 radicals (CaO, MgO, Al2O3, SiO2, Fe2O3, SO3, P2O5 , LOI, MnO2, K2O, Na2O and Cl.)	No.	5,166/-	152	38	1,96,308/-
7	GI core boxes	No.	2,000/-	293	27	54,000/-
					Total	12,04,702/-
					GST@ 18%	2,16,846/-
					Grand Total	**14,21,548/-**

Committee approved additional drilling of 95m and additional associated work with additional cost of Rs. 14,21,548/- (Rupees Fourteen Lakh Twenty-One Thousand Five Hundred Fourty Eight only) including GST with a condition of no further additional approval in the block.

20.6.4. Approval of additional sampling work and associated cost in different projects:

- MECL informed that some additional sampling work has been carried out in different projects as per the requirement of exploration programme. MECL requested to approve the cost of additional sampling work as per following detail:

A. Jhalara-Matasula-Manpur-Bhabrana-Amalva Area (Block Id- Raj-03), Rajasthan						
Sl. No.	Work Component	Unit	Rates	Approved quantity	Additional quantity	Additional amount (in Rs.)
1	for 5 radicals (Cu, Pb, Zn, Co & Mo)	No.	2,254/-	100	05	11,270/-
					GST@18%	2,029/-
					Total	**13,299/-**

B. Kanawat-Chala-Karath-Bagholi Area (Block Id- WR-Raj-07), Rajasthan						
Sl.	Work Component	Unit	Rates	Approved	Additional	Additional

No.				quantity	quantity	amount (in Rs.)
1	Core Samples: for Au by Fire Assay	No.	1,111/-	20	05	5,555/-
2	Core Samples: for Cu & Mo	No.	1,006/-	20	05	5,030/-
					Total	10,585/-
					GST@18%	1,905/-
					Grand Total	**12,490/-**

C. Vasu-Jagat-Kharwach & Saran Bharwawat Area (BLOCK ID WR-RAJ-21), Rajasthan						
Sl. No.	Work Component	Unit	Rates	Approved quantity	Additional quantity	Additional amount (in Rs.)
1	Whole Rock analysis (SiO_2, Al_2O_3, Fe_2O_3, TiO_2, MnO, CaO, Na_2O, K_2O+H_2O, H_2O, P_2O_5, CO_2 & S)	No.	6,386/-	10	02	12,772/-
2	Pit & Trench, Primary & Check Samples					
	(i) Cu, Pb & Zn	No.	1,443/-	100	05	7,215/-
	(ii) Au & Ag by Fire Asssay	No.	1,460/-	35	07	10,220/-
					Total	30,207/-
					GST@18%	5,437/-
					Grand Total	**35,644/-**

C. Saraipani-Dadar Block (G2), Chhattisgarh						
Sl. No.	Work Component	Unit	Rates	Approved quantity	Additional quantity	Additional amount (in Rs.)
1	Primary & Check Samples					
	(i) For 5 radicles (SiO_2, Al_2O_3, Fe_2O_3, TiO_2, LOI)	No.	2,580/-	200	28	72,240/-
	(ii) Internal Check samples for 5 radicles (SiO_2, Al_2O_3, Fe_2O_3, TiO_2, LOI)		2,580/-	20	03	7,740/-

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	(iii) External Check samples for 5 radicles (SiO_2, Al_2O_3, Fe_2O_3, TiO_2, LOI)	No.	2,580/-	10	02	5,160/-
					Total	85,140/-
					GST@18%	15,325/-
					Grand Total	**1,00,465/-**

Note: Rates are escalated as per RBI indices as on 31/03/2018 as work done in 2018-19.

Committee approved additional sampling work and associated cost as per above detail with a condition of no further additional approval in the block.

20.6.4. Approval of additional cost due to change in drilling method in Jhumka-Pathiriposhi Block

- MECL informed that G2 level exploration work for Iron Ore was approved in 2nd EC meeting held on 9th May, 2016 at the cost of 772.68 Lakhs (excluding tax). The project was started on 4th June, 2016 with a time schedule of 14 months. The project was completed on 11th February, 2019 with the time over-run of 19 months which was approved in the 11th EC meeting.
- MECL informed during the review of exploration work in the 8th TC meeting held on 3rd & 4th February, 2017 that a total of 4100m drilling was approved with 2665m RC drilling (42 boreholes) & 1435m core drilling (21 boreholes). MECL commenced exploration work in the block with RC drilling and completed 1034m in 23 boreholes. The Committee was also informed about the problem in taking up some of the boreholes proposed under RC drilling because of non-approachability of the RC Drill unit but these boreholes are necessary for the logical conclusion of exploration work. After studying the Geological Map & Sections, the Committee agreed for drilling the proposed points under core drilling and also agreed for taking up of 7 boreholes under core drilling. Thus, a total of 17 Number of boreholes shall be drilled under core drilling.
- MECL informed the Committee that a total of 2933.60m drilling in 42 boreholes by core drilling and 1034m in 14 boreholes by RC drilling i.e. 3967.60m in 56 boreholes have been carried out in the project. There is a cost over-run in the project due to change of drilling method from RC to core drilling as per following detail:

Sl. No.	Work Component	Unit	Rates	Approved quantity	Actual quantity	Difference in quantity	Additional amount (in Rs.)
1	Core Drilling	meter	19,716/-	1435	2933.60	1498.60	2,95,46,398/-
2	RC drilling	meter	8,130/-	2665	1034.00	-1631.00	-1,32,60,030/-
						Total	1,62,86,368/-

						GST@ 18%	29,31,546/-
						Grand Total	**1,92,17,914/-**

- The NMET representative informed the Committee that while taking time over-run approval in 19th TCC meeting MECL submitted that a total 4100m drilling in 63 boreholes has been approved with 2635m RC and 1465m core drilling. Out of this, 1034m RC drilling in 23 boreholes and 1680m core drilling in 14 boreholes was completed up to January, 2017.

Committee observed that there is ambiguity in data which requires clarification from MECL. Committee directed MECL to submit the reasons for not carrying out the initially approved drilling of 4100m in 63 boreholes and additional 7 boreholes approved in 8th TC meeting.

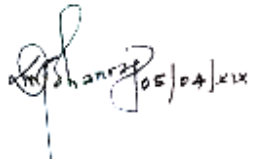
20.7. Approval of additional cost in approved projects to be executed by OMECL

- OMECL representative informed that exploration in 03 iron ore and 04 bauxite blocks was approved in the 10th and 11th EC meeting. It was requested the Committee may consider addition of some work components in the cost sheet in order to effective execution of these projects. The details are given below:

A. Khandadhar Iron ore Block (G4), District- Sundergarh, Odisha (Approved cost= 56.71 Lakh as per 10th EC meeting)					
Sl. No.	Work Component	Unit	Quantity	Rates (in Rs.)	Cost (in Rs.)
1	Geological party days (Drilling Supervision/ logging; QA-QC, Database)	Days	60	8,083/-	4,84,980/-
				GST@ 18%	87,296/-
				Total	**5,72,276/-**
B. Khandadhar Iron ore Block (G2), District- Sundergarh, Odisha (Approved cost= 247.48 Lakh as per 10th EC meeting)					
Sl. No.	Work Component	Unit	Quantity	Rates (in Rs.)	Cost (in Rs.)
1	Geological party days (Drilling Supervision/ logging; QA-QC, Database)	Days	30	8,083/-	2,42,490/-
2	Resource estimation, geological modelling	Days	60	8,083/-	4,84,980/-
				Total	7,27,470/-
				GST@ 18%	1,30,945/-
				Total	**8,58,415/-**
C. Khandadhar Iron ore Sub-block A (G2), District- Sundergarh, Odisha (Approved cost= 405.23 Lakh as per 11th EC meeting)					
Sl. No.	Work Component	Unit	Quantity	Rates (in Rs.)	Cost (in Rs.)

1	Geological party days (Drilling Supervision/ logging; QA-QC, Database)	Days	30	8,083/-	2,42,490/-
2	Resource estimation, geological modelling	Days	60	8,083/-	4,84,980/-
				Total	7,27,470/-
				GST@ 18%	1,30,945/-
				Total	**8,58,415/-**
D. Keluamali Bauxite Block (G3), District- Kalahandi, Odisha (Approved cost= 339.05 Lakh as per 10th EC meeting)					
Sl. No.	Work Component	Unit	Quantity	Rates (in Rs.)	Cost (in Rs.)
1	Geological party days (Drilling Supervision/ logging; QA-QC, Database)	Days	120	8,083/-	9,69,960/-
2	Resource estimation, geological modelling	Days	60	8,083/-	4,84,980/-
				Total	14,54,940/-
				GST@ 18%	2,61,889/-
				Total	**17,16,829/-**

E. Majhingamali Bauxite Block (G3), District- Rayagada & Kalahandi, Odisha (Approved cost= 187.93 Lakh as per 10th EC meeting)					
Sl. No.	Work Component	Unit	Quantity	Rates (in Rs.)	Cost (in Rs.)
1	Geological party days (Drilling Supervision/ logging; QA-QC, Database)	Days	90	8,083/-	7,27,470/-
2	Resource estimation, geological modelling	Days	60	8,083/-	4,84,980/-
				Total	12,12,450/-
				GST@ 18%	2,18,241/-
				Total	**14,30,691/-**
F. Tarhapani (west) Bauxite Block (G3), District- Rayagada & Kalahandi, Odisha (Approved cost= 211.61 Lakh as per 10th EC meeting)					
Sl. No.	Work Component	Unit	Quantity	Rates (in Rs.)	Cost (in Rs.)
1	Geological party days (Drilling Supervision/ logging; QA-QC, Database)	Days	90	8,083/-	7,27,470/-
2	Resource estimation, geological modelling	Days	60	8,083/-	4,84,980/-
				Total	12,12,450/-
				GST@ 18%	2,18,241/-
				Total	**14,30,691/-**
G. Nunapaimali Bauxite Block (G3), District- Rayagada, Odisha (Approved cost=					



202.21 Lakh as per 10th EC meeting)					
Sl. No.	Work Component	Unit	Quantity	Rates (in Rs.)	Cost (in Rs.)
1	Geological party days (Drilling Supervision/ logging; QA-QC, Database)	Days	90	8,083/-	7,27,470/-
2	Resource estimation, geological modelling	Days	60	8,083/-	4,84,980/-
				Total	12,12,450/-
				GST@ 18%	2,18,241/-
				Total	**14,30,691/-**
H. Karnapodikonda Bauxite Block (G3), District- Koraput, Odisha (Approved cost= 170.98 Lakh as per 10th EC meeting)					
Sl. No.	Work Component	Unit	Quantity	Rates (in Rs.)	Cost (in Rs.)
1	Geological party days (Drilling Supervision/ logging; QA-QC, Database)	Days	60	8,083/-	4,84,980/-
2	Resource estimation, geological modelling	Days	60	8,083/-	4,84,980/-
				Total	9,69,960/-
				GST@ 18%	1,74,593/-
				Total	**11,44,553/-**

Committee approved additional work components as per above detail with a condition of no further additional approval in the blocks.

20.8. Issues related to **Veeranam Lignite Block,** District- Cuddalore, Tamil Nadu **(**Implementing Agency: **MECL)**

- The G1 level exploration for lignite in Veeranam Block was approved in 4th EC meeting held on 21st February, 2017 at the cost of Rs. 6763.44 Lakhs (excluding tax). The block was sub-divided in 04 sub-blocks. The work was commenced on 22nd February, 2017 with a time schedule of 36 months i.e. to be completed by 21st February, 2020. The block was proposed by NLC India Limited and was to be executed by MECL.
- The TC in its 6th meeting held on 2nd & 3rd December 2016 suggested that the block should be divided in 4 sub-blocks and initially the work should be taken up in two sub-blocks with cost revision. On the recommendation of 6th TC meeting, the EC in its 5th meeting held on 6th October, 2017 accorded in-principal approval for entire block. However, the work will be first taken up in two blocks and further exploration remaining two blocks will be taken up after evaluation by TCC. NLC will submit the block-wise cost and the same will be examined and approved by TCC. The progress will be monitored block-wise and the release of funds will also be done block-wise.
- Accordingly, NLC submitted the revised cost estimates vide letter dated 5th January, 2018 with the cost of Rs. 17.89 crores for Sub-block-I, Rs. 16.38 crores for Sub-block-II, Rs. 9.91

crores for Sub-block-III and 23.25 crores for Sub-block-IV. The revised cost of the Veeranam Block stands at Rs. 67.43 crores.

- Director, NMET informed the Committee that the cost was revised and taken in to consideration but the time schedule for each Sub-block was not indicated. Moreover, the bills are being submitted cumulatively by MECL along with the 36 months' timeline.

Committee directed that MECL shall work out separate timelines for all sub-blocks in consultation with NLC and submit in the next TCC meeting. The bills submitted for the blocks so far shall be segregated sub-block wise and informed to NMET Secretariat. The progress of the ongoing two sub-blocks will also be reviewed in next TCC meeting.

20.9. Preservation of drilled cores:

- MECL informed that the mineralized cores are required to be preserved as per the drilling guidelines of NMET. MECL requested to issue necessary direction to GSI core libraries established at various regional headquarters and State units of GSI. Also, the photography/videography is also to be carried out as per guidelines, however the charges towards this are not included in the cost schedule of the project.
- The Chairman informed that the National Core Library is being established by GSI and a proposal to upgrade the Regional Core Libraries will be submitted soon to be carried out through NMET funding. The NMET Rules also stipulates for facilitation of a National Core repository for encouraging research in Earth Sciences and evaluation of Mineral prospect.

20.10. General Guidelines by the Committee:

20.10.1. The time over-run should be avoided at all cost and if it is beyond the control of implementing agencies, the Committee should be apprised well before any departure from approved time-schedule.

20.10.2. All the implementing agencies, henceforth, shall inform the TCC/NMET Secretariat before taking any additional work in the approved projects along with proper justification.

20.10.3. All the Implementing agencies shall submit the work progress on monthly basis in prescribed format.

The meeting ended with vote of thanks by Director, NMET.

Annexure- IA

20th Technical-cum-Cost Committee (TCC) NMET, GSI, Nagpur on 04.04.2019 and 05.04.2019

05/04/2019.

(Naeem Ahmad)
General Manager-Exploration (Retd.), CMPDI Ltd.
Member, TCC, NMET

05/04/2019

(Dr. Anjani Kumar)
Dy. General Manager (Exploration) & HoD-Planning (Retd.), MECL
Member, TCC, NMET

5th April 2019.

(Vinay Pal)
Assit. Cost Account Officer, GSI,
Member, TCC, NMET

05/04/2019

(J. V. Ramarao)
Director (GP), GSI
Member, TCC, NMET

5/4/19

(P. Tarafdar)
Dy. DG (Retd.), GSI
Member, TCC, NMET

5/4/2019

(Pradeep Singh)
Director, NMET, MoM
Member, TCC, NMET

05/04/XIX.

(D. Mohan Raj)
ADG & NM H-II, GSI and
Chairman, TCC, NMET

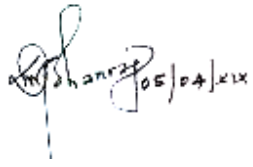
Annexure-IB

List of Participants

20th Technical -cum-Cost Committee(TCC) NMET

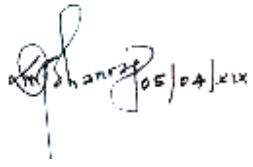
(*Date: 4th & 5th April, 2019*)
(Venue: GSI, Nagpur)

Sl. No.	Name & Designation	Organization/Contact No./ Email	Remarks
1	Shri D. Mohan Raj, ADG NM-II and Chairman, TCC, NMET	GSI hodnm2@gsi.gov.in	*In Chair*
2	Shri P. Tarafdar Dy. DG (Retd.)	GSI / 9503088847 tarafdar.pradipta@gmail.com	Member
3	Dr. Anjani Kumar, DGM (Exploration) & HoD-Planning (Retd.)	MECL 9975350576 anjani_kumar1957@yahoo.co.in	Member
4	Shri Naeem Ahmad, General Manager -Exploration (Retd.)	CMPDI Ltd./ 8588092153 ahmadnaeem17@yahoo.co.in	Member
5	Shri Pradeep Singh, Director	NMET, Ministry of Mines 9810233957 nmet-mines@gov.in	Member
6	Shri J.V. Ramarao, Director (GP),	GSI, Hyderabad 944691284, rarajammi@rediffmail.com	Member
7	Shri Vinay Pal Asstt. Cost Account Officer	GSI, DGCO, New Delhi 8527368161 palvinay009@gmail.com	Member
8	Shri Yogendra Singh Bhamboo, Senior Geologist	NMET, Ministry of Mines 9672666707 nmet-mines@gov.in	NMET representative
9	Shri Shashi Kant, Assistant Cost Account Officer	NMET, Ministry of Mines 9015585789 nmet-mines@gov.in	NMET representative
10	Shri Shashi Kant Reddy, Joint Director	DMG Karnataka/ 9845933999 dirmines@gmail.com	Representative of DMG Karnataka
11	Shri Kailash Dongre, Joint Director (Geology),	DGM Chhattisgarh/ 9424282791 kailashdongre.kol@gmail.com	Representative of DGM Chhattisgarh
12	Dr P.C. Mishra, Dy. Director.	Directorate of Geology, Odisha 0674-2392374	Representative of DGO, Odisha



13	Shri V.K. Sankhla, Dy. Director,	DGM, Madhya Pradesh 9424550311 vksankhla18@gmail.com	Representative of DGM, MP
14	Shri S.A. Khan, Dy. Director (Tech.)	DGM, Madhya Pradesh, 9425678746 sakhan.mining@gmail.com	Representative of DGM, MP
15	Shri. M. R. Vala, Geologist	Commissionerate of Geology & Mining, Gujarat 9727706383	Representative of CGM, Gujarat
16	Shri. K.M. Patel, Sr. Geologist	Commissionerate of Geology & Mining, Gujarat	Representative of CGM, Gujarat
17	Shri C. Parthasarathi, Director	GSI, Nagpur/ 9448863062 parthsarathic1977@gmail.com	
18	Shri E. Hanumantha Rao, CEO	Mineral Exploration Research and Innovation Trust (MERIT), DGM Andhra Pradesh	Representative of MERIT, AP
19	Shri O.V.V.S Ravi Kumar, Geologist, MERIT	MERIT, DGM, DGM Andhra Pradesh	Representative of MERIT, AP
20	Shri. Shiva Kumar M., SM (ME)	KIOCL Ltd./ 9481444686 bmed@kioclltd.com	Representative of KIOCL
21	Shri Vasudha Chandra S., AGM (ME), KIOCL Ltd.	KIOCL Ltd./ 9900789115 bmed@kioclltd.com	Representative of KIOCL
22	Shri B.P. Raturi, HoD (Exploration)	MECL/ 9422806417 bpraturi100@yahoo.co.in	Representative of MECL
23	Shri Pradeep Kulkarni, Sr. Manager (Geology)	MECL/ 9425890225, kulkarnip.mecl@gmail.com	Representative of MECL
24	Shri Krishna Kumar Kaushik, Dy. GM (Exploration- Coal & Lignite)	MECL/ 9422805475 kkaushik47@gmail.com	Representative of MECL
24	Shri Jayant Kumar, Dy. GM (Exploration)	MECL, 9431004502, jkumar.mecl@gmail.com	Representative of MECL
26	Shri J. Narayana M , DGM (Exploration)	MECL, 9561506243	Representative of MECL
27	Dr. S. Kamalakaram Sr. Manager	MECL, 9370621725, drskumprbh@gmail.com	Representative of MECL
28	Shri Indra Kumar Nagpure, AM (Geology)	MECL, Nagpur	Representative of MECL
29	Shri Nandish .V, Assistant Manager, Geology	MECL , Nagpur , 9008599111, nandish28@gmail.com	Representative of MECL

30	Sh. B. Ray	MECL	Representative of MECL
31	Shri Saurabh Vivek, AM-Geology,	MECL, 9545425923 saurabh.12181@gmail.com	Representative of MECL
32	Shri. K. Rajasekhar Reddy General Manager	TSMDC Ltd., 8008558580 tsmdcltd@gmail.com	Representative of TSMDC Ltd.
33	Dr. A.V. Subrahmanya, Consultant BMDC	TSMDC Ltd., 9000181324, dravsubramanya@gmail.com	Representative of TSMDC Ltd.
34	Smt. Aarti Gupta, DGM (Coal)	NTPC/ 9650999965 aartigupta@ntpc.co.in	Representative of NTPC
35	Shri. Shailender Sinha, GM (Exploration)	OMECL, 9937388703, shailender.meel@gmail.com	Representative of OMECL
36	Dr. Prasanta Kumar Nayak, Manager (Geologist)	OMECL, 9438039323 , pknayak257@gmail.com	Representative of OMECL



Annexure-II

Details of revised work component and corresponding cost components in the projects under execution by MERIT, Andhra Pradesh

Sl. No.	Name of the Block	Work Component	NMET approved cost (in Rs.)	MERIT Cost (in Rs.)	Difference (in Rs.)	Remarks
1	Bhimagundam	Core Sampling	1,68,540/-	2,81,580/-	1,13,040/-	Increase in quatum from 60 to 105 days.
		Geological Report	3,65,670/-	5,00,000/-	1,35,330/-	3D modelling charges
2	Gundlakunta	Survey work	3,50,400/-	4,46,190/-	95,790/-	Increase in quatum from 60 to 80 days.
		Core Sampling	2,80,900/-	4,69,300/-	1,88,400/-	Increase in quatum from 100 to 170 days.
3	Dommaranandhyala-Veparala	Survey work	3,50,400/-	5,20,555/-	1,70,155/-	Increase in quatum from 60 to 90 days.
		Core Sampling	2,80,900/-	5,63,160/-	2,82,260/-	Increase in quatum from 100 to 201 days.
4	Madinapadu	Survey work	2,33,600/-	2,77,950/-	44,350/-	Increase in quatum from 40 to 50 days.
		Core Sampling	1,68,540/-	2,17,940/-	49,200/-	Increase in quatum from 60 to 78 days.
		Geological Report	3,47,931/-	6,00,000/-	2,52,069/-	3D modelling charges
5	Tangeda	Survey work	2,33,600/-	4,63,250/-	2,29,650/-	Increase in quatum from 40 to 80 days.
		Core Sampling	1,68,540/-	2,54,030/-	2,54,030/-	Increase in quatum from 60 to 91 days.
		Geological Report	3,74,461/-	6,00,000/-	2,25,539/-	3D modelling charges

6	Mutyalampadu-Tangeda	Survey work	1,75,200/-	2,77,950/-	1,02,750/-	Increase in quatum from 30 to 48 days.
		Core Sampling	1,12,360/-	1,81,450/-	69,090/-	Increase in quatum from 40 to 65 days.
		Geological Report	2,68,361/-	6,00,000/-	3,31,639/-	3D modelling charges
7	Ramapuram	Survey work	1,75,200/-	2,77,950/-	1,02,950/-	Increase in quatum from 30 to 48 days.
		Geological Report	2,32,803/-	6,00,000/-	3,67,197/-	3D modelling charges

Annexure-IV

Justifications for Time Over-run submitted by MECL

1. Agnigundala North Block (AP-09), Guntur, Andhra Pradesh

Sl. No.	Name of the Item	Details
1.	Block Name	Agnigundala North Block , Guntur, Andhra Pradesh
2.	Exploration Stage	G-4
3.	Target Mineral	Base Metals (Cu, Pb, Zn)
4.	Sanctioned Cost	308.99 Lakhs
5.	Date of Sanction	23rd February, 2017 vide letter no F.N.6/1/NMET-2015
6.	Date of Start	15th October, 2016
7.	Time Schedule	11 months
8.	Date of GR Submission (As per sanctioned Time Schedule)	14 September, 2017
9.	Actual Submission of Geological Report	10th January, 2018 (Dec-2017)
10.	Time Overrun	**4 months**
11.	**Schedule of Activities** Pre Sanction	• Mobilisation & Geological mapping were initiated to expedite the exploration campaign for the cause of NMET.
	Post Sanction	• Geological mapping & sampling started in month of October-2016 and completed in March-2017. • Block was reviewed in 8th TC of NMET on 3rd & 4th February, 2017 where Geophysical survey (Magnetic, Resistivity & Self Potential) approved in the northern part of block. Geophysical survey started in May-2017 and completed in the same month. • Block was again reviewed on 9th TC of NMET 8th & 9th June, 2017 where map updation was suggested. After incorporation above suggestions GR sent for peer review on 20th October, 2017. • Comments on peer review received after 2 months in 4th week of December, 2017 • GR submitted after incorporating peer review comments in December, 2017 • GR with covering letter sent to NMET, New Delhi on 10th January, 2018. **It is requested to approve time over run of 4 months.**

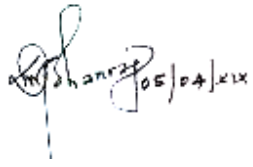
Sl. No.	Name of the Item	Details
12.	Actual Cost of Exploration	**Rs – 65.73 Lakh**, as on Feb-2019.

2. Saraipani- Dadar Block, Kabirdham, Kawardha, Chhattisgarh

Sl. No.	Name of the Item	Details
1.	Block Name	Saraipani- Dadar Block, Kabirdham. Kawardha, Chhattisgarh
2.	Exploration Stage	G-2
3.	Target Mineral	Bauxite
4.	Sanctioned Cost	74.60 Lakhs
5.	Date of Sanction	19th April, 2018 vide letter number F.N. 6/4/2015-NMET/269 (7th EC dated 12th March, 2018)
6.	Date of Start	1st June, 2018
7.	Time Schedule	08 months
8.	Date of GR Submission (As per sanctioned Time Schedule)	18th December, 2018
9.	Actual Submission of Geological Report	22nd February, 2019
10.	Time Overrun	**2 months 4 days (3 months)**
11.	Reasons & justification For Time Overrun	• Drilling activity started in month in June-2018 and completed in July-2019. • Analysis of REE samples as well as trace element studies of Composite samples by ICP-MS were outsourced as MECL does not have the facility of REE sample analysis. • Above analysis has taken time and analysis received by December-2018. • Interpretation and GR preparation has taken another 2 months and GR was submitted on 22nd Feb, 2019. **There is time over run of 2 months & 4 days.**
12.	Actual Cost of Exploration	**Rs – 58.58 Lakh till 15th March, 2019**

3. Naubasta-Kolard Block, Satna, Madhya Pradesh

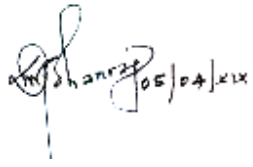
Sl. No.	Name of the Item	Details



Sl. No.	Name of the Item	Details
1.	Block Name	Naubasta - Kolard Block, Satna, Madhya Pradesh
2.	Exploration Stage	G-2
3.	Target Mineral	Limestone
4.	Sanctioned Cost	365.43 Lakh
5.	Date of Sanction	19th April, 2018 vide letter number F.N. 6/4/2015-NMET/269 (7th EC dated 12th March, 2018)
6.	Date of Start	1st May, 2018
7.	Time Schedule	10 months
8.	Date of GR Submission (As per sanctioned Time Schedule)	18th February, 2019
9.	Expected date Submission of Geological Report	31st October, 2019
10.	Time extension required	**11 months (Due to Harvesting season)**
11.	Reasons & justification For Time extension	• Drilling activity started in month of May-2018 and by June-2018, total 660m in 10 boreholes were completed against proposed 2140m in 51 boreholes. • The land owners of paddy field did not allow the drill crew to carry out drilling in the area therefore drilling suspended. • 1480m of drilling in 41 boreholes along with geological mapping, sampling, analysis and report preparation is balance. • Drilling is likely to start in April-2019 after a gap of 9 months. • GR will be submitted by 31 October, 2019 **There will be time over run of 11 month as drilling was suspended.**
12.	Actual Cost of Exploration	**Rs – 98.17 Lakh till 15th March, 2019**

4. Jamodi- Mahanna Block (PART-B), Satna, Madhya Pradesh

Sl. No.	Name of the Item	Details
1.	Block Name	Jamodi- Mahanna Block (Part-B), Satna, Madhya Pradesh
2.	Exploration Stage	G-2
3.	Target Mineral	Limestone
4.	Sanctioned Cost	262.62 lakh
5.	Date of Sanction	21st June, 2018 vide letter number F.N. 6/2/2015-NMET/269



Sl. No.	Name of the Item	Details
		(8th EC dated 12th June, 2018)
6.	Date of Start	2nd July, 2018
7.	Time Schedule	10 months
8.	Date of GR Submission (As per sanctioned Time Schedule)	20th April, 2019
9.	Expected date Submission of Geological Report	31st December, 2019
10.	Time extension required	**11 months (Due to Harvesting season)**
11.	Reasons & justification For Time extension	• Drilling activity started in month of July 2018 and 89m completed in 3 boreholes against proposed 1535m in 48 boreholes. • The land owners of paddy field did not allow the drill crew to carry out drilling in the area therefore drilling suspended. • Total 1446m in 45 boreholes is balance along with geological mapping, sampling, analysis and report prepration. • Drilling suspended due to harvesting season and paddy field. • Drilling is likely to start in April-2019 after a gap of 9 months. • GR will be submitted by 31 December, 2019 **There will be over run of 11 months as drilling was suspended.**
12.	Actual Cost of Exploration	**Rs – 25.27 Lakh till 15th March, 2019**

5. Kuhi-Khobna-Agargaon gap area block, Nagpur, Maharashtra

Sl. No.	Name of the Item	Details
1.	Block Name	Khui Khobna, Nagpur, Maharashtra
2.	Exploration Stage	G-4
3.	Target Mineral	Tungsten
4.	Sanctioned Cost	126.56 Lakh
5.	Date of Sanction	21st June, 2018 vide letter number F.N. 6/2/2015-NMET/269 (8th EC dated 12th June, 2018)
6.	Date of Start	22nd December, 2018
7.	Time Schedule	8 months
8.	Date of GR Submission (As per sanctioned Time Schedule)	20th Feb, 2019

Sl. No.	Name of the Item	Details
9.	Expected date Submission of Geological Report	20th November, 2019
10.	Time extension required	**9 months (Due to Harvesting season)**
11.	Reasons & justification For Time extension	• Team visited to the area after receiving the approval of the project. • Due to harvesting season and standing crop in field, the land owners of the field did not allow the drill crew to carry out drilling in the area therefore drilling could not be commenced. • Field activity and drilling started in the 4th week of December-2018 with a delay of 6 months. • By 15th March 2019 total 720.50m drilling completed against the approval of 945m of drilling. • Total 224.50m of drilling, geological mapping, trenching, pitting, sampling, analysis and report perpetration is balance. • **It is expected to complete drilling activity by 2nd week of April-2019.** • GR will be submitted by 30th November, 2019
12.	Actual Cost of Exploration	**Rs – 69.46 Lakh till 15th March, 2019**