

**MINUTES OF 14<sup>TH</sup> MEETING OF CGPB COMMITTEE -V ON ENERGY MINERALS AND RESOURCES  
HELD ON 28<sup>TH</sup> AUGUST, 2018 AT BIRESHWAR LASKAR CONFERENCE ROOM, NATURAL ENERGY  
RESOURCES, MISSION-IIB, GSI, KOLKATA**

<b>14.1.0</b>	The 14 <sup>th</sup> Meeting of the CGPB Committee-V on Energy Minerals and Resources was held on 28 <sup>th</sup> August, 2018 with Shri C. K. Sengupta, Dy. Director General, Natural Energy Resources (NEnR), Mission IIB (M-IIB), GSI, Kolkata as the Convener. The list of participants is appended at Annexure-I.
<b>14.1.1</b>	Beginning the proceedings, Dr. Manas Roychowdhury, Member Secretary and Director, NEnR, M-IIB, GSI, welcomed Dr. Dinesh Gupta, Director General, GSI as Chief Guest, Shri S. R. Kisku, Addl. Director General and HOD, ER, GSI as Guest of Honour and all the participants including Members, Special Invitees and Guests for gracing the occasion. After self introduction by the dignitaries, Member Secretary requested the Convener, Committee V to give his opening remarks.
<b>14.1.2</b>	Shri C. K. Sengupta, Convener, Committee V & Deputy Director General, NEnR, M-IIB, GSI, Kolkata welcomed the Chief Guest and Guest of Honour and expressed his sincere gratitude for sparing their valuable time. Briefing the history of CGPB Committee V, its activities and achievements, he requested the Guest of Honour, Shri S. R. Kisku to enlighten the house with his valuable suggestions.
<b>14.1.3</b>	In his address, Shri S. R. Kisku welcomed the Chief Guest and all the dignitaries. Detailing the role of coal exploration that led to creation of GSI he stressed upon the need for giving extra impetus on search for coking coal, CBM and shale gas. He expected a vibrant discussion on all issues pertaining to the exploration programmes and strategies to be adopted in the field of fossil fuel.
<b>14.1.4</b>	Upon requested by the Convener, Mr. S. N. Bhagat, Director, DGCO in his speech welcomed all participants and mentioned that the CGPB is the platform for meaningful discussion among the stakeholders, particularly the State Governments. He expected the committee to interact on all the agenda items and resolve them through mutual discussion. He also felt the need to devote sufficient time to address the issues related to the state agencies and recommendations made by different SGPB and identify issues for discussion in main CGPB.
<b>14.1.5</b>	Chief Guest, Dr. Dinesh Gupta requested the members to raise issues that may require his intervention or action from authorities from other Ministry/Department. He also requested all the members to attend this important meeting and instructed Member Secretary to send request letters to all, well in advance.
<b>14.1.6</b>	Citing the recent meeting of NITI Ayog on utilization of REE from coal fly ash, Dr. S. Chakraborty, Senior Scientist, NML, Jamshedpur informed the house that since the power plants use coal from various mines, it is difficult to get homogenized output and it is necessary to pinpoint the source of REE. She requested GSI to take initiative for analyzing the coal samples for REE from exploration

	<p>blocks. Dr. Chakraborty, Dr. S. Bhattacharyya, Director, NEnR, M-IIB and Dr. R.P. Singh, Manager, CMPDI informed that analysis shows high value of REE in coal seams of Raniganj, Ib River and North Karanpura coalfields. Mr. Kannadasan, CGM, NLC pointed out that Ge is being extracted from lignite in USA and Russia. Dr. D. R. Patel, Joint Director, DGM, Chhatisgarh pointed out that fly ash analysis showed high Ga value. He also pointed out that bauxite and lithomarge associated with Deccan Trap have also given high value of Ga.</p>
<b>14.1.7</b>	<p>Dr. Dinesh Gupta in his remark stressed upon the need for synergy between different Departments and opined that this committee is an ideal platform for that. He mentioned that in view of critical need and scarcity of REE in the country, every possible source must be searched upon thoroughly and he instructed Member Secretary to prepare a note and submit to him. He also instructed to incorporate analysis of samples for REE in all exploration programmes of M-IIB from current field season. Dr. Gupta also enquired about the availability of technology to extract REE from coal fly ash, to which Dr. S. Chakraborty answered in affirmative. He also stressed on collaborative study between GSI and NML.</p>
<b>14.1.8</b>	<p>Shri Rajiw Lochan, MGMI, pointed out that in the draft NMP 2018 under para 5.1 it is proposed that the National Inventory of Mineral Resources will be based on a comprehensive and up-to-date review of exploration data which will be maintained in digitized form comprising of both a resource Inventory and tenement registry. The resource Inventory will be in accordance with a globally accepted public reporting standard for ensuring reliability of reporting and acceptability to financial institutions and stock exchanges showing resource and reserve. He emphasized the need for detail discussion among the stake holders on accepting the reporting standard. He also mentioned the need for a national CBM Inventory, not only for disseminating knowledge about the CBM potentiality of the country but also for planning coal exploration in different coalfields which are left out due to CBM leasehold, over a long period.</p> <p>Member Secretary informed that CGPB Committee V has drafted a modified Indian Standard Procedure (ISP) to make it compatible with International norms. The modified ISP was submitted to the Ministry of Coal for acceptance. He pointed out that unless the areas under CBM leasehold are made free for coal exploration, there would hardly be any potential area left out for regional coal exploration in near future.</p> <p>DG, GSI instructed to draft a letter to DGH on his behalf to resolve the issue of carrying out coal exploration in CBM leasehold areas.</p>
<b>14.1.9</b>	<p>Shri A.K. Mohanty, GM (Expl.), CMPDI mentioned that CMPDI is planning to reduce the number of boreholes required during detailed exploration from 6-7 to 4-5 by using geophysical tools like 2D/3D seismic survey. DG, GSI commented that this is quite possible but cautioned that 2D seismic survey is expensive and need to be judiciously used in prospective blocks.</p>

14.1.10	<p>Stating the exploration work carried out by DGM, Nagaland, Shri T. Mar. Imchen, Joint Director, requested for funding from NMET for infrastructure development. Shri M.S. Lyngdoh, Director, DMR, Meghalaya and Shri Arun Kumar, Geologist, DMG, Jharkhand also supported him and requested DG, GSI to consider the request through modifying the NMET guideline for augmenting the capabilities of state DGMs. DG, GSI stated that presently there is no provision for funding for infrastructure development in NMET guidelines and requested the members that instead of this forum, the issue should be discussed in NMET executive committee meeting. Shri Mohanty, CMPDI informed that Ministry of Coal has allocated 1.1 crore INR to DGM, Nagaland for infrastructure development. The decision of MoC was applauded by the Committee.</p>
14.1.11	<p>Shri Lyngdoh raised the issue of difficulty in coal mining in view of NGT guidelines and private land holding. The issue could not be discussed since it is beyond the purview of this committee.</p>
14.1.12	<p>Convener requested the Chief Guest, Dr. Dinesh Gupta to give his concluding remarks on the session. In his remarks, Dr. Gupta emphasised on completing the exploration by all agencies at an accelerated pace, to keep it relevant.</p> <p>He mentioned that national aerogeophysical survey has been taken up by GSI using NMET fund and certain coal bearing area will also be covered. He also pointed out that GSI has already covered 2 lakh sq km by aerogeophysical survey and will cover another 6 lakh sq km by 2020. This will help in a quantum jump in exploration activity in the country. He also pointed to the fact that GSI is planning to double its exploration programmes from 200 in 2018-19 to 400 in 2019-20.</p> <p>He requested CIMFR to think of an action plan to expedite the process of coal sample analysis so that GSI reports can be circulated in time and also instructed to contact other CSIR accredited labs like NML. Representative of TATA Steel informed that there are some NABL accredited labs which also carry out coal analysis.</p> <p>Dr. Gupta stated that the country requires sustainable energy supply in a big way and although nonconventional energy is coming up as a viable substitute, coal is going to play the lead role at least for some time. Thanking all the dignitaries present in the meeting on behalf of GSI, he requested members to discuss the issues threadbare and come out with effective, concrete and implementable recommendations.</p>
14.2.0	<p><b>Follow up of the action taken report on the decision of the 13<sup>th</sup> Meeting of the CGPB Committee V</b></p>
14.2.1	<p>(a) During discussion on para 13.2.1, CMPDI informed that MoC has sanctioned the fund for procurement of machineries by DGM, Assam and CMPDI will release the fund once the job order is placed by DGM, Assam.</p> <p style="text-align: right;"><b>(Action: DGM, Assam)</b></p> <p>(b) Regarding the issue of prospect of coal exploration in the northeastern states including Mizoram, CMPDI informed that</p>

	<p>i) CGPB Com-V has approved regional exploration for coal in Lusaicheera (Thinglum) &amp; West of Retlang Block, Mizoram identified by DGM, Mizoram under promotional exploration programme of MoC. DGM Mizoram will conduct exploration in these two blocks through outsourcing. CMPDI will facilitate DGM Mizoram in tendering the block and will provide other technical guidance for coal exploration.</p> <p>ii) CMPDI has floated tender for outsourcing the detail coal exploration in Namchik East &amp; West area of Namchik-Namphuk Coalfield, Arunachal Pradesh. However, due to some technical reason the tender could not be awarded. The block has been re-tendered for outsourcing.</p> <p>iii) The G2 stage of investigation in Phatapara area in Singrimari Coalfield, Assam has been successfully awarded through tendering to an outsourced agency by CMPDI and the work will commence soon.</p> <p><b>Action completed</b></p>
14.2.2	<p>During discussion on para 13.2.3 on the issue of 2D/3D seismic survey in Deccan Trap covered terrain of Wardha Valley Coalfield, Maharashtra, CMPDI informed that the revised proposal for 2D/3D seismic survey in Deccan Trap as per MoC approved rates has not been submitted by NGRI. The report of 3D seismic survey in Belpahar Area of Ib River Coalfield carried out by NGRI under promotional fund has not been submitted, however, the vetting comments on the draft reports has been sent by CMPDI to NGRI in the month of April'18.</p> <p>No representative from NGRI was present in the meeting neither any ATR has been received from NGRI. In view of importance of the issue, the committee decided that NGRI will be further requested to expedite the decision on seismic survey in Wardha Valley Coalfield and submission of the report on 3D seismic survey.</p> <p style="text-align: right;"><b>(Action: NGRI, CMPDI, Member Secretary)</b></p>
14.2.3	<p>With reference to para 13.2.5, on approval of modified ISP by the Ministry of Coal, Member Secretary informed that the modified ISP, prepared by the Task Force of CGPB Committee V, under the chairmanship of Shri A.K. Sharma, GM (Expl) (Retd.), CMPDI and approved by the committee during its 13th meeting, was submitted to the Addl. Director General, PSS P&amp;M, GSI and the Member Secretary, CGPB on 05.02.2018 which was forwarded to the Secretary, Ministry of Coal for vetting on 08.03.2018.</p> <p>In this connection GM (Exploration), CMPDI informed that they are using 2D seismic survey in the detailed exploration programme in Grindola-Baratap Area, Ib River Coalfield with an aim to reduce the requirement of drilling. He requested the committee to think over incorporating 2D seismic survey as a tool for partial substitution of drilling requirement in modified ISP.</p> <p>Representative of TATA Steel opined that the geophysical data could be used as supplementary tool and not as a substitute for drilling. He also raised the issue of acceptance of the reports by the exploiting agencies since mining involves huge investment. Director, RA Division, NEnR, M-IIB,</p>

	<p>GSI suggested that in the proposed pilot project, 2D seismic study can be done without reducing the number of mandatory boreholes and comparative study can be made to evaluate the accuracy of 2D seismic data considering limited number of boreholes. The committee felt that in view of highly interbanded nature of coal seams and frequent faulting in most of the coalfields, a thorough comparative study is required with sufficient data from different coalfields before changing the norm of minimum number of boreholes in G1 stage. The committee lauded the proposed plan for inducting 2D seismic survey and suggested that, if the accuracy is proved, such modifications in the ISP can also be incorporated subsequently with availability of data from different coalfields.</p> <p>Director, RA Division, GSI also requested to incorporate the existing range of borehole spacing for G2 and G3 stages of exploration in the modified ISP.</p> <p>Convener requested CMPDI to inform the committee about the findings of the project in Ib River Coalfield and communicate with Ministry of Coal to expedite the process of approval of modified ISP.</p> <p style="text-align: right;"><b>(Action: CMPDI)</b></p>
14.2.4	<p>During discussion on para 13.2.7, regarding closure of MoC funding for ILRIS project, NLC India Ltd. informed that as per the advice of the CMPDI, a Closure Report (Interim) in Form VI for ILRIS project was submitted to CMPDI with a copy to Ministry of Coal and CGPB Committee V on 14.03.2017. As per the NLC India Ltd. request, CMPDI has released only 2 Cr. INR dated 14.03.2017 and CMPDI informed that henceforth NLC India Ltd. has to bear the further expenditure on the ILRIS project. In this regard, the MoC funding for ILRIS project has been discontinued and the project is being continued with funding from NLCIL's own internal resources.</p> <p><b>Action Completed</b></p>
14.2.5	<p>During discussion on para 13.2.8, representative from MGMI stressed upon the need for a coalfield-wise inventory of CBM since that will not only be helpful in future planning of CBM exploration but also will help in planning coal exploration programmes. He mentioned that a large area has been earmarked for CBM exploration long back and a large number of the awarded blocks have either been relinquished or are in the process of relinquishment. It is logical to make the areas free for coal exploration. He also mentioned that communications from CMPDI has been made with DGH, but nothing concrete has come out. The Committee decided that as suggested by the DG, GSI, the matter should be conveyed to him for communication with DGH.</p> <p style="text-align: right;"><b>(Action: Member Secretary)</b></p>
14.2.6	<p>During discussion on para 13.2.10 regarding detailed exploration in coking coal areas, CMPDI informed that the exploration in Singa, Kapuria, West Mahuda (Jharia coalfield) has been completed. Exploration in Asnapani West &amp; Chalkari Ext. (East Bokaro coalfield) &amp; Chuliabhulia East (Sohagpur Coalfield) is ongoing. CMPDI has identified East of Chuliabhulia East &amp; North of Chuliabhulia East (Scout) block (Sohagpur Coalfield) for regional exploration in FY 2018-19. The</p>

	<p>work will be carried out by MECL under Promotional (regional) exploration scheme of MoC. MECL has informed that they are interested to take up exploration activities in East &amp; West of Behrabandh, Sohagpur CF covering 20 sq km by drilling 30,000m as soon as it is made available from CBM leasehold.</p> <p>GSI informed that the exploration in Semra Area, Sohagpur Coalfield was closed after drilling one borehole due to very low percentage of shale and coal. However, the data from Jharia Coalfield is showing encouraging gas content both in shale horizons as well as in the coal seams within both Raniganj and Barakar formations. The petrographic study (vitrinite percentage and reflectance) indicates that coal seams of both Barakar and Raniganj formations have coking property.</p> <p>Shri P.S. Rao of Tata Steel suggested to have a holistic evaluation of Jharia Coalfield to find any possible potential reserves from the locked up resources in abandoned mines and common areas between leaseholds. Shri Arun Kumar, DMG, Jharkhand suggested the need for deducting the mined out resource from the National Inventory to make it more realistic. Shri K.K. Sharma, SCCL cautioned against the proposal of straight away deduction of locked up resource since these locked up resource may be mined afterwards.</p> <p>Prof Atul Verma from ISM Dhanbad and Dr. S. Chakraborty, NML, informed the House that study at their respective laboratories has established low ash non-coking coal can be converted into coking coal. However, large scale application requires further elaborate study. Shri Rao mentioned that coking property of some marginal coals like those of North Karanpura should be tested after washing since the coking character increases appreciably with reduced ash content.</p> <p>Mr. Imchen, DGM Nagaland wanted to know whether the high sulphur coal of northeast can be considered for conversion to coking coal because of their low ash content. Dr. Chakraborty, NML informed that the sulphur associated with NE coal are mostly organic which are very difficult to remove and hence are not suitable for coking coal.</p> <p>Dr. V. A. Mendhe of CIMFR pointed out that for meaningful shale gas exploration certain parameters like type of clay, porosity, permeability, fractability etc needs to be studied to characterise the reservoir. Member Secretary informed that since presence of shale gas in the shale horizons within Barren Measures of Jharia Coalfield has been established, GSI will incorporate these studies in future programmes.</p> <p><b>Action Completed</b></p>
14.2.7	<p>While answering the issue raised in para 13.2.12, representative of CIMFR informed that henceforth all the Pre-receipted bills will be submitted with signed revenue stamp and official seal.</p> <p><b>Action completed</b></p>
14.2.8	<p>During discussion on para 13.2.14, regarding the proposal of taking up promotional exploration in Mand-Raigarh Coalfield within CBM leasehold area, MECL informed that as soon as DGH</p>

	<p>relinquishes this CBM leasehold area and makes it available, MECL will submit necessary proposal to undertake exploration in Gharghoda block.</p> <p style="text-align: right;"><b>(Action: DGH, MECL)</b></p>
14.2.9	<p>With reference to para 13.2.18 on formulating a draft future regional exploration programme for finding out potential areas, Member Secretary informed that GSI has already given its coal exploration reports to CMPDI and officers of GSI and CMPDI jointly plotted the block maps and identified the potential areas in different coalfields including northeast. CMPDI requested GSI to share the information and plotted data on map of potential coal-bearing area of all the coalfields for reconciliation of regionally explored and detailed explored area. Member Secretary informed that the all reports of coal exploration, like other reports of GSI, are uploaded in OCBIS portal and anybody can go through the report.</p> <p><b>Action completed</b></p>
14.2.10	<p>The issue of carrying out coal exploration in CBM leasehold area has already been discussed in para 14.2.5.</p> <p>During discussion on other part of the issues raised in para 13.2.22 regarding vetting of coal exploration reports of DMG Jharkhand by CMPDI, CMPDI informed that they were not associated in referred coal exploration project. Representative of DGM, Jharkhand informed that as per MoC directive, vetting by CMPDI is mandatory for reports. After discussion on the issue, it was decided that DGM Jharkhand and CMPDI would resolve the issue bilaterally.</p> <p><b>Action completed</b></p>
14.2.11	<p>During discussion on para 13.2.25, regarding inordinate delay in receiving coal analysis data from CIMFR, the representative from CIMFR informed that due to incorporation of low ash carbonaceous shale (upto 65% ash+moisture) within coal and introduction of GCV analysis, the workload in all the CIMFR labs has been nearly doubled. CIMFR is trying its level best to complete the analysis as early as possible and requested the exploration agencies to minimize the special tests which requires maximum time. CMPDI informed that they ask special tests only for about 10% of the samples. NML informed that although they have an installed capacity for analyzing 12000m samples annually they are presently doing analysis of only 4000m samples of CMPDI. Requested by the convener and DDG, NEnR, MIIB, she consented for a meeting very soon for detail discussion on carrying out chemical analysis of coal samples of GSI. Member Secretary requested CIMFR to expedite the analysis of samples of FS 2016-17 on urgent basis.</p> <p style="text-align: right;"><b>(Action: CIMFR, GSI, NML)</b></p>
14.2.12	<p>During discussion on para 13.2.32, regarding the proposal of DMG, Rajasthan, seeking geophysical data around northwestern Rajasthan, NLC informed that MECL carried out only surface gravity survey in Bikaner District during the period from 1990-91 to 2015-16 in these blocks viz Bhamtasar , Shrichak Vijaisinghpura, Kolasar, Nagrasar-Nokhra, Jasrasar, Kakra-west of Kakra-Sindhu, Nokha,</p>

	<p>Jasalsar, Lalgargh. The geophysical interpreted data for the above will be obtained from MECL and the same may be sent to DMG, Rajasthan. MECL agreed to share the data with DMG, Rajasthan.</p> <p>Representative of DMG, Rajasthan also requested GSI to provide data on geophysical survey which was carried out by GSI in seventies and eighties of last century in Rajasthan. Convener asked the representative of DMG, Rajasthan to contact ADG &amp; HoD, GSI, WR to get the concerned reports.</p> <p style="text-align: right;"><b>(Action: MECL, DMG, Rajasthan)</b></p>
14.2.13	<p>With reference to para 13.5.8 and 13.5.9, MECL informed that:</p> <p>In Charbhata block, G4 stage exploration is completed and GR is under preparation.</p> <p>MECL will submit proposals to take up exploration in East of Pelma &amp; Area of West of Meghuli shortly.</p> <p>Exploration proposals in case of West of Chhal, Raajbahal and Area between Himgir &amp; Meenakshi have already been submitted and exploration in West of Chhal has commenced in July-18 after necessary approval. Approval to take up exploration in Area between Himgir &amp; Meenakshi has been received on July-18.</p> <p>In case of promotional Lignite blocks, Exploration proposals submitted by MECL for Bedela &amp; Bagsura blocks are under consideration with NLC. Proposal for exploration in Basni Block (South of Ucharda and Gangardi), Bikaner and Nagaur Basin was also discussed. (Ref. : Addendum to Agenda, MECL/EXPL/2018-19/520 dated 25.08.2018). MECL will submit proposal to NLC.</p> <p>In case of Nokha gravity block &amp; Kakra, West of Kakra &amp; Sindhu blocks, exploration proposals are awaited to carry out exploration on promotional / NMET funding. Pallayamkottai &amp; Veeranam Lignite blocks are in progress under NMET funding. Exploration in Pyau South block has been completed and the block has been proved negative.</p> <p><b>Action completed</b></p>
14.2.14	<p>With reference to para 13.5.10, MECL informed that at present they are undertaking exploration activities in Rajasthan and Tamilnadu under promotional and NMET funding respectively through inhouse fleet of drills. Also, MECL has plans to under take exploration activities during the year 2018-19 and onwards in above mentioned states through outsourcing to enhance drilling activities and to adhere with time schedule. MECL has requested Secretary, CGPB Committee-V to accord permission for taking up the Promotional Lignite exploration work through outsourcing, vide Letter No. MECL/Expl/2018-19/2142 dated 06.06.2018. Since the issue has been submitted as an agenda by MECL, it has been discussed in para 14.5.8.</p> <p><b>Action completed.</b></p>
14.2.15	<p>With reference to para 13.5.10, NLCIL informed that it has reviewed the correction/ modification suggested by the CGPB Committee-V and revised the draft Lignite Atlas submitted to the CGPB Committee-V vide letter dt.09.05.2018 for finalization.</p>

	<p>Member Secretary informed that the revised draft Atlas was submitted to Dr. Subimal Mukherjee, Director (Retd.) GSI who pointed out that some suggested modifications, given earlier, were not attended by NLCIL. NLCIL resubmitted the soft copy of the draft Atlas after attending the said modifications on 07.08.2018 and the same has been sent to Dr. Mukherjee.</p> <p style="text-align: right;"><b>(Action : Member Secretary, NLCIL)</b></p>
<b>14.3.0</b>	<b>Confirmation of the minutes of the 13th Meeting of the Committee V on Energy Minerals &amp; Resources.</b>
<b>14.4.0</b>	<p><b>Review of work:</b></p> <p><b>The highlights of the exploration work were submitted before the Committee by GSI, CMPDI, MECL, NLC, SCCL, DGM Nagaland and DMG Rajasthan.</b></p>
<b>14.5.0</b>	<p><b>Discussion on Agenda Items</b></p> <p><b>Member Secretary initiated discussion on Agenda Items by requesting all Members to give their views.</b></p>
<i>Agenda 1</i>	<p><u>Results of coal samples from CIMFR, Nagpur</u></p> <p>The regional exploration for coal was successfully accomplished in the Western Extension of Pagaderu (West) Sector (FS 2017-18, spill over item), Item no. M2BCLE/NC/SR/SU:TGN/2017/11586 on 26.05.2018. The coal samples of boreholes GPWE-1 &amp; 2 and borehole GPWE-3 &amp; 4 were submitted to CIMFR lab, Nagpur for analysis on 19.03.2018 and 04.06.2018 respectively. However, the analytical results are still <i>pending with CIMFR</i>, Nagpur for which the resource assessment is due. The final report would be circulated after receiving resource assessment from Resource Division, Kolkata.</p> <p>Therefore, it is requested to expedite the process of obtaining chemical analyses of coal of the above mentioned boreholes at the earliest.</p> <p>It is also requested to make a necessary arrangement for obtaining the chemical analyses for coal exploration blocks within two months of time frame from the submission date. It will help both in assessment of coal resource and circulation of final report in time.</p> <p style="text-align: right;"><i>(Suggestion: GSI)</i></p>
<b>14.5.1</b>	The issue has already been discussed in para 14.2.11. Committee further requested CIMFR to expedite the process.
<i>Agenda 2</i>	<p>Pursuance of the matter for providing the Geophysical Data on western part of Rajasthan with DGH</p> <p style="text-align: right;"><i>(Suggestion: GSI)</i></p>
<b>14.5.2</b>	The issue could not be discussed due to absence of any representative from DGH.
<i>Agenda 3</i>	<p>As per para 1.3 of the Minutes of the Meeting of Core Group CGPB Committee V held on 28.02.2014 at CMPDI, Ranchi, regarding the upper limit of Ash+Moisture % for G17 grade coal, the following observations were made:</p> <p>'After detailed deliberations the proposal of CIMFR to keep the upper limit of G17 grade as</p>

	<p>Ash+Moisture upto 65% (calculated on the basis of Mazumdar's formula) was accepted to maintain uniformity. The Task Force, therefore, recommended that the 'carbonaceous shale' as defined under old 'UHV System of classification with 55% to 75% Ash+Moisture content needs to be subdivided into following two components:</p> <p>i. Carb shale with 55.1% to 65% Ash+Moisture content, and</p> <p>ii. Carb shale with 65.1% to 75% Ash+Moisture content.</p> <p>The issue was deliberated by the Core Group in detail and it was agreed that the Carbonaceous shale will be subdivided as follows:</p> <p>i. The Carb shale with Ash+Moisture 55.1% to 65% will be named 'Carb Shale Low', and</p> <p>ii. Carb shale with 65.1% to 75% Ash+Moisture will be named 'Carb Shale High'.....".</p> <p>This observation also corroborates with the calculation of lower limit of GCV values for G17 grade coal which is fixed at 2200 kcal/kg. Assuming an average moisture content of 5% (on 60% RH and 40° C basis) for Indian coals, the GCV value corresponding to 65% Ash+ Moisture, calculated on the basis of Mazumdar's formula for high moisture coals, is found to be 2182.40 kcal/kg, which is a close approximation of 2200 kcal/kg.</p> <p>Considering all these, GSI is considering an upper limit of 65% Ash+Moisture for G17 grade coal, and therefore, a range of &gt;65% to 75% Ash+Moisture (the range of so called 'Carb Shale High') for defining combustible dirt bands, while calculating in-band thickness and corresponding grades. But off late, it is observed that for a few blocks, while calculating in-band thickness for overall analysis, CIMFR is considering an upper limit 55% Ash+Moisture for defining in-band thickness and corresponding overall grade. Views of other exploration agencies are sought in this regard so as to maintain uniformity of the process.</p> <p style="text-align: right;"><i>(Suggestion: GSI)</i></p>																												
<p><b>14.5.3</b></p>	<p>Committee Members including representative from CIMFR asserted that GCV value w.r.t. 'Carb Shale Low' with Ash+Moisture 55.1% to 65% should be measured and needs to be considered as coal if the value is above 2200 kcal/kg.</p> <p><b>Action completed</b></p>																												
<p><i>Agenda 4</i></p>	<p>Ratification of programme of 2.00 lakh meter of Promotional (regional) Exploration in coal &amp; Lignite for financial year 2018-19 submitted vide letter no CMPDI/DG/532 A/1622 dt 28.06.2018.</p> <table border="1" data-bbox="350 1556 1547 1915"> <thead> <tr> <th colspan="5" style="text-align: center;"><b>Proposed Promotional Exploration Programme in Coat Sector: 2018-19 BE</b></th> </tr> <tr> <th style="text-align: center;">Agency</th> <th style="text-align: center;">Coalfield(State)</th> <th style="text-align: center;">Block</th> <th style="text-align: center;">Drilling (m)</th> <th style="text-align: center;">Other Investigations/Remarks</th> </tr> <tr> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">5</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">MECL</td> <td rowspan="3" style="text-align: center;">Mand Raigarh (Chhattisgarh)</td> <td>1. Taulipalli</td> <td style="text-align: center;">8000</td> <td>Continuing from previous year</td> </tr> <tr> <td></td> <td>2. Wast of Chhal</td> <td style="text-align: center;">10000</td> <td>New block</td> </tr> <tr> <td></td> <td>3. Rajadahi</td> <td style="text-align: center;">500</td> <td>Continuing from previous year</td> </tr> </tbody> </table>	<b>Proposed Promotional Exploration Programme in Coat Sector: 2018-19 BE</b>					Agency	Coalfield(State)	Block	Drilling (m)	Other Investigations/Remarks	1	2	3	4	5	MECL	Mand Raigarh (Chhattisgarh)	1. Taulipalli	8000	Continuing from previous year		2. Wast of Chhal	10000	New block		3. Rajadahi	500	Continuing from previous year
<b>Proposed Promotional Exploration Programme in Coat Sector: 2018-19 BE</b>																													
Agency	Coalfield(State)	Block	Drilling (m)	Other Investigations/Remarks																									
1	2	3	4	5																									
MECL	Mand Raigarh (Chhattisgarh)	1. Taulipalli	8000	Continuing from previous year																									
		2. Wast of Chhal	10000	New block																									
		3. Rajadahi	500	Continuing from previous year																									

		4. Kotmer	2000	Continuing from previous year
	Jahila/Sohagpur	5. Mandria	10000	Continuing from previous year
		6. Area between Ghunghti & Mandana	5000	New block
		7. East of Chuliabhuiia East	10000	New block
		8. North of Chuliabhuiia East (scout)	2500	New block
	Tatapani Ramkola	9. Area west of Reonti Extension	5000	New block
		10. Area between Dhamni & Vijaynagar-Giddi	10000	New block
	Hasdeo Arand	11. Laxmangarh	5000	New Mock
		12. Kedma Scout drill	5000	New block
		13. Pendarkhi Eastern Extension	3000	New block
	to Valley	14. Rajbahal	2000	New block
		15. Area between Himgir & Meenakshi	5000	New block
	Wardha Valley	16. South of Chikni (Dongargaon)	5000	New block
	Kamptae	17. Dahegaon NW extension	2000	New block
<b>Total MECL- CIL Area</b>			<b>90,000</b>	Geophysical Logging as per requirement
CMPDI	Norh Karanpura (Jharkhand)	1. North of Piparwar	3000	Continuing from previous year
	Wardha Valley (Maharashtra)	2. Astona-Wadki-Kothura-Mangli	2000	New block
	Sohagpur (MP)	3. Nigwani Bakeli	5000	New block
	Singrauli (MO)	4. Hatta Dudhmania	3500	New block
	Talcher (Odisha)	5. Dipside of Sakhigopal A	2000	Continuing from previous year
	Singrimari (Assam)	6. Phatapara	500	New block
<b>Total CMPDI- CIL Area</b>			<b>16000</b>	Geophysical Logging as per requirement
DGM, Nagaland	Mokokchung District	1. Changki-B	700	Continuing from previous year
DG, Assam	Kerbi Anglong District	2. Sarpo Teron Gaon & Lai Dera	300	Continuing from previous year
CMPDI	Mizoram	3. Lusaicheera (Thinglum) & West of Retlang	500	New block
	Meghalaya	4. Umthongkut/Tamal/Asim/Kaheliehriat-Sutanga	500	New block

	CMPDI	Jharkhand & West Bengal	Rajmahal Master Basin	8725 LKM	Airborne Gravity Gradiometric Survey
	CMPDI	In Different Coalfields	In Different Coalfields		CBM Studies- 8 boreholes
					Shale Gas Studies- 5 boreholes
	<b>Total Drilling in CIL Area</b>			<b>108000</b>	
	MECL	Godavari Valley (Andhra Pradesh )	Recherla (NMET)	2000	
	<b>Total Drilling in SCCL Area</b>				Geophysical Logging as per requirement
	<b>Total Drilling in Coal-All Agencies</b>			<b>110000</b>	
<b>Proposed Promotional Exploration Programme in Lignite: 2018-19 BE</b>					
	<b>Agency</b>	<b>Coalfield(State)</b>	<b>Block</b>	<b>Drilling (m)</b>	<b>Other Investigations/Remarks</b>
	1	2	3	4	5
	MECL	Nagur Rajasthan	1. Matasukh Lunsera	8400	Continuing from previous year
			2. Kuchera Lunsera	6700	Continuing from previous year
			3. East of Gangardi-Ucharda	5000	Continuing from previous year
			4. Kheduli	8000	Continuing from previous year
			5. East of Deshwai	5000	Continuing from previous year
			6. Kwas	10000	New block
		Neyveli, Tamilnadu	7. Sikkal	28400	New block
			8. South of Sikkal	7000	New block
		Andhra Pradesh/ Tamilnadu	9. KG Basin/RS Manglam	9500	New block
	<b>Total Drilling by MECL in Lignite Area</b>			<b>90000</b>	<b>Geophysical Logging as per requirement</b>
	<b>Grand Total of Drilling by All Agencies</b>			<b>2,00,000</b>	
	(CMPDI)				
<b>14.5.4</b>	The Committee ratified the programmes as proposed by CMPDI. <b>(Action: CMPDI)</b>				
<i>Agenda 5</i>	The regionally explored area is different coalfields of India may be provided to CMPDI. The area				

	<p>explored in detail has already been provided to GSI. A composite map will help in identification of Prognosticated Potential area, regionally explored/detail explored area and balance to be explored area. On preparation of maps of coalfields, joint exercise need to be taken up. (CMPDI)</p>
<b>14.5.5</b>	Already discussed in Para 14.2.9
<i>Agenda 6</i>	<p><b><i>Permission for regional exploration in Charbhata Block</i></b></p> <p>In 12th CGPB Meeting, it was decided that MECL should carry G4 level exploration by drilling few scout boreholes in Charbhata Block. Accordingly, 10 boreholes involving 10,000 m covering the entire block were approved by CGPB Committee-V, for G4 stage exploration on 29.09.2017. MECL has concluded drilling of all ten boreholes, results indicate occurrence of coal seams of Mand Raigarh Coalfields i.e., Seam XVIII to Local 3 with visual workable thickness varying from 0.90 m to 18.00 m. On the basis of band by band analytical data, Grade of the seam varies from G 4 to G 15. Block has large potential for coal i.e., around 8000 million tonnes of coal may be available in the block up to 1200 m depth.</p> <p>The status of the scout drilling was informed to CGPB vide our Letter No. MECL/GM/Expl/G-6/2018-19/1182 dated 19.01.2018.</p> <p style="text-align: right;"><i>(Suggestion: MECL)</i></p>
<b>14.5.6</b>	<p>Bulk of the resource in Charbhata Block is in deeper level. CMPDI mentioned that the moto of promotional exploration is to generate data through regional exploration from all the coalfields. Hence, proposing G2 stage exploration with 1,00,000m drilling in Charbhata Block is not a good position at this stage. MECL proposed to carry out G2 stage exploration in smaller areas carving out from the Charbhata Block. CMPDI mentioned that the geological report on G4 level exploration in Charbhata Block has not yet been submitted by MECL. Once the report is submitted, the merit of carrying out further exploration can be judged.</p> <p><b>Action completed</b></p>
<i>Agenda 7</i>	<p><b><i>Outsourcing of exploration work in Lignite Blocks.</i></b></p> <p>Proposal for outsourcing of exploration work in Lignite Blocks has already been made by MECL vide its Letter No. MECL/Exp/18-19/2142 dated 06.06.2018. Approval is awaited for.</p> <p style="text-align: right;"><i>(Suggestion: MECL)</i></p>
<b>14.5.7</b>	<p>CMPDI mentioned that permission from the Ministry of Coal has been obtained for outsourcing of drilling in case of coal exploration through promotional fund. Similar permission needs to be obtained from the Ministry if the drilling is outsourced in case of lignite exploration. Committee suggested MECL to put up the proposal to NLC who in turn will forward the same to CMPDI for obtaining permission from MoC.</p> <p style="text-align: right;"><b>(Action:MECL, NLC, CMPDI)</b></p>
<i>Agenda 8</i>	<b><i>Proposal for regional exploration in Barra Block (Western Extension of West of Chhal Block,</i></b>

	<p><b><i>Mand-Raigarh Coalfields, District-Raigarh, CG.</i></b></p> <p>MECL is carrying out regional exploration in West of Chhal Block. During its exploration, potential coal horizon has been noticed during drilling. Further, west of West Chhal Block seems to be promising coal potential area. So, MECL proposes a fresh block named Barra Block (Western Extension of West of Chhal Block), for regional exploration to establish coal potential area.</p> <p style="text-align: right;"><i>(Suggestion: MECL)</i></p>
<b>14.5.8</b>	<p>Committee approved the proposal in principle and suggested to submit the detail proposal to CMPDI, with a copy to the Member Secretary for scrutiny and final approval.</p> <p style="text-align: right;"><b>(Action: MECL)</b></p>
<i>Agenda 9</i>	<p><b><i>Proposal for regional exploration in South of Prajapara Deep Block (Area between Block West of Himgiri of GSI and Block area between Himgiri-Meenakshi of MECL), IB Valley Coalfields, District-Sundargarh, Odisha.</i></b></p> <p>MECL is carrying out regional exploration in Area between west of Himgiri and Himgiri-Meenakshi Block. South of Prajapara Deep Block is being proposed for regional exploration to fill the gap and establish continuity of coal seam.</p> <p>Proposal for regional exploration in Thanatola Block, Singrauli Coalfields and Murkil Block (South of Sindhrawal Block) Singrauli Coalfields, Madhya Pradesh. (Ref. : Addendum to Agenda, MECL/EXPL/2018-19/520 dated 25.08.2018)</p> <p>MECL proposes for regional exploration in Thanatola Block and Murkil Block (South of Sindhrawal Block) in Singrauli Coalfields. GSI suggested that both the aforesaid blocks are in proximity of Sanjay Gandhi National Park, area may be delineated for exploration after checking the position of Sanjay Gandhi National Park on ground. Accordingly, MECL may submit proposal to CGPB and CMPDI.</p> <p style="text-align: right;"><i>(Suggestion: MECL)</i></p>
<b>14.5.9</b>	<p>Committee approved the proposal in principle and suggested to submit the detail proposal to CMPDI, with a copy to the Member Secretary for scrutiny and final approval.</p> <p style="text-align: right;"><b>(Action: MECL)</b></p>
<i>Agenda 10</i>	<p><b>Providing Geological Reports of Geological Survey of India (GSI) to Integrated Lignite Resource Information System (ILRIS) project</b></p> <p>On request by NLCIL and also at the instance of Ministry of Coal, the Ministry of Mines vide Lr.No.4/9/2010-MI dated 14-10-2011 addressed to Director General, GSI confirmed the supply of Geological report pertaining to Lignite Exploration of GSI for NLC's ILRIS Project which is creating and maintaining the data base for lignite. Since NLC was designated has nodal agency for ILRIS. Since then Geological Survey of India was kind enough to provide its lignite exploration and other reports to ILRIS project from time to time.</p> <p>In this connection, it is informed that some of the Geological reports of GSI for lignite areas for</p>

	<p>which the resource details were already updated in the 'Inventory Of Geological Resource Of Indian Lignite are yet to be received from GSI. These reports are very much required for ILRIS project in order to generate lignite data base through GIS-WEB project being developed now. The details of geological reports which are yet to be received from GSI are furnished below</p> <p>Tamilnadu: 1) Uttarakosaimangai, 2) Kalari West and 3) Kalari North, Ramnad Dist</p> <p>Rajasthan: 1) Phalki North, Nagaur dist, 2) Karaicharan South, Bikaner dist, 3) Panna, 4) Charanwala and 5) Charanwala North, Jaisalmer &amp; Bikaner dist.</p> <p>Kerala: 1) Madayi, 2)Kadamkottumala and 3)Kayyur in Kannanur district</p> <p>West Bengal: 1) Rakshitpur, 2) Gaurangapur-Bankati in Bardhaman dist., 3) Mahalla, 4) Chandipur, 5) Dhobbanpur and 6) Djara in Birbhum dist.</p> <p style="text-align: right;"><i>(Suggestion: NLC)</i></p>
<b>14.5.10</b>	<p>GSI informed that the two blocks of Kerala and Chandipur Block in West Bengal are not explored by Mission IIB (or erstwhile Coal Wing), GSI. The blocks in Tamilnadu and Rajasthan as well as Gaurangapur-Bankati Block in West Bengal were explored under promotional fund. Hence, NLC should collect these reports from CMPDI as per the followed practice. However, CMPDI requested GSI to provide the reports to NLC. GSI agreed to provide the soft copy of the reports to NLC.</p> <p style="text-align: right;"><b>(Action: GSI)</b></p>
<i>Agenda 11</i>	<p>GSI is conducting geothermal studies in and around Manuguru - Bugga area, of Godavari Valley Coal Field. For this purpose, boreholes were drilled by the Central region of GSI. SCCL interested to know the geothermal potential/prospects in the area.</p> <p style="text-align: right;"><i>(Suggestion: SCCL).</i></p>
<b>14.5.11</b>	<p>GSI informed that the work is going on and once the report is circulated, it will be uploaded in OCBIS Portal.</p> <p><b>Action completed</b></p>
<i>Agenda 12</i>	<ul style="list-style-type: none"> <li>• NLC should provide the lignite block map of Barmer and Jaisalmer district.</li> <li>• NLC should also provide maps of lignite blocks overlapped with petroleum blocks in Barmer district.</li> </ul> <p style="text-align: right;"><i>(Suggestion: DMG, Rajasthan)</i></p>
<b>14.5.12</b>	<p>Already discussed in para 14.2.12</p>
<i>Agenda 13</i>	<p>Secretary (Coal) Govt, of India had a meeting with the Chief Secretary, Govt, of Nagaland along with officials of CMPDI, Ranchi, DGM, Nagaland and Nagaland State Mineral Development (NSMDC), at Kohima on 28:03:2018 to discuss development of coal sector in Nagaland wherein the need to expedite coal exploration activities in the state was strongly stressed upon. Therefore: The need for an excavator, a heavy duty truck, a drilling rig with accessories and a derrick (which was also discussed during the 12<sup>th</sup> CGPB Comm.V meeting) was put forward by DGM, Nagaland</p>

	<p>wherein the Secretary (Coal) Govt, of India instructed CMPDI for putting proposal for approval at MoC.</p> <p>As emphasised by CMPDI that DGM Nagaland can outsource exploration work under the supervision of Geologist of DGM, Proposal for Regional Coal Exploration in two coal blocks has been submitted for consideration and approval as:</p> <p><b>Proposal for Regional exploration (G2-level) of coal at Mongchen-Dibuia coal block (MRCB), Melak-Tsurang valley coalfield, Mokokchung district, Nagaland.</b></p> <p>The present proposed MDCB block is the North-east strike continuation of Northern Khar Coal Block (NKCB) where regional exploration had been completed. The area of the block is 7.6 sq.km where it is proposed to drill 3200 m in 16 boreholes within time period of 3 years (2018-2021 financial year) engaging 3 drilling machines. The average depth of each borehole is targeted at 200 m. Geological mapping on 1:5.000 scale, channel sampling of workable coal seams will be carried out.</p> <p><b>Proposal for Regional exploration (G4 level) of coal at Tuli-Yimchenkimong coal block, Melak-Tsurang valley coalfield, Mokokchung district, Nagaland.</b></p> <p>This block is further northern strike continuation of the Melak-Tsurang valley coalfield in Mokokchung district. The block covers an area of 30.56 sq.km with strike length of about 15 km where it is proposed to drill 17 scout boreholes within time period of 3 years (2018-2021). The total drilling meterage proposed is 3400 m with average depth of 200 m. Geological mapping on 1:12,500 scale and channel sampling of representative coal seams will be carried out.</p> <p style="text-align: right;"><i>(Suggestion: DGM, Nagaland)</i></p>
<p><b>14.5.13</b></p>	<p>As already pointed out in para 14.1.10, CMPDI reiterated that MoC has approved Rs. 1.1 crore for infrastructure development of DGM Nagaland.</p> <p>The committee approved both the proposals and suggested DGM, Nagaland to submit the detailed proposal to CMPDI, with a copy to the Member Secretary for scrutiny and final approval. CMPDI informed that the MoC has approved 1 crore rupees for infrastructure development of DGM, Nagaland. The committee left it to DGM, Nagaland to take the decision of carrying out drilling either with its own resources or through outsourcing.</p>
<p><i>Agenda 14</i></p>	<p>State Geological Programming Board Meeting (SGPB) held on 21st August, 2018 had approved the proposal for 3 (three) Nos. Promotional Coal Exploration for the F.S 2018-2019 and have also agreed to forward this proposal to CGPB-V meeting to be held at Kolkata as follows:-</p> <ol style="list-style-type: none"> <li>1. Khliehriat-Sutnga Block:- Regional Exploration of Coal around Khhehriat-Sutnga, East jaintia Hills District over an area of 4 Sq.Km. which is extendable for further exploration.</li> <li>2. Unithengkut Block:- Regional Exploration of Coal around Umthengkut, South West Khasi Hills District, over an area of 4 Sq Km. which is extendable tor further exploration.</li> <li>3. Damal Asim-Dadengiri Block:- Regional Exploration of Coal around Damal Asim-Dadengiri. East</li> </ol>

	<p>Khasi Hills District over an area of 4 Sq.Km. which is extendable for further exploration.</p> <p style="text-align: right;"><i>(Suggestion: Directorate of Mineral Resource, Meghalaya)</i></p>
<b>14.5.14</b>	<p>Committee approved the proposal in principle and suggested Directorate of Mineral Resource, Meghalaya to submit the detail proposal to CMPDI, with a copy to the Member Secretary for scrutiny and final approval. Member Secretary requested the representative of DMR, Meghalaya to take the help of CMPDI in preparing the proposal if required. He also requested to consult the reports on exploration carried out in Meghalaya by GSI and CMPDI.</p> <p style="text-align: right;"><b>(Action: DMR, Meghalaya)</b></p>
	<p><b><u>Concluding Remarks:</u></b></p> <p>Director, CGPB Secretariat, DGCO, GSI congratulated all the members of the CGPB Committee V for a successful meet. He emphasized that this committee is an appropriate forum to take up matters related to energy minerals and is performing extremely well in solving major issues of concern. The work of this committee gains immense importance considering the contribution of the energy mineral sector of the country.</p> <p>Summarizing the day's proceedings Convener Shri C.K. Sengupta, Dy. Director General, NEnR, M-IIB, GSI, Kolkata, thanked all dignitaries for actively participating during the discussions. He expressed sincere gratitude, on behalf of CGPB Committee V, to the chief Guest and Guest of Honour for actively participating in the meeting. He urged upon more participation of all the State Directorates, particularly North Eastern states, and member organizations like DGH and NGRI, in CGPB Committee-V Meeting. He concluded with expressing great satisfaction about the fruitful discussions held during the day, as it would benefit all stakeholders.</p> <p><b>The meeting ended with vote of thanks proposed by Shri. K.K. Sharma, General Manager, SCCL.</b></p>

## ANNEXURE-I

LIST OF THE PARTICIPANTS OF 14TH MEETING OF CGPB COMMITTEE -V ON ENERGY  
MINERALS AND RESOURCES HELD ON 28th AUGUST, 2018 AT BIRESHWAR LASKAR  
CONFERENCE HALL, NATURAL ENERGY RESOURCES, M-IIB, GSI, KOLKATA.

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