

**MINUTES OF THE 44th MEETING OF THE CENTRAL GEOLOGICAL
PROGRAMMING BOARD HELD AT NEW DELHI ON 14.02.2009**

44.0.00	The 44 th meeting of the Central Geological Programming Board (CGPB) was held on 14 th February, 2009 at Hall No. 4, Vigyan Bhawan, New Delhi. Shri Shantanu Consul, Secretary to the Government of India, Ministry of Mines (MOM), chaired the meeting. A list of Members/Participants of the meeting is annexed as Annexure – I.
44.1.00	WELCOME ADDRESS BY THE MEMBER SECRETARY, CGPB.
44.1.01	Dr. B. Chattopadhyay, Deputy Director General, Geological Survey of India (GSI) and Member Secretary, CGPB welcomed Shri Shantanu Consul, Secretary, Government of India, MOM and Chairman CGPB, Shri S. Vijay Kumar, Additional Secretary, MOM; Shri N. K. Dutta, Senior Deputy Director General (GSI); Dr. A. Roy, Senior Deputy Director General (GSI), all the participating members of the CGPB including representatives from State and Central Government Departments, PSUs and Private Entrepreneurs etc. and other participants.
44.1.02	<p>Member Secretary, during his welcome address, emphasized the following points :</p> <p>(a) Central Geological Programming Board functioning since 1966 is instrumental in coordination of the geological programming of the country. He informed the house that CGPB, which functions through Sub-Committees, has decided to increase the number of Committees from seven to twelve in order to broaden the field of activity and to have focused attention on the terms of reference. He requested all concerned members to participate actively and interact during the committee meetings. Convenors would be intimating the dates for the Committee meeting shortly.</p> <p style="text-align: right;">[Action : GSI]</p> <p>(b) Member Secretary informed that as per the decision of the 43rd CGPB to hold meetings twice in a year the current meeting is the first mid-year CGPB. The Board will meet again in early September, 2009 to discuss and finalize the field programmes of GSI for the Field Season (F.S.) 2009–10.</p> <p style="text-align: right;">[Action : GSI]</p> <p>(c) Member Secretary stated that Programme formulation is a dynamic process and requested all concerned to come forward with their suggestions of priority of work by 31st March 2009 so that these can be considered for incorporation in the field programme of GSI. He made a similar request to States to give proposals for customized training programme, if any, for consideration.</p> <p style="text-align: right;">[Action : All Members]</p>
44.2.00	ADDRESS OF THE CHAIRMAN, CGPB
44.2.01	The Chairman welcomed all distinguished members of the Board and invitees to the 44 th meeting and indicated that in order to make the CGPB

	<p>an effective instrument for planning and coordination, Ministry of Mines has decided to convene the meeting of CGPB twice a year and the present meeting was the immediate outcome. He stated that the Ministry would focus its attention on making the CGPB into an effective instrument for partnership between GSI and State Governments.</p> <p>[Action : MoM]</p>
44.2.02	<p>The Chairman informed that during the 43rd CGPB meeting he had emphasized the need for revamping the CGPB structure including operationalising of CGPB Subcommittee and State Geological Programming Board (SGPB). He expressed his happiness that more than 16 States have convened SGPB meeting and suggested that State Departments hold regular SGPB meeting with participation of all stakeholders because SGPB provide important inputs for overall sectoral plan. He further stated that the Ministry would shortly be announcing that 10% of GSI's budget may be utilized to cater to priorities indicated by States through SGPB and requested the states to avail the opportunity to build partnership with GSI.</p> <p>[Action: GSI/DGM, All States]</p>
44.2.03	<p>The Chairman informed that the seven CGPB subcommittees met in December, 2008 and the convenors of the subcommittees will make their presentation as regular agenda. He stated that he wanted the subcommittees (now raised to 12 committees) to focus their presentation on national level strategies and outcomes for the sector. He emphasized the importance of such meetings in the days to come and hoped that all stakeholders will continue to contribute to make the Committees purposeful.</p> <p>[Action: GSI]</p>
44.2.04	<p>He added that the Ministry had set up a High Powered Committee to chart GSI's programme whose report was due in March, 2009 and that as a result the Ministry expected the evolution of a much more close knit geoscientific community.</p> <p>[Action : MoM]</p>
44.2.05	<p>On the issue of getting easy access to GSI reports and map data products by State Departments and other exploration agencies, the Chairman declared that Ministry and GSI is working on a plan so that GSI reports and maps can be made available for public viewing through GSI portal. GSI is also putting its Annual Field Season Programme in the portal and will be linking the extended abstract of reports Region wise so that stakeholders can be benefited. Putting more and more GSI reports and maps in the portal will enable all the users to make informed decisions in many areas including mineral exploration. He stated that GSI needed to ensure that Reports are finalized as soon as the project is completed, and CGPB should be kept informed of all completed projects where final report was still to be linked to the Portal. A separate informatory item should be an agenda item.</p> <p>[Action: GSI]</p>

44.2.06	<p>On the issue of exploration strategy for low grade hematite ore, the Chairman informed that the reserve was previously estimated on 55% Fe cut-off but with the development of technology lower grade material can also be used as iron ore. Assessment of low grade iron ore (+ 45% Fe) in lease free, non-forest areas is being initiated by GSI to augment resource both at 45% and 55% cut-off following the UNFC norm based on the IBM Report in this respect. Initially the work will be undertaken in potential blocks and will be extended to other areas in future. Augmentation of iron ore resource will also be made by taking up exploration work for magnetite in potential blocks. Considering that the major iron ore deposits of the country is with the leaseholders, the Chairman stated that there was an urgent need for a mechanism to be devised in consultation with GSI and IBM to reassess the iron ore resource in such leasehold areas. He requested the State DGMs of the iron ore rich States to take initiative and assured that the Ministry will extend all necessary assistance in this regard, and if need be, a separate meeting would be convened in MoM for the purpose.</p> <p>[Action: MoM, GSI, DGM, All States]</p>
44.2.07	<p>The Chairman reminded that tenement registry, mineral atlas, data filing requirements and responsibilities, dissemination of data of RP holders after the lock-in period were some of the issues that need to be addressed within the framework of National Mineral Policy 2008 towards effective implementation of the policy. The Ministry of Mines and other stakeholders including GSI, IBM and State DGMs of the mineral rich States will need to work in tandem and the house is expected to be informed about the progress. GSI and IBM have direct responsibility to receive the data and the Chairman desired that SGPBs include these as regular item in their Agenda and synchronise the status of filing of statutory data with IBM and GSI.</p> <p>[Action: GSI, IBM, DGM, All States]</p>
44.2.08	<p>The Chairman reiterated that according to National Mineral Policy 2008, GSI is the principal agency for geological mapping and major mineral resource assessment of the country. Geochemical mapping techniques, globally used for locating natural resources, serving as an aid to mineral exploration, soil fertility assessment, resolving public health issues, establishing geochemical baseline for environmental studies, was launched by GSI as the National Geochemical Mapping Programme six years ago. In Phase –I of the programme a total of 8.13 lakh sq km area (including 5.71 lakh sq km of mineral prognostication area) has been set as target up to XIII Plan. The Chairman commented that the programme will be put on fast track in those States where GSI's resources can be augmented by States' resources and asked GSI to take up the matter in detail with the States, keeping the Ministry informed of the progress. He further informed that the Ministry and GSI are working out the modalities for geomorphological and lineament mapping and hyperspectral mapping as part of the National Natural Resources Management System (NNRMS) in</p>

	<p>consultation with ISRO. He appreciated the initiative of GSI in creating these new datasets in the near future to support mineral assessment and other geoscientific endeavors.</p> <p style="text-align: right;">[Action: GSI]</p>
44.2.09	<p>The Chairman felt that with the increasing demand in the field of geoscientific activity there is a need for well trained professionals. There is a considerable gap between academic curricula and professional needs. He envisioned that the GSI Training Institute will be developed into an Institute for providing specialized and cutting edge training to the practicing geoscientists of Central and State Governments as well as those of other countries. Appreciating GSI's decision to open a Regional Training Institute at Shillong he stated that the Ministry desired that GSI should develop Regional Training Institutes at all Regional headquarters, not only to cater to its own geoscientists but to other Central Institutions and State Governments of the Region. Chairman assured that in case of positive response from the States articulating their training expectations from GSI, Ministry will provide the necessary funds for creating additional infrastructure so that the Regional Institutes can impart training particularly in new techniques and methodologies. He further informed that he would take up the issue with the academicians to review the possibility of changing the curricula at all levels so that young scientists join the field with improved knowledge in the subject. Chairman informed that the issue is being tackled from various approaches. Confederation of Indian Industries (CII) has come forward to assist in conducting a gap assessment.</p> <p style="text-align: right;">[Action: GSI/MoM/DGM, All States]</p>
44.2.10	<p>The Chairman informed that the GSI portal meta databases are being populated with information on published maps, unpublished progress reports and different publications of GSI. GSI has created an Internet map service through uploading of multiple thematic layers of 1: 2m geological map of India as vector image for free viewing and querying. He commended the GSI team for the excellent work. However it was felt that much more of GSI's treasure house of knowledge should be made available in the public domain and he requested GSI to put published geological and mineral map as raster image, published reports and journals and other unpublished maps and reports of various discipline of earth science in its portal for public viewing in line with international best practices.</p> <p style="text-align: right;">[Action: GSI]</p>
44.2.11	<p>The Chairman expressed the intention that with the enunciation of the National Mineral Policy 2008, the Ministry is determined that the CGPB process in general and the GSI in particular will be oriented to act as effective instruments to facilitate geoscientific activity including mineral exploration in the country. He requested all stakeholders to cooperate and participate in this concerted effort. Chairman also congratulated the Additional Secretary (Mines) and the GSI teams for the commendable work in designing the new look for the CGPB and hoped that GSI's exhibition would be a regular feature in CGPB, with better and better material being</p>

	<p>presented. He advised GSI to start a process by which Regions could have their own Exhibition material for display in State level exhibitions and at SGPB/CGPB Committee meetings.</p> <p style="text-align: right;">[Action: GSI]</p>
44.3.00	CONFIRMATION OF THE MINUTES OF THE 43rd MEETING HELD IN NEW DELHI ON 29.9.2008
44.3.01	The minutes of the 43 rd CGPB meeting held in New Delhi on 29.9.2008, circulated to all the members of the Board, was approved.
44.4.00	REVIEW OF ACTIVITIES OF GEOLOGICAL SURVEY OF INDIA
44.4.01	In the absence of the Director General, GSI, who could not attend the meeting due to sudden exigency, Shri N. K. Dutta, Senior Deputy Director General, presented the review of activities of GSI on behalf of DG,GSI. He informed the house that as part of the 43rd CGPB decision to hold biannual meetings, the present one is the first of the mid field season meetings.
44.4.02	As per the decision of the 43 rd CGPB, GSI has taken a lead role with proactive mindset in revamping the CGPB including operationalising CGPB Subcommittees. He congratulated the State Governments for restarting regular SGPB meetings. He stated that GSI was committed to making reports and map data product available in GSI portal. On the issue of taking up cases related to forest clearance for undertaking exploration work in forest areas etc. he stated that GSI has taken initiative and active role in all these issues and the results are forthcoming, he added.
44.4.03	He brought to the notice of the house that GSI's approved field season programme (2008–09) has been initiated and the data have started accumulating. The data will be processed after completion of the field and laboratory work and the report(s) will be prepared as per schedule. He stated that GSI would closely monitor the progress to ensure that extended abstracts are linked to the Portal at the end of each Field Season in a time bound manner.
44.4.04	He stated that GSI had accepted that the mineral deposits of the country are required to be classified following the UNFC norm. As a member of the Committee, GSI has participated in the field visits in different existing working mines to check the set up and existing status in order to classify them as per the UNFC norm and would in future be publishing its own reports following the latest UNFC.
44.4.05	Under the National Mineral Policy 2008, Geological Survey of India continues to remain as the principal agency for geological mapping and regional mineral resource assessment of the country and would come up to the expectations of the stakeholders.
44.4.06	Sr. DDG, GSI informed the Board that GSI organized/participated in the International technical discussion on “Methods of medium scale landslide hazard and risk estimation” at Kolkata. Landslide nature and mitigation plan on case to case basis was discussed during the deliberations. Document

	on policy and guidelines on landslide hazard mitigation plan has already been submitted by GSI to NDMA for finalization. A two-tier policy -- pre-disaster and post-disaster landslide hazard mitigation has been contemplated.
44.4.07	The meeting of the International Geological Correlation Programme (IGCP) was held at Kolkata in January, 2009. During the meeting all the ongoing IGCP programmes were discussed. He further informed that a three member GSI team is undertaking geological and glaciological work at the Central Dronning Maud Land and Larsman Hill, Antarctica as a part of XXVIII Antarctic Expedition.
44.4.08	GSI, working on the problem of Arsenic pollution, has succeeded in locating arsenic free aquifer zone. He informed the house that GSI and Geological Survey of Canada (GSC) will be organizing a two day international workshop on “Development of a Mitigation Strategy in reducing Arsenic Toxicity in groundwater in parts of West Bengal, India” in February, 2009. Field visit will be undertaken in the affected areas to have on the spot knowledge about the geology and geomorphology of the area controlling the pollution.
44.4.09	He stated that GSI Training Institute has earned the reputation as an Institute imparting international level training in earth science related studies. A MOU will be signed between GSI and Geological Survey of Saudi Arabia to train personnel of Saudi Geological Survey.
44.4.10	Sr.DDG, GSI stated that modernization and upgradation programmes of GSI were going on apace. Procurement process of “Blue Water Research Vessel” and Geotechnical research vessel is being continued. Procurement proposal of Heliborne survey system with geophysical sensors has been finalized and the system was expected to be ready for trials during F.S.2009-10. Feasibility report for procurement of fixed wing aircraft is under preparation, he informed.
44.4.11	GSI NET and the GSI Enterprise Portal are nearing completion. He informed the house that the information infrastructure is expected to be fully functional after commissioning of Wide Area Network (WAN). Significant information, announcements and highlight of activities are available on the official website (http://www.gsi.gov.in) and portal (http://www.portal.gsi.gov.in) and he stated that GSI would be making presentation in each CGPB on new applications or data placed online.
44.4.12	Ministry of Mines has accepted the proposal of considering the Geologist Stream of GSI as Organized Group A Service. Proposal of bringing other scientific streams into Group A Organized Service is under preparation. Proposal for cadre review of Group A officials has been submitted to the administrative Ministry and stated that these measures had created a lot of enthusiasm in GSI.
	[Action on all points under para 44.4 by GSI]

44.5.00	AGENDA FOR 44th MEETING OF CGPB
44.5.01	The status of the follow up action on the decisions of the 43 rd CGPB was placed before the house by the Member Secretary, CGPB for discussion.
Agenda 1	Review of action taken on minutes of 43rd meeting of CGPB
44.5.02	In relation to para 43.1.02 and 43.2.01 regarding revamping of CGPB, the proposal for reconstitution of the Board with 12 Committees along with modified and approved terms of reference was placed before the Board. The resolution is to be notified after the 44 th meeting. [Action : MOM]
44.5.03	On para 43.2.02 and 43.9.01 regarding holding of regular SGPB meeting it was informed by the Member Secretary that during 2008 and till 10.2.2009, twenty three State Board meetings were held. Representatives of Government of Mizoram and Assam assured that they would be holding the SGPB meeting in April, 2009 and May, 2009 respectively. Member Secretary requested the States to send their recommendations to GSI latest by 31 st March, 2009 through e-mail (ddgppm@gsi.gov.in), so that appropriate action could be taken during programme finalization of GSI. Representative of Government of Gujarat informed of having four subcommittees of SGPB which hold meeting on quarterly basis. Member Secretary welcomed the advancement and requested the States to take a look at the Gujarat model for better coordination and implementation. Additional Secretary (Mines) advised GSI, IBM and State Governments to take up monitoring of data acquisition / filing along with better coordination, compilation and consolidation in the SGPB meetings. [Action : GSI/IBM/All States]
44.5.04	In relation to para 42.2.03 and 43.9.01 on data filling for mineral sector, Member Secretary informed that GSI's annual programme for 2008-09 has already been posted in GSI portal. The same was also supplied to all the participating members in the form of a CD during the 43 rd CGPB. [Action : GSI/IBM/All State Departments] Representative of Gujarat State commented that IBM, while inspecting mines, directly makes contact with lessees without sharing any information with the State Government. In response, IBM assured that intimation of visits would be made to State Government so that State representatives can accompany the IBM representative during field visit. [Action : IBM] Representative of Government of Karnataka raised the issue of illegal / increased area of mining in lease area and pointed out that extent/quantity of mining becomes more than what is indicated in the mining plan. IBM was requested that information of permission/revision given to lessee in this regard may be made available to State Government and to the State

	<p>Pollution Control Board.</p> <p style="text-align: right;">[Action : IBM]</p> <p>Joint Secretary (Mines) informed that Chief Secretary, Karnataka has referred the issue to MOM. She clarified that in case of revised plan of mining, copy of the modified mining plan is sent to the State Government by the IBM.</p> <p>Representative of Government of Chhattisgarh expressed concern about excess mining by the lessee in violation of approved mining plan of IBM who subsequently grants revised approval with retrospective effect. In response, Chairman opined that such practice, if at all, should be stopped and whenever quantity of mining is raised by IBM the information should be communicated to the State Government so that royalty can be administered systematically.</p> <p style="text-align: right;">[Action : IBM]</p> <p>Representative of Government of Kerala requested IBM to open an office at Kerala to oversee the mining activity in the State.</p> <p style="text-align: right;">[Action : IBM]</p> <p>Representative of Government of Manipur cited a case of mining where the latitude / longitude mentioned in the application for permission was different from what was given in mining plan thereby increasing the mine area. It was informed that the mining plan was approved by SGPB. Additional Secretary (Mines) suggested that such issues are to be sorted out and settled at the SGPB meeting in the first instance, and raised in CGPB only if there was a procedural, legal or policy difficulty.</p> <p>The Chairman, CGPB stated that whenever there is a disparity between coordinates in mining plan and in application for mining, the case should be referred to the State Government. Disputes arising out of absence of coordinates and disputes between adjacent mine holders may thus be resolved.</p> <p style="text-align: right;">[Action : IBM]</p>
44.5.05	<p>In response to para 43.2.04 and 43.9.01 regarding implementation of the UNFC classification of ore reserves / resources, Member Secretary CGPB briefed that a study group was constituted by MOM with Member Secretary from FIMI. Representative of FIMI informed that two meetings were held in this regard and the recommendations would be finalized by March, 2009. He expressed concern regarding implementation of UNFC by small miners having no mechanical devise or qualified geologist to make them understand UNFC. He mentioned that codification is lacking particularly for small mines. Based on all the data up to 2005 IBM carried out codification and the study group will submit certain recommendations. Chairman advised that small miners will need to be familiarized and acquainted with UNFC. Chairman suggested that IBM prepare a pamphlet on UNFC</p>

	<p>classification system as well as organize training courses on UNFC to make miners conscious of the system. The Chairman opined that the document of the pamphlet / booklet may be prepared in English / Hindi and may be passed to the State Governments for translation into the regional language.</p> <p>Representative of FIMI offered that in collaboration with IBM, FIMI can arrange for training material on UNFC System which was accepted. It was decided that IBM and State Governments jointly estimate the training requirement, and develop a strategy for training in the SGPB meeting. [Action : IBM/FIMI/State DGMs]</p> <p>Representative of Andhra Pradesh pointed out that as approval of IBM is needed before grant of mining lease, IBM should make it mandatory that UNFC classification for economically viable mining need be mentioned by mining lease applicant. He further pointed out that RP holders submit their data to GSI, IBM and State Departments but questioned the authenticity of the data. GSI, IBM and State Departments should coordinate and ask for additional data from RP holders for data authentication, he stated.</p> <p>The Member Secretary pointed out that GSI authenticates only aerogeophysical data. Regarding UNFC, Member Secretary informed that UNFC is getting modified as UNFC, 2008 incorporating the suggestions received and further classification is being made on economic as well as feasibility axes in line with geological axis. Secretary (Mines) put forward the urgency to move into a more scientific system, even if not perfect, in the present scenario and stated that full adoption of UNFC should be an item for regular follow up and monitoring in the CGPB.</p> <p>Representative of FIMI informed that as Indian Representative of the UNFC Committee, FIMI is preparing its suggestions and will be sending them to MOM and GSI soon. [Action : FIMI]</p>
44.5.06	<p>In response to para 43.2.05 regarding working together of GSI, IBM, Central Institutions and State Departments to facilitate mining and geoscience activity, Member Secretary informed that the point will be discussed as a separate agenda in the meeting.</p>
44.5.07	<p>On para 43.2.06 regarding High Power Committee (HPC), Member Secretary informed that eight chapters on restructuring of GSI have been put on the portal of GSI. He requested all concerned to go through the report and offer comments as soon as possible. The Committee is expected to finalise the Report in March, 2009.</p>
44.5.08	<p>On para 43.2.07 related to building partnership between GSI and State Governments, Member Secretary informed that the issue will be dealt separately as a fresh agenda.</p>
44.5.09	<p>On para 43.2.08 and 43.9.01 regarding State Government review of policies on mining and minerals and strengthening of State DGM's, representative</p>

	<p>of Maharashtra informed that the State has created Mineral Revenue Fund; representative of Gujarat informed that State DGM has initiated a collaborative programme with GSI; representative of Karnataka informed that the State has formulated new mineral policy; representative of Rajasthan informed that the new mineral policy is under preparation in the State. Representative of West Bengal and Sikkim requested to provide training to State officials free of cost from GSI Training Institute. Chairman requested all States who had formulated their policies or schemes to send him a copy so that it could also be put up on Ministry's website for general information and wider dissemination. MoM would act as facilitator and information interchange node.</p> <p>[Action : State DGMs concerned/MoM]</p> <p>Participating in the discussion, Advisor, Planning Commission remarked that many States earn substantial royalty from the mining sector. States need to allocate funds from the royalty for local development and strengthening of State DGMs as this would improve revenue collection both by improving enforcement and increasing the revenue base. The Chairman strongly recommended that the State Governments should keep a larger budget for Department of Mines and Geology in a phased manner so that DGMs can arrange for training, better equipments/ instruments etc. towards self-sufficiency. He stated that he would be writing to State Chief Secretaries on the issue of strengthening DGMs.</p> <p>[Action : State DGMs/MoM]</p> <p>Representative of Maharashtra informed that the State earned Rs.400 Crores during 1999–2000 and 2/3rd of the earning was utilized for DGM/ State Mining for purchase of equipment, drilling machines, survey equipments etc. The Chairman requested that State of Maharashtra may like to send him a Note on how the fund was generated and how it was utilized for development of DGM so that the same can be circulated to other States citing it as a best practice.</p> <p>[Action : DGM, Maharashtra]</p> <p>Representative of Chhattisgarh briefed that 5% of the revenue collected from mineral sector in the State is provided to the Mineral Development Fund utilized for activities of State DGM, Chhattisgarh Mineral Development Corporation etc. He further informed that the copy of the rules was sent to MOM and Planning Commission.</p> <p>Representative of Andhra Pradesh informed that the State has a fund for the Andhra Pradesh Mineral Development Corporation where the deposit is utilized for exploration activity and for conducting investigation by University students. Chairman desired that these documents may be made available to him for information of the Ministry.</p> <p>[Action: DGM, A.P.]</p>
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44.5.10	<p>In response to para 43.2.09 and 43.9.01 on the issue of putting regional exploration data available in web portal of GSI, Member Secretary informed that a proposal is under consideration at MoM.</p> <p>Additional Secretary (Mines) desired that old reports of GSI may also be put into portal duly linked to the map service as well as to a search facility capable of searching on a combination of parameters like mineral, location, etc. Conversion of the legacy data to electronic form can be continued offline without waiting for the new policy on publication of data though MoM was likely to finalise that soon. AS (Mines) commented that the task could be outsourced, if necessary. Chairman directed that this should be done in a time bound manner. He asked States to give their feedback on the utility of the data on the Portal in the next CGPB meeting. [Action : GSI/State Governments]</p> <p>Representative of DGM, West Bengal commented on the high cost of GSI reports. Chairman, however, assured that a revised policy and guidelines has been prepared and is under final stage of examination.</p> <p>Representative of Geological Society of India proposed that University students may be involved in databank preparation, soft copying, GCM etc. Member Secretary opined that the proposal is agreeable if a reasonable remuneration/ compensation package could be provided to them. Secretary (Mines) asked GSI to prepare a proposal and send it to the Ministry. [Action : GSI]</p>
44.5.11	<p>In response to para 43.6.02 and 43.9.01 on forest issues, Member Secretary clarified that at present approval exists for drilling 20 – 25 boreholes per 10 sq km in place of previous norm of 10 boreholes per 100 sq km but the problem remains with the existing permission of 4” borehole diameter with which exploratory work can be done only up to 300m. He opined that further modification of rules allowing up to 20-25 boreholes per sq km and at least 8” borehole diameter is needed. Addl. Secretary (Mines) informed that MOEF is trying to sort out permission of boreholes for geoscientific studies and expected some positive result before the next CGPB. [Action : MOM and MOEF]</p>
44.5.12	<p>In response to para 43.6.03 and 43.9.01 on issues related to non-availability of GSI reports, Member Secretary informed that on obtaining approval of the new policy of MoM the problem will get sorted out over time.</p> <p>Representative of Karnataka informed that the State is working on online tenement registry; Cadastral maps are being geo-referenced by the State and requested GSI for sharing of digitized Geological map data. In response to clarification by Member Secretary, representative of Ministry of Defence (MOD) agreed that digital data on Everest spheroid cannot be shared without clearance from MOD. MOD representative, however, indicated that</p>

	<p>open series data can be shared and entire data of Karnataka has been converted to open series. He further advocated for conversion of Everest series data into open series. Member Secretary elucidated that such conversion attracts substantial error and Survey of India raise considerable charge for the conversion. Deputy Director General (M&P), GSI elaborated that with respect to open series maps (in WGS'84, polygonic projection and UTM projection series), even with digital OSM the height and contour information in restricted areas is not provided. In the absence of contour information it becomes difficult to take up mineral investigation / landslide hazard zonation studies etc. in such areas. MOD was requested to permit Survey of India to provide height and contour data of restricted areas to GSI. Representative of MOD stated that the National Map Policy is being amended which will take care of this issue. Chairman instructed that details of the issue may be intimated in writing to MOD and a meeting may be convened between MOD, GSI and MOM to examine the extent of concession and relaxation that can be given under existing policies and a clear understanding is made. Further required amendments in National Map Policy may be communicated to MOM. However, GSI should at least complete the process of converting to open series maps in WGS'84 projection without delay.</p> <p style="text-align: right;">[Action : MOD/MOM/GSI]</p> <p>Representatives of Andhra Pradesh informed that Andhra Pradesh State Remote Sensing Agency has been given the task of coordinating with different agencies like GSI, SOI etc. for getting permission and preparing different digital layers for Cuddapah district. Chairman appreciated the efforts of different organizations and advised to bring them on a common platform and synergize the efforts so that the best yielded results can be adopted for nationwide replication.</p> <p style="text-align: right;">[Action : MOM]</p> <p>Advisor, Planning Commission indicated that tenement systems being developed by many States would finally need to be replaced by a central system with the maintenance cost for individual State being borne by the State itself. The cadastral layer had to come from the State since it was the owner of the data in this respect and was the only agency with the rights to make changes. He pointed out that Department of Land Resources, Ministry of Rural Development was funding State Governments to develop a GIS as part of Land Records Computerisation and advised that the Mining Tenement System should interface with this system. Chairman opined that after examining all available system, the best system will be implemented for the country in so far as the application is concerned.</p> <p style="text-align: right;">[Action: State Governments]</p>
44.5.13	On para 43.6.07 regarding power of leasing lignite bearing areas the status remains as is indicated in page 48 of Agenda Papers of 44 th Meeting.
44.5.14	In response to para 43.6.10 regarding handing over of reports on cesium

	<p>investigation in West Bengal, Member Secretary informed that two cesium investigation report has already been handed over. One more report is ready and will be handed over after getting requisite undertakings from DMM, West Bengal. He further clarified that price of the report is indicated customarily to give an idea in case State Government uses the report for commercial purpose. For internal consumption the State Governments need not pay the price of the report.</p> <p>[Action : DMM, West Bengal]</p>
44.5.15	<p>In response to para 43.6.12 regarding handing over of geophysical reports on iron ore of Saltora, Member Secretary updated that the report has been handed over to Department of Mines and Minerals, Government of West Bengal.</p>
44.5.16	<p>In response to para 43.6.14 regarding exploration for gold in Wynad – Nilambur area Member Secretary informed that the work has not been taken up as no feedback was received from DGM, Kerala on forest issues.</p> <p>[Action : DGM, Kerala]</p>
44.5.17	<p>In response to para 43.6.15 regarding exploration of Nimi Limestone of Nagaland, representative of MECL told that a directive from MOM is required for handing over the fund to Nagaland Government since it is a promotional grant. He further explained that DGM, Nagaland will carryout the fieldwork and MECL will provide the laboratory backup. Chairman commented that the remaining issues will be resolved in the SCCP meeting to be held on 18.2.2009 at MOM as to whether a directive is required, seeing that the project fund was a grant to MECL and could be utilized for project purposes following usual accounting standards.</p> <p>[Action : MOM/MECL]</p>
44.5.18	<p>In response to para 43.6.20 regarding Nayachar issue in West Bengal Member Secretary commented that no further communication has been received at GSI and the issue is kept open for future.</p>
44.5.19	<p>In response to para 43.6.22 regarding supply of geological reports of coal free of cost for the promotional items, Member Secretary clarified that GSI cannot part with the reports unless permission is granted by sponsoring agency. In the absence of representative of Ministry of Coal (MOC), Chairman indicated that MOM will take up the issue with MOC.</p> <p>[Action : MOC / MOM]</p>
44.5.20	<p>In response to para 43.6.27 regarding taking up of investigation on industrial minerals in Andhra Pradesh for the benefit of rural people Member Secretary opined that if information on specific area, mineral commodity and latitude / longitude is provided by the State, investigation can be taken up as far as practicable. Representative of Andhra Pradesh requested that excluding gold, diamond for which MNC / GSI are already working some other minerals like iron ore etc. as mooted in SGPB proposals may be taken up by GSI. Member Secretary reiterated that specific proposal may be sent to GSI within 31.3.2009 for consideration.</p> <p>[Action : DGM, Andhra Pradesh]</p>

44.5.21	<p>In response to para 43.6.28 regarding exploration of high grade limestone in Garo Hills, Meghalaya, representative of MECL intimated the result of investigation. MECL explained that the coal underlying the limestone is of insignificant thickness and poor quality and has no future prospect. Member of DGM, Meghalaya desired to have a copy of the report of MECL, who informed that the report was handed over to North Eastern Council in 1986. The Chairman advised MECL to handover a copy of the report to DGM, Meghalaya.</p> <p style="text-align: right;">[Action : MECL]</p>
44.5.22	<p>In response to para 43.6.30 on issues related to geothermal investigations, Member Secretary updated that GSI did not take up significant work after 2002. There is no proposal for updating geothermal atlas as yet. GSI, however, is preparing guidelines for geothermal investigations as suggested by Ministry of Non-Conventional Energy.</p> <p style="text-align: right;">[Action : GSI]</p>
44.5.23	<p>In response to para 43.7.02 and 43.9.01 regarding strengthening of GSI Training Institute, Member Secretary informed that a fresh agenda on the issue would be taken up. He further informed that GSI is periodically revising the curriculum and larger participation of States in training programme is desired. Representative of Himachal Pradesh requested GSI to set up a geological museum at Saketi fossil park near Chandigarh. He informed that the State Government is ready to provide land on concessional lease and urges GSI to set up a training institute at Saketi. Deputy Director General (GSITI) informed that GSI is considering the proposal and detailed plan will be placed to MOM for a paleontology Field Training Centre.</p> <p style="text-align: right;">[Action : GSI/MOM/State Governments]</p>
44.5.24	<p>In response to para 43.7.03 regarding adoption of latest version of the UNFC in Mineral Policy the Member Secretary informed that the issue has been discussed under para 43.2.04.</p>
44.5.25	<p>On para 43.7.04 regarding data filling requirements in New Mineral Policy Member Secretary informed that the issue will be discussed under new agenda.</p>
44.5.26	<p>In response to para 43.7.07 regarding adverse law and order situations prohibiting taking up of approved items, Member Secretary explained that GSI programmes are discussed in advance in different fora and all the States are informed after finalization. The Chief Secretaries are intimated by regional HODs with the request to provide administrative support.</p>
44.5.27	<p>On para 43.7.08, 43.7.09 and 43.9.01 on reassessment of iron ore reserve Member Secretary informed that the issue will be taken up as separate agenda.</p>
44.5.28	<p>On para 43.7.10 regarding assessment of reserve/ resources of low grade phosphate, a meeting was held at MoM on 13.02.2009 for both phosphate and potash. Member Secretary detailed the area for renewed investigation for phosphate as identified between Jhamarkotra, Rajasthan and Jhabua, Madhya Pradesh. GSI would also consider Cuddapah basin for fertilizer</p>

	<p>mineral investigation. Requirement of deep drilling for potash investigation was felt at the said meeting. FIMI informed that private parties are interested to obtain prospecting license to explore potash in Rajasthan. Chairman clarified that whenever private parties desire to take up exploration work, the same would be encouraged. In case of any promising area where no private party has shown interest, GSI/MECL/States may take up investigation. DMM, W.B. informed that as per request of GSI a report on non-forest areas for phosphate prospecting is under preparation.</p> <p style="text-align: right;">[Action : All Concerned / DMM, WB]</p>
44.5.29	<p>Para 43.7.11 refers to the utilization of high-grade (chemical grade) limestone for the manufacture of cement. MGMI wanted GSI to categorize limestone for the benefit of the explorers. Member Secretary clarified that conservation of minerals is the domain of IBM and during regional exploration by GSI layer by layer categorization is not possible. Chairman agreed that such practice of under use of limestone, if any, amounts to national waste. If MGMI provided specific cases the same will be referred to IBM and States will be informed for taking appropriate actions.</p> <p style="text-align: right;">[Action: MGMI / IBM]</p>
44.5.30	<p>On para 43.7.12 regarding geological mapping on 1:25,000 scale and regional mineral resources assessment for iron ore, manganese, bauxite, limestone and magnetite in the state of Jharkhand, request was made to provide specific proposals so that GSI can consider during FSP finalization.</p> <p style="text-align: right;">[Action: DGM, Jharkhand]</p>
44.5.31	<p>Regarding estimation of extractable coal resource base for incorporation in the National Inventory (para 43.7.13), the issue was discussed in detail during the course of 49th Meeting of the Subcommittee on Energy Minerals (Gr. III of CGPB). It was decided that CMPDIL would collect the data on coalfield-wise depletion of resource base from the Coal Controller and supply the same to GSI for annual updation of the National Inventory of Coal.</p> <p style="text-align: right;">[Action: CMPDIL/Convenor, Subcommittee on Energy Minerals (Gr.– III)]</p>
44.5.32	<p>In response to 43.7.14 on supply of location (Co-ordinates) of the already allotted captive blocks, Member Secretary clarified that whenever any details are required on captive blocks, block boundaries/ spatial domains may be clearly defined to facilitate in providing the data.</p> <p style="text-align: right;">[Action: Members concerned]</p>
44.5.33	<p>On para 43.7.15, regarding Detailed Geological Mapping of Urban Agglomerations of NCT, Delhi on Scale 1:10,000, Member Secretary stated that the map is ready and displayed in the exhibition organized by GSI in Vigyan Bhavan. The report is substantially large with 72 maps and voluminous textual content. GSI suggested that the map be handed over to MoES by MoM in a formal function. Representative of IMD stated that IMD had received the hard copies of the maps but insisted for digital copies.</p>

	<p>GSI suggested that IMD may utilize the hard copies for further action at their end as transferring digital maps require lots of formalities and clearances.</p> <p>[Action: IMD/GSI/MoM]</p>
44.5.34	<p>On the issue of Detailed Geological Mapping of Urban Agglomerations of 5 Cities on Scale 1:10,000 (para 43.7.16), Member Secretary agreed to take up one or two cities during FS 2009-10. EREC was requested to contact GSI and arrange for a meeting to finalize the <i>modus operandi</i>. The IMD representative asserted that they are finalizing the proposals and shortly get back to GSI.</p> <p>[Action: IMD(EREC) and GSI]</p>
44.5.35	<p>On the issue of request of NEERI to take up geological work on societal issues (para 43.7.18), representative of NEERI was absent both at 43rd and 44th CGPB meeting and hence the item was dropped.</p>
44.5.36	<p>On para 43.7.19 on the issue of engineering geological studies for underground crude oil storage facility at Mangalore and Visakapatnam, it was stated that GSI had signed a MoU with Engineers India Limited (EIL) and would carry out the investigation as scheduled.</p> <p>[Action: GSI/EIL]</p>
44.5.37	<p>On para 43.7.20 regarding obtaining available geological maps on 1: 63,360 scale from GSI, DGM Assam informed that they have submitted formal requisition to GSI. DDG, NER, GSI informed that necessary communication will be made shortly.</p> <p>[Action: GSI]</p>
44.5.38	<p>On para 43.7.23, regarding the catchment area studies of Dibang Multipurpose Project, Member Secretary stated that the geophysical study had already been undertaken and the remaining work will be attended to. In response, the NHPC representative added that request was made to GSI to take up the reservoir survey work in addition to the regional seismic study being carried out. NHPC official would shortly visit GSI, NER office and finalize the modalities of work.</p> <p>[Action: NHPC/GSI]</p>
44.5.39	<p>On the issue of airborne geophysical survey in the remote areas of Narayanpur, Bijapur and Dantewada Districts of Chhattisgarh State (para 43.7.24) Member Secretary opined that effective survey can only be carried out by the heliborne system which GSI expects to get shortly.</p>
44.5.40	<p>On para 43.7.26, on the issue of exchanging all reports between GSI and state DGMs, DGM, Chhattisgarh wanted to restore the old system of exchange of all reports automatically. GSI responded that the present policy regime requires the States to fulfill two conditions to get any report free of</p>

	<p>cost. The States can find the list of unpublished reports on the GSI Portal and can place requisition for any report after providing two undertakings. However, in future most of the GSI reports will be made available in GSI portal.</p> <p>[Action: DGM, Chattisgarh]</p>
44.5.41	<p>On taking up projects related to health hazards in the State of Chhattisgarh where the local people are getting affected by fluorine and arsenic contamination (para 43.7.27), the state DGM was advised to discuss the programme in SGPB. State is requested to submit well outlined proposals to GSI which would be considered. The Chhattisgarh, DGM responded that the issue was discussed in SGPB and DGM is collecting detail data for the areas concerned for onward transmission to GSI.</p> <p>[Action: DGM, Chhattisgarh]</p>
44.5.42	<p>On para 43.7.28, for locating the high value scarce mineral (gold, diamond, PGE, REE etc.) in the state of Chhattisgarh, it was assured that as per the available resources the projects would be taken up by GSI. On the issue of GSI project in the State, it was pointed out that coal investigations are being carried out in the State. Geochemical mapping, which in turn would help find the concealed deposits, is also being taken up.</p>
44.5.43	<p>On para 43.7.30, reassessment of iron ore resources, the DGM, Orissa stated that the State is in the process of communication with the administration and as soon as response is received it would be forwarded to GSI. Chairman emphasized on getting speedy response from the State.</p> <p>[Action: DGM, Orissa]</p>
44.5.44	<p>On the various issues (para 43.7.31) raised by DGH, bilateral interactions on quarterly basis between DGH and GSI was suggested by making two small groups for further follow up. The representative of DGH mentioned that they had conducted a meeting in this regard and would communicate to GSI about their position. The Chairman insisted for the clarity on the areas of co-operation as desired by DGH and indicated positive participation of GSI.</p> <p>[Action: DGH/GSI]</p>
44.5.45	<p>On para 43.9.01, the issue regarding GSI's initiative for partnership with the States on specific issues at SGPB level, a new agenda would follow.</p> <p>[Action : GSI]</p>
Agenda 2	Presentation of CGPB Sub-Committee Reports
44.5.46	<p>Due to shortage of time the Sub-Committee Reports could not be presented in the house. Member Secretary requested all concerned to go through the recommendations provided to them and offer comments, if any, to the Member Secretary, CGPB. However it was agreed that this should remain a regular agenda item.</p> <p>[Action : GSI]</p>

Agenda 3	<i>Revamping of CGPB and its Sub-Committees.</i>
44.5.47	The agenda could not be discussed due to shortage of time. The essence of the agenda is available at page 60 of the booklet on Agenda papers. Members were requested to go through and offer comments, if any, to the Member Secretary, CGPB. [Action : All members]
Agenda 4	<i>Exploration strategy of iron ore specifically for low grade hematite in the light of IBM report on new cut-off grade.</i>
44.5.48	The agenda could not be discussed due to shortage of time. However GSI's view on the agenda is available at page 61 and 62 of the booklet on Agenda papers. Members were requested to go through and offer comments, if any, to the Member Secretary, CGPB. GSI will separately send its proposal after discussion with IBM so that a view can be taken in the next meeting. [Action: GSI/IBM]
Agenda 5	<i>GSI's assessment of training needs in Geoscience sector and proposal for training during Field Season 2009 – 10.</i>
44.5.49	The issue of training of personnel in different fields of geoscience has been discussed briefly on para 44.02.09, 44.5.23 and 44.5.61. It was decided that GSI would conduct a free of cost course on Natural Hazards (Landslides) specifically for the States since GSI is the Nodal Agency under NDMA. GSI would fix the dates soon in consultation with MoM so that training can be held before the 45 th CGPB in September, 2009. States were informed that a decision on payment for courses is awaited and States may accordingly submit proposals to GSI by May, 2009 for inclusion in the Training Calendar for FS 2009-10. Chairman directed that GSI should send a specific proposal to MoM for deleting charges for training of States and Central Institutions from the Schedule of Charges with full justification so that decision could be taken before the next CGPB. [Action : GSI]
Agenda6	<i>Presentation of future Strategic directions for GSI: - Geochemical, Geomorphological and Hyperspectral mapping programmes.</i>
44.5.50	Member Secretary elaborated a presentation on geochemical mapping (GCM) programme of GSI. During discussion Additional Secretary (Mines) pointed out that since two geologists per toposheet are customarily engaged for sampling for the GCM work per year, one of the option to overcome manpower constraint in GSI is to associate one trained personnel/ professional geologist per team from the State DGM. States's involvement in this programme would step up the progress of work and the outcome would be highly beneficial to the States. MoM will also take up the issue with the States. [Action: MoM/ all State DGMs] Mr. A.K. Bhandari, Advisor, TPPC, MoM suggested that a success story

	<p>from GCM may be highlighted to the States to make the States aware of the benefits. Member Secretary agreed that GSI would present the highlights of the outcome of GCM to the States in a suitable forum.</p> <p style="text-align: right;">[Action: GSI]</p> <p>Member Secretary indicated that many of the North Eastern States (Manipur, Nagaland etc.) has requested for a communication / directive from MoM indicating urgency of strengthening the State DGMs and such a directive would help DGMs negotiate with State Government. for getting leverage.</p> <p style="text-align: right;">[Action: MoM]</p>
44.5.51	<p>Member Secretary made a presentation on a proposal of geomorphological mapping and hyperspectral mapping to be taken up by GSI and ISRO in phased manner.</p> <p>During open house discussion on the issue, Dr. Vinod Kumar, ISRO requested all the States to participate in geomorphological mapping programme instead of an isolated GSI-NRSC programme. Since all the States have State Remote Sensing Agency (working in tandem with ISRO/NRSC) which is also a member of SGPB (otherwise has to be made a member), the States may take advantage of the Agency for such mapping programme and may also team up with GSI. The Board welcomed the proposal and requested ISRO to take up the matter accordingly with State Governments.</p> <p style="text-align: right;">[Action: ISRO/GSI/ all State DGMs]</p> <p>DDG (Map & Publication), GSI pointed out that though ISRO regularly launches satellites, there is no exclusive satellite/ dedicated payload for geological applications. ISRO may be requested to introduce such a payload in future in consultation with GSI. It was also suggested that meeting of PCNNRMS chaired by Member, Planning Commission to be held in March, 2009 would be the best platform to take up the issue of geological payloads by the Secretary (Mines) himself.</p> <p style="text-align: right;">[Action: MoM/ ISRO]</p>
44.5.52	<p>At the end of the deliberations Member Secretary requested all the States/ members to peruse through the newly constituted 12 Committees of CGPB as appended in the Agenda Papers and send their willingness to be members of particular committee based on their activity domain. It was also clarified that there is no restriction to become member of as many committees as opted provided that pertains to the interest of the particular State. However, the willingness of the members for new CGPB Sub-committees ought to reach GSI in the e-mail ddgppm@gsi.gov.in latest by 6th March 2009.</p> <p style="text-align: right;">[Action: all members]</p>
Agenda 7	Presentation on GSI Portal
44.5.53	Deputy Director General (IT) showed a detailed presentation on the GSI

	<p>Portal and stated that GSI is making a keen effort to make the portal very informative and putting everything into public domain. Chairman suggested that Members surf the website and pass the feedback to the GSI. He also desired that in each CGPB meeting, there should be a presentation on the portal to bring out new applications/information that had been included since the previous meeting.</p>
44.5.54	<p>Member Secretary requested all the members of the CGPB to send their valid official e-mail address to the e-mail of the Member Secretary of CGPB (ddgppm@gsi.gov.in). This can ensure speeding up communication/transmission of documents.</p> <p style="text-align: right;">[Action: All Members]</p>
Agenda 8	<i>Discussion on issues arising out of National Mineral Policy 2008</i>
44.5.55	<p>Due to shortage of time the agenda was not discussed. The material is available in page 73 to 77 in the booklet on Agenda papers. The members were requested to go through the document and offer comments, if any. Chairman advised that GSI should send a considered response on each of the issue to MOM so that action is initiated without further delay. He stated that he would be convening a meeting in July, 2009 before the 45th CGPB, for the purpose.</p> <p style="text-align: right;">[Action : MoM/GSI]</p>
Agenda 9	<i>Items proposed by States / other Members.</i>
44.5.56	<p>As per Agenda 9(i), the issue of simplified process for granting PL in coal blocks in a time bound manner was raised by MGMI and discussed in detail. The MGMI representative appreciated the realities and suggested that the process of concession could be operated in ‘single window’ mode. The Chairman admitted that there is a lot of scope for overhauling the present system of concession. He assured that these issues would be addressed in the forthcoming amendments in the MMDR act. He reminded that the single greatest concern is obtaining the clearance of forest and environment. As the issue involves many agencies / States etc. and unless the issues are sorted out in entirety, “single window” may not be tenable. The proposed amendments would effectively look into the procedural delays and will help in speedier processing of concession applications.</p> <p style="text-align: right;">[Action: MoM]</p>
44.5.57	<p>Agenda 9(ii) dealt with the collection of depleted resources data in lignite areas as suggested by NLC. Member Secretary agreed the idea that NLC may be selected as the nodal agency for collecting the depleted resource data for lignite as CMPDIL works out for coal. Member Secretary requested MoM to approach MoC for obtaining administrative decision in this regard. Chairman decided that Ministry has to take an action on this. Advisor, Planning Commission, added that in Gujarat /Rajasthan where the State Governments are engaged in lignite mining, States are bound to supply the mining data to NLC. Member Secretary proposed that NLC need legal</p>

	<p>authority as nodal agency to collect data from all concerned.</p> <p>[Action: MoM]</p>
44.5.58	<p>Repeat electrical resistivity survey by GSI in the coastal region from Pondichery in the north to South of Chidambaram up to Coleroon river in Tamil Nadu was suggested by NLC [Agenda 9(iii)]. Member Secretary agreed to take up the repeat survey and requested NLC to put a formal requisition to GSI, Southern Region before 31st March, 2009.</p> <p>[Action: NLC/GSI]</p>
44.5.59	<p>The Agenda 9(iv), on the supply of Geological Report (GR) of GSI for Integrated Lignite Resources Information System (ILRIS) Project, raised by NLC, was discussed at several fora in recent times and GSI's advice to NLC had been to approach MoM for necessary approval. GSI principally agreed to the importance of the project and need for supply of reports at nominal cost. The NLC representative submitted that since 2005 NLC is trying to get approval but of no avail. The Chairman assured that MoM would communicate to NLC in this regard.</p> <p>[Action: MoM/GSI]</p>
44.5.60	<p>DGM, J&K suggested Agenda 9(v), for providing technical guidance by GSI in exploring various occurrences of Copper, Lead and Gold. Member Secretary reiterated that as agreed in the SGPB meeting, GSI will provide technical guidance in exploring various occurrences of Copper, Lead and Gold in J&K. DGM, J&K was requested to formulate the programme and communicate the same to the operational office of GSI at Jammu so that this can be finalized for the ensuing field season programme of GSI. DGM, J&K agreed to respond soon.</p> <p>[Action: DGM, J&K/GSI]</p>
44.5.61	<p>Agenda 9(vi) on orientation and short term training programme conducted by GSI Training Institute, IBM suggested to extend the training to mining geologists of IBM and GSI agreed to include them in their scheduled courses. However regarding waiver of fees GSI would approach MoM for a formal approval in this regard. Additional Secretary, MoM added that during FS 2009-10, GSI plans to conduct dedicated capsule course for State geologists. Member Secretary, CGPB mentioned that GSI has proposed the training curriculum of F.S. 2009-10 in the Agenda Paper and the State and Central agencies should provide feedbacks. States are required to provide suggestions on additions or customization helpful for them along with participation detail. Based on feedback, if any, received up to 31st March, 2009, GSI would be finalizing the Training programme for F.S.2009-10 and would be including two Training programmes tailored for States.</p> <p>[Action: All State DGM/GSI]</p>

44.5.62	<p>Agenda 9(vii) was on provision of training from time to time for the earth scientists of DMM, WB free of cost. On specific query DMM, WB responded that they had made formal request of participation in three scheduled courses of GSITI. Dy. DG, GSITI agreed on having received the request and same would be forwarded to CHQ for consideration of waiver of fees. Member Secretary assured that GSI would consider it favourably.</p> <p style="text-align: right;">[Action: GSI]</p>
44.5.63	<p>Agenda 9(viii) was raised by DGM, H.P. on large scale mapping of Krol belt indicating different litho-units. Member Secretary requested the State to come up with a firm proposal and get in touch with the DyDG, NR at Lucknow or Chandigarh within 31st March, 2009 for subsequent consideration of the proposal on its merit.</p> <p style="text-align: right;">[Action: DGM, HP/GSI]</p>
44.5.64	<p>Agenda 9(ix), suggested by DGM, H.P. was on identification of stone quarries in hill slopes for establishment of stone crusher for manufacture of grit. The GSI responded it as a State subject and beyond domain of GSI's work. The representative of HP mentioned that despite being domain of the States, the issue assumes importance as it form a major economic activity where expertise of GSI needed to take decision which would have long term effect on State's interest. Chairman moderated that ideally GSI would not like to step into the minor mineral area as that would open so many prospects of work in all the States that GSI's current strength would not be able to do justice. But as a one off case where a large number of crusher activity can be concentrated in a single site envisaging better economy and environmental protection, GSI would consider the work as suggested by DGM, HP. DGM was requested to come up with a concrete proposal within 31st March, 2009. Chairman also assured of revisiting the issue of minor minerals for the States where there is no occurrence of major mineral.</p> <p style="text-align: right;">[Action: DGM, HP/GSI]</p>
44.5.65	<p>Agenda 9(x), re-appraisal of mineral resources of the HP was raised by DGM, HP. Member Secretary suggested the State should consult the Miscellaneous Publication No. 30 for Himachal Pradesh, 1997, for updation of their record for limestone reserve. If the need to take up additional item on limestone is felt by the State they may contact DyDG, NR with proposal for consideration of GSI.</p> <p style="text-align: right;">[Action: DGM, HP/GSI]</p>
44.5.66	<p>Agenda 9(xi), study on impact of mining in riverbeds/ basin/terraces, for sustainable exploitation of mineral wealth was suggested by DGM, H.P. Member Secretary responded that a concrete proposal may be sent to Dy.DG, N.R. by 31st March, 2009 which will be considered while finalizing the annual programme of 2009-10. The representative from DMM, WB mentioned that the State was facing the problem of silicosis as a health hazard in the clay mines and wanted to know who should be approached for this. Additional Secretary, MoM responded that State can either write to MoM or directly write to National Institute of Miners' Health, Nagpur.</p>

	<p>Chairman & Secretary, MoM decided that the matter to be recorded through the minutes and would be referred to NIMH through the minutes of the meeting. Director (Technical), MoM added that the Gujarat Government became successful in containing silicosis in their State and the expertise can be sought by the concerned States.</p> <p>[Action: GSI/NIMH/DMM, WB]</p>
44.5.67	<p>Agenda 9(xii), on the planning of exploration work of GSI, raised by DGM, Karnataka, Member Secretary elucidated that the programmes taken up by GSI are known to the State DGMs being a member of the CGPB and various sub-committees. In addition at the beginning of the execution of the annual programme of GSI, in the month of October each year, formal letter is sent to the concerned district authorities for extending any help required by the field officers of GSI.</p>
44.5.68	<p>DGM, Karnataka raised the issue of forest problem as per Agenda 9(xiii). The representative of Karnataka mentioned that it was strictly not a forest problem and would like to know whether it would be feasible to notify the mineral bearing areas so that other activities can be discouraged or restricted and developmental activity can continue. The Chairman and Secretary, MoM indicated that the same had to be done by the State Governments. Karnataka responded that they would require help from GSI for identifying the areas. Member Secretary agreed to identify the mineral belts in the State on which the State can act upon. DGM, Maharashtra, mentioned that the State had faced same problem and had started notifying the mineral bearing areas since 2002. Rajasthan and Gujarat also informed on issuing NOC for other activities in the mineral bearing areas.</p> <p>[Action: DGM, Karnataka/GSI]</p>
44.5.69	<p>Agenda 9(xiv), on studies on heavy minerals/sea bed deposits and its potentiality, was tabled by DMG, Karnataka. Member Secretary updated that GSI has completed reconnaissance seabed survey within territorial waters and EEZ of Karnataka. Studies on occurrence of lime mud and phosphatic sediments were undertaken off Karnataka coast. Evaluation for offshore construction sand resources has been carried out off Karwar though results were not encouraging. Special studies were also carried out on the geology of the St. Mary Islands and the surrounding lagoons. Geotechnical studies were carried out in the Territorial Water of Karnataka (Karwar, Tadri, Hangarkatta etc.) for development of ports and other offshore structures. Sporadic occurrences of placer minerals have been reported from onshore/beach areas of Karnataka coast. During the course of seabed mapping, not much encouraging picture emerged with respect to placer mineral occurrences.</p> <p>During the current field season (FS 2008-09), offshore sand investigation is scheduled to be taken up off Mangalore.</p> <p>The 38th Subcommittee Meeting of Group VI of CGPB extended special</p>

	<p>invitation to the Directorate of Mining and Geology, Government of Karnataka but no representative attended the meeting. During the last SGPB meeting (38th) of Karnataka, there was no suggestion/proposal on the study of seabed mineral resource evaluation for inclusion in the Annual Programme of GSI. It is suggested the State Government to raise specific proposal in the Subcommittee meeting for GSI to consider.</p> <p>[Action: DGM, Karnataka]</p>
44.5.70	<p>Agenda 9(xv), on exploration of the untouched deposits of low-grade iron ores along the Kudremukh and Bababudan regions, suggested by DGM, Karnataka, Member Secretary requested the State Government to send the proposal with spatial reference within 31st March, 2009 before finalizing the annual programme of GSI for 2009-10.</p> <p>[Action: DGM, Karnataka/GSI]</p>
44.5.71	<p>Agenda 9(xvi), on the issue of investigation of Limestone/Dolomite, raised by DGM, Karnataka; Member Secretary assured that GSI will consider if the specific proposal is received while finalizing the annual programme of 2009-10.</p> <p>[Action: DGM, Karnataka/GSI]</p>
44.5.72	<p>Agenda 9(xvii), on detailed exploration vis-à-vis forest problem, was raised by SCCL. Member Secretary briefed the status of the forest issue to which the SCCL member responded that the restrictions on number of boreholes per 10 sq km is putting hindrance to the detail exploration for coal. It was felt that MoM needs to pursue the matter with MoEF. Chairman clarified that both the MoC and MoM had presented respective view points to MoEF which is looking into the matter. Agencies other than MoEF, like Forest Advisory Committee (FAC) etc are involved in the matter and effort is on towards resolving the issue.</p> <p>[Action: MoM/MoEF]</p>
44.5.73	<p>Agenda 9(xviii), on long term collaboration for GCM work in Gujarat, was raised by CGM, Gujarat. MOU was signed on 12 April, 2007 between GSI and CGM, Government of Gujarat for carrying out GCM of Kachchh district, Gujarat. As per the MoU, Banni Plains and Great Rann of Kachchh are to be covered within a period of two years. Rest of Kachchh could be taken up later, subject to further understanding.</p> <p>[Action: CGM, Gujarat/GSI]</p>
44.5.74	<p>Agenda 9(xix), on long term collaborative exploration programme in Gujarat state, was raised by CGM, Gujarat. Currently GSI is carrying out a phosphate investigation in Panchmahal District, Gujarat. However, CGM can suggest the future exploration programme in Gujarat with a view to long term collaboration with GSI for consideration.</p> <p>Chairman & Secretary, MoM, expressed his concern about the unilateral closure of the bauxite mines by the Gujarat State Government. Representative of Gujarat explained that the non-plant production for the export purpose is stopped but the mining is on for the captive use. Chairman</p>

	<p>asked the member from Gujarat to send it in writing for MoM to review the issue. Chairman enquired under which law this executive order was issued. The Gujarat representative replied that the agency concerned broke the concession condition that the mining was allowed only for their plant consumption, whereas, no plant was set up.</p> <p>[Action: CGM, Gujarat]</p>
44.5.75	<p>Additional Agenda 1 and 2, suggested by DMG, Rajasthan, wanted a policy decision about the GSI's request for reservation of an area where a RP is already given or a RP is applied for. Member Secretary responded in saying that if a RP has already been issued in an area then nobody else, including GSI can be given working rights. In case of an area being applied for RP then status of the area is still free and GSI can be given working right through a notification and nobody else would be granted any concession in that area till GSI finishes its work. Chairman enquired which mineral GSI wanted to work in an area where a RP had already been issued. DMG, Rajasthan responded that it could be base metal. Chairman responded in saying that if the RP was issued to some party for a particular area and even if GSI subsequently place its willingness to work in that area, State Government. has full right to deny the request. Member Secretary elaborated the reason why GSI asking from the State Governments to part with the lease status data. Chairman moderated that PL and ML can be given in a RP area, but if the original RP holder wishes to mine in the same area then the PL/ML holder has to vacate the area. MGMI representative pointed out a situation where a RP for any mineral has been issued to a party and GSI wants to work for any other mineral in the same area. MGMI enquired about the stand of MOM as per rule. Chairman mentioned that MoM would examine the issue and come out with a written clarification.</p> <p>[Action: MoM]</p>
44.5.76	<p>Additional Agenda 3 and 4, suggested by DGM, Karnataka, i) <i>Examination of alkali limestone deposit for flux grade for use in the steel industry.</i> The Member Secretary mentioned that these issues are presented as general case and the State should come up with the specific proposal. The State representative told that the investigation of alkali limestone has been discussed in the SGPB and the GSI member also felt the need for it. GSI reiterated that if the State desires a specific area to be investigated for alkali content of limestone then State should send a proposal. GSI would assess it by re-sampling and reanalyzing. ii) <i>Approval for deep drilling exploration for various metallic minerals in the state.</i> The state representative said that this issue was discussed in the SGPB meeting where it was felt that deep drilling is required to ascertain the genetic aspect of the gold occurrences without which the private entrepreneurs will not be encouraged to take up exploration. Member Secretary suggested the State Government to submit specific proposal to GSI.</p> <p>[Action: DGM, Karnataka/GSI]</p>
44.5.77	<p>Additional Agenda 5 and 6 raised by Nagaland Government, i) <i>Declaration of DGM, Nagaland as nodal agency for geotechnical and landslide</i></p>

	<p><i>investigation in the state of Nagaland.</i> In case of geotechnical studies, there is no agency declared as nodal agency and State DGM is welcome to take up all the geotechnical investigations of the State. In case of landslide the NDMA has declared GSI as a nodal agency. Large number of landslides (about 450 in number) occurs in India during the two and half months of rainy season. GSI does not have enough resources to work on all the landslides of the country. Member Secretary suggested NDMA to equip the State DGMs to undertake the studies and GSI is ready to train the State geologists to various landslide studies. Chairman, CGPB, added that when a GSI team visits a State for landslide study the State Government personnel can accompany them and get a first-hand-on-the-job exposure of nature of work. The DGM, Nagaland pointed out that as GSI is the nodal agency for landslide studies, the Government of Nagaland turns down the work proposal of State DGM and does not allocate any fund for the job. Chairman stated that GSI would raise the issue with NDMA and request to identify DGM, Nagaland for working in landslide of the state. A draft guideline for handling landslides has also been submitted to NDMA and it will be distributed. The Director (Technical), MoM suggested that a course on landslide can be devised for the States and given free of cost. The Member Secretary responded in saying that there is already a course on landslide in GSITI's schedule and the States are welcome to attend this course free of cost.</p> <p style="text-align: right;">[Action: GSI/state DGMs]</p> <p>ii) <i>Preparation of detail project for a preparatory model coal mine in the state of Nagaland.</i> On this agenda the Chairman explained that the matter of developing a model coal mine falls under the domain of MoC and the matter would be taken up with the MoC to take action on it.</p> <p style="text-align: right;">[Action: MoM/MoC]</p>
44.5.78	<p>The Government of Kerala handed over an agenda at the meeting itself on which the Chairman, CGPB decided that the matter would be responded by GSI through a direct communication to the State Government with a copy to MoM.</p> <p style="text-align: right;">[Action: GSI]</p>
44.6.00	CONCLUDING REMARKS
44.6.01	<p>While expressing his happiness on the productive discussions that had taken place, Chairman, CGPB & Secretary (Mines) made the following concluding remarks :</p> <ol style="list-style-type: none"> 1. As desired in the last meeting of the Board, CGPB is being held in biennial mode. CGPB has to be a forum for policy and coordination instead of a formal mechanism for putting a stamp of approval on GSI's Annual Field Season programmes. 2. Structure of the CGPB has been examined and is being reconstituted with 12 committees giving focus on important sectors. 3. States should conduct regular SGPB meetings and utilize the presence of GSI to further the State interest. He stated that GSI was

	<p>being reoriented to provide support for development of State capacity and the SGPB was the forum to give effect to this foray. [Action: all DGMs]</p> <p>4. GSI/IBM and States must take up a proactive problem-solving approach without waiting for the next CGPB meeting. [Action: all DGMs/GSI/IBM]</p> <p>5. Strengthening of Portal was a major achievement for GSI. However, GSI needed to ensure that the applications and data available under the portal meet the requirements of users. Organizations like GSI carry out regional exploration and keep its data in public domain for further follow up by interested parties.</p> <p>6. The issue of sharing GSI data and maps free of cost is under consideration at MoM. The useful work carried out by GSI has to reach to the parties who will be able to carry the knowledge further for development. [Action: MOM]</p> <p>7. GSI still has to reorient itself and open itself to new ideas and approaches and sincerely develop partnerships with Central and State organizations. Making available its training faculties to States is absolutely essential for sectoral development. [Action: all State DGMs/ GSI]</p> <p>8. MoM expects all DGMs to build their infrastructure, skills, equipment base, drilling units etc. States to invite private capital in prospecting and exploration as well as mining. The monetary advantage out of this would primarily accrue to the States with large inflow of revenue, creation of jobs etc. Initial positive findings in prospecting by the States would help invite private parties since entrepreneurs would not be interested unless sure of profit. [Action: all State DGMs]</p> <p>9. Regarding disputes on sharing of maps between various organizations (SOI, GSI, IBM, MOD, States etc.), avenues to be explored to sort out the matter for an effective solution. [Action: MoM]</p> <p>10. MOM would look forward to continuous interaction with States to carry out future plans and implementation in proper manner.</p> <p>11. GSI is to be congratulated for the organization of the CGPB. GSI need to see that the stakeholders are interested in its work. GSI must share its data and help build up capacity in the sector in a large hearted and altruistic manner.</p>
44.7.00	VOTE OF THANKS
44.7.01	Dr. Abhinaba Roy, Sr. Dy. Director General, GSI, offered vote of thanks.

Annexure – I

Members/Participants in the 44th meeting of the Central Geological Programming Board held on 14th February, 2009 at New Delhi.

Sl. No.	Name	Designation	Organisation
1.	Shri Shantanu Consul	Secretary (Mines)	Ministry of Mines
2.	Sri S. Vijay Kumar	Addl. Secretary (Mines)	Ministry of Mines
3.	Shri N. K. Dutta	Sr. Dy. Director General	Geological Survey of India
4.	Dr. A. Ray	Sr. Dy. Director General	Geological Survey of India
5.	Dr. B. Chattopadhyay	Dy. Director General	Geological Survey of India
6.	Smt. Ajita Bajpai Pandey	Jt. Secretary	Ministry of Mines
7.	Shri K. Ayyasami	Director (T)	Ministry of Mines
8.	Shri S. K. Mishra	Secretary	Dept. of Mines, Min. Resources Deptt., Madhya Pradesh
9.	Dr. Govind Sharma	Principal Secretary	Secretary Dept. of Mines & Petroleum Rajasthan
10.	Shri B. S. Ramaprasad	Secretary	Industries & Commerce Deptt.,Karnataka
11.	Shri Rajeev Yaduvanshi	Secretary (Mines)	Govt. of Goa
12.	Shri D. R. Kharel	Secretary, M&G	Government of Sikkim
13.	Shri A. Som	Secretary	Department of Mines & Geology, Meghalaya
14.	Shri N. Behjamin	Secretary	Deptt. of Geology & Mining, Nagaland
15.	Mr. B. B. Singh	Director	Department of Mines & Geology, Jharkhand
16.	Shri R.S. Vishwakarma	Secretary	Mining, Chattisgarh
17.	Shri Thanga Kaliya Perumal	COMMR	Geology & Mining, Tamil Nadu
18.	Shri M.P. Nirmala	CMD	Tamil Nadu Govt.
19.	Shri L. P. Sonkar	Advisor (Minerals)	Planning Commission
20.	Shri R. B. Tyagi	Dy. Advisor (Minerals)	Planning Commission
21.	Shri A. K. Bhandari	Advisor	T. P. P. C, MOM
22.	Shri G. S. Jaggi	OSD, HPC	MOM
23.	Shri S. K. Trivedi	Director	Geology & Mining, Chattisgarh
24.	Shri Hector M.C. Fernandes	SR. Technical Assistant	Directorate of Industries & Mining, Goa
25.	Shri P.D. Vankar	Addl. Director	Commissioner of Geology & Mines, Gujarat
26.	Shri Arun Kumar Sharma	State Geologist	Deptt. of Industries & Commerce, Himachal Pradesh
27.	Dr. A. S. Sodhi	Geologist	Deptt. of Geology, Jammu & Kashmir
28.	Shri Manoj Kumar	Director	Director (Industries), H.P.
29.	Mr. J.P. Singh	Director	Mines and Geology Division, Jharkhand
30.	Shri C. Vasudeva	Director in Charge	DMG, Kerala
31.	Shri R. K. Sharma	Director	Deptt. of Geology & Mining, MP
32.	Shri V.S. Sawakhande	Director	Directorate of Geology & Mining, Maharashtra

33.	Shri W.R. Lyngdoh	Director	Directorate of Mineral Resources, Meghalaya
34.	Dr. D.K. Bhattacharya	Jt. Director	Directorate of Mineral Resources, Meghalaya
35.	Dr. H. Lallenmawaia	Director	Directorate of Industries, Mizoram
36.	Shri Warthang	Jt. Director (G)	Directorate of Geology & Mining, Nagaland
37.	Shri J. R. Patnaik	Jt. Director (G)	Deptt. of Mining & Geology, Orissa
38.	Shri Pradeep Bhatnagar	Addl. Director (G)	Directorate of Mines & Geology, Rajasthan
39.	Shri G.C. Khanal	Jt. Director	Deptt. of Mines & Geology, Sikkim
40.	Shri T.K. Shome	Director	Directorate of Mines & Minerals, WB
41.	Shri G. D. Prasad	Dy. Director	Geology & Mining Deptt. Uttarakhand
42.	Shri Vir Singh	Senior Geologist	Deptt. of Mines & Geology, Haryana
43.	Kh. Dilip Singh	Sr. Geologist	Director of Commerce & Industries, Manipur
44.	Shri O. Koraterjen	OSD	Nagaland Govt.
45.	Shri T.A. Subbiah	Dy. Director	Tamil Nadu Govt.
46.	Shri Somnath Das	Senior Geologist	Deptt. of Mines & Minerals, WB
47.	Shri V. K. Ojha	Dy. Director	Jharkhand
48.	Shri C.L. Bhairam	Regional Director	Atomic Minerals Directorate of Exploration & Research (AMD)
49.	Shri C.S. Gundewar	CG	Indian Bureau of Mines (IBM)
50.	Dr. A. K. Srivastava	CMG	Indian Bureau of Mines (IBM)
51.	Dr. A. K. Lomas	CMD	Mineral Exploration Corpon. Ltd. (MECL)
52.	Shri B. R. V. Susheel Kumar	Joint Director	Govt. of Andhra Pradesh
53.	Shri L.C. Bezbarua	Director	DGM, Assam
54.	Shri Hari Krishna Palwol	Principal Secretary	DGM, Arunachal Pradesh
55.	Shri I. D. Paswan	Director	DMG, Bihar
56.	Dr. S. K. Halder	Director (Tech)	Mineral Exploration Corpon. Ltd. (MECL)
57.	Shri Y. Sharma	Sr. Mn. (BD)	Mineral Exploration Corpon. Ltd. (MECL)
58.	Shri Niranjan Sundaray	GM & RM	National Aluminium Co. Ltd. (NALCO)
59.	Shri M. Krishnan	Chief Geologist	Neyveli Lignite Corporation Ltd. (NLC)
60.	Shri A. K. Pandey	GM (CRMG)	Steel Authority of India Ltd. (SAIL)
61.	Shri Y.S. Baburao	Chief of exploration	Singarani Collieries Co. Ltd. (SCCL)
62.	Shri T. V. Singh	Director (Mech. Engg.)	Bureau of Indian Standards
63.	Shri V.C. Gupta	Dy. Director	Central Water Commission (CWC)
64.	Shri Awadhesh Prasad	Advisor (R)	Directorate of Hydrocarbons
65.	Dr. A.P. Pandey	Meteorologist	Indian Meteorological Department (IMD)
66.	Dr. K. Vinodkumar	Head, Geosciences	Indian Space Research Organisation (ISRO)
67.	Dr. A. K. Jain	KDMIPE, DDN.	Oil & Natural Gas Commission (ONGC)
68.	Shri N.K. Punjradh	KDMIPE, DDN	Oil & Natural Gas Commission (ONGC)
69.	Shri S. B. S. Chauhan	Advisor	Federation of India Mineral Industries (FIMI), New Delhi
70.	Shri R. K. Sharma	Secretary General	FIMI, New Delhi
71.	Dr. K. R. Gupta	Secretary	Geological Society of India, New Delhi Chapter
72.	Dr. A. K. Moitra	Council member	Mining Geology & Metallurgical Institute of India (MGMI)

73.	Maj. Gen. M. V. Bhat	ADG	Ministry of Defence
74.	Shri D. K. Goel	Dy. Secretary	Ministry of Rural Development & Employment
75.	Shri S. K. Mondal	Director (HPA)	Central Electricity Authority
76.	Dr. M. Prithviraj	Scientist-F	Dept. of Science & Technology
77.	Shri Imran Sayeed	Chief (Geology)	NHPC
78.	Shri Jaswant Singh	Sr. Dy. Director General (SSTS)	Geological Survey of India, Mech. Engg. Division, Kolkata
79.	Shri B. K. Bandopadhyay	Dy. Director General	Geological Survey of India, Map Division, Kolkata
80.	Shri R. K. Singh	Dy. Director General	Geological Survey of India, WRO, Jaipur
81.	Shri U. K. Ray	Dy. Director General	Geological Survey of India, Marine Wing, Kolkata
82.	Shri R. K. Khorana	Dy. Director General	Geological Survey of India, Training Institute, Hyderabad
83.	Shri R. G. Viyay	Dy. Director General	Geological Survey of India, SRO, Hyderabad
84.	Shri R. K. Visnoi	Dy. Director General	Geological Survey of India, CRO, Nagpur
85.	Shri V. K. Kanchan	Dy. Director General	Geological Survey of India, WRO, Jaipur
86.	Shri Monohar Singh	Dy. Director General	Geological Survey of India, Coal Wing, Kolkata
87.	Shri Sudipta Lajiri	Dy. Director General	Geological Survey of India, NER, Shillong
88.	Shri A. Sinha	Dy. Director General	Geological Survey of India, AMSE, Bangaluru
89.	Shri S. C. Gulati	Dy. Director General	Geological Survey of India, Delhi
90.	Shri Amitava Sarkar	Dy. Director General	Geological Survey of India, Kolkata
91.	Shri P. Pande	Dy. Director General	Geological Survey of India, IT, Kolkata
92.	Shri M.V. Rao	Dy. Director General	Geological Survey of India, Geophysical Division, Kolkata
93.	Shri A. Majumder	Dy. Director General	Geological Survey of India, Geochemistry, Kolkata
94.	Shri G. Dhar	Dy. Director General	Geological Survey of India, Finance, Kolkata
95.	Shri D. S. Bohra	Dy. Director General	Geological Survey of India, Geoph. Instrm., Kolkata
96.	Shri N. M. Mugadur	Dy. Director General	Geological Survey of India, Personnel, Kolkata
97.	Shri Hanumanth Rao	Director (CT)	Geological Survey of India, Training Institute, Hyderabad
98.	Shri K. K. Rao	Director (CT)	Geological Survey of India, SRO, Hyderabad
99.	Shri J. Srinivasan	Director (CT)	Geological Survey of India, AMSE, Bangalore
100.	Dr. D. M. Mohabay	Director (CT)	Geological Survey of India, CRO, Nagpur
101.	Shri Pratip Gupta	Director (CT)	Geological Survey of India, WRO, Jaipur
102.	Shri G. Malhotra	Director (CT)	Geological Survey of India, Marine Wing, Kolkata
103.	Shri V. C. Srivastava	Director (CT)	Geological Survey of India, NRO, Lucknow
104.	Shri J. N. Ray	Director (CT)	Geological Survey of India, ERO, Kolkata

Geological Survey of India, Kolkata

105.	Shri S. Bhattacharjee	Director	Geological Survey of India, Marine Wing, Kolkata
106.	Shri S. K. Mukhopadhyay	Director	Geological Survey of India, Coal Wing, Kolkata
107.	Shri K. Balasubramaniam	Director (CT)	Geological Survey of India, NER, Shillong
108.	Shri T. K. Chakraborty	Director	Geological Survey of India, IT Division, CHQ, Kolkata
109.	Shri P. Naskar	Director	Geological Survey of India, IR&HR, Kolkata
110.	Shri Sujit Dasgupta	Director	Geological Survey of India, PPM, Kolkata
111.	Dr. S. K. Biswas	Director	Geological Survey of India, Mineral-I, Kolkata
112.	Shri S. Chakraborty	Director	Geological Survey of India, Kolkata
113.	Shri M.S. Jairam	Director	Geological Survey of India, Minerals-II, Kolkata
114.	Shri N. Kutumba Rao	Director	Geological Survey of India, ID Division, Kolkata
115.	Shri Virendra Kumar	Director	Geological Survey of India, New Delhi
116.	Shri Sanjiv Sharma	Director	Geological Survey of India, Faridabad
117.	Shri N. Das	Geologist (Sr.)	Geological Survey of India, PPM, Kolkata
118.	Shri K. K. Gangopadhyay	Geologist (Sr.)	Geological Survey of India, Kolkata
119.	Shri P. Tarafdar	Geologist (Sr.)	Geological Survey of India, Kolkata
120.	Shri D. K. Mukhopadhyay	Geologist (Sr.)	Geological Survey of India, Kolkata
121.	Shri D. Saha	Geologist (Sr.)	Geological Survey of India, Kolkata
122.	Shri T. Duttgupta	Geologist (Sr.)	Geological Survey of India, Kolkata
123.	Shri A. Acharyya	Geologist (Sr.)	Geological Survey of India, Kolkata