

## **MINUTES OF THE 48<sup>th</sup> MEETING OF THE KERALA STATE GEOLOGICAL PROGRAMMING BOARD**

Date : 23.07.2011  
Venue : Banquet Hall, Government Guest House, Thycaud,  
Thiruvananthapuram  
Time : 11.00 am to 1.45 pm  
Participants: Separate list appended

### **Background**

As per the decision of the Central Geological Programming Board it was decided to hold SGPB meetings twice in a year. The first meeting of the SGPB for the year 2011 (47<sup>th</sup> SGPB) was conducted on 10.01.2011. The second SGPB meeting for the year was conducted on 23.07.2011.

### **Proceedings**

**1.0.** The Member Secretary and Director of Mining & Geology (i/c), Shri. C. Balaraman, informed the members that Shri. Alkesh Sharma IAS, Chairman, SGPB & Secretary to Government, Industries [IP] Department had to leave for Kochi to attend another function and he had instructed the Member Secretary to convene the meeting. The Member Secretary then welcomed all the participants of the 48<sup>th</sup> SGPB meeting.

**2.0.** In his welcome speech, Director of Mining and Geology (DMG) briefly outlined the dual functions of exploration and regulatory activities on mineral administration entrusted upon the department. He pointed out the problems faced by the mining sector in the state. He emphasized that the problems that arose in the mining areas with local residents and the environmental problems need to be resolved by the entrepreneurs themselves at the grass root level with the assistance of local self governing bodies. The Member Secretary requested the co-operation of all members who were experts in the

field of mineral exploration and utilization which was essential for the survival of mineral based industries.

**3.0.** Thereafter the Member Secretary sought comments on the minutes of the 47<sup>th</sup> SGPB meeting.

**3.1.** Shri. M. Suresh Chandran, Director, Project Kerala, Lakshadweep and Karnataka, Marine and Coastal Surveys Division, GSI, Mangalore pointed out that his remark regarding the relevance of sieve analysis provided by the department as stated in paragraph 3.1 of the minutes was incorrect. What he meant was that sieve analysis, though relevant, was just a routine work done by GSI while considering the use of marine sand for construction purpose.

**3.2.** Shri. P. Praveen Kumar, Sr. Geologist, Marine and Coastal Surveys Division, GSI, Kochi clarified on paragraph 4.4.1 of the minutes that they could not undertake studies on coast line changes generally, but studies could be done only on specific areas as per proposals given. He agreed to take up study on shoreline changes on Kollam – Kayamkulam area if the Department of Mining and Geology proposes.

**Action – Department of Mining and Geology**

**3.3.** Shri. M. Suresh Chandran commented on paragraph 4.4 that the Geotechnical appraisal of Munambam Harbour and Azhikkal Port were carried out by Marine and Coastal Surveys Division, Kochi, whereas the rest of the work were done by Marine and Coastal Surveys Division, Mangalore and was presented by him during the 47<sup>th</sup> SGPB meeting and not by Shri Praveen Kumar.

**3.4.** Shri. A.K. Mehrotra, Zonal Manager, MECL, invited attention to the statement by DMG, Kerala regarding the exploration of Maruda Gold recorded in the minutes of the 46<sup>th</sup> SGPB. He enquired whether DMG had brought the matter before the

Government for reconsideration. DMG explained that though the exploration for Maruda Gold was a dream project of the Department, it was understood that Ministry of Environment and Forests (MoEF), Government of India, had rejected the proposal. But no communication in this regard had been received in the Directorate of Mining and Geology. Shri. Mehrotra suggested that MECL might be sent an official communication regarding the present status of the project so as not to pursue the matter further.

### **Action – Department of Mining and Geology**

**3.5.** Inviting attention to paragraph 3.6 of the minutes, Shri. P.K. Bharathan, Geologist, KCCP, enquired whether clay mining was possible at Kommangala Padavu, Kasargod as KINFRA had informed that there was no Government order so far allotting the land for KINFRA Park. DMG suggested KCCP to apply for NOC for clay mining to the District Collector.

**3.6.** Shri. P.K. Bharathan further enquired whether investigation for china clay had commenced at Peringom area, Kannur. Shri D.P. Sreekumar, Deputy Director, Department of Mining and Geology, replied that the drill had been shifted from Perinthatta to Aravanchal area and later would be shifted to Peringom.

**4.0.** Following these discussions the minutes of the 47<sup>th</sup> SGPB was approved by the gathering with necessary corrections.

**5.0.** DMG then invited the participants for the presentation of, work done during the period from January to June 2011 and the proposed program for the year 2011-2012.

## **5.1. GSI MARINE AND COASTAL SURVEYS DIVISION, MANGALORE**

Shri. M. Suresh Chandran, Director, Project Kerala, Lakshadweep and Karnataka presented the ongoing projects and details of proposed work.

- Parametric survey in the shelf area off Vizhinjam, Kanyakumari, Kerala and Tamil Nadu coast.
- Evaluation of relict sand body off Cherthala, Kerala
- The offshore sand investigation in Ponnani area will be taken up during the current field season

## **GSI MARINE AND COASTAL SURVEYS DIVISION, KOCHI**

Shri. P. Praveen Kumar, Sr. Geologist detailed the ongoing programs – Geological appraisal of Azhikkal Port and Ponnani Harbour.

**5.1.1.** In the discussion that followed Shri. S. Singanenjiam , Director & H.O.D, GSI, Kerala, informed that in a meeting convened during 2009 the Chief Secretary had suggested to the Industries Secretary to form a committee to ascertain the feasibility of offshore sediments for construction purpose. Shri. Singanenjiam enquired about the present status of the studies.

**5.1.2.** DMG opined that the agency for granting mining lease for offshore sediments was IBM. Those entrepreneurs interested in extracting the proven reserve should go for EIA studies and get clearance from Government of India. He also stated that in connection with the feasibility study of offshore sand for construction purpose, College of Engineering, Thiruvananthapuram had informed that the quantity of offshore sediment supplied to them for study was insufficient; 100-150 kg of sediment was required for a thorough study. This had been intimated to GSI Marine Wing by the Department.

5.1.3. Shri. Suresh Chandran informed that the samples would be provided in the next field season.

**Action – GSI Marine and Coastal Surveys Division**

5.1.4. Shri. Job Cherian, Mines Manager, KMML enquired about the distance off the coast from where the core samples were taken by GSI Marine Wing and also the mineral content. Shri. Suresh Chandran responded that the core samples were taken 20-30 km from the coastline. Several heavy minerals had been identified in the core samples.

**5.2. GEOLOGICAL SURVEY OF INDIA, KERALA UNIT**

Shri. Shafeeq Ahmed, Director presented the summary of work carried out by GSI in the current field season

- Study of the structure and tectonostratigraphy of the area between Wandur and Edakkara, Nilambur Gold Belt, Malappuram
- Thematic mapping of the Precambrian metamorphics and intrusives in the vicinity of Bavali Tectonic Zone, Kannur
- Geochemical mapping of the southern part of the Precambrian Peninsular Shield in parts of Kozhikode and Malappuram districts
- Geochemical mapping of Kozhikode Iron Ore Belt
- Preliminary investigation for PGE in the Attappadi Valley, Palakkad
- Detailed site specific study of Kuppukada landslide, Kozhikode
- Detailed site specific study of Kunnamangalam Vayal landslide, Wayanad

5.2.1. Shri. S.N. Kumar, Reader, Department of Geology, University of Kerala, enquired whether GSI had identified any granitic body in Perinthalmanna area where fluorosis had been reported.

**5.2.2.** Shri. Singanenjram answered that about 60-70% of the school children were affected by fluorosis and this matter had been reported to DMO. The granite body covered about 120 sq. km. Shri, Shafeeq Ahmed added that the authorities had initiated defluorinisation steps.

**5.2.3.** Shri. S.N. Kumar further enquired whether the PGE analysis was carried out in the GSI Laboratory itself or elsewhere.

**5.2.4.** Shri. Singanenjram replied that there was a rush of samples due to National Geochemical Mapping (NGCM). Most of the samples were being sent to a private laboratory in Bangalore, some samples were analysed in the GSI laboratory in Hyderabad.

**5.2.5.** Shri. S.N. Kumar further enquired about the possibility of exposing Post Graduate students of Geology to geochemical mapping techniques. Shri. Singanenjram agreed that this was possible.

**5.2.6.** Shri. V.D. Jalnapurkar, Sr. Mining Geologist, IBM enquired upon the sampling procedures followed by GSI for NGCM. Shri. Singanenjram described the procedures.

**5.2.7.** Shri. R. Radhakrishnan Nair, Sr. Geologist, Department of Mining and Geology, requested GSI to reconsider the tungsten exploration in Palakkad district; tungsten being an important strategic mineral in India. Shri, Singanenjram assured to reconsider the tungsten studies though the preliminary studied were not promising.

**5.2.8.** DMG enquired whether GSI was providing the reports on landslides to the District Collectors. Such reports were crucial while granting quarrying permits/mining leases. He also requested to provide the landslide data

available with GSI to the Department so as to circulate the details to all district offices of the Department.

### **Action – Geological Survey of India**

**5.2.9.** Shri. Singanenam enquired whether mining lease for Kozhikode Iron Ore had been granted to any private company.

**5.2.10.** DMG responded that the Government had granted letter of indent for mining of Iron ore, but the company had not submitted the clearance from MoEF. Mining could be started only when they obtain clearance from various agencies.

### **5.3. GSI TRAINING INSTITUTE, SALEM**

Shri. Sundaravanan detailed the various training programs of the Institute. He informed that Kochi was chosen for imparting training on Marine Geology for the newly recruited geologists of GSI. GSI Training Institute proposed to conduct a course on “Systematic approach to Mineral Exploration” for the officers of the DGMs of southern region at Salem FTC for one week from 15.12.2011 to 23.12.2011.

**5.3.1.** Shri. S.N. Kumar enquired whether the students had to pay for participating in the training programs. Shri. Sundaravanan replied that there was no fee for training but the students had to meet the expenses for food and accommodation.

**5.3.2.** Shri. S.N. Kumar remarked that geologists with laboratory training in geotechnical field had better job opportunities in gulf countries. He asked whether the facility for geotechnical training which was available at the laboratory in Hyderabad is available at Kochi.

**5.3.3.** Shri. Praveenkumar responded that to avail geotechnical training a request might be sent to Marine Wing Deputy Director General, Mangalore.

**5.3.4.** Shri. Sanil Kumar A.N., Asst. Executive Engineer, KSEB, enquired whether GSITI provide training to outside agencies in Engineering Geology. Shri. Sundaravanan replied that training would be imparted if proper proposals were given.

#### **5.4. CENTRAL GROUND WATER BOARD**

Dr. Nandakumar, Regional Director presented the ongoing programs and proposed works of CGWB. He informed that since the field season started only in April all the programs were in the preliminary stage.

- Impact of clay mining activities in groundwater regimes of Kollam and Thiruvananthapuram districts
- Estimation of specific yield studies of geologic formation using microlevel studies
- Base level data collection and ground water regime studies of the proposed Chamravattom Barrage, Malappuram
- Groundwater regime studies of the proposed Vizhinjam harbour and container terminal area
- Ground water exploration through rigs at Pathanamthitta, Kottayam, Palakkad and Thrissur districts
- Regional aquifer mapping of Kerala and Lakshadweep
- Re-estimation of dynamic ground water resources with the State Ground Water Department
- Artificial recharge and rain water harvesting studies
- Impact of ground water extraction for industries in Chavara area, Kollam in collaboration with Department of Geology, University of Kerala



- Hydrochemical studies in Ernakulam – Kochi area
- IEC activities in tribal areas of Wayanad and Idukki
- Monitoring of Farmers Participatory action Oriented Research Programme

Concluding, he invited proposals from different agencies to undertake collaborative programs with relevance to ground water.

**5.4.1.** Shri. Radhakrishnan Nair enquired about the report on the impact of clay mining activities in ground water levels of Thiruvananthapuram district. Shri. Nandakumar replied that the copy of the report would be forwarded to the Department as soon as the report got finalized. He added that china clay mining had seriously affected the ground water regime.

#### **Action – Central Ground Water Board**

**5.4.2.** Shri. Radhakrishnan Nair enquired about the mapping of mining pits in Madikai – Karindalam area. Shri. Nandakumar answered that due to certain procedural problems CGWB could not take up the study.

**5.4.3.** Shri. Sanil Kumar, KSEB stated that though the State Ground Water Board based on geophysical survey had given a report on the availability of ground water at 80 m below ground level adjacent to the KSEB Colony area, Kozhikode, ground water was not obtained even after drilling up to 100 m.

**5.4.4.** Shri. Nandakumar responded that availability of ground water in hard rocks depended on the fracture zones. In hard rock terrains of Palakkad dug wells were more ideal. He pointed out that there was no method to ascertain the quantum of ground water available at any particular depth. He advised KSEB to construct a large diameter dug well and augment ground water resources through methods like rain water harvesting.

## **5.5. MINERAL EXPLORATION CORPORATION LIMITED**

Shri. A.K. Mehrotra, Zonal Manager, South Zone reported that MECL had not undertaken any programmes during the period under review. He explained the various projects MECL had undertaken in the past. He invited proposals from organizations interested in the assistance of MECL in various exploratory works.

**5.5.1.** Agreeing with the statement of Shri. Mehrotra, DMG requested the Public Sector Undertakings to approach MECL.

**5.5.2.** Shri. Jose Thomas, Mines Manager, Malabar Cements Limited requested the help of MECL for the further expansion of their existing mine.

## **5.6. INDIAN BUREAU OF MINES, BANGALORE**

Shri. V. D. Jalnapurkar, Sr. Mining Geologist enquired whether the Department was submitting the various reports asked by IBM in time.

**5.6.1.** DMG replied that all reports to IBM were submitted without delay. He also informed that though the Department had identified an agency for DGPS survey they had not started the work.

**5.6.2.** Shri. Jalnapurkar insisted that the Department had not responded to the module of Mineral Concession Approval System introduced by the Ministry of Mines. DMG assured him that the matter would be verified.

### **Action – Department of Mining and Geology**

**5.6.3.** Shri. Jalnapurkar informed the participants to register the difficulties faced by them while carrying out DGPS survey.

**5.6.4.** Shri. Mehrotra reminded that the 12<sup>th</sup> plan document had not been forwarded from the Department in spite of repeated requests. DMG replied

that the document had not been finalized. It would be forwarded immediately after finalization.

**Action – Department of Mining and Geology**

**5.7. KERALA MINERALS AND METALS LIMITED**

Shri. Job Cherian, Mines Manager informed that they were facing, acute ilmenite shortage and problems in land acquisition; hence they were considering lake beds as potential areas for heavy minerals. He reminded that in the 46<sup>th</sup> SGPB KMML had requested AMD for their report on Vattakkayal but had not received it.

**5.7.1.** Shri. K. Balachandran, Officer in-charge, AMD, responded that the report for Vattakkayal could be obtained from Hyderabad office.

**5.8. KERALA CERAMICS LIMITED**

Shri. Amresh Kumar Jha, Mines Manager requested DMG to arrange exploration work at Mulavana village, Kollam as good quality clay was available in that area. DMG directed KCL to give a proposal in this regard.

**Action – Kerala Ceramics Limited**

**5.9. ATOMIC MINERALS DIRECTORATE FOR EXPLORATION AND RESEARCH**

Shri. K. Balachandran, Officer in-charge informed that they had finalized three reports and submitted to the headquarters.

- Heavy mineral resources in the beach placer sands of Thrikunnapuzha – Thottappally sector, Eastern extension, Alappuzha district
- Heavy mineral resources in the beach placer sediments of Alappuzha – Kochi sector, Alappuzha and Ernakulam districts
- Heavy mineral resources in the beach placers of Karimanal – Kazhakuttom sector, Thiruvananthapuram district

#### **5.10. INDIAN RARE EARTHS LIMITED, CHAVARA**

Shri. V.G.K. Prasad, GM (Production) thanked DMG for the timely intervention which had stopped to a great extent the theft of mineral sand from IRE mining areas. He enquired whether it was possible to get permission to mine limited pockets of mineral sand adjacent to IRE's existing mining lease areas.

**5.10.1.** Shri. Jalnapurkar responded that mining outside the lease area was not permissible.

#### **5.11. NATIONAL INSTITUTE FOR INTERDISCIPLINARY SCIENCE AND TECHNOLOGY, THIRUVANANTHAPURAM**

Dr. Krishnakumar R., Scientist reminded that though NIIST had submitted the report on regional EIA studies of the clay mining areas in Thiruvananthapuram district in July 2010, they had not yet received the balance amount of ` 2.5 lakhs.

**5.11.1.** DMG replied that the Department had requested NIIST to make certain corrections in the report and Government had insisted for the final report. The balance amount would be settled when Government sanction was accorded.

**5.11.2.** Dr. Krishnakumar informed that NIIST had not received any letter suggesting the required corrections.

#### **Action – Department of Mining and Geology**

#### **5.12. MALABAR CEMENTS LIMITED, PALAKKAD**

Shri. Jose Thomas, Mines Manager apprehended about the scarcity of raw materials. He requested DMG to help in the exploration of limestone for the expansion of their mines. He appealed DMG to approach

DGM, Tamil Nadu to examine the possibility of getting raw materials from Tamil Nadu.

**5.12.1.** Shri. R. Radhakrishnan Nair suggested Malabar Cements to approach Secretary, Industries.

### **5.13. DEPARTMENT OF MINING AND GEOLOGY**

Shri. D.P. Sreekumar, Deputy Director presented the progress of Exploration and Prospecting Division and the proposed programme for the field season 2011-12.

- Investigation for bauxite and china clay in Perinthatta, Kannur, Vidyanagar-Manjeswar area, Kasargod, Kanjiramcode and Kakkolil areas, Kollam
- Feasibility study for carrying out auger drilling for assessment of sand deposits identified by GSI in the palaeochannels of Bharathapuzha, Periyar and Pamba basins.
- Assessment of silica sand in the lease hold areas of Thycattussery, Panavally and Pallipuram villages of Cherthala, Alappuzha

The proposed programmes of the Department for the field season 2011-12 include:

- Investigation for bauxite and china clay in Aravanchal and Peringom areas, Kannur and Kakkolil area, Kollam
- Identification of bauxite/aluminous laterite in parts of Kasargod using remote sensing techniques
- Minor mineral quarry mapping in Kozhikode, Malappuram, Kasargod and Wayanad districts

**5.13.1.** DMG informed that PGE investigation in Palakkad district could not be included in the proposed programme for 2011-12 since the Department had to take up some urgent pilot project as directed by the government.

6.0. Shri. Radhakrishnan Nair pointed out the importance of including an official from the Department of Mining and Geology in the curriculum committee.

6.1. Shri. S.N. Kumar remarked that the feeling of the Board would be brought to the attention of the Vice Chancellor. He stated that the syllabus for Geology was about to be revised; if suggestions were put forward by the Department, mining lease laws and other such aspects might be incorporated into the syllabus.

**Action – Department of Mining and Geology**

7.0. DMG informed the gathering that in the CGPB held at Delhi; some states had suggested that in a year, instead of two, one SGPB would be sufficient for small states where there were not much exploration activities. DMG asked the opinion of the members in this regard. The Board unanimously suggested that for a small state like Kerala SGPB need to be held only once in a year.

8.0. GSI Kerala Unit and Member Secretary, SGPB congratulated the Department of Geology, University of Kerala for the outstanding performance of the students in UPSC Geologists' Examination.

**9.0. Vote of Thanks**

Shri. A. Prabhakumar, Deputy Director delivered vote of thanks.

The meeting concluded at 1.45 pm.

Minutes approved by

Sd/-

**C.BALARAMAN**

**DIRECTOR OF MINING & GEOLOGY (i/c)**

## List of Participants of the 48<sup>th</sup> SGPB Meeting held on 23rd July 2011

Sl. No.	Name of Institution	Officers who attended the meeting
1	Atomic Minerals Directorate for Exploration and Research, Thiruvananthapuram	K. Balachandran Officer in-charge
2	Central Ground Water Board, Thiruvananthapuram	1) Dr. Nandakumar Regional Director(i/c) 2) T.S. Anitha Shyam Senior Hydrogeologist
3	Department of Geology University of Kerala, Kariavattom	Dr. S.N. Kumar Reader
4	Federation of Indian Mineral Industries, New Delhi	R. Chandrasekharan GM (Mines), English Indian Clays Ltd. Thiruvananthapuram
5	Marine and Coastal Surveys Division, GSI, Kochi	P. Praveen Kumar Senior Geologist
6	Marine and Coastal Surveys Division, Operation West Coast, GSI, Mangalore	M. Suresh Chandran Director, Project Kerala. Lakshadweep & Karnataka
7	Geological Survey of India, OP. TNP & K, Kerala Unit, Thiruvananthapuram	1) Shafeeq Ahmed Director T.C. 2) S. Singanenjam Director & H.O.D.
8	Indian Bureau of Mines, Bangalore	V.D. Jalnapurkar Sr. Mining Geologist
9	Indian Rare Earths Limited Chavara, Kollam	1) V.G.K. Prasad GM (Production) 2) Jameel Ahmed Manager (Mining)
10	Kerala Clays & Ceramics Products Ltd., Kannur, Kerala	P.K. Bharathan Geologist
11	The Kerala Ceramics Ltd., Kundara, Kollam, Kerala	Amresh Kumar Jha Mines Manager
12	The Kerala Minerals and Metals Ltd., Chavara, Kollam, Kerala	1) Job Cherian Mines Manager 2) R. Haridasan Assistant Scientific Officer
13	Kerala State Electricity Board Civil Construction, Trivandrum	Sanil Kumar A.N. Assistant Executive Engineer
14	Kerala State Electricity Board Investigation & Dam Safety Thiruvananthapuram	Moni P.K. Project Director DRIP & R & DSO
15	Malabar Cements Ltd., Walayar, Palakkad, Kerala	Jose Thomas Mines Manager
16	Mineral Exploration Corporation Ltd., Hyderabad	A.K. Mehrotra Zonal Manager
17	National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram	Dr. Krishnakumar R. Scientist
18	GSI Training Institute, Hyderabad	D. Sundaravanan Senior Geologist & Faculty, Salem FTC

19	Industries Department Secretariat	Rajagopal K.S. Deputy Secretary
20	Department of Mining and Geology Thiruvananthapuram	1) C. Balaraman Director (i/c) 2) A. Prabhakumar Deputy Director 3) D.P. Sreekumar Deputy Director 4) R. Radhakrishnan Nair Sr. Geologist