Government of India
Ministry of Mines

Annual Report 2015-16
Indian Bureau of Mines

Gold and iron at the present day, as in ancient times, are the rulers of the world; and the great events in the world of mineral art are not the discovery of new substances, but of new and rich localities of old ones.

— William Whewell
Lecture (26 Nov 1851), to the London Society of Arts.

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2015-16

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Indian Bureau of Mines
Nagpur

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Preface

Promulgation of the MMDR Act, 2015 infused new vigour in the functioning of IBM by redefining its role and responsibilities. After a lot of brainstorming, IBM have prepared a road map for way forward, infrastructure needs, manpower requirement, re-organization of regional & Zonal offices IBM due to notification of 31 MCDR minerals as minor minerals and submitted to Ministry in December 2015.

Year 2015-16, a milestone in reforms in the mineral sector, was a year of challenge for Indian Bureau of Mines to demonstrate its significance. IBM has come out with flying colors in moulding itself and carving its future road map.

As a sequel to implementation of Report on review and reorganization of territorial jurisdiction of Zonal/ Regional offices and redistribution of manpower, Ministry conveyed in principle approval for opening up of 2 Regional Offices of IBM at Raipur in Chhattisgarh and Gandhinagar in the state of Gujarat. Office Building of IBM Bhubaneswar office was inaugurated & dedicated to the Nation.

Addressing to the environmental aspects of the mining areas, Ministry of Mines through IBM, rolled out SDF for mining sector at Sukinda Chromite Mine of TISCO & Donimalai Iron Ore Mine of NMDC. IBM is in the process for establishing a system of star rating of mines based on SDF parameters initiated with designing the templates.

MMDR Amendment Act, 2015 initiated new era of transparency in mineral concessions. IBM responded to dispension of new regulatory regime by providing technical inputs for initiating Auction Process, Average sale value for concerned minerals for the Auction, handholding the State Govts., drafting sub-legislation, identifying blocks for regional exploration etc. IBM participated in the Committee constituted to examine pending applications for mineral concessions at the time of MMDR Amendment Act, 2015 and in the Committee constituted to examine exploration reports from the point of view of their amenability to auction mineral blocks.

IBM assumed Proactive Role to curb illegal mining with the help of Space Technology and initiated (i) Project "Sudoor Drishti" after signing of MOU with NRSC at Hyderabad and (ii) Development of Mining Surveillance System with the help of BISAG, Gujarat under Digital India Programme of DEITY. Remote Sensing Techniques are being utilized to generate triggers under these projects.

The ambitious Project of IBM "Mining Tenement System", aimed at developing an online National Mineral Information System for investors by linking Central and State organizations engaged in administration of mineral resources in the country, is slowly progressing towards logical end for selecting System Integrator. The bid evaluation process is in progress.

To promote awareness among mine owners towards the need for conservation of minerals and preservation of environment in mining areas, IBM is encouraging Mining Industry to organize MEMC week throughout India thereby prompting industry for adoption of environment protection measures and SDF implementation.

IBM is Nations data bank on mines and minerals. IBM updates National Mineral Inventory every five years. The Process for NMI Updation as on 1.4.2015 has been initiated by organizing a stakeholders conference at IBM HQ.

Regional Office Jabalpur obtained ISO certification which has brought the tally to nine ISO certified Regional offices. IBM has prepared five sub sector development Plans for important minerals like Chromite, Copper, Bauxite etc.

On the Industry front, the cumulative growth for the year 2015-16 as against corresponding period of previous year stands at + 2.2%. The Production of important minerals that showed positive growth during March 2016 over March 2015 include : Iron Ore (40.2%), Magnesite (32.9%), Copper Conc. (28.6%), Lead Conc.(20.2%), Gold (19.5%), Chromite (13.5%), Bauxite (11.9%), Diamond (11.6%) and Limestone (10.1%).

IBM is ready to perform its role entrusted vide new charter of functions, as the National Technical Regulator, National Mineral Information Repository, Capacity Builder, promoting research, providing technical consultancy in respect of the mining sector, proactively and effectively.

IBM has to play a key role for resolving critical issues such as environmental threats by implementing process of Star rating of mines, facilitator for curbing illegal mining with remote sensing techniques, facilitating auction process, upgrading skills in mineral processing, updating mineral inventories to demarcate reserve resources gap, adoption of strategies to cut short the graph between import and export of minerals and ores. IBM will strive hard to refresh Indian Mining Sector.

RKSinha 31/1/17

R. K. Sinha
Controller General, IBM.

CHAPTER – I

Highlights of 2015-16

- Inspected 1633 Mines (including 703 inspections for approval of Mining Plans/Schemes of Mining/Mine Closure Plans). 121 Mining Plans, 490 Schemes of Mining, 28 Final Mine Closure plan disposed.

- Issued 1928 violations in respect of 737 mines and prosecutions launched against 34 mine owners for non-compliance of provisions of MCDR, 1988. Suspended mining operations under rule 13(2), and 45 of MCDR, 1988 in 89 cases and suspension orders were revoked in 44 cases. Seventeen cases were recommended to State Governments for termination of leases.

- As per amended Rule 45 of MCDR 1988, registration numbers have been allotted to **8708** lessees. Similarly as regards to the status of registration of end users, traders, stockiest and exporters (including 31 notified minor minerals), **at the end of March, 2016** total 3146 units of end-users, 5009 number of traders, **1602** number of stockiest and 830 number of exporters have been registered.

- IBM manual on appraisal of mining plan 2014 and IBM Manual of Inspections have been prepared and uploaded in to IBM website for their implementation.

- To sensitize the importance of mineral conservation and protection of environment, organised 12 Mines Environment and Mineral Conservation Weeks in non-fuel mines pan India in which 749 mines participated.
- Conducted Regional Mineral Development Study (RMDS) of two clusters covering 8 Manganese Mines in Madhya Pradesh.

- Updation of NMI as on 1.4.2015 and Updation of RP/PL/ ML data as on 31.3.2016 was in progress.

- Updated 100 Multi-mineral leasehold maps for the states of Andhra Pradesh (12), Tamil Nadu (86) and Kerala (2).

- To encourage value addition and mineral conservation, carried out 56 Ore Dressing Investigations, 35,376 Chemical Analysis & 2,423 Mineralogical Examinations.

- Two Technical Consultancy (TC) Assignments and one Mining Research (MR) Assignment completed.

- As part of the capacity building of human resources, conducted 19 training courses for the industry, State Governments employees, IBM employees etc including three exclusively for personnel from the NER States.
- Released 21 statistical and technical publications including Monthly Statistics of Mineral Production (MSMP), Bulletin on Mineral Information (BMI), Indian Mineral Industry at Glance, Bulletin on MLs & PLs, Indian Mineral Year Book and Statistical Profile of Minerals.

- Provided inputs for replying 197 Parliament Questions and 471 references from Ministry of Mines.

- Request for Proposal (RFP) for selection of an implementation Agency for design, development, maintenance and operation of mining Tenement System was uploaded in IBM website on 04.08.2015. Bids were opened on 20th January 2016 and three parties have submitted bids (M/s TCS, M/s Wipro and M/s L&T Info tech). Bid Evaluation Process was carried out by Technical Evaluation Committee. Action for clarification from bidders was in progress.

- Sustainable Development Framework was Rolled out at Sukinda Chromite Mine of TISCO in Odisha on 7.1.2016. Preparation of templates and finalizing other modalities for PAN Indian roll out of SDF was in progress.

- Signed Memorandum of Understandings with National Remote Sensing Centre (NRSC) of ISRO on 21.01.2016 at Hyderabad to undertake a pilot project on “monitoring of mining activities/ changes within mining lease area & 2 km buffer of Mining Lease Boundaries using time series Satellite Imagery and capacity building of IBM officers for three years including technical support for setting up of remote sensing laboratory in IBM.

- Developing a Mining Surveillance System' (MSS) for major minerals with the help of Bhaskaracharya Institute of Space Applications & Geo-Informatics (BISAG), Gujarat which will have minimum human interference and would be accessible in remotest area for automatic detection.

- To facilitate auction processes, IBM is publishing the average sale price of other minerals like Limestone etc in addition to those for which royalty is collected on ad valorem basis their average sale on its website on monthly basis.

- Participated in various committees constituted by the Ministry of Mines for examination of geological reports of GSI and MECL in order to finalize the auctionable blocks for mining lease/ composite licence.

- Provided hand holding support to State Governments for implementation of the programme of auctions of mining leases. In this regard, State Governments are incorporating a member from IBM in the high power committees constituted for the purpose.

- Submitted a road map containing the activities, infrastructure needs, manpower requirement, re-organization of other IBM offices (due to notification of 31 MCDR minerals as minor minerals) to Ministry in December 2015.

- As sequel to re-organization of IBM, "In principle approval" from Ministry of Mines was obtained for opening up of new Regional offices at Raipur Chhattisgarh having territorial jurisdiction over the State of Chhattisgarh and at Gandhinagar having territorial jurisdiction over the State of Gujarat, Daman & Diu and Dadara & Nagar Haveli.

- Since 2012-13 till 2015-16, nine Regional Offices viz. Ajmer, Bengaluru, Chennai, Goa, Hyderabad, Jabalpur Kolkata, Nagpur and Udaipur got ISO certification.

- As an incidental activity, IBM generated a Revenue of Rs. 1.28 crores.

- Observed Hindi Fortnight at Head Quarters and at all regional offices and Regional Ore Dressing Laboratories of IBM during 02-15 September 2015.

- Office Building of IBM Bhubaneswar Regional office was inaugurated & dedicated to the nation by Hon'ble Union Minister of Steel & Mines, Shri Narendra Singh Tomar on 07.01.2016.

- As a member of delegation led by Hon'ble Minister of Mines Shri Narendra Singh Tomar, Shri R.K.Sinha, Chief Controller of Mines, IBM participated in Asia Pacific's International Mining Exhibition (AIMEX) -2015, held at Sydney, Australia during 1-4 September, 2015.

- Indian Bureau of Mines celebrated the 69th foundation day as Khanij Diwas on 01st March, 2016 at IBM Head Quarter, Indira Bhavan Nagpur and Zonal and Regional Offices.

- Towards Swachh Bharat Abhiyan, IBM Headquarters along with Zonal/ Regional offices have initiated various steps to keep the office premises clean to improve the work environment.

- Right to Information Act has been implemented as a matter of policy of Govt. of India and is being attended to.

- Online facility for registration of public grievances has been provided by linking IBM's website with the grievance portal of DoPT "Central PGRAMS".

CHAPTER - II

ROLE AND ORGANISATION OF INDIAN BUREAU OF MINES

The Indian Bureau of Mines (IBM) established in 1948 is a scientific and technical organisation under the Ministry of Mines. It is engaged in the promotion of scientific/ sustainable development of all the mineral resources of the country, conservation of minerals, protection of environment in mines, other than coal, petroleum and natural gas, atomic minerals and minor minerals, and accomplishes it through a gamut of assigned functions, both statutory and non-statutory.

Vision for IBM

2.1 The National Mineral Policy, 2008 (NMP) has envisioned diverse mineral development programmes and has formulated policy framework and strategies for providing a roadmap to achieve sustainable mineral development in the country. Therefore, the vision statement for IBM necessarily reflects the character of NMP, 2008. Accordingly, the vision envisaged is:

"IBM to perform as a National Technical Regulator and to discharge the developmental functions for the sustainable development of the mineral industry and to work as repository of database on mines and minerals".

Mission

2.2 1) To ensure effective regulation of Indian Mineral Sector which promotes long termbenefits for its sustainable growth.

2) To provide capacity building to State regulatory agencies and also to provide quality technical assistance to the mineral industry, and

3) To work as data bank on mines and minerals and to disseminate mineral information for policy formulations.

Objectives

2.3

i. To work as National Technical Regulator operating at national-level designing systems, processes and guidelines for regulation of the mining sector;

ii. To function as a facilitator for creation and improvement of state-level regulatory mechanisms and to facilitate state agencies to ensure adherence to standards and parameters for scientific and systematic mining in the sector;

iii. To work as catalytic agent for development of mineral sector by evolving capability & proficiency in beneficiation techniques; dissemination of knowledge and skills in mining and allied areas through its training facilities; consultancy services.

iv. To play crucial role of that of an Advisor to the Government in matters and issues relating to the mineral sector in areas of short-medium and long-term mineralwise strategies, mineral taxation and legislative processes .

v. To play the role of National Repository of mineral data through maintaining a data bank of mines and minerals in the country by developing advanced IT based Mineral Information System enabling the industry to report and access information online, and

vi. To broaden its interactive base and reach out to overseas counterparts through consultations and exchange programmes and to build capacity, skill & expertise through academic and training programmes at institutes of international repute.

Role

2.4 IBM's functions are pivotal in the development of Indian Mineral Industry.

The Bureau:

- Promotes conservation and systematic & scientific development of mineral resources of the country through inspection of mines, beneficiation plants, and mineral based industries;
- Approves the mining plans which is a pre-requisite for grant/renewal of mining leases and also approves schemes of mining, mine closure plans, grants recognition to Qualified Persons for preparing mining plans.
- Conducts geological, mining, beneficiation and other related techno-economic field studies and applied research on mining-geological problems.
- Conducts studies on environmental protection and pollution control in regard to the mining and mineral beneficiation operations.
- Implements the Offshore Areas Minerals (Development & Regulation) Act, 2002 and administers the grant of Mineral Concession in offshore areas.
- Prepares mineral maps and the inventory of mineral resources of India.
- Provides technical consultancy services in the field of mining, geology, mineral processing and environment.
- Conducts mineral beneficiation and related technological studies under the departmental programme.
- Disseminates information and data on exploration, prospecting, mines, minerals, mineral based industries and mineral legislation, and publishes bulletins and monographs.
- Imparts training to the scientific, technical and other cadres of IBM as well as persons from the mineral industry and other agencies for human resource development.
- Acts as Data Bank on Mines and Minerals.
- Advises the Government on matters in regard to mineral industry, relating to environmental protection and pollution control, export and import policies, trade, mineral legislation, fiscal incentives and related matters and conducts market surveys of minerals and metals.
- Promotes awareness about conservation, systematic and scientific development of mineral deposits and protection of environment including restoration, reclamation and rehabilitation of mined out areas through exhibitions and audio-visual media.
- Promotes and monitors community development activities in mining areas

In the wake of the liberalization of the policy regime governing mineral sector and the increasing need for adequate environment management as part of systematic and scientific mining, the mandated functions for IBM, as given for notification in Official Gazette vide Resolution No. 31/ 49/ 2014 – M. III, dated 3rd November, 2014 are given below:-

(i) Collect, collate and organize into a database, all information on exploration, prospecting, mines and minerals in the country in the shape of a National Mineral Information Repository and take steps to publish and disseminate the same;
(ii) Function as the National Technical Regulator in respect of the mining sector, and lay down regulations, procedures and systems to guide the State Governments (first tier of regulation);
(iii) Build up capacity in the system, both for regulatory as well as the

developmental work, at the central level as well as at the level of the States;

(iv) Establish institutional mechanisms of coordination between the centre, the States, mineral industry, research and academic institutions and all stake holders, so as to proactively develop solutions to the demands and problems faced by the industry;

(v) Promote research on all aspects of practical relevance to the Industry and to act as bridge between research institutions on the one hand and user industry on the other;

(vi) Provide Technical Consultancy Services;

(vii) Participate in International collaborative projects in the area of regulation and development of the mineral sector;

(viii) Advise Government on all matters relating to the mineral industry; and

(ix) Undertake any such other activity as has become necessary in the light of developments in the field of geology, mining, mineral beneficiation and the environment.

Key Activities and Functions

2.5 In light of the role and charter of IBM, the key functions being performed by IBM can be broadly classified as (1) Regulatory Functions, and (2) Developmental Functions.

2.5.1 Regulatory Functions

i. Mining Plan & Scheme of Mining - Inspections and Approval

ii. Mining Regulations for ensuring implementations of Mining Plan, Scheme of Mining, Mine Closure Plan and other statutory provisions of MCDR 1988 and launching of prosecutions

iii. Inspections and grant of permissions to carry out 'stoping' operations in underground mines

iv. Monitoring of Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) aspects of mining operations

v. Calculations of State-wise, mineral-wise and month-wise royalty on *ad valorem* basis

vi. Mine Closure Plan - Inspections, Approval and monitoring

vii. Co-ordination with State Governments for curbing illegal mining activities, and

viii. Grant of mineral concessions and monitoring of its activities in the offshore areas [various provisions of Offshore Areas Mineral (Development and Regulation) Act 2002 and the Offshore Areas Mineral Concession Rules, 2006].

2.5.2 Developmental Functions

(i) R&D in Mineral Processing - To play a role of a catalytic agency to promote & develop the much-needed R&D in mineral processing in the field of mineral beneficiation, mineral characterisation, chemical analysis of ores and minerals and analysis of environmental samples;

(ii) Information Support and Advisory Services - To function as an advisory body to the government in formulation of mineral policy, lending technical guidance & support for framing Mineral Acts and in articulating provisions, rules & regulations thereof and lend it the credentials to formulate strategies, articulate policy requirements and oversee their implementation at both national and State levels;

(iii)National Mineral Inventory – Periodical updation of National Mineral Inventory reflecting the micro-level status and possession of various mineral resources of the country as per the international standards like UNFC;

(iv) Repository on Mines & Minerals – To shoulder the responsibility for collection,

processing and storage of statistical data in respect of all major minerals through statutory and non-statutory basis;

(v) Publications on topical interest – To assort, process and analyse mines and mineral information generated on account of statutorily and non-statutorily collected information and supply them as important inputs for policy interventions, and

(vi) Training and Capacity Building – To provide training facilities for human resource development and to develop required technical expertise and skill in the personnel manning the mineral industry.

Organisation

2.6 IBM has its headquarters at Nagpur and is headed by Controller General.

IBM is organized into six functional divisions, namely:

(i) Mines Control & Conservation of Minerals Division" renamed as "Minerals Development and Regulation Division"

(ii) Ore Dressing Division" renamed as "Mineral Processing Division

(iii)Technical Consultancy, Mining Research and Publication Division.

(iv)Mineral Economics Division.

(v) Mining and Mineral Statistics Division.

(vi) Planning and Co-ordination Division having two sub-divisions:

a) Administration, Establishment matters (including training), Accounts with all other administrative and financial matters and;
b) Planning and Co-ordination.

The existing set-up is shown in the organisation chart (as on 31.3.2015).

Modern Mineral Processing Laboratory and Pilot Plant

2.7 UNDP aided Modern Mineral Processing Pilot Plant and Analytical Laboratory of IBM is located at MIDC Hingna, Nagpur. IBM's Environmental laboratory has the recognition of the Central Government to carry out testing of samples of air, water, soil and other substances specified under the Environmental (Protection) Act, 1986. IBM has been registered by the Department of Scientific & Industrial Research (DSIR) for purpose of availing Customs Duty exemption to carry out R&D work.

Zonal / Regional /Sub Regional Offices

2.8 The Mines Control and Conservation of Minerals Division now renamed as "Minerals Development & Regulation Division" functions through its Zonal offices viz North, Central and South located at Ajmer, Nagpur and Bangalore respectively and 12 Regional Offices located at Ajmer, Bangalore, Bhubaneswar, Chennai, Dehradun, Goa, Hyderabad, Jabalpur, Kolkata, Nagpur, Ranchi and Udaipur and 2 sub-regional offices located at Guwahati and Nellore. The territorial jurisdiction of regional offices is shown in the map.

Regional Ore Dressing Laboratories

2.9 The Bureau has two Regional Ore Dressing Laboratories and Pilot Plants at Ajmer and Bangalore to cater to the mineral beneficiation needs of the neighbouring areas. A Clay Testing Laboratory is also functional at Kolkata for catering the needs of North Eastern Region.

Activities of IBM

2.10 The activities of IBM have been conducted through the following continuing schemes:

Scheme No. 1. Inspection of mines for scientific and systematic mining, mineral conservation and mine environment;

Scheme No. 2. Mineral beneficiation studies, utilisation of low-grade and sub-grade ores and analysis of environmental samples;

Scheme No. 3. Technological upgradation and modernisation, and

Scheme No. 4. Collection, processing, dissemination of data on mines and minerals through various publications.

In addition a new Scheme, Scheme No. 5. Mining Tenements System is in process of implementation.

Human Resources in IBM

2.11 The Bureau has a total sanctioned strength of 1479 consisting of 420 Gazetted (Group A – 245 & B – 177) and 1057 Non-Gazetted (Group B – 362, Group C (Tech.) - 191 & Group C –504) posts. Sanctioned strength in various streams is as per the table below:

Sl. No.	Stream	Sanctioned strength
1	Mining Engineers	145
2	Mining Geologists	115
3	Ore Dressing, Chemical &Metallurgical Engineers	224
4	Mineral Economists	53
5	Statisticians	78
6	Administrative &other Technical Personnel	866
	Total	1479

Committee for Review and Restructu-ring of the Functions and Role of IBM

2.12 In terms of the policy directions given in the National Mineral Policy 2008, the Government had constituted a Committee for review and restructuring of the functions and role of the Indian Bureau of Mines under the Chairpersonship of Joint Secretary (Mining Legislation), Ministry of Mines. The Committee submitted the "Report of the Committee for Review and Restructuring of the Functions and Role of IBM" to the Government on **4th May 2012.**

The Committee has made 73 major recommendations for overall restructuring of the IBM including creation of additional 933 posts and infrastructure development like opening of new offices, new environmental laboratories, training centres etc.

The Ministry has communicated IBM vide letter No.31/72/2009-M.III dated 10th September, 2012 that the recommendations of the Committee have been accepted and directed to start the implementations of recommendations.

SFC note along with DPR and Cabinet Note for implementation of 46 financial implications recommendations of the IBM Review and Restructuring report is under consideration of Ministry.

IBM has initiated to implement 26 non-financial recommendations of Review and Restructuring Committee. Ministry has considered 2 non-financial recommendations regarding national level awards and RQP examination as financial implicated and dropped from non-financial recommendations. Hence, 24 non-financial implicated recommendations have been taken up for implementation. So far, action initiated in respect of 17 recommendations. They are implemented and are ongoing activities in IBM. Three recommendations having no financial implications regarding renaming of divisions and new charter of functions of IBM were approved by Ministry vide Resolution No.31/49/2014-M.III on 03.11.2014 and notified in the Gazette of India on 22.11.2014. "Mines Control & Conservation of Minerals Division" renamed as "Minerals Development and Regulation Division". "Ore Dressing Division" renamed as "Mineral Processing Division" . One (1) revised proposal sent

to Ministry for approval on 27.06.2014. Remaining three (3) recommendations are under consideration for implementation. Thus out of 24 non-financial implicated recommendations, 20 recommendations have been implemented.

Ministry of Mines, Government of India has approved opening of new regional offices of IBM in the States of Chhattisgarh and Gujarat and and upgradation of Sub-Regional Office at Guwahati, Assam.

Capacity Building recommended in IBM Review & Restructuring Report

1. IBM to evolve as a National Technical Regulator ensuring effective regulation of Indian non-coal mining sector to ensure sustainable mining practices by creation of adequate human resource.

2. IBM to evolve as a consultant for creation and improvement of state –level regulatory mechanism in order to assist them for effective regulation of mineral sector including for prevention of illegal mining activities.

3. Improving quality of Mining Plans and Schemes of Mining and grant of recognitions to qualified persons for preparation of Mining Plans by re-orienting and improving the system.

4. To create infrastructure, facilities and expertise for regulation of the off-shore mineral developmental activities including systems and standards practices for grant of mineral concessions and exploration and exploitations techniques in offshore areas.

5. Digitization of resource inventory and updation of the same at frequent interval in accordance with the international norms.

6. Creation of facilities and expertise to monitor and implement the Sustainable Development Framework (SDF) including closure and post- closure activities and socio-economic issues related to mining industry.

7. Development of interactive web enabled portal and use of full potential of information technology for effective regulation of mineral sector to ensure transparency.

8. Development of 'Mining Tenement System' for transparent and effective mineral concession system linking with State Governments, Indian Bureau of Mines and Central Government databases.

9. Opening of new Regional offices in mineral rich states and re-organisation of territorial jurisdiction of existing regional offices as per state boundaries to have greater synergy with the State Governments.

10. Strengthening of mineral processing, mineralogical, chemical and environmental laboratories of IBM and creation of facilities and infrastructure for mineral processing regulation in order to achieve the concept of zero waste mining.

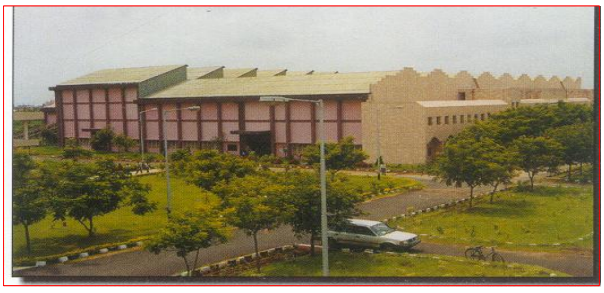
11. To evolve IBM as a mineral intelligence and information centre and creation of data bank on mines and minerals rendering strong support and policy related inputs to the Government.

12. Capacity building of existing training facilities and creation of additional training infrastructure to

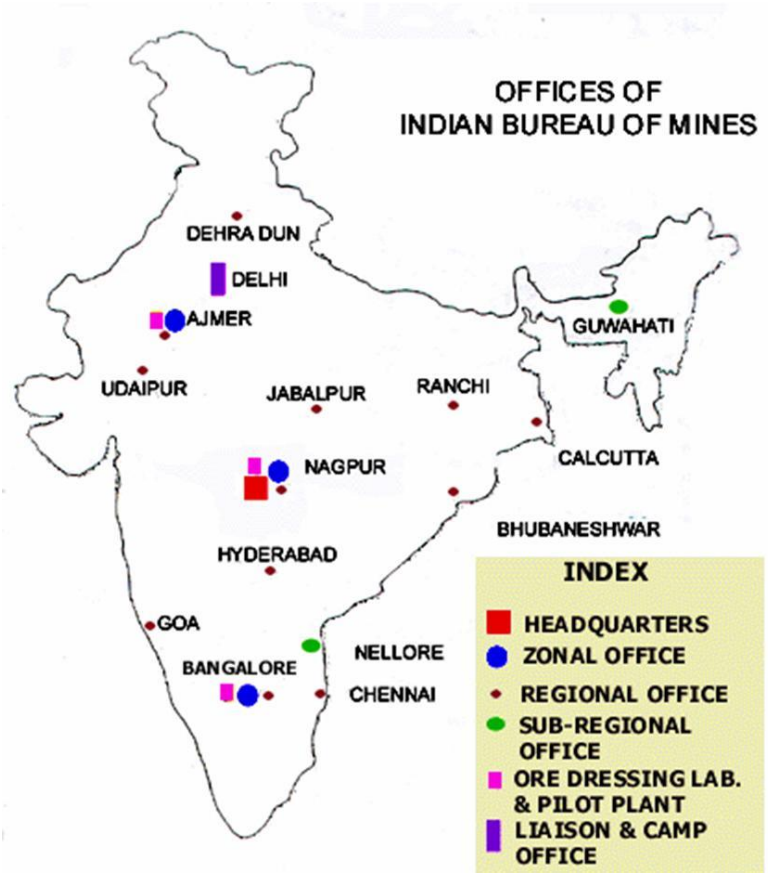
work as Centre of excellence to impart training to Central, State and industry personnel in applied aspects of mining and mineral processing sector.

Indira Bhavan - IBM HQ

Analytical Laboratory, Nagpur



Modern Mineral Processing Laboratory & Pilot Plant, Nagpur


OFFICES OF
INDIAN BUREAU OF MINES
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AJMER
GUWAHATI
UDAIPUR
JABALPUR
RANCHI
CALCUTTA
NAGPUR
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Teritorial jurisdiction of
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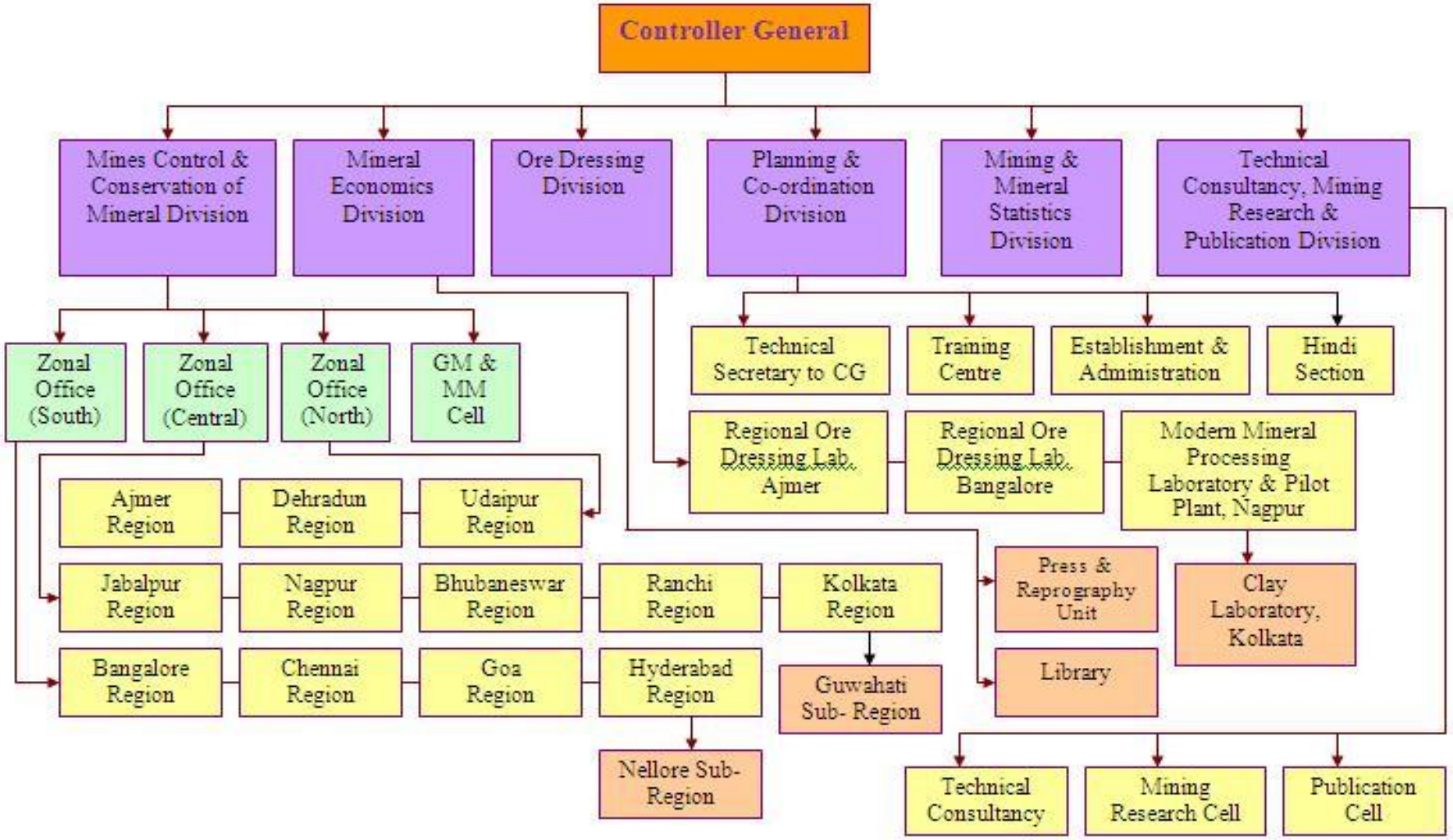


Present organizational structure of IBM

CHAPTER – III

MINERALS DEVELOPMENT AND REGULATION DIVISION

The Minerals Development and Regulation (MDR) Division is the primary wing of the IBM and is responsible for conservation, systematic and sustainable development of mineral resources of the country and protection of mines' environment through statutory enforcement as well as promotional activities. It is headed by the Chief Controller of Mines at the headquarters. There are 3 Zonal Offices located at Ajmer, Bengaluru and Nagpur and 12 Regional Offices and two Sub-Regional Offices (see para 2.5 and Map). The Zonal Office is headed by a Controller of Mines and Regional Office by a Regional Controller of Mines. The Chief Controller of Mines is assisted by the Chief Mining Geologist. Geological Mapping and Mineral Map Cell is headed by Chief Mining Geologist and is under the overall supervision of Chief Controller of Mines.

3.2 The Division carries out the following activities:

- Inspection of mines for enforcing Mineral Conservation and Development Rules, 1988.
- Approval of Mining Plans/ Schemes of Mining/ Mine Closure Plans under Mineral Concession Rules 1960, and Mineral Conservation and Development Rules, 1988.
- Granting recognition to the scientific and technical persons to work as Recognized Qualified Persons (RQPs) for the preparation of the statutory mining plans / Scheme of Mining / Final Mine Closure Plans.
- Conducting Regional Mining Geological Studies.
- Holding 'Mines Environment and Mineral Conservation Week' at different mining centers.
- Preparation of Mineral Maps along with forest overlays.
- Revision/updating of National Mineral Inventory of major minerals under private lease holds.
- Administration of Offshore Areas Minerals (Development & Regulation) Act 2002 & Offshore Areas Mineral Concession Rules, 2006.
- Attending Parliament Questions and Ministry References.

Inspection of Mines

3.3 During the year 2015-16, IBM carried out 1,633 inspections of mines (including 703 inspections for examining mining plans/schemes of mining/ mine closure plans) to administer various statutory provisions of Mineral Conservation and Development Rules, 1988 in following States as listed below :

Sl. No.	State	Inspection	
		MCDR	Mining Plan/ Scheme of Mining/ Mine Closure Plans
1	Andhra Pradesh	135	56
2	Assam	0	0
3	Bihar	8	2
4	Chhattisgarh	24	29
5	Goa	1	73
6	Gujrat	110	78
7	Haryana	0	0
8	Himachal Pradesh	34	16
9	J & K	0	1
10	Jharkhand	88	34
11	Karnataka	93	80
12	Kerala	8	1
13	Madhya Pradesh	61	114
14	Maharashtra	21	33
15	Manipur	0	0
16	Meghalaya	4	17
17	Orissa	121	34
18	Punjab	0	0
19	Rajasthan	109	59
20	Sikkim	0	0

21	Tamil Nadu	77	63
22	Telangana	31	13
23	Uttaranchal	3	0
24	Uttar Pradesh	1	0
25	West Bengal	1	0
	Total	930	703

Year wise details of target and achievement of inspection of mines for enforcement of MCDR 1988 and for approving mining plans during last 5 years are shown in Figure 3.1

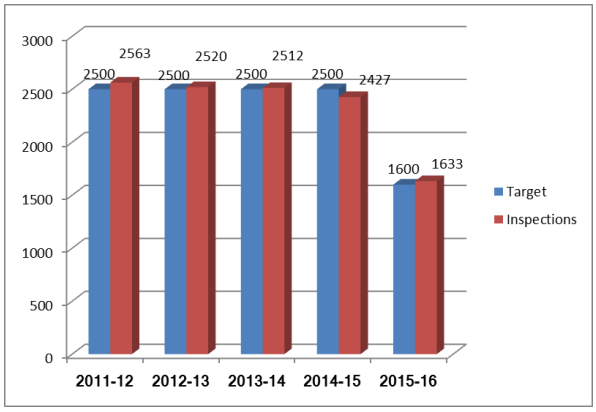


Figure 3.1

3.4 During inspections/studies, IBM advised the mine owners on adoption of appropriate technology for prospecting and mining; offered suggestions to ensure systematic mining; and guided for utilisation of low grade minerals and rejects and if not found feasible for the present, were advised to stack them separately for future use. On receipt of stoping notices, mines were inspected in detail to examine the scope for further development, feasibility of improved methods for stoping and other ancillary aspects. Environmental problems during and after cessation of mining activities were taken care of. Suitable advices were given to mine owners so that the environmental pollution due to mining could be properly managed by taking appropriate abatement measures.

Mining Plans

3.5 During 2015-16, a total of 65 mining plans were received. Of the mining plans received during 2015-16 and also those received / under processing prior to this period, 50 were withdrawn by the parties, 65 were approved and 56 were not approved during the year.

From the time of introduction of the mining plan in the year 1988 up to March 2016, a total of 16,484 mining plans were received. Out of these, 13,443 mining plans were approved, 1,837 were not approved, 1,159 were withdrawn by the parties, 11 were pending with the parties for modification and 34 were at different stages of processing at IBM.

The status of disposal of Mining Plans during last 5 years is shown in Figure 3.2

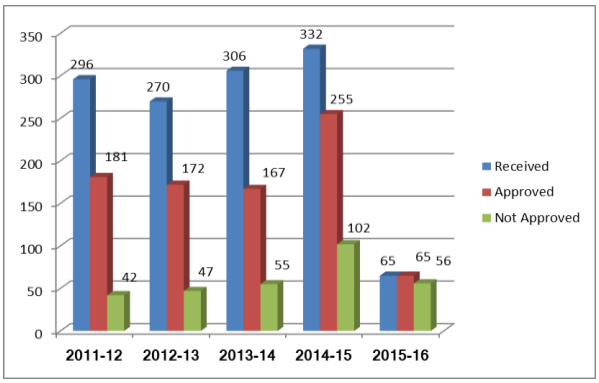


Figure 3.2

Schemes of Mining

3.6 During the year, 400 Schemes of Mining were received. Of the schemes received during 2015-16 and also those received prior to this period, 121 were withdrawn by the parties, 366 schemes were approved and 124 were not approved during the year.

Since the introduction of Scheme of Mining up to March 2016, 8,414 Schemes of Mining were received under Rule 12 of MCDR 1988. Out of these, 6194 Schemes were approved, 1490 were not approved, 501 were withdrawn by the parties, 50 were pending with parties for modification, and

179 were at different stages of processing at IBM. The status of disposal of Schemes of Mining during last 5 years shown in Figure 3.3

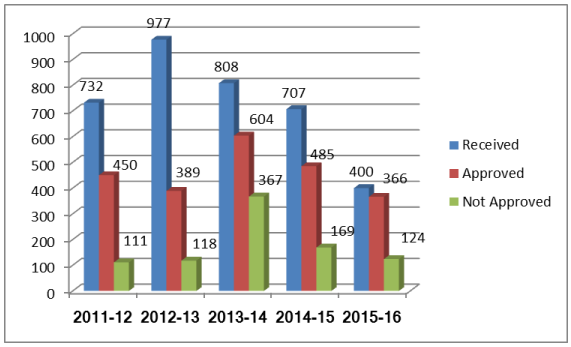


Figure 3.3

Mine Closure Plans

3.7 Mining operations are to be carried out as per the approved mining plan and after extraction of minerals, the mines are required to be reclaimed as per an approved Mine Closure plan. To ensure that the lessee completes the work of mine closure as approved for his mine, he has to submit a valid financial assurance in the form of encashable bank guarantee. So far up to 31 March 2016, Financial Bank Guarantees for a value of Rs.2299.53 million (excluding expired Financial Bank Guarantee) have been collected for valid FMCP's and after fulfilling the requirements of the FMCP, certificates under rule 29 A of MCR 1960 have been issued for 18 cases (excluding minor minerals) of partial or full surrender of lease.

During the year, 25 Final Mine Closure Plans (FMCPs) were received. Of the plans received during 2015-16 and also those received prior to this period, 23 plans were approved and 5 were not approved during the year.

Since the introduction of FMCPs up to March 2016, 447 plans were received. Out of these, 317 were approved, 67 were not approved, 54 were withdrawn by the parties, 2 were pending with parties for modification, and 7 were at different stages of processing at IBM. Cumulative status of disposal of FMCP is shown in Figure 3.4

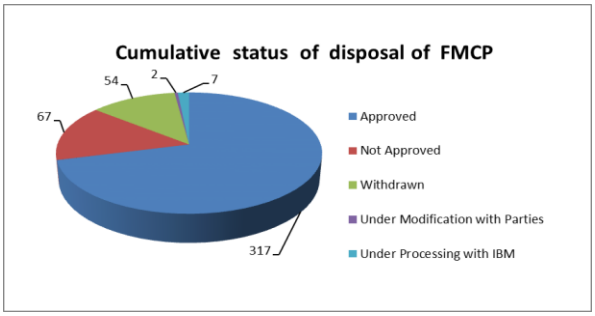


Figure 3.4

Mining Plan Grievances Committee (MPGC)

3.8 The Mining Plan Grievances Committees for the redressal of grievances of entrepreneurs in dealing with IBM for approval of mining plans, constituted in each region comprise representatives of mine owners, RQPs, State Directorates of Geology and Mining, and the Controller of Mines, IBM of the concerned Zone as Chairman. All the MPGCs continued their activities and except Ranchi, Nagpur, Ajmer & Udaipur Regions, other Regions held meetings during the reporting year.

Grant/Renewal of Recognized Qualified Persons (RQPs)

3.9 Under Rule 22C of Mineral Concession Rules 1960, competent authorities of IBM have been delegated powers to grant/renew recognitions to qualified persons to prepare mining plan. During 2015-16, 142 recognitions were granted, 18 renewed and 3 refused.

A total 3,316 recognitions have been granted so far out of which 1215 were valid, on the IBM's record, as on March 2016.

Meeting with RQPs

3.10 During 2015-16, IBM held meetings with the RQPs at the following places with an objective to provide guidance regarding problems faced by them in preparation of mining plans:

Sl. No.	Region/ Venue	Date	No. of RQPs participated
	CENTRAL ZONE		
1	Ranchi	09.12.2015	29
2	Jabalpur	Meeting not held	
3	Nagpur	Meeting not held	
4	Kolkota	12-03-2016	18
5	Bhubaneswar	08.01.2016	42
	NORTH ZONE		
6	Ajmer	19.11.2015	Nobody attended
7	Dehradun	09.07.2016	09
8	Udaipur	08.12.2015	20
	SOUTH ZONE		
9	Chennai	09.03.2016	22
10	Hyderabad	19.03.2016	41
11	Goa	11.03.2016	80
12	Bangalore	09.02.2016	54
Total number of RQP's participated in Meetings			**315**

Administration of MCDR, 1988

3.11 While discharging the statutory function of enforcing administration of Mineral Conservation and Development Rules, 1988, during 2015-16, **1928** violations of different rules and sub-rules were pointed out in respect of **737** mines and were further followed up for their rectification. A summarized account of status of enforcement of MCDR is tabulated below:

Sr.No	Aspect	No.
1.	Violations pointed out for various Rules & Sub-rules.	1928
2.	Mines for which violations pointed out.	737
3.	No. Violations rectified	716
4.	Show cause notices issued	269
5.	No. of violations rectified after issue of show cause notices	254
6.	Court cases launched	34
7.	a) Cases compounded b) Total fee received	8 Rs. 87,000/-
8.	a) Cases decided in favour of IBM b) Fine imposed c) Cased dropped	80 Rs. 23,36,000 02
9.	No. of mines where, a) Mining operations suspended b) Suspension orders revoked	 89 44

3.12 Principal violations pointed out under MCDR, 1988 during mine inspections are given below:

Rule No.	Subject	No. of violations pointed out
	Chapter III Mining Operations (Rule No. 9 to 26)	
12(3)	Submission of scheme of mining.	108
13(1)	Mining operations in accordance with mining plans	370
22(1)	Notice of opening of mine	11
23B(2)	Submission of progressive mine closure plan	22
23E(2)	Responsibility of the holder of mining lease to submit yearly report	146
23F(1)	Financial assurance	49
23F(3)	Financial assurance	16
24	Notice of temporary discontinuance of mining operations	68
	Others under Chap. III	90
	Chapter IV Plans & Sections (Rule No. 27 to 30)	
27(4)	Maintenance of plans and sections	67
29	Copies of plans and sections to be submitted	64
	Others under Chap. IV	20
	Chapter V Environment (Rule No. 31 to 41)	
31	Protection of environment	0
33(2)	Storage of overburden, waste rock, etc.	14
	Others under Chap. V	22

	Chapter VI Employment of Qualified Persons (Rule No. 42 to 44)	
42(1)(c)(i)	Employment of Whole time Mining Engineer/Geologist	98
42(1)(c)(ii)	Employment of Part time Mining Engineer/Geologist	30
	Others under Chap. VI	24
	Chapter VII Notices & Returns(Rule No. 45 to 53)	
45(1)	Submission of returns	19
45(5)(a)	Submission of Monthly Return	255
45(5)(b)	Submission of Annual Return	313
	Others under Chap. VII	122
Total		**1928**

Disposal of Applications for Grant of Permission under MCDR, 1988

3.13 Details of applications disposed off during 2015-16 for grant of permission under MCDR, 1988 are given below :

Sl. No	Subject	No of cases in which permission	
		Granted	Refused
1	Stoping (Rule 26)	32	Nil
2	Preparation of plans & sections of Mine working (Rule 27)	22	Nil

3.14 Significant Results of Inspections & Studies

Scientific development of mines:

1. Yerekatte Limestone mine (ML No. 2620, Extent 305.54 Ha.) of M/s Heidelberg Cement India Ltd was inspected by Shri K. Chatterjee, JMG, Bengaluru RO on 19.06.2015 under the provision of MCDR, 1988 and it was found that complete retention wall is not constructed along the toe of Dump no. 1 (1600-1800 W, 1200-1400N) to prevent escape of material from the dump. Accordingly, violation of Rule 33(2) was pointed out to the company. In response to said violation, complete retention wall along the toe of the Dump no. 1 is constructed by the lessee. Photographs and co-ordinates of the retention wall are also provided as evidence vide letter no. MM/YKT/LST/2015dated 21.12.2015

2. During Mining Scheme site inspection of Meghataburu Iron ore mine of M/s SAIL on 07.02.2015 by Shri B. P. Kerketta, ACOM, Kolkata it was observed that as per approved mining plan dated 29.01.2010, chapter 6, page 108, it was proposed during the scheme period i.e. 2010-11 to 2014-15 to cover the exposed surface of the overburden dump with coir net and after that grass will be planted to prevent erosion in addition to check dam. But during the inspection no coir net was seen and no plantation of grass was done on the overburden dump. A violation letter was issued vide letter no. KOL/JHK/SB(W)/Fe(M-4), Vol. V, dated 24.02.2015. The lessee has replied vide letter Ref. No. GM/MIOM/2015-16/2113, dated 07.04.2015, that they have issued a purchase order to M/s Coir Board, Kolkata, West Bengal for supply of 21518.75 sqm. Geo textile (Coir Mat). Maximum area for lying of coir mat has been completed.

Measures for Abatement of Pollution and Environmental Protection

3.15 While approving the mining plans, schemes of mining and mine closure plans, IBM ensures that environment impact assessment studies have been carried out and to that effect environmental management plan has been incorporated for its effective implementation, besides reclamation and rehabilitation of mined out areas. IBM also ensures that mining operations are carried out in accordance with the approved mining plan/scheme of mining.

As a result of follow up for implementation of EMP, extensive

afforestation has been undertaken in the mines by the mine owners. During the year 2015-16, about 2.54 million saplings have been planted over an area of 1893 hects. in and around mine areas. Thus, so far, 112.60 million saplings have been planted over an area of about 46,722 hects. with a survival rate of 68.08 percent.

Simultaneous reclamation in working mines, and reclamation of abandoned mines are required to be carried out wherever it is feasible. During the year 2015-16, simultaneous reclamation / rehabilitation is going on in 389 working mines covering an area of about 732 hects, taking the cumulative figure for an area of about 17,018 hects. So far, 99 abandoned mines covering an area of 1245 hects. have been reclaimed/ rehabilitated.

Mines Environment and Mineral Conservation Week

3.16 IBM plays a key role in fostering greater awareness and inculcates competition amongst the mine owners by organising Mines Environment and Mineral Conservation (MEMC) Week in different mining areas in the country towards the protection and restoration of mine environment with sustainable development.

The MEMC week held under the aegis of different Regional offices of IBM during 2015-16, in which a total of 749 mines participated, are given below:

REGION	Period	No of Mines participated
CENTRALZONE		
Ranchi	02.11.2015 to 07.11.2015	35
Jabalpur	03.01.2016 to 09.01.2016	72
Nagpur	11.01.2016 to 22.01.2016	61
Kolkota	01.02.2016 to 07.02.2016	20
Kolkata (Guwahati Sub-Region)	Not celebrated	
Bhubaneshwar	18.01.2016 to 26.01.2016	78
NORTH ZONE		
Ajmer	08.01.2016 to 14.01.2016	40
Dehradun	13.03.2016 to 20.03.2016	22
Udaipur/ Rajasthan	14.03.2016 to 29.03.2016	19
Udaipur /Gujarat	22.03.2016 to 27.03.2016	67
SOUTH ZONE		
Chennai (NZ)	01.02.2016 to 13.02.2016	150
Hyderabad	04.01.2016 to 10.01.2016	129
Goa	Not celebrated	
Bangalore (Karnataka)	07.12.2015 to 12.12.2015	56
Bangalore (Kerala)	Not celebrated	
TOTAL MINES PARTICIPATED in MEMC WEEK		**749**

The celebration of MEMC Weeks continued to receive wide publicity and popularity. It is happy state of affairs that a positive response towards mineral conservation and protection of mine environment has been noticed, particularly in mechanised mines. A healthy sign has also been observed amongst small mine owners towards achieving the goal of conserving mineral and protecting the mines environment.

SDF Implementation

In accordance with the policy direction in the National Mineral Policy, 2008, Ministry of Mines commissioned M/s ERM India Pvt. Ltd to develop a Sustainable Development Framework for the Mining Sector (Non Coal, Non Fuel) in India. The SDF is informed by ground realities, conflicts, issues, expectations and perceptions with regard to the mining and the different activities associated with it.

The SDF as an institutional system is understood to be fully integrated, though functioning at different levels through an arrangement of representative cells.

Roll out of SDF

SDF has been rolled out for the first time in mining sector in Sukinda Chromite Mines of M/s TISCO in Odisha on 7th January, 2016 and then on 3rd/26 February, 2016 at Donimalai Mines of the NMDC at Bengaluru in presence of Secretary (Mines) and Controller General, IBM.

Star Rating: IBM is in process of establishing online System of Star rating based on SDF parameters. In star rating process, the miners themselves would fill up the details online for rating purpose which will be verified and confirmed by IBM later on. The evaluation template for Star Rating will encompass managing impacts at mine level, addressing land resettlement and other social impacts, community engagement, final and progressive mine closure and adoption of international standards.

SDF by gathering and analyzing the information collected from different Stakeholders, including effective communication with local communities, by developing a communication program with all interested parties and identifying, analyzing and managing the issues occurring in all stages of the mine lifecycle from exploration to mine closure activities may lead to smooth functioning of mining operations.

Grant of Exploration Licence in Off-shore Areas

3.17 The Offshore Areas Mineral (Development and Regulation) Act, 2002 and the Offshore Areas Mineral Concession Rules, 2006 came into force with effect from 15.01.2010. The Controller General, IBM has been notified as Administering Authority as well as authorised officer for the purpose of the Offshore Areas Mineral (Development and Regulation) Act, 2002 vide order dated 11.02.2010. Subsequently, the Controller General & Administering Authority vide notification dated 07.06.2010 has notified total 63 blocks (26 mineral bearing Offshore blocks in Bay of Bengal and 37 mineral bearing Offshore blocks in Arabian Sea). In response to the above notification, total 377 applications were received from 53 applicants till the last date, i.e. 14.09.2010 stipulated for the purpose. Based on the recommendations of the Screening Committee, Exploration Licences were granted to 16 applicants for 62 mineral bearing blocks in the offshore waters of Bay of Bengal and Arabian Sea on 5th April 2011. Block No. 3 and 32 of Arabian Sea were having identical bounding latitudes and longitudes and therefore were recommended and granted as one block, i.e. Block No. 3. Draft of corrigendum for deletion of Block No. 32 (published in the notification dated 07.06.2010) has been sent to Ministry for approval on 03.03.2014.

Further progress in execution of Exploration Licenses is stalled due to various court cases. Presently, one W.P. No. 12835 of 2011 is pending in the Hon'ble High Court of Judicature of Andhra Pradesh/Telangana, Hyderabad. Draft rule under OAMDR Act 2002 have been prepared and circulated to all members for their comments. As per directions of Ministry, action for cancellation of offshore blocks was in progress.

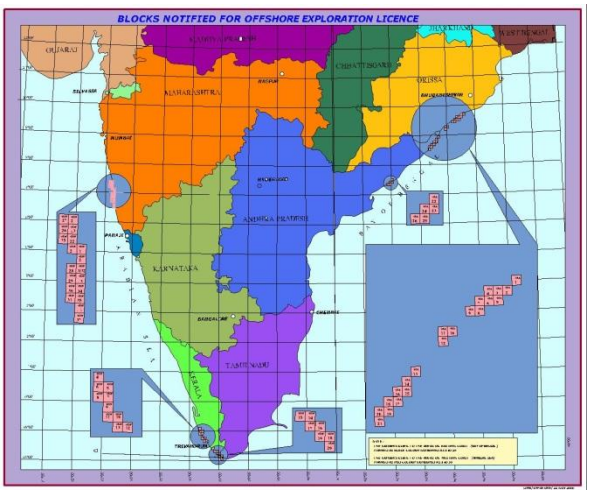


Figure 3.5 : Mineral bearing blocks in Offshore areas

TMIS Database

Under Technical Management Information System (TMIS), there are seven databases:

1. National Mineral Inventory (NMI)
2. Mines-cum-Production (MCP)
3. Mining Leases (ML)
4. Mineral Consumption (MC)
5. External Trade (ET)
6. World Mineral Intelligence (WMI)
7. MCCM Database.

Mineral Concession Approval System (MCAS)

3.18 The Web based Mineral Concession Approval System is operational in the Ministry of Mines and is being used to monitor the progress of applications received in the Ministry, recommended by the State Governments in favour of a particular applicant in respect of RP, PL, ML for major minerals specified in the first schedule of MMDR Act, 1957. The system is being extended to capture the post approval activities.

Measures to Curb Illegal Mining

3.19 While the issue of prevention of illegal mining is not covered within the functioning of IBM, it has been associated with state government and its law enforcement agencies in efforts of curbing the illegal mining activities.

The Ministry of Mines have formulated a three-pronged strategy for prevention of illegal mining viz. constitution of Task Force by the state government at State and District Level having a representative of IBM, framing of rules under Section 23C of the MMDR Act, 1957 and furnishing of quarterly returns on illegal mining for review by the Central Government.

With rigorous follow-up made by IBM with various State Govt(s)., all together, 22 State Governments have constituted Task Force namely, Andhra Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Nagaland, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh & West Bengal and 20 states have framed the rules under section 23C of MMDR Act 1957 namely Andhra Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Nagaland, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand & West Bengal so far. The function of the Task force is to review the action taken by member departments for checking the illegal mining activities in their respective jurisdiction. Further, whenever IBM detects illegal mining during the course of routine MCDR inspection, the same is reported to the State Govt. concerned to take suitable action and report the compliance to IBM.

The Ministry of Mines has directed the state governments to conduct special drive to increase awareness on the issue of illegal mining by organising ‘Pakhwara’ (Fortnight Programme) in liaison with the office of IBM in the state. Accordingly, IBM has initiated the action on the matter and nominated one officer each from the regional offices of IBM for the event.

Besides, IBM has nominated Nodal Officers for every zonal/regional offices to look after all the work of prevention of illegal mining activities in the respective regions/states mainly for surfacial deposits of major and minor minerals. They will co-ordinate with the state governments for

timely submission of quarterly returns on illegal mining; liasoning with state govt. for framing of rules under section 23 C of MMDR Act 1957 and constitution of task force; participation in the regular task force meetings, coordination in organizing Pakhwara for prevention of illegal mining; attending all the references pertaining to illegal mining and submission of report/comments thereof, referring the cases of illegal mining noticed during MCDR inspections to the state govt. and action taken by the state govt. and other related issues.

In compliance of the direction of the Ministry, IBM has constituted Special Task Forces for inspection of mines in endemic areas by taking help of Satellite imageries. The Task Force inspections were conducted during the period from December 2009 to March, 2014 in the States of Andhra Pradesh, Chhattisgarh, Goa, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Tamilnadu. In all 658 mines comprising minerals like iron ore, manganese ore, dolomite, limestone, bauxite etc. were inspected by the Task Force.

Mining operations were suspended in 233 mines under rule 13(2) of MCDR, 1988. Suspension orders were subsequently revoked in 152 mines after ensuring rectification of violation(s). In 21 cases (Andhra Pradesh-3, Gujarat-02, Karnataka-08, Madhya Pradesh-02, Jharkhand-02, Maharashtra-01 and Odisha -03) recommendation to terminate the leases under rule 27(1) (u) and 27 (5) of MCR 1960 have been communicated to the concerned State Governments.

During the year 2015-16, 19 state governments have submitted the quarterly returns on illegal mining up to the quarter ending March, 2016. An annualised quarterly return on illegal mining for the year 2015-16 is given as **Annexure VIII.**

The Ministry of Mines has further directed all the state governments to start the process of registration of end users, constitution of Special Cell in State Police, use of satellite imagery to track down illegal mining, hologram-marking / bar-coding of transport permit etc. The state governments are also planning to set up special camp at sites and deployment of Boarder Home Guards in the areas where there have been complaints about illegal mining.

3.20 Proactive Role for curbing illegal Mining – Tie up with NRSC & MSS

IBM-NRSC MOU: Indian Bureau of Mines (IBM), Ministry of Mines, Government of India has entered into a MOU for project named "Sudoor Drishti" with National Remote Sensing Centre (NRSC), Department of Space, Government of India for monitoring of Mining activity through satellite under the Prime Minister's vision of 'Digital India'.

This project was visualized by the inspiring observations made by Sri Narendra Modiji Prime Minister during his remarks in the meeting held in September 2015 wherein he stated that when forest fires can be monitored by Satellite, why the other activities like mining are not subjected to the same regime.

The project "Sudoor Drishti" is a Mile stone in the history of IBM wherein its application will not be limited to core mining activities but can also be used by State

Government for various purposes such as detection and monitoring of illegal mining, Material movement and revenue collection from Minerals etc. It will also be helpful to keep an eye on reclamation and rehabilitation, social foot prints, water bodies and agriculture, tribal tracts, sanctuaries and bio diversity zone and around mining clusters thereby proving an effective tool towards sustainable mining.

As per The MOU,NRSC shall impart training to the IBM officials, on the developed methodology towards processing and interpretation of satellite data, so that the activity can be taken forward by IBM independently after the pilot study. NRSC will provide technical guidance for IBM in creating a remote sensing cell at remote sensing unit at IBM, Nagpur and Hyderabad. Bhuvan based services will be used for monitoring of mining activities and development of mobile app for field data collection to verify the ground realities with respect to the approved proposals.

NRSC will also carry out a pilot project to demonstrate the feasibility of using High Resolution Satellite imagery in monitoring mining activities/changes over a period of time, over selected group of mines at two different locations as provided by IBM. This includes checking and validation of the consistency of Differential Geo Positioning System (DGPS) points collected as a part of lease boundary survey program of selected group of mines. As an R & D effort, volume changes in selected group of mines using satellite derived DSM will also be attempted. The two areas, one each for Limestone Mining in Tandur region of Telangana State and Bellary-Hospet region for iron ore in Karnataka have been identified for this. The requisite sanction of funds has already been received from Ministry for Pilot project.

IBM-BISAG MSS Project: Mining Surveillance System' (MSS) for major minerals is being developed with the help of Bhaskaracharya Institute of Space Applications & Geo-Informatics (BISAG), Gujarat under DEITY, to curb the incidences of illegal mining with the use of space technology.

This system has minimum human interference, accessible to remotest area and automatic detection. Union Secretary (Mines) advised the State Governments that the MSS may also be adopted for minor minerals. It was requested the State Governments to provide the available digitized lease-wise information for all major mineral leases and also for the minor minerals leases granted within 500m zone of major mineral leases in their State for expediting the development of MSS, about the following-

1. Mine wise Khasra / Cadastral plan either scanned in JPEG format or hard copy

2. GPS coordinates of lease boundary pillars
3. Mining lease data in format supplied in the meeting

Implementation of amended Rule 45 of Mineral Conservation and Development Rules 1988

3.20 To handle the problems of illegal mining the Central Government has taken steps to keep accounts of mineral flow from mine to end. Therefore, the Government of India has notified amendment in Rule 45 of Mineral Conservation and Development Rules, 1988, vide G.S. R. No. 75(E) published in Part-II, Section-3, Sub-Section (i) of the Gazette of India Extraordinary dated, 9th February, 2011, which stipulates mandatory registration of miners, stockists, traders, exporters, and end-users of minerals, and stringent reporting norms for ensuring end-to-end accounting of the mineral produced. In this system it is mandatory for the miners, traders, exporters, and end-users of the minerals to send a copy of the reports to State Governments also. The State Governments have also been advised to ensure that any automation in the reporting system developed at the State levels should be compliant with the amended Rule 45 of the MCDR. Accordingly, IBM in association with NIC has developed online registration forms and statutory monthly and annual returns forms. The on-line reporting system is linked to on-line registration system.

Monthly Returns (Form F1 to F8) and Annual Returns (Form H1 to H8) have been made operational. IBM is receiving the returns online through this system

Complete switchover to online submission of returns would help ensuring effective data collection, increasing the coverage of mines and faster collection and compilation of information and to bring out in time various statistical publications.

The on-line registration system has already commenced in the IBM and so far up to March, 2016, 6254 lease holders, 5009 traders, 830 exporters, 1602 stockiest and 3146 end-users have registered their details.

Broadly the reporting system is divided into two parts. Part-I covers the general information in addition to the employment details. Part-II of the monthly reporting system deals with the grade wise production, dispatches, stock and justification for increase/decrease of production and sale price of minerals. The Part-II of reporting system requires the registration number of the consignee and purpose of sale whether for domestic consumption or export and in case of domestic consumption whether it is made for captive consumption / sale / transfer.

In order to facilitate tracking of mineral from mine to end-use, the reporting system requires indicating the registration number of supplier from whom the mineral is procured. The reporting system will have details of approved mining plan production proposals to compare the same with the actual production from the mine. All the State Government will be able to access the system to check the data reported in the returns and can initiate action in case of wrong reporting of data, evasion of royalty, etc.

The amended Rule 45 of MCDR, 1988 specifies the penal action against defaulting mine owners and empowers the Central Government to order for suspension of all mining operations and may revoke the order of suspension after ensuring proper compliance, take action to initiate prosecution and recommend for termination of mining lease. The Rule further specifies that in case of defaulters engaged in trading or storage or end use or export of minerals, the State Government is

empowered to order for suspension of trading license, all transport permits issued, storage license for stocking minerals and permits of end use industry, etc. In future, the system will be linked to Railways and Ports Authorities to check the correctness of the reporting made under the Rule for which a separate project/scheme has been proposed by IBM.

3.21 Website

A Web Portal of IBM as per the guidelines of Government of India was designed by National Informatics Centre (NIC) and hosted on its server In July, 2010 at ***www.ibm.gov.in*****.** Information regarding IBM's history, functions, organization, divisions of IBM and its activities, jurisdiction of regional & zonal offices, services offered by IBM, Mining Plans – guidelines / formats / circulars thereof, RQPs - guidelines / formats thereof, UNFC guidelines, Mining Laws, Mineral Information like mineral reserves, value, royalty and dead rent, details of reconnaissance permits, threshold values, notices & returns under MCDR,1988 Mining Leases distribution data, Indian Mineral Year Books, Bulletin of Mining Leases & Prospecting Licenses, Bulletins of Mineral Information, Offshore Mineral Concession Rules, Notification & Form G thereof, Tenders, RTI information, Photo gallery, etc., have been displayed on the web portal. There is also provision for online submission of vigilance complaints and Grievances.

The bilingual website of IBM is operational since 15th January, 2015 onwards.

3.22 Online Register of Mining Tenements System (MTS)

A scheme on Computerized Online Register of Mining Tenements system was taken up by the IBM during the programme year 2009-10.

The objective of the Scheme is to develop an online National Mineral Information System for investors by linking Central and State organizations engaged in administration of mineral resources in the country. The project comprised of GIS and Registry parts. The approved funds will be utilised for implementation of the project in mineral rich states i.e. Andhra Pradesh, Chhattisgarh, Goa, Gujarat, Jharkhand, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Orissa, Rajasthan and Tamil Nadu.

The MTS has been envisaged by the Government to automate the various processes associated with the mineral concession regime. This would not only give an impetus to the decision making process but is also expected to meet the ends of transparency and openness. It is envisaged that MTS will not only enable online filing of applications but it will also be possible to identify online the areas for various types of mineral concessions. This would involve integration of web based technology services with Geographical Information System (GIS), so that information could be shown spatially in the form of maps. IBM has been nominated by the Ministry as the Nodal Implementing Agency for the project.

A detailed consultative meeting with the States, NIC and IBM was held on 20.9.2012 to solicit their views on draft DPR submitted by the consultant and implementation issues. Accordingly provisions for IT manpower and hardware support to the States and technical manpower support to IBM were included in the DPR. Thereafter the DPR was endorsed by the Central Co-ordination-cum-Empowered Committee (CEC) and finally approved by the core committee of MTS in its meeting on 31.10.2012.

M/s Ernst & Young Pvt. Ltd. has prepared Request for Proposal (RFP) as per approved DPR.

The Ministry of Mines vide office memorandum No. 37/5/2004-Vol.III (Pt.) dated 13th August 2013, constituted Technical Evaluation committee (TEC), for selection of system integrator, finalization of tender document and evaluation of tender document.

The SFC for the project on Mining Tenement System was approved on 29th August 2013 by the SFC committee under the chairmanship of the Secretary (Mines) at the Ministry of Mines.

The approved RFP was hosted on CPP portal and IBM website on 03.12.2013.

As scheduled, the tender opening process started under the chairmanship of the IBM tender opening committee on 17th February, 2014 at 15.30 hours. After opening the bids in tender box of IBM and CPP Portal it was found that IBM did not receive any bid in the form of hard copy or soft copy from any of the bidders.

On the basis of representations received from various companies regarding inclusion of the Limitation of Liability clause, other requirements, TEC Meetings for the same and in consultation with ministry, the revised RFP was again floated on 08.07.2014 in CPP Portal and IBM Website. After giving sufficient time by floating corrigendum's for bid submission, only single party has responded for the bid on 13.11.2014 and according to Rule 169 of GFR, 2005 the EMD as received from M/S Wipro ltd as well as soft copy of the bid in CPP portal has also not been opened as advised by consultant E & Y.

TEC Meetings were held to discuss, agree and finalize the new draft RFP and forwarded to Ministry for approval. On 15.01.2015, Ministry has conveyed in principle approval of new RFP on which Controller General, IBM is authorized to make requisite changes to make it in line with the MMDR, Amendment Ordinance 2015.

After finalization of RFP in line with the MMDR Amendment Act, 2015 and NIC Cloud, retendering was done on 04.08.2015 for selection of an Implementing agency for design, development, maintenance and operations of Mining Tenement System. Pre-bid meeting was held on 03.09.2015 wherein 33 representatives of 18 prospective companies participated and submitted around 686 queries. Various corrigendum's were published for responses to queries, clarification on clauses of RFP, Revised financial Bid worksheet, online submission of bids and physical copy of bid and extension of bide submission date etc. Finally on 20th January, bids were opened in the presence of representatives of bidders in which M/s L&T, WIPRO and TCS had submitted bids. Bids were forwarded to M/s E&Y for technical evaluation. M/s E & Y furnished draft observations on pre-qualification bids on 23.02.2016 for further review of TEC (Post bid). Meetings of TEC (Post bid) were held to discuss the observations prepared by M/s E & Y against each bidder, to invite clarification / fresh documents from bidders on the points / observations by the TEC and to analyze adequacy of clarification documents submitted by the bidders.

As part of the project, MoUs with respective State Governments, who are involved in the first phase of the system, viz. State Governments of Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Goa, Karnataka, Kerala, Gujarat, Jharkhand, Maharashtra, Odisha, Rajasthan and Tamilnadu have signed the MoU with IBM for MTS implementation.

The Project will be implemented in three phases. In phase I, the registry component of Central Database will be developed covering aspect of registration, returns, revision, inspection, mining plan approval and mine closure plan approval. The state specific registry components would be developed in phase II and phase III will be devoted for GIS component. Some parts of GIS components can be taken up simultaneously along with development of Phase I and Phase II.

Umbrella software will be developed for all States. The project will be implemented by adopting the cafeteria approach wherein the system is developed for pilot locations and latter other States are free to choose the software package as per their requirements. As per the individual need and strategy of each State, the services can be opted and payment can be done for the limited package opted by the State.

North Eastern Region Assistance Programme

As per the directives of the Government 10% of the allotted plan budget of IBM is being spent for the development of North-Eastern Region/States. For closer interaction with the NE States, a Sub-regional office of IBM is functioning at Guwahati since April 1998.

Status of on-going Projects in NER

The then Department of Mines of Ministry of Coal & Mines vide OM No.TPPC/19/2003 dated 12.7.2004 had constituted an 'Empowered Committee' on Mineral Development in North Eastern Region (NER) with a view to facilitate the fast decision making process and to ensure time-bound action for sustainable development in NER. Terms of Reference of the Empowered Committee on Mineral Development in North Eastern Region are as follows:

1. To formulate policy guidelines and to take decisions for accelerating pace of development of mineral and mining sector.
2. To ensure flow of resources from Ministry of Development of NER, Department of Mines and other agencies for various projects/schemes related to mineral and mining sector (including upgradation of infrastructure)
3. To provide assistance for technological upgradation & modernisation of mineral and mining industry
4. To ensure capacity building for training and skill development.
5. To strengthen Directorates of Mines & Geology in North Eastern States.
6. Any other issue related to mineral and mining development

Out of the above 6 terms of references of the Empowered Committee, IBM is providing assistance to NER States under:

a) Terms of reference number 3: To provide assistance for technological upgradation & modernisation of mineral and mining industry
b) Terms of reference number 4: To ensure capacity building for training and skill development

The IBM will continue to look after the conservation and development of mineral resources of NE States. The report of the Committee for Review and Restructuring of the functions and Role of IBM has recommended to upgrade the Guwahati sub-Regional Office into a full fledged Regional office. This will boost the mineral developmental activities in the NE States.

IBM carried out the following activities in North Eastern States in 2015-16.

1. The Sub-Regional Office of IBM at

Guwahati continued to undertake inspection of mines in North-Eastern Region. During the year 2015-16, 21 mines/areas in the States of Meghalaya were inspected for enforcement of provisions of MCDR, 1988 and for processing and disposal.

Three training programmes viz.

1. Workshop-cum North East special assistance Meeting on 28-29th May, 2015 at Nagpur in which a total of 10 Senior Officers of DGMs of North Eastern States participated.
2. Training Programme Chemical Analysis of Rock **and Minerals for NER Personnel** 5th to 9th October, 2015 at Nagpur for NER Personnel in which a total of 16 Officers of DGMs of North Eastern States participated.
3. Training programme on Recent Amendments in MMDR Act & Inception of new Statutes related to grant of lease for NER States officers & Industry persons on 9-10th March, 2016 at Kolkata in which a total of 08 Senior Officers of DGMs of North Eastern States and 2 North Eastern Region industry personnel participated.

Revenue Expenditure of Rs.72.76 Lakhs have been made for running of Guwahati sub-Regional Office.

CHAPTER -IV

Geological mapping & Mineral Map Cell

4.1 Geological mapping & Mineral Map Cell is a part of MDR Division in IBM. It is headed by the Chief Mining Geologist (CMG). Being the functional head of Mining Geology discipline in IBM, CMG is responsible for formulating and monitoring of Annual Programme of the Mining Geologists of IBM. The cell imparts technical inputs in key policy issues on exploration& mining activities in the country and engaged in preparation of Multi Mineral Leasehold Maps(MMLM) .

4.2GEOLOGICAL MAPPING CELL

The regular activities of Geological mapping cell include formulating Annual Programme for Mining Geologists, supervising the updation of National Mineral Inventory in respect of private leasehold deposits, inventorisation of Reconnaissance Permit and Prospecting Licenses of the country, monitoring and inspecting Reconnaissance Permit areas, listing of Exploration agencies, implementation of UNFC for Resources and Threshold values of minerals, formulating notes for various sub-committees of CGPB to oversee mineral exploration activities in the country in coordination with GSI, participating in Standing Committee on Promotional Projects for recommending promotional exploration activities of MECL etc. Geological mapping Cell also provides inputs for replying to ministry references on prior approval of grant of PL, relaxation in area for grant of PL, reservation of areas for exploration, etc.

This cell also deals with matters related to Offshore Areas Mineral (Development & Regulations) Act, 2002, and framing rules their under guidelines etc.

4.2.1 Achievement during the year 2015-16:

1) During the year, 51 schemes/ commencement/Annual Reports/Final/ Relinquished/ closure Reports were received from the RP holders which were scrutinized and documented for further follow-up action.
2) For administration and effective implementation of MCDR under Rule 3A to 3E of MCDR1988 for RP licenses3 violation letters were issued to RP holders. During the year 5 final/closure reports were submitted by RP holders.

3) Quarterly reports having list of Active RPs for the quarter ending March, June, September and December 2015 were furnished to the Ministry and also hoisted on IBM website. As on 31st March,2016, out of 401 RPs covering an area of 5,17,644 sq.km., 396 RPs have been relinquished/surrendered /abandoned. The Status of RP's in India (as on 31.03.2016) is given in Table no.1

4) Data collection on quarterly basis from all the Regional Offices for inventorisation of PL areas for major minerals was carried out. The data so collected & compiled and further processed on quarterly basis and the status of PL areas was quarterly uploaded on IBM website for the Quarter ending March, June, September and December 2015.

5) Updation of National Mineral Inventory as on01.04.2015 in respect of

Private Leasehold deposits were carried out during the year 2015-16covering all the 71 minerals. A total of 10431 NMI sheets were updated for the Private Leasehold deposits from all the Regional Offices. These updated sheets were processed, scrutinized and sent to ME Division for further action.

6) Exploration carried out in Mining leases during the year 2015-16:

i)The notice of intimation of sinking shaft or borehole in Form ' J' under provision of rule 47 of MCDR'1988 , as submitted by lessees/ licensees for their exploration program proposed during the year 2015-16 have been processed and data in respect of 141 mineral concession areas (ML) covering intimation of drilling boreholes of about 2353 nos. have been compiled pertaining to mining leases of limestone , Iron ore, Manganese ore, base metals, bauxite, Chromite , gold& others.

ii) During the year 2015-16, 188 numbers of mines have reported exploration through drilling. The total number of boreholes drilled is 4742 with total meterage of 2,23,074 meters. The mineral wise and state wise breakup of drilling is given in Table no. 2.0

7) Ministry references on the prior approval of grant of PL, relaxation in area for grant of PL and reservation of areas for exploration were also attended. Total 17 such ministry references were attended during the year.

8) A total 45 no. Parliament Questions received from CCOM Office and ME Division were attended.

9) Brief notes/action taken reports for meetings of CGPB and its subcommittees were prepared and the meetings were attended.

10) Listing Of exploratory agencies of Country and Hoisting on IBM portal:

To promote Private Exploration Agencies in mineral exploration work, list of Exploration Agencies was compiled by GM&MM Cell and hoisted on IBM Website. So far, 39 companies have been enlisted with IBM.

11) Pre-auction Preparatory Work

Mining Geologists of GM & MM Cell, IBM, were actively engaged and assisted the committee constituted by Secretary (Mines), Ministry of Mines, Govt. of India, vide DO letter No.11/57/2014-M.I, dated 24th July, 2015to examine exploration reports of Geological Survey of India (GSI) and Mineral Exploration Corporation Limited (MECL) from the point of view of their amenability to auction.

12) **Evaluation of Ineligible mineral concessions application under sub section 10A (1) of MMDR-1957 for further exploration.**

Mining Geologists of GM & MM Cell are also part of the Apex Committee constituted by CG, IBM vide letter no T-43004/CGBM/MMDR/AC/2015 Dated 16.02.2016 for monitoring & guiding the work of state wise committees constituted by Secretary (Mines), Govt. of India vide DO no-11/57/2014-M.I Dated 05.02.2016 with the intention of evaluating ineligible applications for mineral concession &categorise them in terms of suitability for regional

exploration or auction for PL cum ML/ML.

4.3MINERAL MAP CELL

Mineral Map Cell is engaged in preparation of State wise Multi Mineral Leasehold Maps (MMLM) along with Forest Overlays as per the directives of National level committee consisting of Ministry of Mines (MOM) and Ministry of Environment and Forest (MOEF) in December, 2001.MMLM depicts distribution & disposition of mining leases of various minerals found in a region, along with other relevant details about infrastructure, physiography, resources, forest cover etc.

An yearly target of preparation of100 such maps was decided under Scheme No. 3 of IBM. MMLM is a geographic representation of the Mining Leases on Survey of India (SOI) toposheet on 1: 50,000scale and involve superimposition of regional geology taken from Mineral Atlas of India, GSI Publication, 2001 (1:20,00,000 scale) and forest data from Forest Survey of India. These maps are being prepared using AUTOCAD software. Mineral Map Cell is equipped with AUTO CAD 2004, AUTO CAD MAP 2008,MICRO STATION V8 and GEOMEDIAPROFESSIONAL.IBM completed the work of preparation of such maps for entire India during the year 2011-12. Since 2012-13 onwards, updation of earlier prepared maps is being carried out.

These maps have been found useful for policy planners and to facilitate development of mineral deposits. Besides, these maps also serve as authentic references for resolving mining and mineral related issues.

The various maps prepared by MM Cell are:

(i) **Index Map:** The index map incorporates the distribution of mining leases, regional geology, physiography and infrastructure available in the area. These maps are prepared on 1:50,000scale.

(ii) **Forest Overlays:** The forest overlays are prepared for the corresponding index maps on1:50,000 scale and they incorporate forest cover as obtained from Forest Survey of India (FSI).

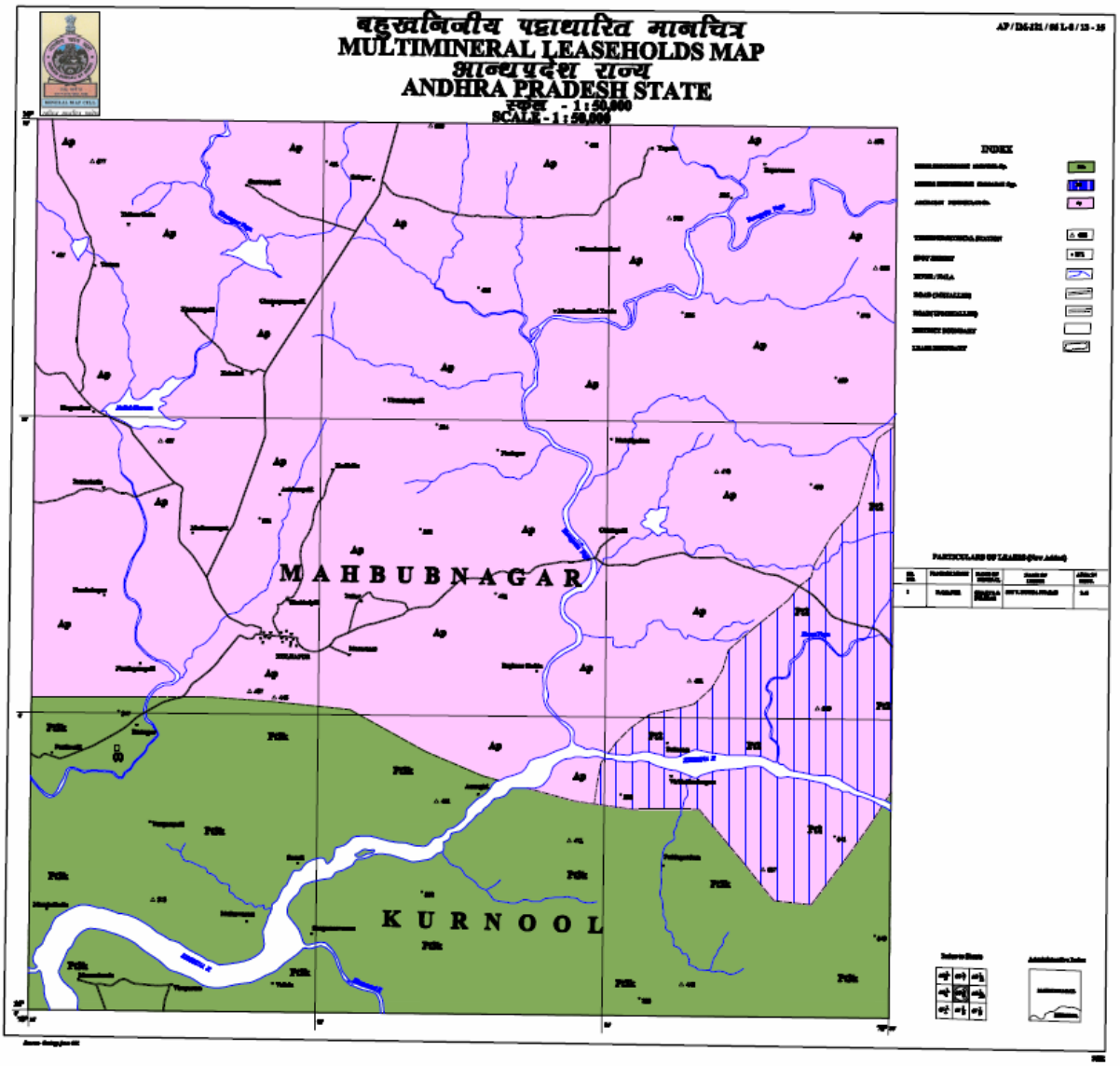
4.3.1 Achievements during the year 2015-16

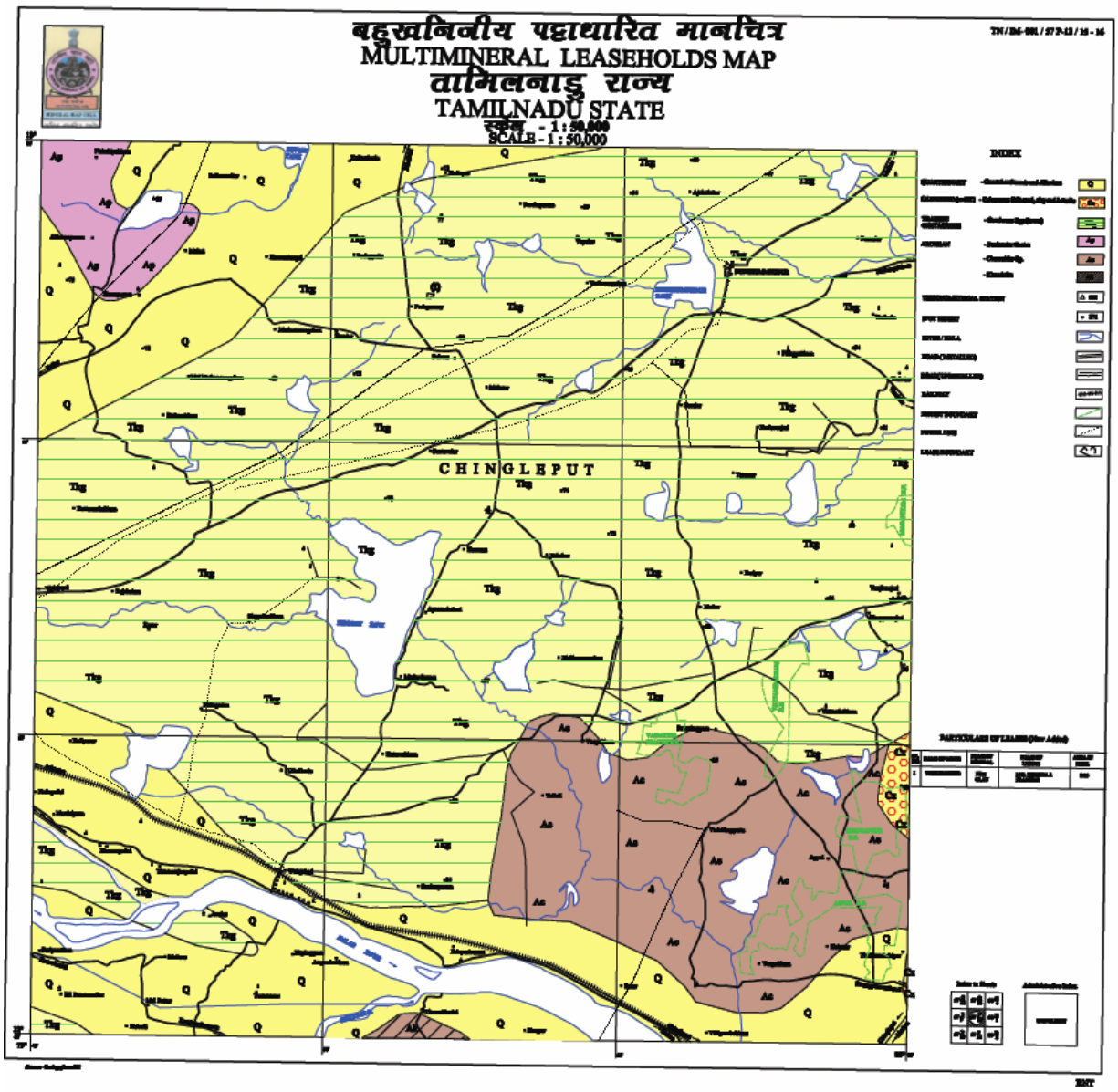
1. During 2015-16, 12 MMLM of Andhra Pradesh, 02 MMLM of Kerala and 86MMLM of Tamil Nadu State totaling to 100MMLM were updated along with corresponding forest overlays and the process of collection of data for updation of MMLM of all the states was carried out for next year programme.

2. **Application of Multi Mineral Leasehold (MML) map in synergy with GSI**

The Multi Mineral Leasehold (MML) Map of all states have been provided to Geological Survey of India for synchronizing in GIS platform of GSI for identification of regional exploration targets.

Geological mapping & Mineral Map Cell




बहुखनिजीय पट्टाधारित मानचित्र
MULTIMINERAL LEASEHOLDS MAP
तमिलनाडु राज्य
TAMILNADU STATE
SCALE - 1 : 50,000
INDEX
CHINGLEPUT

CHAPTER -V

MINERAL PROCESSING DIVISION

The Mineral Processing Division undertakes test work on beneficiation of low grade ores and minerals to develop suitable process flow sheet on bench-laboratory scale and pilot plant scale. It has a Modern Mineral Processing Laboratory and Pilot Plant at Nagpur and two Regional Ore Dressing Laboratories at Ajmer and Bengaluru. Ore Dressing Division is headed by Director (Ore Dressing). The Modern Mineral Processing Laboratory and Pilot Plant at Nagpur is headed by Chief Ore Dressing Officer. The Regional Ore Dressing Laboratory and Pilot Plants at Ajmer and Bengluru are headed by Superintending Officer (Ore Dressing). This Division has a strong R&D base for mineral beneficiation and these studies are carried out on various low grades of ores/minerals, waste/rejects viz ferrous, non-ferrous, sulphide minerals and industrial minerals except atomic minerals on charge basis as well as on promotional basis, as a part of the conservation studies being carried out by the MCCM Division.

5.2 The Modern Mineral Processing Laboratory and Pilot Plant at Nagpur is well equipped with most sophisticated equipment and is regarded as "Centre of Excellence" in the field of Mineral Beneficiation. This is a core centre to cater to the needs of the country for beneficiation test work. The pilot plant has flexible capacity ranging from 0.5 to 2.0 tonnes/hour for conforming the process evolved in the laboratory as well as to generate additional data before commercial application and also to produce adequate quantity of concentrate, if needed, for end use testing.

Modern Mineral Processing Laboratory & Pilot Plant, Nagpur

5.3 The Analytical Laboratory located in the premises of Modern Mineral Processing Pilot Plant, houses the Chemical Laboratory, the Mineralogical laboratory and the Environmental Laboratory. The Environmental Laboratory is a recognized laboratory by the Central Pollution Board of Ministry of Environment & Forests (MoEF), Government of India.

5.4 The Bureau has region-wise facilities in mineral testing and beneficiation with regional ore dressing laboratory and pilot plants at Ajmer and Bengaluru which are also well equipped with sophisticated equipment. A 'Clay Laboratory' has also been established at Kolkata to cater to the needs of the north-eastern region exclusively.

5.5 The most important function of this Division is to conduct R&D work with an objective of developing a suitable process flow sheet for beneficiation of low grade ores and minerals for commercial application; chemical analyses by conventional as well as instrumental methods; mineralogical studies and physical characterization of ores and minerals and ore dressing products; preparation of pre-feasibility reports; in-plant studies and plant audit; environmental studies of mine waste effluents; trouble shooting jobs at site for commercial plants; and providing consultancy services in fields of mineral processing, chemical analyses and mineralogy. This Division also imparts training to the scientists of mining industry in the specialized fields of ore dressing.

Performance

5.6 During the year 2015-16, 56 ore dressing investigations, chemical analyses in respect of 35,376 radicals, 2,423 mineralogical examinations were carried out. Out of these achievements, 25% of the Ore Dressing Investigations were on promotional basis and the remaining were on charge basis. A revenue of ₹ 84,37,004/- was generated during the year. Laboratory-wise break-up of

work carried out and revenue generated is as follows:

TARGETS AND ACHIEVEMENTS

(APRIL, 2015 TO MARCH, 2016)

Sl. No		UNIT									DIVISION		
		NAGPUR			AJMER			BANGALORE					
I. ORE DRESSING INVESTIGATIONS (Annual Target – 60 ODI)													
		FS	**LS**	**TOTAL**	**FS**	**LS**	**TOTAL**	**FS**	**LS**	**TOTAL**	**FS**	**LS**	**TOTAL**
Annual Target		**30**	**-**	**30**	**15**	**-**	**15**	**15**	**-**	**15**	**60**	**-**	**60**
1.	**Completed**	9	85	**94 (30.25)**	5	6	**11 (6.50)**	11	36	**47 (20.00)**	25	127	**152 (56.75)**
2.	**ODI in progress**	3	1	**4 (3.25)**	-	2	**2 (0.50)**	16	9	**25 (18.25)**	19	12	**31 (22.0)**
II. CHEMICAL ANALYSIS (Annual Target – 40,000 Radicals)													
Annual Target		**28,000**			**6,000**			**6,000**			**40,000**		
1.	**Completed (T)**	**26,100**			**2,256**			**7,020**			**35,376**		
	By Instrument	**19,927**			**407**			**2579**			**22,913**		
	By Wet	**6,173**			**1,849**			**4,441**			**12,463**		
2.	**In progress**	3,673			07			130			3,810		
III. MINERALOGICAL EXAMINATIONS (Annual Target – 2,300 M.E.)													
Annual Target		**1,300**			**500**			**500**			**2,300**		
1.	**Completed**	**1,394**			**441**			**588**			**2,423**		
2.	**In progress**	40			02			23			65		
IV. REVENUE GENERATION (For Sponsored Work from Mineral Industries (₹)													
1.	**Ore Dressing**	18,26,854			5,36,048			41,07,071			**64,69,973**		
2.	**Chemical**	9,21,702			1,35,346			94,725			**11,51,773**		
3.	**Mineralogy**	3,67,520			63,051			3,84,687			**8,15,258**		
Grand Total (₹) …		**31,16,076**			**7,34,445**			**45,86,483**			**84,37,004**		
V. ACTUAL REVENUE, SERVICE TAX & E. CESS RECEIVED & NOTIONAL CHARGES (₹)													
Revenue Generation		**Actual Revenue (₹)**			**S. Tax received (₹)**			**E. Cess Received (₹)**			**Total Revenue (₹)**		
Total (₹) …		**74,32,219**			**9,97,741**			**7,044**			**84,37,004**		
Notional Charges (Work Carried out for)		**RCOM**			**NER**			**DEPARTMENTAL STUDIES**			**Total (₹)**		
Total (₹) …		**26,03,721**			**1,775**			**6,15,000**			**32,20,496**		

Full Scale Investigation **(FS)**
Limited Scale Investigation **(LS) (4 LS = 1 FS)**

5.7 In case of promotional work, IBM conducts test work on the samples mainly collected during inspections of mines and R&D support provided towards fulfilling regulatory functions of IBM for systematic and scientific mining, which are prime importance from conservation and environmental aspects. The charge basis samples are received from the public and private sector mines and also from exploratory agencies such as GSI, MECL etc. **Annexure II** furnishes the list of laboratory and pilot scale investigations completed during the year 2015-16. Mineral-wise breakup is as follows:

SL.NO.	MINERAL	CHARGE BASIS	NON-CHARGE BASIS	TOTAL
1.	Barite	--	12 (3.00)	12 (3.00)
2.	Bauxite	2 (0.50)	6 (1.50)	8 (2.00)
3.	Beach Sand	1 (0.25)	--	1 (0.25)
4.	Copper Ore	7 (2.50)	1 (1.00)	8 (3.50)
5.	Clay/China clay	5 (1.25)	2 (2.00)	7 (3.25)
6.	Graphite	1 (1.00)	--	1 (1.00)
7.	Granite Rock	11 (2.75)	--	11 (2.75)
8.	Gold ore	3 (2.25)	1 (1.00)	4 (3.25)
9.	Glauconite	--	1 (1.00)	1 (1.00)
10.	Gypsum	2 (0.50)	--	2 (0.50)
11.	Iron Ore	26 (11.75)	7 (2.50)	33 (14.25)
12.	Kyanite/Sillmanite	1 (0.25)	--	1 (0.25)
13.	Laterite	1 (0.25)	--	1 (0.25)
14.	Limestone	8 (2.00)	2 (0.50)	10 (2.50)
15.	Lead-Zinc	2 (0.50)	--	2 (0.50)
16.	Manganese ore	11 (3.50)	--	11 (3.50)
17.	Rock Phosphate	4 (3.25)	--	4 (3.25)
18.	Shale	--	6 (1.50)	6 (1.50)
19.	Silica Sand	3 (1.50)	--	3 (1.50)
20.	Tin	2 (0.50)	--	2 (0.50)
21.	Tungsten	2 (2.00)	--	2 (2.00)
22.	White Clinker	1 (0.25)	--	1 (0.25)
23.	Miscellaneous	21 (6.00)	--	21 (6.00)
	TOTAL	**114 (42.75)**	**38 (14.00)**	**152 (56.75)**

ODI- No. of Full & Limited scale investigations (Full scale ODI)

5.8 TRAINING PROGRAMMES

(i) Training Programme For Industry Personnel:

The Training Programme on "Characterization of ores and minerals by Mineralogical and Chemical analysis in view of Mineral Processing for Industry persons" held at Modern Mineral Processing Laboratory and Pilot Plant, IBM, Nagpur from 27th to 28th August 2015 . Shri V.A. Sontakkey, DODO was the Course Director of the Training Programme and Shri S.M. Rode, ARO was the Course Co-ordinator.

(ii) Training Programme For North Eastern Personnel:

A Training Programme on "Chemical analysis of Rocks and Water sample" for North-Eastern officials was held between 5th to 9th October, 2015 at Modern Mineral Processing Laboratory and Pilot Plant, IBM, Nagpur. The training programme was inaugurated under the President-ship of Dr.(Mrs.) S.M. Lal, Suptdg. Officer (OD) & In-charge Mineral Processing Division, IBM, Nagpur. Sixteen NER personnel participated in the Training Programme. The lectures on various topics were delivered by expertise factulty members of IBM. The Practical demonstration of different methods/techniques of chemical analysis were apprised to NER personnel. A valedictory function was held on 9th October, 2015.

Dr. (Mrs.) S.M. Lal, SO(OD) and In-charge, MP Division presided over the function. Shri S.S. Sapkal, DCOM & Incharge (Training) also graced the occasion. Representatives of NER personnel expressed their views about the Training Programme. On this occasion, the certificates were distributed to the all the participants. Shri N.M. Bhave, Chemist was the Course Director and Shri A. Majumdar, Asstt. Chemist was the Course Co-ordinator of the Training Programme. Overall, the training programme was a successful one.

(iii) Training Programme For Industry Personnel:

A training programme on "Beneficiation of low grade ores and different techniques of Mineral Processing for industry persons" was held on 3rd – 4th December, 2015 at Modern Mineral Processing Laboratory & Pilot Plant, IBM. MIDC, Nagpur. The training programme was inaugurated on 3.12.2015 by Dr. Mrs. S.M. Lal, Suptdg. Officer(OD) and I/c, M.P. Division. Dr. D.R. Kanungo, SO(OD) and Shri S.S. Sapkal, DCOM & Director(Training) I/C, were present. A brief agenda on the present programme was presented. Dr.(Mrs.) S.M. Lal, SO(OD) & I/c, M.P. Division was the President of the function.

Total 20 executives from various mineral industries viz. M/s V.M. Salgaoncar and Brothers Ltd., Goa, Mysore Minerals Ltd., Karnataka, MECL, Nagpur, Ultratech Cement, Kesoram Cement, Rashi Steel and Power Ltd. attended the Training Programme.

A comprehensive course module was prepared comprising of various topics viz. (1) Facilities and capabilities of M.P. Division in the field of mineral characterization, (2) Chemical analysis and beneficiation of Ores and Minerals, (3) Beneficiation of Low Grade Non-ferrous ores and minerals for development of process flow sheet, (4) Significance of Mineral characterization in view of beneficiation of ores and minerals , (5) Development of process flowsheet for upgradation of industrial and fertilizer minerals and (6) Beneficiation of low grade and complex ferrous ores.

Representatives from different industries visited laboratory and pilot plant during training programme on 4th December, 2015 and the work carried by IBM was highly appreciated.

A valedictory function was held on 4.12.2015 under the President ship of Dr.(Mrs.) S.M. Lal, SO(OD) & I/c, M.P. Division. The certificates were distributed to the participants during the function. The participants also expressed their views on this occasion and appreciated the training programme. Most of the participants mentioned that the training course will be very useful for them and will immensely help them in their projects.

Shri D.R. Kanungo, SO(OD) was the Course Director and Shri J.P. Mishra, ARO was the Course-

Co-ordinator. In all, the training programme was a grand success.

Feedback was obtained from the participants. All the participants expressed that the training programme would be very useful for them.

Salient Results

5.9 Salient results of the important investigations are as follows:

COPPER ORE:

Bench scale beneficiation studies on a bore hole copper ore sample from Thanewana block, Chandrapur District, Maharashtra (for M/s Mineral Exploration Corp. Ltd.) (IBM/NGP/RI NO. 2103)

A bore hole copper ore sample from Thanewana block Chandrapur district, Maharashtra was received through M/s Mineral Exploration Corp. Ltd. for conducting bench scale beneficiation studies at the Modern Mineral Processing Laboratory and Pilot Plant of Indian Bureau of Mines, Nagpur. The as received sample assayed 0.53% Cu, 4.25% Fe(T), 78.01% SiO_2, 5.43% Al_2O_3, 0.32% CaO,2.11% MgO,1.52%S, 0.162% P_2O_5, 0.189%TiO_2, 0.367%K_2O, 0.088% MnO_2, 0.165%BaO and 83.82% acid insoluble. The beneficiation process adopted was froth flotation. Flotation tests were conducted using Sodium isopropyl Xanthate (SIPX), Methyl isobutyl Carbinol (MIBC) as a frother and Lime as a pH modifier. Flotation test at 87.1% - 200 mesh grind at a pH of 10.5 yielded a copper concentrate assaying 20.88% Cu, 7.80% SiO2 and 8.08% acid Insoluble with copper recovery of 90.9 percent and weight percent yield of 2.3.

GLAUCONITE:

Beneficiation studies on a glauconite sand stone sample, Shale Of Vindhyan Super Group from Kurchha – Barwadih Area, Sonbhadra District, U.P. (For G.S.I Northern Region, Lucknow) (IBM/NGP/RI No.2104)

A Glauconite sand stone sample from Sonbhadra district, U.P. was received at the Modern Mineral Processing Laboratory and Pilot Plant, Indian Bureau of Mines, Nagpur for conducting beneficiation tests. The objective of the study was to enrich Glauconite mineral present in the sample so as to explore the utility of indigenous glauconitic sand as potash fertilizer. The as received sample consisted mostly of lumps from 2 inches to 5 inches in size with little amount of fines.The as received sample assayed 2.85 % K_2O, 3.65% Fe_2O_3, 7.88% Al_2O_3, 78.52% SiO_2, 1.20% CaO, 1.65% MgO, 0.10% Na_2O, 0.20% TiO_2, 0.20% F and 2.49% LOI. Mineralogical studies reveal that the sample consists mainly of quartz (~60%) with subordinate amount of glauconite (~20%) and minor amounts of feldspar (~10%) and mica (muscovite, biotite) (6-8%). Very minor amounts goethite/limonite (2-3%) and carbonate (calcite) (1-2%) and traces of hematite and clay. The best results were obtained by rod mill stage grinding of – 10 mesh original sample to all – 30 mesh followed by wet sieving over 100 mesh to remove -100 mesh size fraction. The – 30 + 100 mesh product obtained was subjected to attrition scrubbing followed by desliming of the scrubbed slimes. The scrubbed sand obtained was dried and subjected to dry high force magnetic separation at 16 Kilo Gauss yielded a composite concentrate comprising of scrubbed slimes, - 100 mesh and magnetics of -30+100 mesh assayed 4.20 % K_2O, 5.19% Fe_2O_3, 13.93% Al_2O_3, 67.34% SiO_2 and 4.06% LOI with a K_2O recovery of 70.7 and weight percent yield of 48.9. This suggests that wet process involving stage grinding, screening, attrition scrubbing and

dry high force magnetic separation could yield a glauconite concentrate with a reasonably good recovery. The sample is amenable for beneficiation.

IRON ORE:

1. Beneficiation studies on an Iron ore dump sample from Subbarayanahalli mines, Sandur taluk, Bellary district, Karnataka for M/s Mysore Minerals Ltd, Bangalore (IBM/BNG/R.I. No. 740).

An Iron ore dump sample from Subbarayanahalli mines, Sandur taluk, Bellary district, Karnataka was received from M/s Mysore Minerals Ltd. for beneficiation studies at Regional Mineral Processing Laboratory, Indian Bureau of Mines, Bangalore. The objectives of the test work are to develop a process flow sheet to produce pellet grade concentrate.

The as received sample assayed 52.92% Fe(T), 7.43% SiO_2, 8.72% Al_2O_3, 0.09% CaO, 0.02% MgO, 0.07% Na_2O, 0.05% K_2O, 0.20% Mn, 0.81 TiO_2, 0.02% P, 0.19% S and 6.45% LOI.

The sample was subjected to gravity concentration by tabling yielded the combined concentrate (Table conc. I+II+III) assaying 64.30% Fe(T), 2.72% SiO_2, 2.69% Al_2O_3 and 3.49% LOI with 50.90% Fe(T) recovery (wt.% yield 41.90).

The concentrate meets the specification as stipulated by the party.

2. Beneficiation on an Iron ore sample from Kalane Iron Ore mines, Goa for M/s Samruddha Resources Limited, Mumbai (IBM/BNG/R.I. No. 743).

An Iron ore sample from Kalane mines, Goa was received from M/s Samruddha Resources Limited, Mumbai for beneficiation studies at Regional Mineral Processing Laboratory, Indian Bureau of Mines, Bangalore. The objectives of the test work are to upgrade the ore to > 57% Fe(T) with maximum Fe(T) recovery and to develop a process flow sheet..

The as received sample assayed 55.52% Fe(T), 6.65% SiO_2, 1.36% Al_2O_3, 0.37% CaO, 0.03% MgO, 0.07% Na_2O, 0.05% K_2O, 2.98 % Mn, 0.20 TiO_2, 0.01% P and 10.37% LOI.

By simple process of scrubbing, screening followed by tabling of the ground fraction minus 6.25 mm+150 mesh yielded a final concentrate assaying 58.15% Fe(T), 3.11% SiO_2, 1.61% Al_2O_3, 2.76% Mn and 10.15% LOI with 81.30% Fe(T) recovery (wt.% yield 78.10).

The concentrate meets the specification stipulated by the party.

MANGANESE ORE:

Bench Scale Beneficiation Studies on a Black Dump Rejects of Manganese Ore sample from Ukwa Mines, Balaghat Dt., for M/s MOIL, Nagpur (IBM/NGP/RI No. 2071).

The black dump rejects from Ukwa mine of M/s MOIL was received at Modern Mineral Processing Laboratory and Pilot Plant, IBM, Nagpur for conducting bench scale beneficiation studies. The objective of the investigation was to develop a process flow sheet to produce manganese concentrate suitable for end user industry.

The as received sample assayed 8.02% Mn, 2.61% Fe(T), 75.41% SiO_2, 2.63% Al_2O_3, 0.68% CaO, 0.23% MgO, 0.61% BaO, 1.03% Na_2O, 0.53% K_2O, 0.13% P, 0.02% TiO_2, 0.04% SrO, 0.2% S(T) and 1.26% LOI.

Gravity concentration by employing tabling at -65 mesh size followed by wet high intensity magnetic separation at 12000 Kilo

Gauss of table tails yielded a composite manganese concentrate with a reasonably good grade and recovery. The composite concentrate obtained by combining the table concentrate and magnetic fraction of table tails assayed 30.08% Mn, 7.76% Fe(T), 29.42% SiO_2, 2.62% Al_2O_3, 0.21% P, and 3.10% LOI with a Mn recovery of 72.2%. (Wt% yield: 18.4). The Mn to Fe ratio is 3.87.

The sample is amenable for beneficiation by gravity cum wet magnetic separation. The fine concentrate obtained may find utilization in Steel industry after agglomeration.

MANGANESE ORE

Recovery of silica sand from over burden of Katangjhri Manganese ore mine, Balaghat, Madhya Pradesh (IBM/NGP/RI No. 2102).

Mineral Processing Division of IBM has developed a process on the overburden of Katangjhri Manganese ore mine to recover silica sand as a value added product to be used as stoving material in the Katangjhri Manganese ore mine, Balaghat, Madhya Pradesh. Thus, the process developed by M.P. Division of IBM has an achievement to convert the overburden into value-added product.

ROCK PHOSPHATE:

Bench scale beneficiation studies on a low grade rock phosphate sample from a mine in Meghnagar, District Jhabua, Madhya Pradesh for M/s. Samruddha Resources Ltd., Mumbai, Maharashtra. (IBM/NGP/RI No. 2068).

A low-grade complex siliceous &magnesia rich rock phosphate ore sample from Madhya Pradesh was taken up for bench scale beneficiation studies with the objective to develop a process flow-sheet to produce phosphate concentrate suitable for manufacture of phosphoric acid. Mineralogical studies revealed the presence of apatite, quartz, dolomite and calcite as main minerals and chemically assayed 17.26% P_2O_5, 33.15% Acid Insol., 32.65% SiO_2(T), 3.52% MgO and 30.61% CaO.

Beneficiation studies evolved a process flow-sheet comprising of ball mill wet grinding to d_{80} size 61 microns, to liberate phosphate from gangue minerals, with addition of sodium silicate in the mill as silica depressant. Single stage rougher phosphate-carbonates bulk flotation, at pH 10-11, using anionic collector sodium oleate could yield bulk rougher phosphate-carbonate float and discard silica (quartz) and silica bearing minerals, in the rougher tails forming reject. Three cleanings of rougher phosphate-carbonate bulk float, at pH 10, followed by reverse flotation of the III cleaner bulk float for separation of phosphate from carbonate at pH 5-6 using sulfuric acid as pH modifier, ortho-phosphoric acid as phosphate depressant and pine oil as frother could yield a phosphate concentrate assayed 32.66% P_2O_5, 9.77% Acid insoluble, 9.42% SiO_2(T), 0.65% MgO, 1.11% Fe_2O_3, 0.62% Al_2O_3,1.73% R_2O_3(Fe_2O_3+Al_2O_3), 47.34% CaO, 3.29% F and 4.32% LOI with phosphate recovery of 63.1% and weight % yield of 33.1. The study reflects the importance of beneficiation studies in producing a phosphate concentrate suitable for phosphoric acid manufacture in view of utilization of low grade and complex ores.

SILICA SAND:

Bench scale beneficiation studies on a silica sand sample from Bharatpur, Rajasthan for M/s LSC Infratech Pvt. Ltd. ((IBM/AJM/R.I. No. 562).

A silica sand sample from Bharatpur, Rajasthan was received through M/s LSC Infratech Pvt. Ltd. at Regional Mineral Processing Laboratory, Indian Bureau of Mines, Ajmer for conducting bench scale

beneficiation studies. The objective of the beneficiation test was to investigate the amenability of the sample for removal of impurities mainly iron and Alumina contents.

The as received sample assayed 98.31% SiO_2, 0.22% Fe_2O_3, 0.42% Al_2O_3, 0.21% CaO, 0.18% MgO, 0.12% Na_2O, 0.08% K_2O, 0.43% LOI.

By adopting the beneficiation test involving attrition scrubbing followed by sieving and perm roll Magnetic separation, the non-magnetic fraction assaying 99.13% SiO_2, 0.062% Fe_2O_3, and 0.22% Al_2O_3 with a 78.20% SiO_2 recovery (wt. yield 77.40).

The non-magnetic fraction meets the specification of Silica sand grade-II for the glass sand industry.

INTERNATIONAL SEMINAR ON MINERAL PROCESSING TECHNOLOGY (MPT-2016):

The International Seminar on "Mineral Processing Technology (MPT-2016)" held at TCS, Sahyadri Park Campus, Hinjewada, Pune from 5th to 7th January 2016. Five officers from Mineral Processing Division Dr. (Mrs.) S.M. Lal, SO(OD), Dr. D.R. Kanungo, SO(OD) , Dr. V.A.J. Aruna, SO(OD), Shri M.G. Raut, DODO and Shri B. Suresh Kumar, AODO attended the Seminar. The following technical papers were presented: (Photo enclosed).

(1) "Characterisation of Silica Sand from various Silica Sand deposits of India" authored by Dillip R. Kanungo, Sanjay K. Nanda and Sandhya Lal.

(2) "Exsolution Intergrowths and Elemental Substitutions in Titanium-rich Magnetite Iron Ores – a challenge for Mineral Beneficiation" authored by Dillip R. Kanungo, Laxmikant B. Toal and Sandhya.

(3) "Utilisation of Manganese Dump Rejects of Central India Region for Industrial Applications" authored by V.A. Sontakkey, Ipsita Mohan Ram, R.S. Aehdi, , V.A.J. Aruna and S.M. Lal.

(4) "Beneficiation studies for utilization of low grade complex siliceous and magnesia rich rock phosphate sample for phosphoric acid manufacture" authored by V.V.R. Murty, T.H. Banerjee, V.A.J. Aruna and S.M. Lal .

(5) "Flotation Studies on a Copper Plant Tails Sample of Democratic Republic of Congo" authored by V.A.J. Aruna, Prathama Diwakar, P.P. Pathak, B.R. Ramteke and S.M. Lal .

(6) "Significance of beneficiation studies on a very Lean gtade Copper Ore from Central India in view of
Mineral Conservation : A case study" authored by M.G. Raut, V.A.J. Aruna and S.M. Lal .

(7) "Beneficiation studies on a gold ore sample from Togo, Africa" authored by B. Suresh Kumar, Dev Prasad Ananth, Indira Ravindran.

Dr.(Mrs.) S.M.Lal and Dr.V.A.J.Aruna each chaired technical sessions in the seminar.

DR. DILLIP R. KANUNGO, SO(OD) PRESENTING THE PAPER IN MPT-2016

CHAPTER – VI

TECHNICAL CONSULTANCY, MINING RESEARCH AND PUBLICATION (TMP) DIVISION

The Technical Consultancy, Mining Research and Publication Division is headed by the Controller of Mines. It offers technical consultancy services to the mining industry, undertakes scientific, techno-economic, research oriented studies and brings out monographs and bulletins on topical interest.

TECHNICAL CONSULTANCY

6.1 Technical consultancy services are offered on charge basis to the mining industry within the country and abroad in the fields of surveying, exploration, geology, mining and environment related issues. It offers consultancy services to large as well as small mine owners. Small mine owners are offered services at a concessional rate. It helps the mine owners in systematic development of their mines, formulation of their production plans, better utilisation of mineral resources available in the areas, to take investment decisions for implementation of new projects and obtain financial assistance from the financial institutions. The services offered are:

6.2 Survey and Geological Services

- Topographic survey of mineral properties
- Preparation of geological plan as per MMR 1961 and MCDR 1988
- Preliminary geological appraisal of mineral deposits
- Formulation of scheme of exploration and preparation of detailed exploration reports
- Geo-statistical evaluation of mineral deposits
- Collection of bulk samples from mineral deposits/mineralized dumps for laboratory and pilot plant investigation

6.3 Mining Services

- Preparation of mine development scheme of opencast and under-ground mines
- Preparation of mining feasibility reports of opencast and under-ground mines
- Evaluation of feasibility reports for financial institutions.
- Financial analysis of mining projects
- Remodeling of old mines for introduction of advanced mining technology.

6.4 Environmental Studies

- Preparation of Solid waste management plan
- Generation of environmental base-line data
- Preparation of Environmental Impact Assessment (EIA) & Environmental Management Plan (EMP)

6.5 Specialised Services

- Productivity study of opencast and underground mines
- Techno-economic survey of mineral properties
- Production planning and grade control on given process parameters

6.6 Advanced computer facilities like Surpac 2000 computer system alongwith latest software on mine planning and designing, map making etc, highly sophisticated, sensitive and accurate survey equipment like Differential Global Positioning System (DGPS), Electronic Total Station, Electronic Distance Meter,

Lap Top Computer with software suitable for processing of survey data, available in this division provide necessary sophisticated backup to these services.

6.7 Achievements

During the period April, 2015 to March 2016, 2 survey assignments and 2 Regional Mineral Development Studies of Manganese Ore mines located in Madhya Pradesh Statehave beencompleted, against the target of 1-2 Mining assignments, 2-3 geological assignments & 2-3 Survey assignments & 2 Regional Mineral Development Studies with special emphasis on SDF aspects in the state of Madhya Pradesh for Manganese Ore Mines (as per action plan 2015-16).Total revenue generation for the period for 20145-2016 is **Rs. 7,44,804.**

Projects Completed:-

a) Joint survey and measurement of Excavation work of lignite stock of **Vastan Lignite mine** of M/s Gujarat Ind. Power Co. Ltd. Surat Gujarat.

b) Joint Survey of Excavation measurements at **Valiya lignite mine** of M/s Gujarat Ind. Power Co. Ltd. Surat, Gujarat.

c) 2 Regional Mineral Development Study, 2 clusters of Manganese mine located in Madhya Pradesh State

Two clusters of Manganese mines in Balaghat Distt. of Madhya Pradesh State.

Cluster- I consist:

i) Ukwa Mn Mine, of M/s MOIL Ltd.
ii) Jagantola Mn Mine, of M/s Hira Power.
iii) Jagantole Mn Mine, of M/s Krishna Mining.
iv) Laughar Mn Mine, of M/s Pacific Minerals.

Cluster- II consist:

i) Ramrama Mn Mine, of M/s A.P.Trivedi.
ii) Netra Mn Mine,of M/s Pacific Minerals.
iii) G.F.S.R. Mn Mine,of M/s J.K.Minerals
iv) Katangjhari I & II Mn Mines, of M/s J.K.Minerals.

A) Regional Mineral Development Study of Ukwa Mn Mine, of M/s MOIL Ltd., Jagantola Mn Mine, of M/s Hira Steel & Power, Jagantole Mn Mine, of M/s Krishna Mining& Trading Syndicate & Laughar Mn Mine, of M/s Pacific Minerals in Balaghat distt. of Madhya Pradesh State.

During the annual programme year 2015-16 RMDStudy-II, covers four Maanganese mine in Balaghat district of Madhya Pradesh - Ukwa, Manganese Mine of M/s MOIL Ltd., Jagantola Manganese Mine of M/s Hira Power & Steels Ltd., Jagantola Manganese Mine of M/s Shree Krishna Mining & Trading Syndicate, & Laugher Manganese Mine of M/S Pacific Minerals Pvt. Ltd.

Ukwa Mn mine of M/s MOIL Ltd. having total lease area199.0673 Ha In which 1.983 Ha is forest land. Another 69.58 Ha and 48.97 Ha area have been granted to M/s MOIL Ltd in the dip side (towards north) of 199.0673 Ha lease area. Jagantola Manganese Mine of M/s Shree Krishna Mining & Trading Syndicate having total lease area62.58 Ha.Jagantola Manganese Mine M/s Hira Power & Steels Ltd having total lease area6.264 Ha &Laugher Manganese Mine of M/s Pacific Minerals Pvt. Ltd having total lease area10.00Ha. The entire lease area of Laugher Mn Mine is forest land.

Madhya Pradesh is the leading producer of manganese ore in the country contributing to the extent of 30% of India's production of manganese ore. Almost all the production from the state is reported from Balaghat, Chhindwada& Jhabua districts, of which Balaghat district contribution more than 90%.

This area lies in Sausar belt of Pre-Cambrian era. The manganese ore is associated with Mica Schist of Mansar formation. Locally the area is represented by Phyllite, Quartz Mica schist and Sericite schist in hang wall side and Quartz Sericite schist and felsapathic quartz schist at the footwall side. The Sausar group extends broadly in ENE-WSW direction from Balaghat district, M.P. in the east and passes through Bhandara district and Nagpur district, in the center and end in Chindwada district in the west, comprising within it the famous manganese belt of Central India. This belt stretches over a length of 220 km and is about 25 km wide in the Central part. The regional strike of formations is E-W varying to ENE-WSW locally, with moderate to steep southerly dips varying from 45º to 70º.

Regionally the area forms rolling and plain topographic terrain. A rolling topography with low lying hillock is the outstanding topographical feature of Ukwa Mine. In Jagantola Mine the area in general is plain territory and the general slope of the area is towards north - east direction. The average mRL is 636. Laugher Mine area is a part of the Maikal ranges of Satpura. In lease area occupies almost east waste trending ridge with northerly slop. The ridge developed a depression in the central part and two parts of ridge locally named as Hill no 1 in west and hill no 2 east.

The reserves/recourses have been estimated considering 10% Mn content as threshold value. As on 01.04.2015, total resources in Ukwa mine are 4623598 tonnes, out of which 4167406 tonnes are reserves. In second lease (69.581 ha), 1380481 tones of probable reserves (121) and 2988034 tones of inferred resources (333) are estimated. Similarly in third lease (48.974 ha), 1626590 tones of probable reserves (122) and 2225510 tones of resources (222 & 333) are estimated.In Jagantola Mine (Krishna mining & Trading Syndicate), total resources are 85050 tonnes out of which 68040 tonnes are reserves and 17010 tonnes are resources. As on 01.04.2015, total resources in Jagantola mine (Hira Power & Steel Ltd) are 199297 tonnes, out of which 116263 tonnes are reserves and 83034 tonnes are resources. In Laugher Mine, total resources are 518011 tonnes out of which 488011 tonnes are reserves and 30000 tonnes are resources. The resources may increase with the systematic exploration in the lease area.

The Ukwa Manganese mines comprised three leases which are contiguous. Lease-I is of 199.067 ha. , Lease-II is of 69.581 ha and Lease-III is of 48.974 ha. Presently, opencast & underground mining is carried out in Lease-I. Dump mining is also reported. Lease-II is reported small scale dump mining. Lease II is mainly for underground extension of dipping ore body where Levels of 1750'L onwards will be developed up to 850'L through vertical shafts. The Jagantola Manganese Ore Mine of M/s Hira Power & Steels Ltd. is worked by underground method. Only development work is reported&another Jagantola Manganese Ore Mine of M/s Shree Krishna Mining & Trading Syndicate is worked by opencast method. Laugher Manganese Ore Mine of M/s Pacific Minerals is worked by Underground method.Flat back Cut and Fill method of stoping with sand stowing is used.

All efforts are being made to recover the mineral from ROM using mechanical and manual beneficiation in all the mines. Non-sealable mineral is stacked separately. The environmental parameters for monitoring viz. air, water, noise etc. being diligently monitored for the environmental management by M/s MOIL Ltd. itself at Ukwa Mn Mine, whereas Madhya Pradesh State pollution Control Board is monitoring environmental parameters of Jagantola Manganese Ore Mine of M/s Hira Power & Steels Ltd; Jagantola Manganese Mine of Shree Krishna Mining & Trading Syndicate & Laugher Manganese Mine of M/s Pacific

Minerals. The results reported are within the permissible norms.

Conclusion and recommendation:

Conclusion :

- The rock types exposed in the study area belongs to Tirodi, Sitasawangi and Mansar formation of Sausar series of Pre-Cambrian Age. The manganese ore occurs at the contact of lower Sitasawangi and upper Mansar formation. The area is also traversed with younger intrusive consisting of quartz and pegmatite veins.
- The Manganese Ore horizon, in conformable relation with the enclosing rocks, follows the regional trend and can be traced intermittently from Bharveli to Ukwa through the occurrences at Kanhatola, Laugher, Gondi, Jagantola and Gudma. The strike of formations in study area is E-W varying to ENE-WSW, with moderate to steep southerly dips varying from 20º to 30º.
- Structurally, the area is simple and does not show much variation in attitudes both along the dip and strike direction except discontinuity along the strike and variation of thickness mainly due to localizes feature. Along the dip direction the mineralization is deep seated.
- Exploration, development and production in all the mines are not as per the proposal given the approved documents.
- The reserves/resources have been estimated considering 10% Mn content. The reserve has been estimated as per UNFC based on the data generated by exploration, opencast working and underground development covering entire lease area.
- Mining operations are being carried out both by opencast and underground method. Systematic mining is being done in Ukwa mineof M/s MOIL, where as in other mines mining operations are not fully systematic.
- Suitable protective measures are being taken in the interest of protection of environment ie air, water and noise pollution. The results are within permissible limit. Regional environment is suitable for human being.
- In the interest of optimum mineral conservation, ROM produced is beneficiated by screening, washing, manual sizing, sorting, and blending of low grade with high grade, thereby increasing the recovery percentage of salable mineral.
- The mines are in the operation and have not reached to a stage of exhaustion, hence reclamation and rehabilitation is not warranted at this stage.
- The socio-economic status of people has improved by direct and indirect employment in the area. Activities under CSR has further bust up their economic status. The follow up of SDF measures while mining has improved health status.

Recommendation:-

- About four decade backGSI identified the mineral existence in the study area by exploratory drilling on regional scale. Present geological set up as established in study area by exploration and underground development confirms the continuation of mineralization both along strike and dip direction in all mines. Hence, the following areas are recommended for detail exploration either by GSI, MECL, State Government or any other exploration agency as per the provisions of MMDR Act- 2015,MEMC Rule-2105 and Auction Rule-2015 by using National Mineral Exploration Trust Fund.The data generated shall be useful for framing suitable mineral development planning and policies by the Government which are essential for national growth.
- The area along the strike direction in the east of Ukwa mine for a distance of about 1 km and west of Laugher mine.
- The area between Jagantola mine and Laugher mine for distance of about 4km., for which many applications

were pending with the State and Central Government, prior to the notification of Auction Rule - 2015 for grant of PL or ML This area previously was held under mining leases, now either has been surrendered/terminated due to unfavorable market conditions vis-à-vis mining economics. Huge quantity of mineral is expected to be available is evident from the surface and old excavation exposures, which have not been prospected in detail by any Government agency and hence suitable for taking up systematic detailed exploration. This area may also be considered to be granted under PL cum ML through auctioning process.

- The area outside the study area, in the dip direction from Ukwa-Jagantola-Laugher mines shows continuity of mineralization at greater depth almost over a length of 12 km without any remarkable structural disturbances, which needs to established by detailed exploration. This area may also be considered to be granted under PL cum ML through auctioning process.
- It is also recommended that the above proposals of exploration may be discussed in State Geological Programming Board (SGPB) / Central Geological Programming Board (CGPB) meets and to know the true potential of the deposit detail exploration may be taken up on priority. This will result into augmenting the resources /reserve base of the country and in term generation of additional revenue by the State Government by auctioning the deposit.
- There are deviations in approved proposed exploration, development and production and in actual done, which is against the systematic and scientific mining. MRD division should take adequate measures as per the prevailing rules for its implementation.
- Considering mine wise established resources and its present rate of production,life of mine there is scope for augmentation of production in the study area without harming environment.

B)Regional Mineral Development Study of Ramrama Mn Mine, of M/s A.P.Trivedi, Netra Mn Mine,of M/s Pacific Minerals, Netra Mn Mine,of M/s Pacific Minerals & Katangjhari I & II Mn Mines, of M/s J.K.Mineralsin Balaghat distt. of Madhya Pradesh State.

Ramrama Manganese Mine (43.086Hect of M/s A.P.Trivedi Sons), Netra Manganese Mines (20Hect.) of M/s Pacific Minerals, G.F.S.R Lease-.I & II (33 Hect.Govt. Forest) and Katangjhari Lease- I & II (3.38 & 5.26 Hect) of M/s J.K.Minerals.

The mines are located about 40 to 45 kms NE of Balaghat, near Warasioni tehsil of the Madhya Pradesh State. The rock types exposed in the region belongs to Mansar stage of Sausar Series of Pre-Cambrian Age. The strike of the formation varies from almost E-W to ENE-WSW with dip amount varying from 14^0 to as much as sub vertical and direction towards both north and south. Hangwall side of ore body is having quartz- mica- schist & in footwall side is muscovite- sillimanite- schist. The major portion of the area on the surface is covered with soil, at some places rocks are exposed on the surface.

Structurally, ore body in Ramrama mine is complex and shows series of folding both along strike and dip direction, however structure in other mines is rather simple except variation in thickness and discontinuity of ore body along the strike and dip mainly because of localized phenomena and history of deposition. The rocks of the area have undergone intense deformation, resulting in the close variation in topography. The mineralization in study area is topographically controlled from GFSR Lease-I to Netra mine, where as in Ramrama mine it is structurally controlled.

The area was prospected by in the past GSI by on regional scale. Most of the

mines covered under the study are operated by underground mining method. Ramrama, GFSR and Netra, mines are operated by opencast as well as underground mining method and Katangjhari I & II mine by opencast method. The ROM produced from the underground in Ramrama, G.F.S.R mine is hoisted to surface by shaft as well as by incline and at Netra mines by incline In Katangjhari I & II are opencast mines loading of ore is done by mechanized means. The total mineral resources in the study area are estimated to the tune of 3644725 tonnes of which 13,92,997 tonnes, 8,38,953 tonnes, 16,75,369 tonnes 46,675tonnes and 33,619 tonnes are estimated in Ramrama, G.F.S.R. block-I and block-II, Netra, Katanjhari-I and Katangjhari - II mines respectively.

Conclusion:

- The study has been life, method of working, waste generation during mining, disposal, environmental impact on the surrounding and mitigation measure as undertaken by the lessee, zero waste mining if any and reclamation & rehabilitation.
- The manganese ore deposits in this area are associated within the rocks of Sausar Series of Pre-Cambrian Age. The mineralization is restricted within mica-schists on hang wall side of Mansar stage and quartzite on foot wall side of Sitasaongi stage. The area has passed through various phases of deformation resulting into folding and faulting of strata. Due to thick mantle of soil cover in the area the regional structure largely remains vague. The regional strike of the litho-units in the area varies between EW to WNW-ESE with general dips towards north, however in Ramrama mine the strike of the ore body varies from WNW- ESE, to WNW-ENE with both northerly as well as southerly dips. The manganese ore deposits in the area consists of syngentically formed primary braunitic, rhodonetic and gonditic ores. The orebody shows variation in thickness with pinching and swelling character.
- The old quarries on reaching economical depth by opencast method have been converted into underground mines by opening inclines and shaft. Most of the area covered under study falls under forest land and hence mining by underground method is most convenient. A small part of the area belongs to Government/private revenue land. The depth of the orebody is almost established in the lease area, however its continuation beyond the lease area is not known. From the existing details it seems that the ore body is deep seated along dip direction. The ore is extracted by developing driveges of levels and winzes/raises in ore body itself following the footwall contact and by using flat back cut and fill stoping method.
- In Ramrama mine even after sufficient subsurface data generated by exploratory drilling and extensive underground development the geometry of orebody is not so far clear mainly becausecomplex geological structure. Underground detail structural mapping coupled with data generated by exploration and underground development may be used for delineation of exact geometry of orebody by drawing geological cross-sections. The assessment of resources/reserves will facilitate for proper underground development planning and designing of stopes and stoping method.
- Mining operations are being carried out both by opencast and underground method. Systematic and scientific mining is not done in any of the mines.
- The mines are in the operation and have not reached to a stage of exhaustion, hence reclamation and rehabilitation is not proposed by them.
- The socio-economic status of people has improved by direct and indirect employment in the area. Activities under CSR has further boosted up their economic status. The follow up of SDF

measures while mining has improved health status

- The condition of submission of Geo-reference map as per CCOM circular could not be complied since the State Government is yet to authorize agency to undertake such survey work.
- Total 3.4059 ha area is covered under afforestation within the lease. Plantation is done on 7.5m lease barrier. Most of the mines are located in forest and is covered with thick vegetation.
- CSR activities carried out in the area by individual lessee does not show desired results due to lack of efforts. The network of roads used for mining activities are kaccha roads and quite good number of vehicles ply daily which harm the environment of the area to certain extent. Money generated under District Mineral Foundation, after establishment may be utilized in this region for development of infrastructural activities like roads, transport, health and education depending on priority.
- Good quantity of resources is already established in all the mines and ongoing exploration and development has also proved the mineralization at deeper level hence possibility of closure of mines and issue of retrenchment of employees does not arise at this stage. However, with the present status locals will be benefited through fresh employment in due course of time
- At Ramrama mine low-grade ore, rejects and lumps attached with small portion of manganese is crushed to -5mm size beneficiated through mechanical jigging process. The grade of this ore is almost +25% Mn content and waste is devoid of marketable ore. Zero waste mining concepts is implemented by using the entire waste generates for leveling of the reclamation of areas. The water used in this beneficiation process is recycled thus avoided pollution of natural water courses.
- The development and production in open cast and underground sections is not done as per proposal given in the approved document in all the mines. The parameters of benches in opencast sections as proposed are not maintained. Plans are not regularly updated. Plantation is not done as proposed.

Recommendation:-

- Geological Survey of India prospected the study area during various time between 1950 & 60 on regional basis by exploration and identified mineral existence. Present geological set up as established in the individual mine by exploration and underground development confirms the existence of mineralization mainly dip direction in all mines. Hence, the following areas are recommended for detail exploration either by GSI, MECL, State Government or any other exploration agency as per the provisions of MMDR Act- 2015, Mineral Evidence and Mineral Content Rule-2105 and Auction Rule-2015 by using National Mineral Exploration Trust Fund. The data generated shall be useful for framing suitable regional mineral development planning and policies by the Government which are essential for national growth.
- The manganese mineralization in Ramarama mine is structurally controlled. Due to complex structure of multiple folding in the lease area, geometry of orebody is not clearly deciphered. Hence it is recommended that, detail underground structural mapping may be carried out and along with generated exploration and underground development data, attempts may be made by lessee to delineate exact geometry of ore body for scientific and systematic development planning.
- Considering the overall structure and control of mineralization in the Ramrama – Netra manganese belt and in particular the repetition of orebody due to multiple folding and topographic control of mineralization in Ramarama

mine the freehold area between northern lease boundary of Ramrama mine upto the hill is also recommended for exploration.

- The manganese mineralization in the GFSR and Netra mines is topographically controlled. In this mines ore body dips towards north direction and has been fully established upto northern lease boundary by underground development. The orebody does not show any sign of discontinuity, variation in thickness, grade, and attitudes, and does not show specific structural disturbances indicates that, orebody further continue beyond lease in the dip direction and passes in the hill. The extension of orebody needs to be established by detailed exploration, hence, recommended to be granted under PL cum ML through auctioning process.
- There are deviations in approved proposed exploration, development and production and in actual done, which is against the systematic and scientific mining. MRD division should take adequate measures as per the prevailing rules for its implementation.
- considering mine wise established resources and its present rate of production, life of mine there is scope for augmentation of production in the study area without damaging environment.
- It is also recommended that the above proposals of exploration may be discussed in State Geological Programming Board (SGPB)/Central Geological Programming Board (CGPB) meets and to know the true potential of the deposit, detail exploration may be taken up on priority. This will result into augmenting the resources /reserve base of the country and in term of generation of additional revenue by the State Government by auctioning the deposit.

CHAPTER –VII

MINERAL ECONOMICS DIVISION

The Mineral Economics Division (ME) provides information support and advisory services to the Government and Mineral Industry specially on issues like marketing, specifications and uses of minerals, mineral legislation, inventory of mineral resources, mining leases, and taxation etc. Moreover, it disseminates latest information on mineral industry, collected through statutory as well as non-statutory sources, through its flag-ship publication `Indian Minerals Year Book' and number of other publications. This Division is headed by a Chief Mineral Economist (CME). The IBM's Library and IBM Press are also function under this Division.

ACHIEVEMENTS

7.2 NATIONAL MINERAL INVENTORY (NMI)

Synthesis of inventories of freehold, leasehold Public & Private sector deposits and generation of summary outputs in respect of selected 25 minerals as per UNFC of National Mineral Inventory as on 1.4.2013 in respect of of selected 25 minerals as per UNFC was completed. The publication on "National Mineral Inventory as on 1.4.2013-At a Glance" in respect of selected 25 minerals was released and uploaded on Indian Bureau of Mines website. The publication provides reserves/resources of minerals produced in the country as per United Nations Framework Classification (UNFC) adopted by the Indian Mineral Industry. The reserves/resources data have been provided in tabular form with elaborate depictions of mineralwise distribution of resources in different states and vice versa, which have been duly indicated with codes and terminologies as per UNFC.

Quinquennial updation of NMI as on 1.4.2015 as per UNFC for 71 minerals was initiated. An All India Conference to gather the views of various stake holders was successfully organized on 15th July,2015. The processing and generation of mineral wise comparative statements in respect of 14 minerals were completed. Data collection through literature survey & field visits, data entry of freehold, leasehold Public & Private sector deposits and generation of summary outputs in respect of remaining minerals is in progress.

The NMI is based on UNFC system which is being used to for making decisions of investments in the mining and exploration sectors by domestic/foreign investors. Such a system has wide ramifications of use in different kinds of decision making and policy formulation concerning not only minerals but allied fields as well.

Mineral wise Reserve/remaining resources as on 01/04/2010/2013 is enclosed as **Annexure-X**.

CONFERENCE ON NATIONAL MINERAL INVENTORTY-2015

A Conference on National Mineral Inventory (NMI) -2015 was organized by IBM at Nagpur on 15 July, 2015 in the context of updation of NMI as on 01.04.2015. The participants in the conference represented vide spectrum of stake holders of mineral industry from the State/Central Governments and also

public & private sector of the mineral based industries. There were about 140 participants including delegates from various organizations and Central/State Government Undertakings like Geological Survey of India (GSI), Atomic Minerals Division (AMD), Mineral Exploration Corporation Ltd. (MECL), State Directorate of Geology & Mining, National Mineral Development Corporation (NMDC), MOIL Ltd., National Aluminium Co. Ltd. (NALCO) and private entrepreneurs like Tata Steel, Jindal Steel & Power Ltd., Hindustan Aluminium Co. Ltd., etc. 'NMI at a Glance as on 01.04.2013' was released on this occasion and distributed to the delegates.

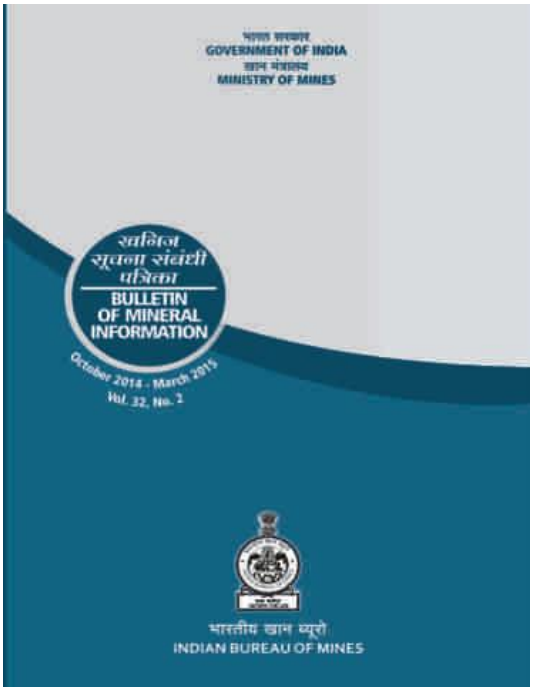
Shri Kutumba Rao, Additional Director General & HOD, GSI (Central Region), Nagpur was the Chief Guest while Shri K. Thomas, Controller General (Incharge), IBM presided over the inaugural function. Shri Kutumba Rao, in his speech, while appreciating the role played by IBM in updating NMI has stressed upon to work together to contribute to the national growth by extending support in preparation/updation of NMI. Shri K. Thomas in his speech has reiterated that updation of mineral inventory has to be done very precisely with utmost care in order to have a clear picture of the availability of the minerals for planning for utilization of resources.

The conference was conducted in four technical sessions having lecturers and deliberations on UNFC Guidelines, list of minerals and enduse grade classification.

7.3 BULLETIN OF MINERAL INFORMATION (BMI)

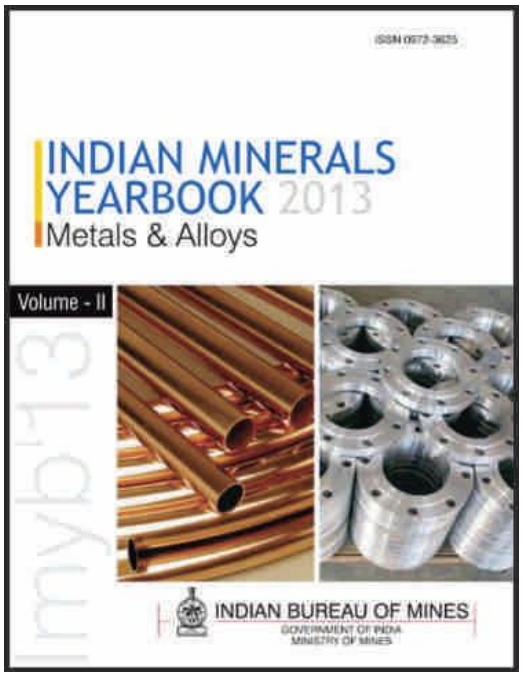
Bulletin of Mineral Information (BMI) is a half yearly Bulletin, published by IBM, a sole publication in the country of its nature, which provides information to mine owners and mining industry on – court decision concerning mineral legislation, trade policy on minerals & metals; trends in mining lease and prospecting licenses along with R/P granted for mineral based industries in the country; the month wise production of various mineral based products and also high lights status of mineral and mining industries both in domestic & foreign sector.

In a nutshell, this publication provides concise & synthesized knowledge and information on mining of various metallic / industrial minerals of the country, explored through its respective mines.



During the period 2015-2016 BMI viz. October 2014-March 2015 issue was published and released, April 2015-September 2015 issue was uploaded on IBM's Website and BMI issue October 2015-March 2016 is under progress.

7.4 INDIAN MINERALS YEARBOOK (IMYB)



IMYB is the flagship publication of IBM brought out in three volumes. It consists of **Part I** having as many as 11 General Chapters, **Part II** consists of 19 Reviews on Metals & Alloys and **Part III** consists of 50 Mineral Reviews.

This publication covers information on minerals and mineral-based commodities, their development, production, resources/reserves, consumption, trade and policy. It also includes world scenario. IMYB provides a status report of Mining and Mineral Industry in India on an annual basis. This publication has wide readership- both National and International which is now available on IBM's Website.

For IMYB 2014 (data 2013-2014), total 80 general/metal & alloys/mineral reviews were prepared, technically edited, finalized and sent to Press after consolidation of all chapters with the statistical data. The IMYB 2014 was uploaded on IBM's portal.

IMYB Volume I–March, 2016(Advance)

IMYB Volume II – May, 2016(Final) and

IMYB Volume III –July, 2016(Final)

For IMYB 2015(data 2014-2015) about 3,550 letters/questionnaires were issued for capturing of data. Nearly 700 (including Form 'O','N' and Others) receipts from various mineral-based industries, Central/State Government Departments, Central/State Undertakings, National Laboratories etc. were received during the period under review. End-use mineral consumption tables (data 2014-2015) in respect of 50 minerals were computed.

Registration under Rule 45 of MCDR, 1988 (As on 31/03/2016)

End users	Traders	Stockiest	Exporters	Total
3153	5009	1605	832	10599

7.5 DIRECTORY OF MINING LEASES

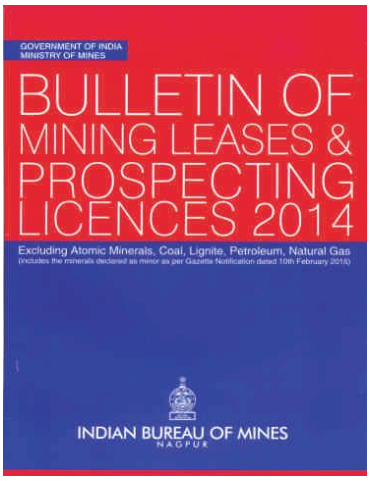
Updation of Mining Leases information based on consolidated annual returns from State Governments and Union Territories under statutory provision of Rule 57(2) of MCR, 1960 was continued. Based on this, Directory of Mining Leases in India depicting the distribution of mining leases granted/executed for different states is updated every year. This information is also used in the preparation of 'Bulletin of Mining Leases and Prospecting Licenses'.

Directory of Mining Leases in India as on 31-03-2015 has been released. The work for preparation/updation of Directory of Mining Leases in India as on 31-03-2016 is in progress by way of collecting information from State Governments, Union Territories, and

Central and State Public Sector Companies. The processing/scrutinizing of the data available in annual returns received from various state governments and work of data entry are in progress. State-wise summary of lease distribution as on 31/03/2015, mineral-wise summary of lease distribution as on 31/03/2015 is enclosed as **Annexure-XIII C&D** respectively.

A sum of Rs. 90,000/- was realized on sale of mining lease information during the period April 2015 to March 2016.

7.6 BULLETIN OF MINING LEASES AND PROSPECTING LICENCES.



The Bulletin of Mining Leases and Prospecting Licenses contains information on mining leases, prospecting Licenses as well as reconnaissance permits. The bulletin provides the distribution pattern of mining leases spread over in as many as 23 states with its break-ups into state-wise, district-wise, mineral-wise and sector-wise (Public & private) information demarcating high, medium and low mineral potential bearing districts. Exhaustive information on mining leases abridged concisely for easy assimilation will suit the convenience of readers/entrepreneurs or policy makers.

The Bulletin of Mining Leases and Prospecting Licenses, 2015 is under progress.

7.7 MINERAL INFORMATION AND ADVISORY SERVICES

During the year, 57 Parliament Questions, 21 Central Govt. references and 04 private and 56 other inquiries from other divisions of Bureau were also attended. These were related to mineral resources, availability and utilization, reservation of mineral-bearing areas, mineral trade, policy, mineral legislation, etc. A status note on the mining and mineral sector for the year 2015-16 is also prepared.

7.8 WORLD MINERAL INTELLIGENCE

During 2015-16, 11 ministry references were attended. Comments/suggestions and draft notes were furnished and these are related to mineral Trade, bilateral co-operation in Mining and Mineral sector.

During the year 2015-16, the country wise/mineral wise reserves data for 45 minerals based on Mineral Commodity Summaries, USGS were prepared and furnished to IMYB Unit. Country wise World Production data for the year 2011, 2012 & 2013 was updated and data inputting for the year 2014 is carried out and output is generated and the same were also forwarded to IMYB unit for incorporation in various reviews of IMYB.

7.9 MINERAL LEGISLATION

Amendments made in Mines and Minerals (Development and Regulation) Act, 1957

The Central Government has suggested amendments in the MMDR Act, 1957 on 9th May, 2016. Section 3(a), (aa) were substituted, new clause inserted in sub-section (6) of Section 12A of MMDR Act, 1957 and clause (qqja) is inserted after clause (qqj) of sub-section 2 of Section 13 of the above said act.

Further, the Central Government has framed the following legislations to implement the above said Act :-

(i) The Central Government in exercising the powers conferred under Section 13 of the MMDR Act, 1957, makes the Minerals (Evidence of Mineral Contents) Rules, 2015, notified vide Ministry of Mines, notification No.G.S.R. 304(E) dated 17.4.2015; Further, Central Government has framed following legislations to boost the mining sector;

(ii) The Central Government in exercising the powers conferred under Section 13 of the MMDR Act, 1957, makes the Mineral (Auction) Rules, 2015, notified vide Ministry of Mines, notification No.GSR 406(E) dated 20.5.2015;

(iii) The Central Government in exercising the powers conferred under Section 9B(5) and (6) of the MMDR Act, 1957, framed the Mines and Minerals (Contribution to District Mineral Foundation) Rules, 2015, notified vide Ministry of Mines, notification No.G.S.R.715(E) dated 17.9.2015;

(iv) The Central Government in exercising the powers conferred by clause (qqh) of sub-section (2) of Section 13 read with Section 10C of the MMDR Act, 1957, makes the Mineral (Non-exclusive Reconnaissance Permits) Rules, 2015, notified vide Ministry of Mines, Notification No.G.S.R.516(E) dated 29.6.2015;

(v) The Central Government in exercising of the powers conferred by sub-section(2)(3) and (4) of Section 9C and Section 13 of the MMDR Act, 1957 makes the National Mineral Exploration Trust Rules, 2015, notified vide Ministry of Mines, Notification No.G.S.R.632(E) dated 14.8.2015;

(vi) The Central Government in exercising the powers conferred under Sub-section (1) of Section 9C of the MMDR Act, 1957, establish a Trust to be called as the National Mineral Exploration Trust with a Governing Body and an Executive Committee, notified vide Ministry of Mines, Notification No.G.S.R.633(E) dated 14.8.2015;

(vii) The Central Government in exercising the powers conferred under Sub-section(2), (3) and (4) of Section 9C and Section 13 of the MMDR Act, 1957, makes the National Mineral Exploration Trust Rules, 2015, notified vide Ministry of Mines, Notification No.G.S.R.632(E) dated 14.8.2015;

(viii) Amended Rule 45 of MCDR, 1988 and notified vide Notification No.G.S.R.430(E) dt.19.4.2016.

(ix) The Central Government in exercising the powers conferred under Section 13 of the MMDR Act,

1957, makes the Minerals (other than Atomic and Hydro Carbon Energy Minerals) Concession Rules, 2016, notified vide Ministry of Mines, Notification No.G.S.R.279(E) dated 4.3.2016;

(x) The central Government has framed National Mineral Exploration Policy (non-fuel and non-coal minerals), 2016.

(xi) Draft Mineral Conservation and Development (Second Amendment) Rules, 2015, not notified; etc.

7.10 CENTRAL LIBRARY

The Central Library of IBM is categorized as special library in terms of Library Science. The library is enriched with valuable collection on subjects like Mineral Economics, Mineral Processing, Mining Research, Environmental Engineering, Mineralogy and more related subjects. Besides books and journals, the collection includes unpublished reports of Indian Bureau of Mines and Geological Survey of India and published reports of various ministries etc. The collection of Records, Memoirs, Bulletins, Maps, Atlases, Symposium and Seminar Proceedings make the library "Information Hub" for IBM.

Every year Library Committee Meeting is held for procurement of Library publications such as Technical Journals, Administrative as well as Hindi Publications and Newspapers for Central Library and IBM(HQ). The committees members are nominated from different divisions of Indian Bureau of Mines headquarter. The budget 20 lakh was allotted for purchase of publications for Library during the year 2015-2016 . Within this budget purchase of

Publications, Journals, Newspapers, Magazines for IBM(HQ) and Journals, Books for Modern Mineral Processing Laboratory of IBM at Hingna was also done. During the financial year 2015-2016, 8372 Publications, Gazettes, Annual Reports, Periodical and Newspapers were procured in the library.

The total collection has crossed the figure 1,39,795 (Books, Bound Volumes, unpublished reports and gazettes etc.), special drive of Hindi publications for Hindi language promotion as per Central Government norms is also achieved. The aim of this library is to procure publications on the above and other related subjects of Science and Technology for the users of Indian Bureau of Mines (HQ, Zonal/Regional Offices and Mineral Processing Division) all over India.

ACTIVITIES & SERVICES

- OPAC - On Line Public Access Catalogue is a Libsys based service for searching the publications and journal articles by the users.
- Lending of Publications – In 2015-2016, 1230 publications were borrowed by IBM Users and 4700 Publications were consulted.
- Reference Service - 4566 references were provided to IBM Users from Publications, Journals, Gazettes, Newspapers and Administrative Matter
- Indexing of articles from Technical Journals.
- National and local dailies are procured in the library and provided to the users during the lunch time

- Classified Mineral News - Current Awareness Service- News Clipping File (marking and compilation of news items from news papers)
- GEM - Current Content (Compilation of front page and content page of Technical Journals)
- MINERAL NEWS-Twelve Mineral News files are updated every month by mineral news.
- SELECTIVE ARTICLES-Through e-mail important articles from journals are scanned and sent to the users as SDI service.
- Online Activity-The journal "World Metal Statistics" and "Gazettes" are now online.

For the benefit of the users, Library compiled subject wise bibliographies, provided index for all technical subjects related to IBM, Annual Reports, and Gazette Notifications and Administrative matters. Also it helped readers by providing Xerox copies, including copies for outsiders on payment basis and information on reference enquiries.

Every year Library Committee Meeting is held for procurement of Library publications such as Technical Journals, Administrative as well as Hindi Publications. The committee members are nominated from different divisions of Indian Bureau of Mines headquarter. The budget of 20 lakh was allotted for purchase of publications for Library. Within this budget purchase of journals and books for Mineral Processing Laboratories of IBM at Ajmer, Banglore and Hingna was also done.

7.11 IBM PRESS

The Publication Section more or less functions as a full-fledged Publishing House of IBM operating within the precincts and responsibilities of the Bureau. As per the New Charter of Functions effectuated from 22.11.2014 post its notification in the Gazette of India, IBM fulfils the function, i.e., "collect, collate and organise into a database, all information on exploration, prospecting, mines and minerals in the country in the shape of National Mineral Information Repository and take steps to publish and disseminate the same." One of the vital channels adopted by the Bureau to disseminate the data/information on mines and minerals is through its publications. Beginning July, 2016, the section is also engaged in making of e-books for Mobile App, IBM e-book reader, launched to make available free of cost publications of IBM in an E-book format on mobile phones for public in general and for those from mineral sector.

The Publication Section of IBM constitutes Editorial, DTP, Production & Printing and Binding units. The functions include editing, designing & formatting and publishing of technical literature in the form of Indian Minerals Yearbook, Monthly Statistics of Mineral Production and various other periodicals, technical bulletins, monographs, newsletter etc. It is also engaged in conversion of text publications to EPUB format through book marking and hyper linking for launching the books on the mobile app. The Section also initiates price fixation mechanism for all the publications published at IBM. It also undertakes complimentary distribution and sale of publications and formalizes agreements for mutual exchange of publications with organizations of repute in India and abroad. The section generated a revenue

of Rs 1,83.556/- through sale of publications in 2015-16.

Thus, the Publication Section through its in-house printing facilities which involve Photo-offset Printing Units fulfills all printing needs of the Bureau besides printing of publications. The in-house printing facility or IBM Press during the period ending 31 March, 2016 undertook printing of approximately 7.02 lakh page impressions of various publications, reports, newsletter etc. A list of publications released during 2014-15 is placed **at Annexure VI.**

CHAPTER –VIII

MINING AND MINERAL STATISTICS DIVISION

The Mining and Mineral Statistics (MMS) Division is assigned with the responsibility of maintaining data base on mineral sector. This Division furnishes data on mineral sector on regular basis to Ministry and Central & State govt. organizations. The data mainly comprises of mineral production & value, index of mineral production, average sale price of specified minerals for computation of royalty by state govt., export/import related information etc. This division comprises of officers/officials of ISS & SSS Cadre and supported by Ministerial staff from IBM. During the year 2015-16, the following work was carried out:-

Processing of Monthly & Annual Returns and Database Management

8.1 Mines Cum Production (MCP) Database

MMS Division receives monthly and annual returns in prescribed formats under rule 45 of MCDR, 1988 from mines regularly. Data entry and verification of 2360 Annual Returns received under MCDR for the year 2014-15 was completed. Outputs for the year 2014-15 and 2015-16 relating to labour, production, stocks and value were generated. Processing of monthly returns for the year 2015-16 was taken up. Data entry and verification of data received in 26924 monthly returns were completed and provisional monthly statements generated for the year 2015-16. The Directory of Mines as on 31.03.2016 contains 1581 reporting mines. A number of software application dynamic reports using SQL were developed to generate outputs from the MCP database.

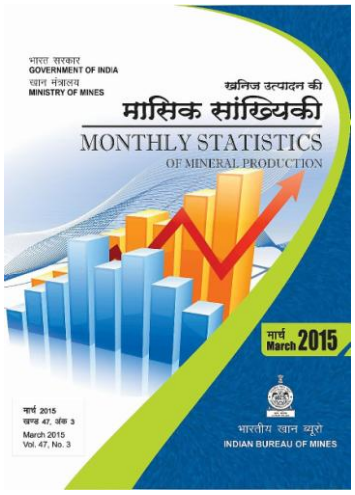
8.2 External Trade Database

Data on external trade are received from the Directorate General of Commercial Intelligence and Statistics (DGCI&S) in accordance with Indian Trade Classification based on Harmonized Commodity Description and Coding System. The data is received annually in respect of more than 1300 commodities which cover minerals, metals and selected mineral based products. Export and Import data of minerals, metals and selected mineral based products received from DGCI&S for the year 2014-15 was processed and about 500 statements were generated.

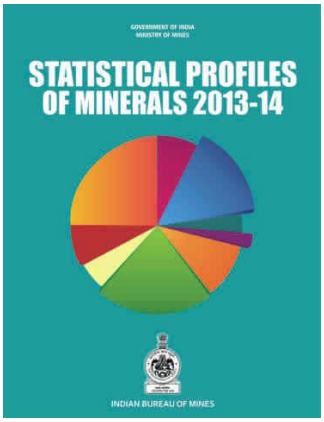
Publications

8.3 Monthly Statistics of Mineral Production (MSMP)

This monthly publication contains information on Index of Mineral Production, state-wise mineral production and value, average sale price of minerals by grades etc. During the year, 14 issues of the publication for the months of October 2014 to November 2015 were released.

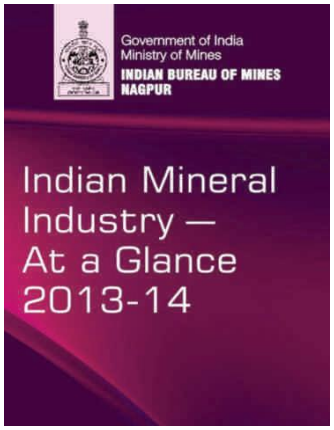


8.4 Statistical Profiles of Minerals (Annual)



This publication gives a bird's eye view of most of the vital aspects of major minerals (except fuels and atomic minerals) produced in India. It contains information on production, value and stocks of minerals, labour employment and number of reporting mines for the current year. Besides, data on reserves, mining leases, life index of mineral resources, export and import of minerals are incorporated for the latest available year. The issue for 2014-15 has been finalised and would be shortly uploaded on the website of IBM.

8.5 Indian Mineral Industry at a Glance (Annual)



This publication provides time series data on production of minerals, metals and mineral based products, consumption of minerals, labour employment and external trade. In addition, information on mining machinery, consumption of explosives, mining leases and afforestation in metalliferous mines are also presented for the latest year. The issue for 2013-14 has been released; the issue for 2014-15 is under preparation.

8.6 Indian Minerals Yearbook (annual)

Statistical tables with reviews on national income, production, labour, exports, imports and prices covering major minerals, fuel minerals, minor minerals and metals along with detailed figures at the district and state level for IMYB 2015 is under preparation.

Statistical Reports and Data Dissemination

8.7 Reports on estimated value of monthly mineral production for March, 2015 to February, 2016 were sent to the Ministry of Mines.

8.8 Press Note on Monthly Mineral Production for February, 2015 to January 2016 was prepared and sent to the Ministry of Mines.

8.9 Material for answering 111 Parliament Questions giving information on various parameters like production, value, number of mines, labour, dispatches, stocks, exports, imports, etc; was prepared and supplied to other divisions/Ministry.

8.10 Ex-mine prices of 19 mineral grades for the months of February, 2015 to January 2016 were sent to the Ministry of Commerce and Industry, for computation of Wholesale Price Index.

8.11 Monthly average sale price for royalty/auction purpose for various minerals/metals have been completed and hosted on the website of IBM for the period up to January'2016.

8.12 MMS Division is also engaged in collection, compilation and dissemination of secondary information collected on fuel minerals, minor minerals, trade, prices etc.

8.13 Data on different aspects of minerals and metals were provided to the Ministry and Central & State Governments as per requirement.

8.14 Information on production, value, stocks, dispatches, number of mines, index of mineral production, etc. was supplied to Central Statistics Office, for inclusion in their publication namely: Statistical Abstract, Monthly Abstract of Statistics, Compendium of Environment Statistics, Directory of Statistics, India in Figures, Statistical Pocket Book, etc. Data on input rates for major mineral was also sent to CSO for computation of Gross Value Added in respect of mining & quarrying sector for the year 2012-13 and 2013-14.

8.15 Mineral-wise deductible rates for major minerals for 2012-13 were provided to all the States Government for computation of State Domestic Product. Information on district-wise and mineral-wise number of mines, production and value was also sent to all the state Government for the years 2011-12 to 2013-14.

8.16 Growth in mining & quarrying sector

The total value of mineral production (excluding atomic mineral and also excluding value for February and March in respect of 31 minerals notified as minor minerals w. e. f. 10.02.2015) during 2015-16 (estimated) was Rs. 272731 crores, which shows a decrease of about 1.5% over previous year. The fuel minerals accounted for Rs. 190925 crores or 69.65 percent, metallic minerals Rs. 33293 crores or 12.14 percent, non-metallic minerals (including minor minerals) Rs. 49931 cores or 18.21 percent of the total value. The decrease in total value of mineral production was mainly due to low production of natural gas, petroleum (crude), lignite, manganese ore, gold, limeshell, phosphorite and decrease in per unit value of certain minerals like iron ore also resulted reduction in the total value of Production. However, the production of some important minerals like iron ore, chromite, bauxite, lead concentrate, copper concentrate, coal limestone and diamond has increased during the year.

The index of mineral production (base 2004-05=100) for the year 2015-16 was 129.3, which shows a positive growth of 2.2% over that of 2014-15.

8.17 External Trade

Export and import data of minerals, metals and selected minerals based products for the year 2014-15 was collected from the Directorate General of Commercial Intelligence & Statistics. The data thus collected were processed and above 500 statements were generated for different purposes.

8.18 Minor Minerals

Information on quantity and value of production of minor minerals was collected on non-statutory basis from all the States and Union Territories. Data in respect of 24 minor minerals for the year 2012-13 and in respect of 31 newly notified minor minerals for 2014-15(upto January 2015) was processed and finalized.

8.19 Fuel minerals

Data on monthly production of coal and lignite was received from the office of the Coal Controller, Kolkata and similar data for petroleum (crude) and natural gas was received from the Ministry of Petroleum & Natural Gas. These data is included in the IMYB and other publications of IBM.

CHAPTER –IX

PLANING AND CO-ORDINATION DIVISION

The Planning and Co-ordination Division (P&C) comprises two sub-divisions namely, (i) Planning and Co-ordination (including Training); (ii) Administration Establishment Matters, Accounts with all other administrative and financial matters. This division is headed by Controller of Mines (Planning & Co-ordination) assisted by Technical Secretary and Chief Administrative Officer/Head of Office.

9.2 The Controller General, IBM is assisted by Controller of Mines (Planning & Co-ordination) as well as Technical Secretary (TS) in important technical and administrative matters. In this process in consultation with the Divisional Heads, they draw up, Five Year Plans, Annual Programme, Annual Action Plans, Performance Review of activities in IBM, Preparatory work for IBM Advisory meeting and other important meetings regarding plan proposals, reviews, performance, etc., in IBM as well as in the Ministry and take follow up actions. Material for inclusion in the Annual Report, Outcome Budget and Demands for Grants of the Ministry of Mines are also prepared. A brief account of activities carried out during the year is as follows.

Plans / Proposals of IBM

9.3 Following documents regarding plans/proposals were furnished to the Ministry:

i) Annual Plan, 2016-17

ii) Annual Action Plan, 2016-17

iii) Outcome Budget, 2016-17

iv) Material in respect of IBM for the Annual Report of Ministry of Mines, 2015-16

Parliament Questions & Ministry References

9.4 Coordinated regarding preparations of draft replies for the Ministry of Mines on 197 Parliament questions and 471 other Ministry references.

Notable Comments / notes / reports furnished by TS Section to the Ministry:

(i) Compilation of Organizational History of Ministries/Deptt./Offices as required under clause (i) of sub-section 1 of the Section 6 of the Public Records Act, 1993;
(ii) Information on Flagship Schemes/ Programmes for the Department of Administrative Reforms & Public Grievances;
(iii) Revision of User Charges, Advisor Cost, Ministry of Finance, Department of Expenditure, Office of Chief Advisor Cost,
(iv) Instructions for 'All information / data to be kept separately in respect of Andhra Pradesh and Telangana' after bifurcation of erstwhile A.P.,
(v) Proposal for extension of tenure of Consultant for MTS Project
(vi) Demands for Grants: correspondence for furnishing inputs to the Parliamentary Standing Committee (PSC) on Coal & Steel for Demands for Grants :
i) **For 2014-15**- Inputs for 12th report/ updated 12th report of PSC on the Action taken pertaining to the Ministry of Mines ii) **2015-16** – (a) **Standing Committee** General :Replying Questionnaire for preparation of Demands for Grants, Oral Evidence for PSC, ATR on 8th & 16th Report of the Committee; Inputs for Selection of Subject for detailed Examination by the Committee covering Organizational Structure and Performance of IBM, Mineral Exploration Activities in the Country, Self-Reliance in Minerals and Mineral based products and Skill Development in Mining Sector,
(b) **Examination of the subject "S&T and R&D in Mining Sector** - Self contained note for preparing background note, inputs to questionnaire for Oral Evidence on 16.2.2016

and replies to the post Oral Evidence questions of the Committee
(c) Study Tour of the Standing Committee to Ranchi, Bokaro, Dhanbad, Burnpur, Durgapur, Kolkata and Mumbai from 18.01.2016 to 21.01.2016- Inputs on List of points for informal discussion with the representatives of IBM on the subject "Illegal Coal Mining and Theft of Coal" at Burnpur.
iii) 2016-17 General information on nine points, inputs on List of Points for Oral Evidence on 28.3.2016.

(viii) Monthly Progress Reports on the Activities of IBM for March 2015 to February 2016.

(ix) Highlighting the significant initiatives/Achievements and success stories during the first year of new Government for Ministry and for Reference from Ministry of Information & Broadcasting, Initiatives, policies and achievements of the Government for information of Media on special occasion for Reference received from PIB, Presentation on Achievements of IBM for Hon'ble Minister of Mines.

(x) Comprehensive Road map for IBM in the light of transition due to the regulatory regime of MMDR Amendment Act, 2015 and transferring of 31 minerals to the list of minor minerals.
(xi) Preparing ATR on minutes of earlier meetings, agenda papers, background notes on agenda items for review meetings by Secretary (Mines) held on 14.7.2015, 18.11.2015 & 3.3.2016. ATR on Actionable Points of meeting held during the Visit of Shri Sudhakar Shukla, Economic Advisor and Shri Prithul Kumar, Director, Ministry of Mines on 3.6.2015 to review the performance of IBM

Visit of Secretary (Mines) to IBM HQ

Shri Balvinder Kumar Secretary (Mines) visited Indian Bureau of Mines (IBM) headquarters, Nagpur on 14 July, 2015 and held meeting with the divisional heads. In the meeting, power point presentations on (i) Activities of IBM (ii) Sustainable Development Framework (iii) Draft Minor Mineral Conservation and Development Rules and (iv) Mining Tenement System (MTS) were made. Actionable Points of the meeting have been prepared and sent to the Ministry of Mines on 17 July, 2015.

Visit of Shri Sudhakar Shukla, Economic Advisor and Shri Prithul Kumar, Director, Ministry of Mines to IBM Headquarters, Nagpur.

A meeting to review performance and achievements of various divisions of IBM was held during the visit of Shri Sudhakar Shukla, Economic Advisor and Shri Prithul Kumar, Director, Ministry of Mines to IBM Headquarters, Nagpur on 03 June, 2015. Besides Controller General, IBM (In charge), the meeting was attended by all divisional heads and senior officers of IBM. During the meeting, presentations on role and responsibilities of respective divisions along with achievements were made and detailed discussions were held. Shri Sudhakar Shukla highlighted about the need of redefining the role and responsibilities of IBM in the light of transition due to the regulatory regime of MMDR Amendment Act, 2015 and transferring of 31 minerals to the list of minor minerals. The actionable points emerged from the meeting has been received from the Ministry and action has been initiated for compliance of the action points as per timeline.

Status on D.O. letters of other Ministries/Departments as circulated by CDN Section.

Ministry of Mines vide e-mail forwarded D. O. letter No. CS-8683/2015 issued by the Cabinet Secretary regarding ensuring an improved work culture & work environment including hygiene & cleanliness of the workplace from 22-26 June, 2015. In compliance to the same, a weeklong cleanliness drive was held during 22-26 June,

2015 in all the offices of IBM. During the weeklong activities special emphasis was given on upkeep and cleaning of internal places like working areas, toilets, corridors, stairs, record rooms, store rooms, terraces, emergency exits, waste disposal ducts, cooling system rooms, un-occupied places, etc. Similar cleanliness drive also carried out outside the office buildings such as parking lots, roads within the premises, garden areas, etc. including filling and leveling of pot holes/low lying areas. Efforts are being taken to maintain the cleanliness of the workplace and surrounding premises on regular basis.

Committee constituted to examine exploration reports from the point of view of their amenability to auction mineral blocks.

In pursuance to the promulgation of the Mines & Minerals (Development & Regulation) Amendment Act-2015 and as regards to handing over of mineral resource bearing blocks to the State Governments based on the mineral exploration reports prepared by GSI & MECL for facilitating auctioning, the Secretary (Mines) vide D.O. No. 11/57/2014-M.I, dated 24 July, 2015 constituted a committee comprising Controller General (I/c), IBM, Additional Director General, NMH-II, GSI and Chairman-cum-Managing Director, MECL to examine exploration reports from the point of view of their amenability to auction mineral blocks.

A series of meetings regarding auctioning of mineral blocks were held on different occasions in MECL, GSI and IBM. A meeting was held in MECL under the chairmanship of Secretary (Mines) on 28 August, 2015 during his visit to Nagpur. Besides this meeting, the meetings were held in MECL, Nagpur on 27&30 July.2015 and 06&11 August,2015, in IBM, Nagpur on 14&31 August,.2015 and in GSI on 04 Sept., 2015. These meetings, besides Shri K. Thomas, CG (I/c), were attended on different occasions by S/Shri R. K. Sinha, CCOM, S. K. Adhikari, CMG, Abhay Agrawal, DCOM&TS, Dr. M.K. Somani, RMG, U. L. Gupta, SMG and S. K. Muduli, JMG.

Deputation Abroad.

As a member of the Indian Delegation led by Hon'ble Minister of Mines, Shri R. K. Sinha, CCOM participated in Asia Pacific's International Mining Exhibition (AIMEX-2015) held during 01-04 September, 2015 at Sydney, Australia.

Inauguration of Bhubaneswar Regional office Building : The new building of Bhubaneswar regional office was inaugurated & dedicated to Nation on 7.01.2016 by Hon'ble Union Minister of Mines Shri Narendra Singh Tomar. Other dignitaries attended the function were Hon'ble Union Minister of Tribal Affairs, Shri Jual Oram, Hon'ble Union Minister of State for Petroleum & Natural Gases (Independent Charge) Shri Dharmendra Pradhan, Honble Minister of Steel & Mines of Odisha State Shri P.K.Mallik & Dr.(Prof) Prasanna Patasani MP Bhubaneswar, Shri Balvender Kumar, Secretary (Mines) and other Sr. officers of IBM & various State Government departments.

Roll Out for Sustainable Development Framework at Sukinda Chromite Mine of Tata Steel was inaugurated by Shri Balvender Kumar Secretary (Mines) Government of India held on 7.1.2016

Celebration of Foundation day of IBM as Khanij Diwas, on 1st March 2016:

The 69th foundation day of Indian Bureau of Mines, Khanij Diwas was observed on 1st March 2016 with full enthusiasm and favor by the officials of Indian Bureau of Mines at Head Quarter and respective regional offices, In IBM head quarter Indira Bhavan Civil Line Nagpur, the Mineral processing Division was nodal office for organizing Khanij Diwas and Director (OD) Mineral Processing division was the convener of the event. Shri N Kutumb Roa, Additional Director General Geological Survey of India, Central Region Nagpur graced the occasion as Chief Guest and Dr.

Lokendra Singh, Renowned Nerosurgen and Director, CIIMS Nagpur graced the occasion as Guest of Honour. Shri R.K.Sinha Controller General presided over the function. The programme was attended by an august audience comprising of officials from IBM Head quarter, retired officers of IBM, dignitaries from GSI, JNRDDC, RTM Nagpur University & Other department and invited guests.

IBM goes for ISO certification

9.11 As part of the Results Framework Document for 2015-16, Indian Bureau of Mines obtained ISO 9001-2008 Certification for its Jabalpur Regional office. The ISO 9000 family addresses various aspects of quality management and contains some of ISO's best known standards. The standards provide guidance and tools for companies and organizations who want to ensure that their products and services consistently meet customer's requirements, and that quality is consistently improved.

ISO 9001:2008 sets out the criteria for a quality management system and is the only standard in the family that can be certified to. It can be used by any organization, large or small, regardless of its field of activity. In fact ISO 9001:2008 is implemented by over one million companies and organizations in over 170 countries. The standard is based on a number of quality management principles including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement.

Earlier in 2012-13 & 2013-14, Ajmer, Bengaluru, Chennai, Goa, Hyderabad Kolkata, Nagpur, and Udaipur Regional Offices got ISO 9001-2008 certification. With this IBM has embarked upon the quality management standards and added another feather to its cap.

Generation of Revenue in IBM

9.12 The Indian Bureau of Mines generates revenue as incidental to the following activities:

- Beneficiation studies on low grade ores and minerals including mineralogical and chemical analysis on sponsored samples from other organizations and analysis of environmental parameters of air, water and soil.
- Technical Consultancy to Mining Industry on mining, geological, environmental and geo-technical assignments.
- Fee for processing of mining plans and scheme of mining.
- Compounding of offences under Mineral Conservation and Development Rules (MCDR) 1988.
- Sale of IBM's technical and statistical publications, mineral inventory datasheets, mineral maps and other data.
- During the year 2015-16, revenue of Rs. 128.65 Lakh has been generated on account of these activities.

CHAPTER –X

TRAINING CENTRE

The Training Centre of IBM is headed by the Officer In-charge (Training) / Regional Controller of Mines. It is under the overall supervision of Controller of Mines (Planning & Co-ordination). It conducts in-house training programmes for its employees, state govt officers people from North-Eastern States and persons engaged in mining industry including overseas with the objective to provide them adequate orientation and updation in their fields of work.

During the year 2015-16, 18 training programmes comprising of 09 in-house, 05 training programmes for industry personnel, 01 training programme for State Govt. DGM/GMG offices and 03 for the North Eastern personnel, were conducted. A total of 327 IBM officials, 34 participants from North-Eastern States and 190 industry personnel including 2 from North-Eastern States & 66 DGM officers were benefitted. Revenue of Rs.14,70,000/- was realized from the training programmes conducted for the industry personnel. The details of the courses conducted are as given below.

Training Programmes for IBM personnel.

1. The training course on 'Processing of MCDR returns (both online and offline), MCP database and processing of foreign Trade data.' for IBM staff and officers to be held on 29th & 30th June 2015 at Indian Bureau of Mines, Nagpur in which a total of 46 personnel from IBM participated.
2. Workshop Three day Field oriented training programme on R.P., P. L. and geological mapping for IBM officials from 7th to 9th July, 2015 at Bhubaneswar in which a total of 24 personnel from IBM participated.

Photograph of Workshop-cum North East special assistance Meeting on 28 - 29th May, 2015 at Nagpur.

3. Training programme on Administration, establishment, financial rule, office procedure, stores procurement for IBM officials on 1-2nd September, 2015 at Nagpur in which a total of 55 personnel from IBM participated.
4. Training on APAR writing, dealing with RTI cases and refresher course on vigilance for IBM officials on 8-9 Dec 2015 at Nagpur in which a total of 38 personnel from IBM participated.
5. Two week in-service training Programme for Mining Geology discipline on administration of MCDR & other technical aspects from 11-22nd January, 2016 at Nagpur in which a total of 23 personnel from IBM participated.
6. Two week on job Mandatory in-service training Programme for Mining Geology on various technical aspects 08-19th Feb, 2016 at various Regional office of IBM in which a total of 25 personnel from IBM participated.
7. Training Programme on Amendments in Statutes & MCDR Inspection as per new guide lines with One day field visit for IBM officers from 23 to 25th February, 2016 at Goa in which a total of 27 personnel from IBM participated.
8. Four week Mandatory training Programme on Administration, Establishment & Accounts matters from 29.02.16 to 28.03.2016 including One week training from 29th Feb. to 4th March, 2016 at IBM, Nagpur & remaining period on the job training at his/her place of posting for OS, UDC & LDC in which a total of 49 personnel from IBM participated.
9. In house training programme from 11.03.16 to 18.03.2016 on Administrative, Establishment & Accounts at Nagpur for IBM officers in which a total of 04 personnel from IBM participated.

Training Programmes for Industry/DGM personnel.

1. Training on e filling of Monthly return, Annual return and Form O at Jabalpur ON 19Th & 20th May 2015 **for Industry persons** in which a total of 34 personnel from industry participated.
2. Training programme on Reserve Assessment as per UNFC with case studies & preparation of Feasibility report for Industry Persons on 4-5th August, 2016 at Bangalore in which a total of 55 personnel from industry and 01 from State DGM office participated.
3. Characterization of ores & minerals by mineralogical analysis in view of mineral processing for Industry persons on 27-28th August, 2015 at Nagpur in which a total of 17 personnel from industry 01 from State DGM office participated.
4. Training Programme on Preparation of MP, SoM, PMCP & FMCP as per new guide lines for industry personnel on 7th & 8th October, 2015 at Nagpur in which a total of 64 personnel from industry 1**3** from State DGM office participated.
5. Training on Beneficiation of low grade ores and different techniques of mineral processing 3-4 Dec. 2015 at Nagpur for Industry persons in which a total of 20 personnel from industry participated.
6. Training on Processing, scrutiny and implementation of Mining Plan for State Govt. officers of State DGM/DMG offices on 28th – 29th January, 2016 at Nagpur in which a total 51 State DGM officers participated.

Training Programmes for North-Eastern States personnel.

1. Workshop-cum North East special assistance Meeting on 28-29th May, 2015 at Nagpur in which a total of 10 Senior Officers of DGMs of North Eastern States participated.
2. Training Programme Chemical Analysis of Rock **and Minerals for NER Personnel** 5th to 9th October, 2015 at Nagpur for NER Personnel in which a total of 16 Officers of DGMs of North Eastern States participated.
3. Training programme on Recent Amendments in MMDR Act & Inception of new Statutes related to grant of lease for NER States officers & Industry persons on 9-10th March, 2016 at Kolkata in which a total of 08 Senior Officers of DGMs of North Eastern States and 2 North Eastern Region industry personnel participated.

NORTH EASTERN REGION ASSISTANCE PROGRAMME

North Eastern States have initiated programme to establish mineral-based industries. Therefore, the feasibility of the development of mineral resources needs to be studied. As per the directives of the Government, 10% of the allotted plan budget of IBM is being spent for the development of North-Eastern Region/States. For closer interaction with the NE States, a Sub-regional office of IBM is functioning at Guwahati, Assam since April, 1998.

The IBM will continue to look after the conservation and development of mineral resources of NE States. The draft report of the Committee for Review and Restructuring of the Functions and Role of IBM has recommended to upgrade the Guwahati sub-Regional Office into a full-fledge Regional office. This will boost the mineral development activities in the NE States.

IBM carried out the following activities in North Eastern States in 2015-16.

1. Inspection of mines for enforcing systematic and scientific mining by Regional office.
2. Imparting training to the personnel of mining industry, State Governments of NE States.
3. Taking up of consultancy assignments in mining, geology, beneficiation, environmental aspects.
4. Providing instruments / Equipment to the State Governments of North Eastern States to strengthen their capacities for development of mineral resources in their states.
5. Other related assignments as and when required related to mineral development.

Sub-Regional Office of IBM at Guwahati continued to undertake inspection of mines/studies on development of resources of the North-eastern States.

During the year 2015-16, 34 officials of NE Region and 2 personnel of NE Region industries were benefitted from following workshop-cum-training programmes viz, (i) Workshop-cum North East special assistance Meeting on 28-29 May, 2015 at Nagpur in which a total of 10 Senior Officers of DGMs of North Eastern States participated. (ii) Training Programme Chemical Analysis of Rock and Minerals for NER Personnel 5th to 9th October, 2015 at Nagpur for NER Personnel in which a total of 16 Officers of DGMs of North Eastern States participated. (iii) Training programme on Recent Amendments in MMDR Act & Inception of new Statutes related to grant of lease for NER States officers & Industry persons on 9-10th March, 2016 at Kolkata in which a total of 08 Senior Officers of DGMs of North Eastern States and 2 North Eastern Region industry personnel participated.

The Training Centre of IBM is headed by the Director (Training) / Regional Controller of Mines. It is under the overall supervision of Controller of Mines (Planning & Co-ordination). It conducts in-house training programmes for its employees and also for persons engaged in mining industry as well as overseas with the objective to provide them adequate orientation and updation in their fields of work.

Photographs of Training on Processing, scrutiny and implementation of Mining Plan for State Govt. officers of State DGM/DMG offices on 28th – 29th January, 2016 at Nagpur in which a total 51 State DGM officers participated.

Photographs of Two week in-service training Programme for Mining Geology discipline on administration of MCDR & other technical aspects from 11-22nd January, 2016 at Nagpur.

CHAPTER –XI

GENERAL ADMINISTRATION

The General Administration under Planning and Coordination Division deals with the establishment matters related to recruitment, budget, finance and accounts, purchase of stores, disbursement of salary and other claims and internal audit.

12.1 It is organized into the following sections: 1. Establishment(i) Gazetted and(ii) Non-Gazetted 2.Budget 3.Cash, Accounts& contingent Expenditure 4) Stores 5)General Administration 6)construction work of office & residential buildings and maintenance thereof 7) Internal Audit and 8) Vigilance

It is headed by the Chief Administrative Officer under the overall supervision of Controller of Mines (P&C).

12.2 Sanctioned vis-a vis filled Strength of IBM as on 31.3.2016

Sr. No	Group	Sanctioned strength	Filled up	Vacant
1	Group 'A'	247	146	101
2	Group 'B' (Gaz.)	176	108	68
3	Group 'B' (Non-Gaz.)	362	256	106
4	Group 'C' (Tech)	260	175	85
5	Group 'C'	434	332	102
	Total	**1479**	**1017**	**462**

12.3 During the year 2015-16, 20 new appointments, 43 promotions, 57 retirement cases were dealt. Vigorous efforts were continued to fill up the vacancies reserved for Scheduled Castes, Scheduled Tribes and OBCs.

12.4 Budget estimates, Revised Estimates vis-à-vis actual expenditure for 2015-16 are as under:

SCHEME-WISE FINANCIAL PERFORMANCE OF IBM DURING 2015-16

(Rs. in lakhs)

Name of the Scheme/project	Annual Plan 2015-2016		
	BE	RE	Actual
1	2	3	47
Scheme No.1. Inspection of Mines for Scientific & Systematic mining, Mineral Conservation and Mine Environment	1605.50	1748.50	1671.87
Scheme No.2. Mineral Beneficiation studies- Utilization of low grade & sub-grade ores and analysis of environmental samples	681.00	695.00	658.17
Scheme No.3. Technical upgradation & Modernization.	524.00	567.50	561.52
Scheme No.4. Collection, Processing, Dissemination of Data on Mines & Minerals through various publications.	281.50	314.00	298.35
Scheme No.5. Computerisation online Register on Mining Tenement System.	1380.00	0.00	0.00
Tribal Area Sub Plan Tribal welfare fund	212.00	74.00	0.00
Capital Expenditure (Works Outlay)	1.00	0.00	0.00
Motor Vehicles	15.00	22.00	13.60
Machinery & Equipment	70.00	372.00	54.83
Capital Outlay (NER)	400.00	0.00	0.00
Lump-sum provision for NER	130.00	0.00	0.00
T O T A L - PLAN (I B M)	**5300.00**	**3793.00**	**3258.34**
Non-Plan (IBM)	**5483.00**	**4819.00**	**4780.16**
Construction (MOUD Budget)	491.00	491.00	0.00

69th 'Independence Day' celebrated in Indian Bureau of Mines

12.5 The 69th Independence Day of the Republic of India was celebrated with great fervor and enthusiasm in Indian Bureau of Mines. The main function was held at IBM headquarters at Indira Bhavan, Civil Lines, Nagpur. Shri K. Thomas, Controller General in charge, IBM, unfurled the National Flag. Speaking on the occasion, Shri Thomas urged the officers and staff of IBM to rise to the occasion and put their best to perform the assigned task. He appealed to all the employees maintain good discipline and perform with dedication for effective and quality work. The function was attended by the large number of officers and staff of IBM.

67th 'Republic Day' celebrated in Indian Bureau of Mines

12.6 The 67th 'Republic Day' was celebrated with great fervor and enthusiasm in Indian Bureau of Mines on 26th January, 2016. The main function was held at IBM headquarters at Indira Bhavan, Nagpur. Shri R. K. Sinha, Controller General, IBM unfurled the National Flag.

He appealed to all the employees to maintain good discipline and perform with dedication for effective and quality work. The function was attended by the large number of officers and staff of IBM. Shri Vinay Kumar Saxena, Senior Library and Information Assistant conducted the proceedings in the impressive manner.

Sadbhavana Divas observed in IBM

12.7 Sadbhavana Divas (Rajeev Gandhi Birth Anniversary Day) for communal harmony was observed with great fanfare at IBM Headquarters and all its offices on 20th August, 2015. The observance of Sadbhavana Pakhwara commenced on 20th August 2015. In the main function held at IBM, Headquarters, the programme started with garlanding of th portrait of Late Shri Rajiv Gandhi, former Prime Minister of India by Shri K. Thomas, Controller General in charge, Indian Bureau of Mines.

National Integration (Quami Ekta) Week

12.8 As per directions of Government of India, 19th November of late prime Minister of India, Mrs. Indira Gandhi was observed as National Integration (Quami Ekta) Day. All the employees have taken pledge of National Integration. A number of programmes were organised from 19.11.2015 to 24.11.2015 on the themes of National Integration, minority Welfare, Weaker Section, Cultural Unity, Women and defence etc.

Redressal of Grievances & Welfare Measures

Work Done Concerning Women (Perspective Plan for Women)

12.9 Indian Bureau of Mines work on principle of equal opportunity to all and based on this, out of a total filled up strength of employees, women employees constitute about 12.36 percent. Training is imparted to women employees in the field of technical as well as administrative matters. Women employees are also actively participating in various cultural and extracurricular activities organized by IBM from time to time.

International Women's Day in IBM

12.10 The Indian Bureau of Mines observed the International Women's Day at the Headquarters in Nagpur on 1 April, 2016. Two eminent speakers, Smt. Neerup Kapai, Secretary of Sheila Education Society which runs NK Academy was the chief guest, while Dr. Varsha Deshpande, Assistant Professor in the Department of Law, Dr. Ambedkar College, Nagpur was the guest of honour. Shri R.K. Sinha, Controller General, IBM presided over the function. While, Smt. Vijaya Sinha, better half of the Controller General was invited as special guest. Bothwere felicitated on the occasion.

In her address, Dr. Varsha Deshpande delivered a talk on the subject, "Planet 50-50 by 2030 – Step it up for Gender Equality" emphasising the need for bringing gender equality in the society. She spoke about various legislative measures taken in the recent past for protecting women rights including guidelines and law against Sexual Harassment of Women at Workplace and pros and cons of the same.

Smt. Neeru Kapai also shared her views on "Role of Men for Gender Equality by 2030" using power point presentation. She said participation of women was essential to solve gender equality issues. On the occasion, seven women employees of IBM who are due for retirement during 2016 were felicitated. Shri Ivan Khess, Controller of Mines and other senior officers were present.

Smt Shashi Pasin handled logistic support for the event. Smt. Preeti Mishra compered the programme and Smt. Hemalata Pal proposed vote of thanks. Smt. Dhanshri Vairaghare coordinated the event. The programme concluded with National Anthem.

Committee to redress complaint regarding sexual harassment of women in the workplace

12.11 To ensure a safe, secure and healthy environment for women at the workplace, as per directions of Hon'ble Supreme Court, a complaint committee has been constituted in IBM. Committee functions to redress the complaint made by the victims of sexual harassment at work place in a time bound manner.

Dr.(Mrs.) Sandhya Lal, Suptdg. Officer Ore Dressing Officer, Indian Bureau of Mines has been nominated as Chairperson of the Committee. Contact address of Dr.(Mrs.) **Sandhya Lal,** is as given below:

Dr.(Mrs.) Sandhya Lal,
Suptdg. Officer Ore Dressing (SOOD)
Modern Mineral Processing Lab.
& Pilot Plant, IBM
L-8, MIDC Industrial Area, Hingna Road
Nagpur - 440 016.
Telephone 07104 234441
Email smlal@ibm.gov.in, ibmhngn@bsnl.in

Measures for persons with Disabilities

12.12 IBM is strictly following the various instructions of the Government issued from time to time regarding reservation of vacancies for persons with physical disabilities. As on 31st March 2016, 11 physically handicapped persons were under employment in IBM of which 03 are visually handicapped, 01 is hearing handicapped and 07 are orthopedically handicapped.

Liaison Officer for SC/ST/OBC and PWD

12.13 Shri D.W.Beck, Mineral Economist has been nominated as Liaison Officer for SC/ST/OBC and PWD to look after the welfare measures. Contact address of **Shri D.W.Beck, Mineral Economist** Liaison Officer for SC/ST/OBC and PWD is as given below:

Shri D.W.Beck, Telephone Nos.
3rd Floor, 'D' Block, 0712-2565471
Indira Bhavan, 0712-2565500-PBX
Civil Lines,
Nagpur - 440 001.

Redressal of Public Grievances

12.14 There is a Public Grievances Cell in IBM for taking care of Grievances of services matters of employees and also public. Shri S.K.Adhikari, Chief Mining Geologist, Indian Bureau of Mines, is nominated as Director of Grievances. Contact address of Shri S.K.Adhikari, Director of Grievances is as follows:

Shri S.K.Adhikari,
1st Floor, 'D' Block,
Indira Bhavan, Civil Lines,
Nagpur - 440 001
Telephone No. / Fax No. 91-712 - 2561267
E mail skadhikari@ibm.gov.in

At the beginning of the year, 01 grievance cases were pending. During the year 2015-16, 61 cases were received, 45 cases were disposed off. Online facility for Registration for Public Grievances has already been provided by linking IBM website with the Grievance Portal of DoPT "Central PGRAMS".

Vigilance cases

12.15 During the year 2015-16, 05 complaints were received of which 03 were brought to their logical conclusion after investigation. Besides, 02 cases were under investigation. In addition to this, 01 case chargesheet for minor Penalty was imposed against an officer by Mininstry. 425 Vigilance Clearance Certificates were issued in respect of officers and staff during the period.

12.16 The Indian Bureau of Mines observed Vigilance Awareness Week between 26th-31st Oct 2015 at the headquarters in Nagpur and all other regional and zonal offices. The main inaugural event was held at the headquarters.

Shri R.K. Sinha, then Controller General (I/c) administered the pledge to the officers and employees in Hindi and English. The oath taking was followed by reading of messages of Hon'ble President of India, Hon'ble Vice-President, Hon'ble Prime Minister and Hon'ble Union Minister Steel and Mines and the Central Vigilance Commissioner.

The week-long programme comprised of a joint rally of IBM & MECL employees organized on 27th Oct, 2015. The rally started from Kasturchand Park ground and covered the thoroughfares of the city to spread awareness of vigilance awareness week. The employees holded placards, banners with messages for eradicting corruption from public life. The staff and officers of IBM also took part in the essay and debate competitions held on 27th and 28th Oct, respectively. The topic for the essay was "Preventive Vigilance as a toll of Good Governance" and that for the debate contest was "Can Preventive Vigilance Curb Corruption in Offices".

The week-long programme concluded on 30th Octoer, 2015. Shri Narendar Kumar, Chief Engineer, CPWD, Nagpur was the chief guest. In his address, he said it was important to overcome greed to serve the public of□ ce and for eradicating the corruption. He called for imbibing qualities of integrity to stay away from corrupt practices.

Shri R.K. Sinha, who presided the valedictory stressed the need for observing Vigilance in day to day official work and also in all spheres of life. Shri Parsodkar, AMG

(Vigilance) highlighted the role of vigilance and said each individual should be vigilant to combat corruption. Capt. S.S. Chaudhary, Sr. AO & HOO (Hq), IBM was present. Smt Pradnya Deo, JTA (P) compered the programme, while Shri Dinesh Kumar gave the vote of thanks.

Swachchha Bharat Abhiyan

12.17 In October 2014, Swachh Bharat Abhiyan as envisaged by our Hon'ble Prime Minister was started at IBM. The cleanliness activities were initiated in IBM on 2nd October 2014. Further, as per the directions of Ministry of Mine, a weeklong cleanliness drive was held during the week 22 to 26 June 2015 in all the offices of Indian Bureau of Mines as well as all the Zonal/Regional Offices and Regional Ore Dressing Laboratories.

The activities under intensive "Swachh Bharat Abhiyan" were continued for five days. In addition to face lift and beautification of the front visible areas; special emphasis was given on cleaning of places which are usually overlooked during routine cleaning such as emergency staircases, Record Rooms, unoccupied cabins, store rooms, waste disposal bins/ducts, cooling system rooms, terraces, cabins/rooms/places used for storing old/additional furniture items /equipments etc.

While cleaning these areas the unserviceable/obsolete items were identified and action was initiated for the disposal of the same as per laid down procedure. Office premises were cleaned thoroughly by uprooting weeds, collecting & disposing litter, waste, and improving the overall appearance in aesthetic manner. All the employees participated with enthusiasm in the activities. This week long intensive Abhiyan has created lot of awareness about cleanliness and neatness among the employees and their enthusiasm will be helpful in maintaining the office and premises neat and clean on routine basis.

Cleanliness drive has increased awareness amongst the employees towards cleanliness in the office premises and their own responsibility to contribute for cleanliness. Region-wise brief account of activities in this regard is given in **Annexure XVI.**

Bio-metric attendance system

12.18 IBM initiated **Bio-metric attendance system** from August, 2014. As per directions of the Government, process for installation of an AADHAR Enabled Bio-metric Attendance System (AEBAS) in all offices of IBM is done.

Right to Information Act, 2005

12.19 Consequent to the enactment of the Right to Information Act, 2005, IBM has been receiving various requests under RTI Act which are timely responded to. At the beginning of the year 2015-16, 12 applications were pending and during the year, 497 applications were received. 425 applications were disposed off within the stipulated time frame. Information was denied under Section 8(1), 9, 11, 24 etc of RTI Act in 44 cases and 40 cases were under processing at the end of the year.

Similarly, at the beginning of the year, 1 first appeal was pending and during the year 27 first appeals were received. 28 first appeals were disposed off within the stipulated time frame and no appeal was under processing at the end of the year.

Similarly, at the beginning of the year, 16 second appeals were pending with CIC and during the year 02 second appeal was filed. One second appeals was decided in favour of Organization. Out of the 18 pending cases, 8 cases have been heard by CIC on 13.12.2012 for which orders are awaited. Remaining 10 cases have to be heard by CIC.

अध्याय - १२ हिंदी अनुभाग

वर्ष 2015- 16 के दौरान हिंदी से संबंधित कार्यों का विवरण

भारत सरकार की राजभाषा नीति के कार्यान्वयन में भारतीय खान ब्यूरो सतत् प्रगतिशील पथ पर अग्रणी है । ब्यूरो का मुख्यालय ख क्षेत्र में स्थित है । क क्षेत्र में 5 कार्यालय तथा शेष कार्यालय ग क्षेत्र में स्थित हैं। जहॉ तक क क्षेत्र का सवाल है वहां सभी कार्यालयों मेंराजभाषा विभाग द्वारा निर्धारित लक्ष्य के अनुसार पत्राचार किया गया एवं हिन्दी के प्रचार एवं प्रसार के लिए अन्य विविध कार्यक्रमों का आयोजन किया गया । ख क्षेत्र मुख्यालय में भी हिंदी से संबंधित अनेक कार्यक्रम आयोजित किए गए तथा हिंदी पत्राचार का लक्ष्य लगभग प्राप्त कर लिया गया है । उल्लेखनीय है कि भारतीय खान ब्यूरो के क एवं ख क्षेत्र स्थित सभी कार्यालय राजभाषा नियम 1976 के नियम 10(4) के अंतर्गत अधिसूचित हैं । ख क्षेत्र स्थित कार्यालय में भी सरकार द्वारा निर्धारित लक्ष्य के अनुसार हिंदी में पत्राचार किया तथा अन्य हिंदी से संबंधित गतिविधियां जैसे हिंदी पखवाड़ा, हिन्दी कार्यशाला आदि का आयोजन किया गया । ग क्षेत्र में ब्यूरो के दो कार्यालयों को छोड़कर सभी 5)कार्यालय नियम 10(4) के अंतर्गत अधिसूचित हैं ।

वर्ष 2015-16 के दौरान हिंदी से संबंधित प्रगति का विवरण निम्नवत है :-

मुख्यालय में विभागीय राजभाषा कार्यान्वयन समिति की बैठक - दिनांक 29/06/2015 को राजभाषा कार्यान्वयन समिति की 94वीं बैठक एवं दिनांक 29/09/2015 को 95वीं बैठक, दिनांक 01/01/2016 को 96वीं बैठक तथा 30/03/2016 को 97वीं बैठक का आयोजन महानियंत्रक भारतीय खान ब्यूरो की अध्यक्षता में किया गया । इन बैठकों में समिति द्वारा पिछली बैठक के कार्यवाही की पुष्टि की गई साथ ही अन्य महत्वपूर्ण विषयों जैसे हिंदी प्रगति रिपोर्ट की समीक्षा हिंदी शिक्षण एवं प्रशिक्षण की स्थिति हिंदी पुस्तकों की खरीद मुख्यालय एवं क्षेत्रीय कार्यशालाओं का आयोजन आदि पर विचार विमर्श किया गया तथा इन बैठकों में अध्यक्ष महोदय द्वारा उचित निर्देश भी दिए गए । साथ ही मुख्यालय सहित सभी क्षेत्रीय कार्यालयों में भी राजभाषा कार्यान्वयन समिति की बैठकों का नियमित आयोजन किया जाता है ओर रिपोर्ट मुख्यालय को भेजी जाती है ।

मुख्यालय में हिंदी पखवाड़े का आयोजन : भारतीय खान ब्यूरो मुख्यालय नागपुर में दिनांक 01/9/2015 से 14/09/2015 तक हिंदी पखवाड़ा का आयोजन सफलतापूर्वक किया गया । पखवाड़े के दौरान हिंदी निबंध, टिप्पण आलेखन, हिंदी सुलेखन, परिसंवाद, तात्कालिक भाषण एवं हिंदी प्रश्नमंच प्रतियोगिताओं का आयोजन किया गया । दिनांक 15/09/2015 को हिंदी पखवाड़ा समापन समारोह का आयोजन किया गया तथा विजयी प्रतिभागियों को पुरस्कार वितरित किए गए ।

हिंदी दिवस का आयोजन : महानियंत्रक महोदय की अध्यक्षता में दिनांक 14 सितम्बर 2015 को हिंदी दिवस समारोह का आयोजन किया गया तथा इस अवसर पर श्री डॉ पी.के. जैन, राजभाषा अधिकारी द्वारा माननीय गृह मंत्री श्री राजनाथ सिंह जी के संदेश का वाचन किया गया ।

अनुवाद कार्य : वर्ष के दौरान विभिन्न महत्वपूर्ण तकनीकी एवं प्रशासनिक दस्तावेजों का हिंदी का अनुवाद किया गया । वर्ष 2015 -16 के लिए आउट कम बजट एवं खान मंत्रालय की वार्षिक रिपोर्ट जो करीब 200 पृष्ठों का था का हिंदी अनुवाद किया गया । साथ ही वर्ष 2016-17 के लिए आउट कम बजट का जो करीब 50 पृष्ठों का था हिंदी अनुवाद किया

गया । इसके अतिरिक्त खान एवं खनिज सांख्यिकी प्रभाग से प्राप्त वार्षिक विवरणियों का 12 पृष्ठों का हिंदी अनुवाद किया गया । साथ ही मंत्रालय से प्राप्त कोयला एवं इस्पात पर स्थायी समिति से संबंधित 20 पृष्ठों का हिंदी अनुवाद किया गया एवं उसे टंकित कर मंत्रालय को प्रेषित किया गया । इसके अतिरिक्त लोकसभा स्थायी समिति से संबंधित 15 पृष्ठों का हिंदी अनुवाद एवं टंकण कर प्रेषित किया गया । इसके साथ हिन्दी बेवसाइट की सामग्री जो करीब 40 पृष्ठों का था, का भी अनुवाद किया गया तथा मुख्य संपादक कार्यालय से प्राप्त आई. बी. एम. न्यूज हेतु सामग्री का अनुवाद एवं समेकन किया गया ।

नराकास नागपुर के तत्वावधान में आयोजित प्रतियोगिताओं में भारतीय खान ब्यूरो की सहभागिता : नराकास नागपुर के तत्वावधान में आयोजित विभिन्न प्रतियोगिताओं में भारतीय खान ब्यूरो के अधिकारी एवं कर्मचारी प्रमुखत: से भाग लेते हैं । इस वर्ष भारतीय खान ब्यूरो से श्री मुजीबउद्दीन सिद्दकी, श्री विनयकुमार सक्सेना, श्री असीम कुमार, श्री अयज कुमार, श्री जगदीश अहरवार एवं श्री विभूति नंदन तिवारी ने नराकास की प्रतियोगिताओं में पुरस्कार प्राप्त किया ।

राजभाषा निरीक्षण : वर्ष के दौरान मुख्यालय के खनिज अर्थशास्त्र प्रभाग खनिज सांख्यिकी प्रभाग प्रशिक्षण केन्द्र, जी. एम. सेल, तकनीकी सचिव अनुभाग, तकनीकी परामर्श प्रभाग, राजपत्रित अनुभाग, खनिज प्रसंस्करण प्रभाग एवं अराजपत्रित अनुभाग भारतीय खान ब्यूरो का राजभाषा का निरीक्षण किया गया ।

हिंदी प्रशिक्षण : वर्ष के दौरान कार्यालय के एक अधिकारी को हिंदी शिक्षण योजना के अन्तर्गत हिंदी प्राज्ञ का प्रशिक्षण दिलाया गया ।

हिन्दी कार्यशाला : दिनांक 05 एवं 06 नवंबर 2015 को मुख्यालय में दो दिवसीय हिन्दी कार्यशाला का आयोजन किया गया जिसमें 17 अधिकारियों एवं कर्मचारियों ने भाग लिया । तत्पश्चात दिनांक 23 से 26 फरवरी, 2016 तक 4 अर्ध दिवसीय कार्यशाला का आयोजन किया गया जिसमें 16 अधिकारियों एवं कर्मचारियों ने भाग लिया ।

हिंदी पारंगत प्रशिक्षण : भारतीय खान ब्यूरो मुख्यालय में जनवरी 2016 में हिंदी पारंगत प्रशिक्षण प्रारंभ किया गया जिसमें 30 अधिकारियों एवं कर्मचारियों ने प्रशिक्षण प्राप्त किया ।


भारतीय खान ब्यूरो
हिन्दी पखवाड़ा
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रजिस्ट्री सं० डी० एल०-33004/99 REGD. NO. D. L.-33004/99

भारत का राजपत्र
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खान मंत्रालय

संकल्प

नई दिल्ली, 9 दिसम्बर, 2015

सं. 35/3/2015-खान-3.—भारतीय खान ब्यूरो के कामकाज की प्रभाविता में सुधार के लिए सरकार को सक्षम बनाने हेतु, भारतीय खान ब्यूरो पुनर्विचार समिति ने दिसम्बर 1979 में पेश अपनी रिपोर्ट में भारतीय खान ब्यूरो के लिए एक सलाहकार बोर्ड के गठन की सिफारिश की थी । तद्नुसार, केंद्र सरकार ने अपने संकल्प सं. 23012/99/80-खान-6, दिनांक 12 जनवरी, 1981 द्वारा भारतीय खान ब्यूरो के लिए एक सलाहकार बोर्ड का गठन किया ।

पिछली बार संकल्प सं. 35/1/2011-खान 3, दिनांक 3 जुलाई, 2012 द्वारा सलाहकार बोर्ड का गठन किया गया था । तदनतर खान और खनिज विकास और विनियमन (संशोधन) अधिनियम, 2015 के द्वारा विधायी ढाँचे में बड़े परिवर्तन हो चुके हैं । इस संदर्भ में, सरकार ने भारतीय खान ब्यूरो के लिए सलाहकार बोर्ड को पुनर्गठित करने का निश्चय किया हैं जोकि नये परिदृश्य में भारतीय खान ब्यूरो को इसके कामकाज के लिए सज्जित करने हेतु सरकार को उचित सलाह दे सके ।

अत: अब सभी पूर्व संकल्पों का अधिक्रमण करते हुए, भारतीय खान ब्यूरो के सलाहकार बोर्ड का पुनर्गठन निम्नलिखित संरचना और कार्य के साथ किया जाता है:-

संरचना

अध्यक्ष

सचिव, खान मंत्रालय

सदस्य

1. अपर सचिव, खान मंत्रालय ।
2. आर्थिक सलाहकार/संयुक्त सचिव (आई बी एम प्रभारी), खान मंत्रालय ।
3. निदेशक/उप सचिव (आई बी एम प्रभारी), खान मंत्रालय ।
4. महानियंत्रक, भारतीय खान ब्यूरो, नागपुर ।
5. महानिदेशक, भारतीय भूवैज्ञानिक सर्वेक्षण, कोलकाता ।
6. महानिदेशक, खान सुरक्षा निदेशालय, धनबाद ।
7. विज्ञान एवं तकनीकी विभाग, नई दिल्ली का संयुक्त सचिव स्तर का अधिकारी ।
8. पर्यावरण और वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली का संयुक्त सचिव स्तर का अधिकारी ।
9. आणविक उर्जा विभाग का संयुक्त सचिव स्तर का अधिकारी ।
10. प्रमुख सचिव/ खान एवं भूविज्ञान सचिव, ओडिशा सरकार ।
11. प्रमुख सचिव/ खान एवं भूविज्ञान सचिव, महाराष्ट्र सरकार ।
12. प्रमुख सचिव/ खान एवं भूविज्ञान सचिव, गुजरात सरकार ।
13. प्रमुख सचिव/ खान एवं भूविज्ञान सचिव, झारखंड सरकार ।
14. प्रमुख सचिव/ खान एवं भूविज्ञान सचिव, राजस्थान सरकार ।
15. प्रमुख सचिव/ खान एवं भूविज्ञान सचिव, कर्नाटक सरकार ।
16. प्रमुख सचिव/ खान एवं भूविज्ञान सचिव, गोवा सरकार ।
17. निदेशक, सी आई एम एफ आर, धनबाद ।
18. निदेशक, इंडियन स्कूल ऑफ माइन्स, धनबाद ।
19. प्रोफेसर , खनन विभाग, आई आई टी, खड़गपुर ।
20. अध्यक्ष, फेडेरेशन ऑफ इंडियन मिनरल इंडस्ट्रीज, नई दिल्ली ।
21. अध्यक्ष/ सचिव, खनन क्षेत्र समित, सी आई आई ।
22. अध्यक्ष/ सचिव, खनन क्षेत्र समित, फिक्की
23. अध्यक्ष/ सचिव, खनन क्षेत्र समित, ऐसोचेम ।
24. अन्य कोई सदस्य विशेष आमंत्रित के रूप में ।

सदस्य सचिव

तकनीकी सचिव, भारतीय खान ब्यूरो, नागपुर

2. बोर्ड के कार्य का स्वरुप सलाहकारी होगा । यह भारतीय खान ब्यूरो और सरकार , दोनों को सलाह देगा । बोर्ड को यह स्वतंत्रता होगी कि वह सरकार से सीदे पत्राचार कर सके । भारतीय खान ब्यूरो बोर्ड को सचिवालय प्रदान करेगा । बोर्ड अपनी कामकाज के नियम और प्रक्रिया स्वयं निर्धारित करेगा परंतु सरकार एक वर्ष में कम से कम एक बार इसकी बैठक भी अपेक्षा रखेगी । बोर्ड के कार्य निम्नलिखित होंगे :-

1. नये कानून के बदलते परिदृश्य में आई बी एम के लिए कार्य रोड मैप पर पुनर्विचार और परामर्श देना, खनिज ब्लॉकों की नीलामी, एस डी एफ का रॉल आउट ।

2. 31 खनिजों के गौण खनिजों के रुप में हस्तांतरण के कामकाज आई बी एम के कामकाज पर परामर्श देना ।

3. ऑफ शोर ब्लाकों के आवंटन के लिए आई बी एम के कामकाज पर परामर्श देना ।

4. प्रबंधन सूचना और प्रबंधन लेखाकरण की प्रणालियों पर परामर्श देना ।

5. भारतीय खान ब्यूरो के कामकाज को और अधिक प्रभावी बनाने के तरीके और साधनों पर परामर्श देना ।

कार्यकाल

सलाहकार बोर्ड इसके गठन की तिथि से दो वर्ष के लिए होगा बशर्ते सरकार द्वारा इसका कार्यकाल बढा न दिया जाये ।

सुधाकर शुक्ला, आर्थिक सलाहकार

MINISTRY OF MINES

RESOLUTION

New Delhi, the 9th December, 2015

No. 35/3/2015-M.III.—With a view to enable the Government to improve the effectiveness of the working of the Indian Bureau of Mines, the Indian Bureau of Mines Review Committee, in its Report submitted in December 1979, had recommended the formation of an Advisory Board for Indian Bureau of Mines. Accordingly the Central Government vide its Resolution No. 23012/99/80-M.VI dated the 12th January, 1981 constituted an Advisory Board for Indian Bureau of Mines.

Vide Resolution No.35/1/2011-M.III dated 3rd July, 2012 the Advisory Board had been last reconstituted. Subsequently there have been major changes in the legislative framework brought about by the MMDR (Amendment) Act 2015. In this context, the Government has decided to reconstitute the Advisory Board for the Indian Bureau of Mines in order to provide the appropriate advice to Government to equip IBM for its functioning in the new scenario.

Now, therefore, in supersession of all earlier resolutions, the Advisory Board of Indian Bureau of Mines is reconstituted with the following composition and function:-

COMPOSITION

CHAIRMAN

Secretary, Ministry of Mines.

MEMBERS

1. Additional Secretary, Ministry of Mines.
2. Economic Adviser/Joint Secretary(In-charge of IBM), Ministry of Mines.
3. Director/Deputy Secretary (In-charge of IBM), Ministry of Mines.
4. Controller General, Indian Bureau of Mines, Nagpur.
5. Director General, Geological Survey of India, Kolkata.
6. Director General, Directorate of Mines Safety, Dhanbad.
7. Joint Secretary level officer of the Department of Science and Technology, New Delhi.
8. Joint Secretary level officer of the Ministry of Environment and Forest& Climate Change, New Delhi.
9. Joint Secretary level officer of the Dept.of Atomic Energy.
10. Principal Secretary/Secretary of Mines & Geology, Government of Odisha.

11. Principal Secretary /Secretary of Mines & Geology,Government of Maharashtra.

12. Principal Secretary /Secretary of Mines & Geology, Government of Gujarat.

13. Principal Secretary /Secretary of Mines & Geology, Government of Jharkhand.

14. Principal Secretary /Secretary of Mines & Geology,Government of Rajasthan.

15. Principal Secretary /Secretary of Mines & Geology, Government of Karnataka.

16. Principal Secretary /Secretary of Mines & Geology, Government of Goa.

17. Director, CIMFR, Dhanbad.

18. Director,Indian School of Mines University, Dhanbad.

19. Professor, Department of Mining, IIT, Kharagpur.

20. President, Federation of Indian Mineral Industries, NewDelhi

21. President/Secretary of Mining Sector Committee, CII

22. President/Secretary of Mining Sector Committee, FICCI

23. President/ Secretary of Mining Sector Committee, ASSOCHAM.

24. Any other member as special invitee.

MEMBER SECRETARY

Technical Secretary, Indian Bureau of Mines, Nagpur.

2. The functions of the Board will be advisory in character. It will advise both the Indian Bureau of Mines and the Government. The Board will be at liberty to correspond directly with Government. The Indian Bureau of Mines will provide the Secretariat of the Board. The Board should devise its own working rules and procedures but the Government would expect it to meet at least once a year. The functions of the Board will be as follows:-

FUNCTIONS

1. To review and advise on the Road Map for IBM in the changing scenario of new legislation, auctioning of mineral blocks, roll out of SDF.

2. To advise on the functioning of IBM in view of transfer of 31 minerals as minor minerals.

3. To advise on the functioning of IBM for allocation of Off Shore Blocks.

4. To advise on systems of Management Information and Management Accounting.

5. To advise on ways and means of making Indian Bureau of Mines functioning more effective.

TENURE

The Advisory Board will be for two years from the date of its constitution unless the term is extended by the Government.

SUDHAKER SUKHLA, Economic Adviser

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Annexure-II

LIST OF ORE DRESSING INVESTIGATIONS COMPLETED
(APRIL, 2015 TO MARCH, 2016)

MODERN MINERAL PROCESSING LABORATORY & PILOT PLANT, NAGPUR	
2056 F/NC	Beneficiation studies on a **Laterite iron** sample from Gandhigram (Sample No.1) Jabalpur for Sandeep Bansal **(under RMDS).**
2057 2L/C	Determination of Shatter Index, Tumbler Index and Abration Index including chemical and differential thermal analysis (DTA/TG Test) of a **bulk Limestone** Sample of Lumthalary block, Litang River Valley, East Jaintia Hills, Meghalaya for M/s Mineral Exploration Corporation Ltd., Nagpur.
2058 2L/C	Determination of Shatter Index, Tumbler Index and Abration Index including chemical and differential thermal analysis (DTA/TG Test) of a **bulk Limestone** Sample of Lumshortoh block, Litang River Valley, East Jaintia Hills, Meghalaya for M/s Mineral Exploration Corporation Ltd., Nagpur.
2059 L/NC	Characterisation of a **Lateritic Iron Ore** Sample No. 2 from Gandhigram, Jabalpur, Madhya Pradesh for Regional Controller of Mines **(Under Regional Mineral Development Study).**
2060 4L/NC	Four limited amenability studies on two **Laterite**, one C**lay** & one **Ochre** sample from Khitola laterite, clay and ochre deposit, Jabalpur, District Jabalpur, Madhya Pradesh (For Regional Controller of Mines, Jabalpur).
2061 L/C	One limited amenability study on a **Rock** sample from Chittorgarh, Rajasthan from Shri Manoj Singh.
2062 3L/NC	Three limited amenability studies on one **Bauxite**, one **Laterite** & one **Fire Clay** samples from Katni, Madhya Pradesh (For Regional Controller of Mines, Jabalpur).
2063 5L/C	Five limited amenability studies on **iron ore** samples from Sihora, Madhya Pradesh received from M/s Uro Pratik Ispath Pvt. Ltd., Madhya Pradesh.
2064 2L/C	Two limited amenability studies on **Copper** sample received from M/s P.T. Radilogam, Indonesia.
2065 2L/NC	Two limited amenability studies on **Limestone** samples from Manehara Limestone/Dolomite Deposit, Katni Distt, Madhya Pradesh for Regional Controller of Mines, Jabalpur.
2066 5L/C	Five limited amenability studies (heavy liquid separation) on **Coal** samples received from M/s Indorama Synthetics (India), Butibori, MIDC, Nagpur , Maharashtra.
2067 L/C	Amenability studies and Mineralogical Studies on **Silica Sand** sample from Nanded, Maharashtra for Raja Khanderao Deshmukh of M/s Raj Mineral, Krushnur, MIDC, Nanded.
2068 F/C	Bench scale beneficiation studies on a low grade **Rock phosphate** sample from a mine in Meghnagar, Dist. Jhabua, Madhya Pradesh for M/s Samruddha Resources Ltd., Mumbai, Maharashtra.
2069 L/C	Determination of Bond's Ball Mill Work Index on an **Iron ore** sample from Iron ore Beneficiation & Pelletization project near Gwalior, M.P. for M/s Magnum Steels Ltd.
2070 F/NC	Bench Scale flotation beneficiation studies on a low grade **Copper ore** sample from Khetri, Rajasthan **(Departmental studies).**
2071 F/C	Bench scale beneficiation studies on **Manganese ore** sample from black dump rejects of Ukwa manganese mines for MOIL.
2072 F/C	Bench scale beneficiation studies on a **Tungsten ore** bulk sample from Kuhi (zone-I), Nagpur District, Maharashtra for MECL.
2073 L/C	Microscopic studies on **Pb-Zn** sample from Morocco for M/s. Earthern Treasures.
2074 L/C	Microscopic studies on **Copper** sample from Indonesia, M/s.Khandelwal.
2075 L/C	Microscopic studies of **Clay** sample from Nanded for M/s.Raja Deshmukh.
2076 L/C	DTA of **Limestone** sample from Meghalaya, M/s.MECL.

2077 L/C	DTA of **Limestone** sample from Meghalaya, M/s.MECL.
2078 L/C	Microscopic studies on **Granite rock** sample from Seoni (MP), M/s.M.M.Mines.
2079 L/C	Microscopic studies on **Tin ore (Cassiterite)** sample, Africa, Dr. R.S.Deshpande, Consultant, Nagpur.
2080 L/C	Microscopic studies on **Copper** sample Indonesia of M/s.Radiologan.
2081 L/C	Microscopic studies on **rock** sample M/s. Rashi Steel & Power, Bilaspur
2082 2L/C	Microscopic studies & sieve analysis on **iron ore** sample from Gwalior, (MP) M/s.Magnum Steel.
2083 4L/C	Mineralogical studies on four **Manganese ore** sample (NMP/RD/AE, AG) from M/s.Navaratna Manganese products Ltd.
2084 3L/C	Mineralogical studies on three **rock** samples (BH4 35 M, 34 MT & 10 MTH) received from M/s Engeotech Consultant, Jabalpur (MP).
2085 L/C	Limited tabling test on a **Laterite** sample LAT-3 from Eastern Ghat, Panchpatmali mines for JNARDDC, Nagpur.
2086 F/C	Bench Scale Beneficiation Studies on a very low grade **tungsten bearing drill core** sample from Kuhi, District: Nagpur, Maharashtra for M/s. Mineral Exploration Corporation Ltd., Nagpur.
2087 F/C	Bench Scale Beneficiation Studies on a **Low Grade Graphite Bulk** Sample (Blk-01) from Geological Survey of India, District Betul, Madhya Pradesh.
2088 L/C	X-ray diffraction studies on one **iron ore** sample received from Ms. Diptimayee Nanda, Research Scholar, Indian School Of Mines, Dhanbad.
2089 L/C	Mineralogical report on two **manganese ore** samples received from M/S J.K. Minerals, Balaghat, Madhya Pradesh.
2090 L/C	Mineralogical report on a **rock** sample received from M/S Hira Power & Steels, Raipur, Chattisgarh.
2091 L/C	Limited amenability studies on **clay** samples from Nanded for M/s.Raja Deshmukh.
2092 L/C	Limited amenability studies on **cassiterite** ore sample from Africa, for Dr.R.S.Deshpande, Consultant, Nagpur.
2093 L/C	Sieve analysis studies on **iron ore** sample from Gwalior, (M.P.) for M/s.Magnum steels Ltd., New Delhi.
2094 L/C	Amenability studies on sample (a) from M/s. Phoenix Amalgams Pvt. Ltd., Nagpur
2095 L/C	Differential thermal analysis on a casting powder sample from M/S SKG Refractories Ltd., Nagpur.
2096 3L/C	X-ray diffraction studies on three samples from Shri Dipankar Thakuria, M.Tech., III Semester, G.H. Raisoni College Of Engineering, Nagpur.
2097 4L/C	Report on mineralogical studies on an **iron ore** sample from Jabalpur area, received from M/S Suryavansham Mining And Minerals Private Limited, Indore, Madhya Pradesh.
2098 L/NC	Limited amenability studies on **lump** sample from RCOM, Jabalpur.
2099 2L/C	Two limited amenability studies on bauxite sample from RODL, Bangalore.
2100 L/C	Amenability studies on sample from M/s. Phoenix Amalgams Pvt. Ltd., Nagpur.

2101 4L/C	Four Limited amenability studies on samples from Ground water Survey & Development Agency, Nagpur.
2102 L/C	One Limited scrubbing and screening test on sand over burden of **manganese ore** sample from Katangjhri mine for sand making soil at Pipal dump.
2103 F/C	Bench scale beneficiation studies on a **copper borehole** sample from Thanewana block, Chandrapur Dt., Maharashtra.
2104 F/NC	Bench scale beneficiation studies for **Glauconite** in glauconite sand stone, shale of Vindhyan super group sample, Kurchha-Barwadih area, Sonbhadra Dt., U.P. under CGPB studies.
2105 8L/C	Microscopy & XRD studies of four samples of Indian Origin and four samples of foreign origin for M/s.Sarda Energy & Minerals Ltd., Raipur (Chattisgarh).
2106 L/C	X-ray Diffraction studies of **kyanite/sillimanite** sample for M/s.Pavri Kyanite Mines, Nagpur.
2107 L/C	Detailed Mineralogical studies & XRD analysis for Ms.Mousumi Gharai, Dhanbad
2108 3L/NC	Mineralogical studies on 3 **bauxite** samples from RMPL Bengaluru.

REGIONAL MINERAL PROCESSING LABORATORY, AJMER	
553 L/C	Determination of Bond's Ball Mill Work Index on a **White Clinker** (FO) sample from Gotan, Rajasthan. for M/s J.K. White Cements Ltd.
554 L/C	Determination of Bond's Ball Mill Work Index on a **Gypsum** (F) sample from Gotan, Rajasthan. for M/s J.K. White Cements Ltd.
555 L/C	Determination of Bond's Ball Mill Work Index on a **Gypsum** (G) sample from Gotan, Rajasthan. for M/s J.K. White Cements Ltd.
556 F/C	Bench scale beneficiation (Thickening and Filtration) studies on a low grade **Rock Phosphate** Sample from Jhamarkotra, Udaipur district, Rajasthan for M/s Hindustan Zinc Ltd.
557 F/NC	Beneficiation of Low Grade **Clay** sample (CH-7) from Jafer Kheda mines of M/s Shri Gopal lal Agal, District. Chittorgarh, Rajasthan (For Regional Controller of Mines, IBM, Udaipur.
558 F/NC	Beneficiation of low grade **Clay** sample (CH-8) from Acchuda Mines of M/s Ambe Impex , C/o Shri Gopal Swaroop Ojha, Distt. Chittorgarh, Rajasthan (For Regional Controller of Mines, IBM, Udaipur).
559 F/C	Bench scale beneficiation of **Red Ochre** sample for Silica Reduction for Wonder Cement Ltd. , Nimbahera Dist. Chittorgarh Rajasthan
560 L/C	Attrition scrubbing followed by sizing on a **Clay** sample from M/s Wonder Cement, Nimbahera mines, District. Chittorgarh, Rajasthan..
561 L/C	Limited attrition scrubbing followed by sizing on a **silica sand** sample from Bharatpur, Rajasthan for M/s LSC Infratech Pvt. Ltd.
562 F/C	Bench scale beneficiation studies on a **silica sand** sample from Bharatpur, Rajasthan for M/s LSC Infratech Pvt. Ltd.
563 L/C	Determination of Bond's Ball Mill Work Index on a **Felsic Meta Volcanic** sample (KB-01) from Khera, GSI, Western Region, Jaipur, Rajasthan. for M/s GSI, Western Region, Jaipur.

REGIONAL MINERAL PROCESSING LABORATORY, BENGALURU	
725 1F&2L/C	Bench Scale beneficiation studies, Denver Grindability Studies and Determination of work index on a **low grade iron ore** -2 sample from Jabalpur, Madhya Pradesh for M/s Gulfd Ispat Ltd.
726 F/NC	Beneficiation studies on a **ROM Gold Ore sample** from Hatti Gold Mines, Raichur, Karnataka for Regional Controller of Mines, IBM, Bangalore.
727 F/C	Beneficiation Studies on a **Gold Ore** Sample from Sikitiko mines, Tanzania for M/s City Energy & Infrastructure ltd., Bangalore.
728 F&2L/C	Bench scale beneficiation studies, Denver Grindability studies and Work Index determination on a **Clayey Iron Ore** sample from Indonesia for Bellary Iron Ore Private Limited, Karnataka.
729 F/C	Beneficiation Studies on a low grade **Phosphate** sample from Egypt for M/s Green Star Fertilizers Ltd., Tuticorin..
730 12L/NC	Twelve limited beneficiation tests on **Barite** samples from M/s Andhra Pradesh Mineral Development Corporation Limited, Kadapa Dt., Andhra Pradesh for RCOM, Hyderabad.
731 6L/NC	Six limited beneficiation tests on **Red shale, White shale and Black shale** samples from M/s APMDC, Mangampet, Kadapa dt., Andhra Pradesh for RCOM, Hyderabad
732 3L/C	Detailed mineralogical studies on two **iron ore** samples & Amenability studies on one **Iron ore** sample from the Lease Hold area at Survey No. 746/2, Ganapavaram Village, Tripurantakam, Prakasham District of Andhra Pradesh for M/s Geomin Industries Private Limited, Jabalpur.
733 L/C	Detailed mineralogical studies on three **Beach sand** samples and determination of bulk density combined sample from Srikakulam area of Andhra Pradesh for M/s Transworld Garnet India Pvt Ltd.
734 L/C	Beneficiation studies on **Gold Ore** sample from Pahardia Gold Project , Dist. West Singhbhuro , Jharkand for M/s Mineral Exploration Corporation Limited, Ranchi.
735 2/L/C	Limited tests On **Clay** Samples from Rajasthan – Plasticity Tests, Brightness and Chemical analysis for Saramin, Bangalore**.**
736 L/C	Limited Jigging tests on an **Iron ore** sample from Chitradurga district, Karnataka for M/s. Mineral Enterprises Limited.
737 L/C	Amenability studies on a **Phosphate powder** sample received from Jhabua District of Chhathisgarh for M/s B E C Fertilizers, Bilaspur, Chhathisgarh.
738 F/C	Beneficiation Studies on an **Iron Ore** sample from Goa for M/s Delkor Technik Private Limited, Bangalore.
739 1L/C	Amenability Studies on a **Gold bearing Sand** sample received from Morrocco for M/s City Energy & Infrastructure, Bangaluru.
740 2F & 2 L/C	Beneficiation, Dewatering and Work index studies on an **Iron ore dump** sample from Subbarayanahalli mines, Sandur taluk, Bellary district, Karnataka for M/s Mysore Minerals Ltd, Bangalore.
741 L/C	Amenability studies on one **Manganese ore** sample received from Oman for M/s Asian Builders, Bangalore.
742 2L/C	Limited beneficiation studies on a siliceous surface **Limestone** sample from Muddapur Mines, Dist. Bagalkot, Karnataka for M/s JK Cement Works, Dist. Bagalkot, Karnataka.
743 F/C	Beneficiation on an **Iron ore** sample from Kalane Iron Ore mines, Goa for M/s Samruddha Resources Limited, Mumbai.
744 F/C	Beneficiation studies on an **Iron ore** sample from Hirebaganal village, Koppal district, Karnataka for M/s Shree Krishna Vyjayanthi Industries, Hospet.

LIST OF ORE DRESSING INVESTIGATIONS COMPLETED FOR RCOM'S .

MODERN MINERAL PROCESSING LABORATORY & PILOT PLANT, NAGPUR	
2060 4L/NC	Four limited amenability studies on two **Laterite**, one C**lay** & one **Ochre** sample from Khitola laterite, clay and ochre deposit, Jabalpur, District Jabalpur, Madhya Pradesh for Regional Controller of Mines, Jabalpur.
2062 3L/NC	Three limited amenability studies on one **Bauxite**, one **Laterite** & one **Fire Clay** samples from Katni, Madhya Pradesh for Regional Controller of Mines, Jabalpur.
2098 L/NC	Limited amenability studies on **lump** sample from RCOM, Jabalpur.
REGIONAL MINERAL PROCESSING LABORATORY , AJMER	
557 F/NC	Beneficiation of Low Grade **Clay** sample (CH-7) from Jafer Kheda mines of M/s Shri Gopal lal Agal, District. Chittorgarh, Rajasthan (For Regional Controller of Mines, IBM, Udaipur.
558 F/NC	Beneficiation of low grade **Clay** sample (CH-8) from Acchuda Mines of M/s Ambe Impex , C/o Shri Gopal Swaroop Ojha, Distt. Chittorgarh, Rajasthan (For Regional Controller of Mines, IBM, Udaipur).
REGIONAL MINERAL PROCESSING LABORATORY , BENGALURU	
726 F/NC	Beneficiation studies on a **ROM Gold Ore sample** from Hatti Gold Mines, Raichur, Karnataka for Regional Controller of Mines, IBM, Bangalore..
730 12L/NC	Twelve limited beneficiation tests on **Barite** samples from M/s Andhra Pradesh Mineral Development Corporation Limited, Kadapa Dt., Andhra Pradesh for RCOM, Hyderabad.
731 6L/NC	Six limited beneficiation tests on **Red shale, White shale and Black shale** samples from M/s APMDC, Mangampet, Kadapa dt., Andhra Pradesh for RCOM, Hyderabad

LIST OF ORE DRESSING INVESTIGATIONS COMPLETED (DEPARTMENTAL STUDIES)

MODERN MINERAL PROCESSING LABORATORY & PILOT PLANT, NAGPUR	
2070 F/NC	Bench Scale flotation beneficiation studies on a low grade **Copper ore** sample from Khetri, Rajasthan **(Departmental studies).**

LIST OF ORE DRESSING INVESTIGATIONS COMPLETED (UNDER REGIONAL MINERAL DEVELOPMENT/RMG STUDIES)

MODERN MINERAL PROCESSING LABORATORY & PILOT PLANT, NAGPUR	
2056 F/NC	Beneficiation studies on a **Laterite iron** sample from Gandhigram (Sample No.1) Jabalpur for Sandeep Bansal **(under RMDS).**
2059 L/NC	Characterisation of a **Lateritic Iron Ore** Sample No. 2 from Gandhigram, Jabalpur, Madhya Pradesh for Regional Controller of Mines **(Under Regional Mineral Development Study).**

Annexure III

Foreign Deputation during 2015-16

S. No.	Name	Place of visit	Date	Purpose
1	Shri R.K.Sinha, Chief Controller of Mines	Sydney, Australia	01-04 September, 2015	To participate in Asia Pacifc's International Mining Exhibition (AIMEX) -2015, held at Sydney, Australia during 1-4 September, 2015 as a member of delegation led by Hon'ble Minister of Mines Shri Narendra Singh Tomar.

Annexure IV

Participation in Seminars/Symposia/Workshops etc. during the Year 2015-16

(i) Shri R. K. Sinha, COM attended workshop on 'Sand & Gravel Mining' organised by the Ministry of Environment & Forests on 27 March, 2015 at New Delhi.

(ii) Dr. Y. G. Kale, RCOM participated in the 'Sustainable Mining Summit' organised by the Federation of Indian Mineral Industries (FIMI) during 17-18 April, 2015 at Donapaula, Goa. He presented a paper during the Summit titled "Mining Industry in the Perspective of New Legislative Regime" prepared in the joint authorship of Shri S. Tiu, COM.

(iii) Shri S. K. Sharma, AME (I) participated in International Conference on 'Global Challenges, Policy Framework and Sustainable Development for Mining of Mineral & Fossil Energy Resources (GCPF: 2015-20)' organised by the National Institute of Technology, Surathkal (Karnataka) during 17-18 April, 2015 at Surathkal. He presented a paper titled "Demand Forecasting Techniques vis-à-vis Demand Forecast for Lead" prepared in the joint authorship of Shri G. K. Sharma, AME (I).

(iv) Shri S. Tiu, COM attended a conference on 'Mining in Karnataka – Enhancing Production' organized by the Associated Chambers of Commerce & Industry of India at Bengaluru on 19 June, 2015. He made a presentation on "Mines & Minerals (Development & Regulation) Amendment Act, 2015".

(v) Shri M. Biswas, RCOM attended a workshop on 'Carrying Capacity Studies' organized by CSIR-NEERI at Bhubaneswar on 23 June, 2015 and delivered a lecture on "Iron Ore Reserves in Odisha & Future Mining Practices".

(vi) Shri R. K. Sinha, CCOM attended Mining Leaders Round Table (Conference) organised by the CII on 07 August, 2015 at New Delhi.

(vii) Dr. P. K. Jain, Sg.MG attended World Hindi Conference organised by the Ministry of External Affairs, Government of India during 10-13 September, 2015 at Bhopal.

(viii) Shri R. K. Sinha, CCOM along with senior officers attended inaugural function of Mining Mazma organised by FIMI at Bengaluru from 24-26 September 2015.

(ix) S/Shri S. Tiu, COM (SZ), Dr. P.K.Jain SgMG & C.Parmeshwaran DCOM participated in "Mining-Exploration Convention & Trade Show (Mining Mazma 2015) organised by FIMI from 24-26 September 2015 at Bengaluru. Dr. Jain presented a paper titled "Mineral Policy and Lagislation- A Changing Perspective and Vision" jointly authored with Shri Ranjan Sahai, COM. A stall was set up by IBM in the trade show displaying major functions and activities of IBM with display & sale of IBM Publications. The stall was inaugurated by the Hon'ble Minister of Mines.

(x) Shri M.G. Raut, DODO attended seminar on "Importance of Sieves and Sieving in the Process Industry" organised by Bureau of Indian Standards on 08 October, 2015 at New Delhi. He made a presentation on "Other Sizing Methods and Equipment Used in Mining Industry" during the seminar.

(xi) S/Shri Rajanish Purohit, RCOM, G. C. Sethi, DCOM, N. K. Chatterjee AMG, S. Bodra, AMG & B.K.Singh AMG attended Conference on Environmental Protection & Sustainable Development - Impact on Climate Change organised by Judicial Academy, Jharkhand and National Green Tribunal in association with the Ministry of Forest & Environment, Government of India and State Government of Jharkhand on 10 & 11 October, 2015 at Ranchi.

(xii) Shri Ashish Mishra ACOM attended 2nd Interactive Workshop with Mines Officials regarding 'Carrying Capacity Studies for Environmentally Sustainable Mining of Iron & Manganese Ore in Keonjhar, Sundergarh and Mayurbhanj districts of Odisha' on 29-30 October 2015 at CSIR-NEERI, Nagpur

(xiii) Shri R. K. Sinha, CCOM along with Shri S. Tiu, COM (SZ) & Dr Y.G. Kale RCOM participated in Conference on 'Raw Materials Security for Iron and Steel' organised by FIMI from 06-07 November 2015 at Goa. A paper titled "Goan Iron Ore Mining: Present Status and Way Forward" was presented by Shri R. K. Sinha and Dr. Y.G. Kale, jointly authored with Shri S.Tiu.

(xiv) Shri R. K. Sinha, CCOM alongwith Shri Abhay Agrawal, DCOM & TS attended Seminar on MMDR Amendment Act organised by FICCI at New Delhi on 19 November, 2015 and presented a paper on "Mining Operation in the Ambit of Amended MMDR Act."

(xv) Dr. Y. G. Kale, RCOM attended UN PRME Conference during 27-28 November, 2015 at Goa Institute of Management, Goa and made a presentation on "Regulatory Aspects of Mining".

(xvi) Shri S. S. Sapkal, DCOM& I/c Training Centre attended Introductory Workshop with Training Managers of Central Ministries/Departments organised by the DoPT on 27 November, 2015 at New Delhi.

(xvii) S/Shri A. B. Panigrahi, RCOM and K. Kartikeya, JMG participated in Manganese/Chrome Ores & Ferro-Alloys Summit organised by FIMI during 30 November-01 December, 2015 at Kolkata. Shri.A.B. Panigrahi presented a paper titled 'Panorama of Manganese Ore Mining in India:Challenges & Prospects' jointly authored with S/Shri Kartikeya, JMG and Naman Ekka, JMG.

(xviii) Shri R. K. Sinha, CCOM along with Dr. V.A.J Aruna Suptdg. Officer (OD) & Shri K.S.Yadav RCOM attended Conference on "Encouraging Exploration in India with the theme: Charting the Course for better mineral finds" organised by CII at India Habitat New Delhi on 3.12.2015 and presented the Paper on "Expanding Frontiers in Mineral Exploration".

(xix) S/Shri S.K.Adhikari, CMG & A.M.Kamble RMG attended workshop on Developing Motivational Leadership in Corporate Sector" Organised by Mineral Exploration Corporation Ltd. At Nagpur on 11.12.2015

(xx) S/Shri L.H.Changte, DCOM & Dilip Jain AMG attended International Seminar on MINEXPRO 2015 organised by Society for Geoscientist and allied Technologies on 11-12 December 2015 at Bhubaneswar.

(xxi) Shri S.R.Roy COM attended Regional Seminar on Make in India Initiatives in mining , organized by Indian Mining & Engineering journal in association with the AK University at Satna (MP) on 23.01.2016.

(xxii) Dr. Y.G.Kale RCOM Goa, Participated in National Workshop on "Proactive approach for Sustainable Mining in India" (PASM-16) on 09.01.2016 at Goa Jointly organised by Department of Mining Engineering , Goa College of Engineering and Mining Engineers Association of India(MEIA) Goa Chapter & presented a paper titled "Proactive approach for Sustainable Mining : Goan Scenario"

(xxiii) S/Shri R. Mujumdar SMG & A Mishra A.O. participated in 19th National Conference on e-Governance organised by the Deity & DAR & PG at Nagpur on 21-22 January 2016-02-11

(xxiv) Shri S.Tiu COM, attended the event STONA 2016 organized by FIGSI at Intention Exhibition Center Banglore on 3rd & 5th February 2016 along with Shri V. Jayakrishna Babu, RCOM.

(xxv) Dr. P.K.Jain SgMG) delivered a lecture as guest faculty in the workshop on UNFC at GSI, RTI (western Region) on 15.-16 February 2016 at Jaipur.

(xxvi) S/Shri K.S.Yadav, RCOM & D.R.Gurjar ACOM participated in IIRS User Interaction Meet organized by the Indian Institute of Remote Sensing on 18.02.2016 at Dehradun.

(xxvii) Shri R.K.Sinha Controller General participated in conference organized by FIMI at Ahmedabad (Guj) on 25.02.2016 and presented a Paper on "Industrial Minerals, Bauxite and Lignite- A Stepping Stone to Make in India".

(xxviii) Dr. Y.G.Kale RCOM participated in the Mining Policy Round Table of Goa organized by FICCI at Panjim Goa and made presentation as one of the panelist. Shri Balvinder Kumar Secretary (Mines) chaired the Technical Session of the round Table.

(xxix) Shri K.S.Yadav RCOM attended Dissemination Workshop of IUCN Tata Steel Partership organized Integrated Management of Biodiversity, 17th March 2016 at India International centre, New Delhi.

(xxx) S/Shri C Parmeshwaran DCOM and D.V.Moon Sr. Chemist attended workshop on Science Policy and General Management held from 29 February to 11 March 2016 at National Institute of Advanced Studies Banglore.

* * *

Annexure V

Nominations to the Committees, Working Groups, etc.

1. Smt. Indira Ravindran, Director (OD) & Head Mineral Processing Division, IBM is nominated as a member of the committee to review the project mineral Systematic & Pre-concentration of PGE values from low grade Chrome ores of Bhoula Mine, Orissa" in IMMT, Bhubaneswar & make appropriate recommendation to PERC.

2. Dr. V.A.J. Aruna, Supd. Officer (OD), IBM is nominated as a member to represent Ministry of Mines in Expert Committee for Strategy on REE. The first meeting of Expert committee to evolve a strategy for Self reliance in critical strategy rescue of Rare Earths.

3. Shri H. Meena, RCOM, IBM has been nominated in committee for meeting & presentation on "MRAI's vision on Metal Recycling Sector in India" by Metal Recycling Association of India.

Annexure VI

Publication Released during year 2015-16

Sr.No.	Name of Publications	Release Date
1.	IMI – At a Glance 2012-13	27/4/2015
2.	MSMP October,2014	18/5/2015
3.	IBM News April,2014 – June,2014 * July,2014 – Sept.2014	08/06/2015
4.	Statistical Profile of Minerals 2013-14	16/06/2015
5.	Bulletin of Mining Leases & Prospecting Licences, 2013	18/06/2015
6.	MSMP Nov.2014	18/6/2015
7.	IMYB-2013 Vol-II	26/06/2015
8.	MSMP Dec.2014	20/07/2015
9.	Bulletin of Mineral Information April'14 – Sept.'14	27/7/2015
10.	MSMP – Jan.2015	04/09/2015
11.	MMDR Act, 1957	20/10/2015
12.	Indian Mineral Industry at a Glance 2013-14	05/11/2015
13.	Monthly Statistics of Mineral Production – Feb.2015	30/11/2015
14.	Indian Minerals Yearbook-2013 (Vol-III)	03/12/2015
15.	Bulletin of Mineral Information –Oct.2014-March,2015	17/12/2015
16.	Indian Minerals Yearbook-2013 (Vol-I)	18/12/2015
17.	Monthly Statistics of Mineral Production – March,2015	18/12/2015
18.	Bulletin of Mining Leases & Prospecting Licences, 2014	19/02/2016
19.	Monthly Statistics of Mineral Production – April,2015	08/03/2016
20.	Monthly Statistics of Mineral Production – May,2015	11/03/2016
21.	Monthly Statistics of Mineral Production – June,2015	18/03/2016
22..	Monthly Statistics of Mineral Production – July,2015	22/03/2016
23.	Monthly Statistics of Mineral Production – August,2015	22/03/2016
24.	Monthly Statistics of Mineral Production – September,2015	23/03/2016
25.	Monthly Statistics of Mineral Production – October,2015	23/03/2016

Annexure VII-A

Performance 2015-16

Scheme No. 1-Inspection of Mines for Scientific and Systematic Mining, Mineral Conservation & Mines Environment.			
S. No	**Programme**	**Annual Target**	**Achievement (as on 31.03.2016)**
1	Inspection of Mines	1600	1633
2	Regional Mineral Development Studies (RMDS)	02	02 completed
3.	Disposal of Mining Plans/Schemes/Closure Plans	-	121 MP/ 490 MS/ 28 FMCP
Scheme No 2-Mineral Beneficiation studies - utilization of low grade and sub-grade ores and analysis of environmental samples			
S. No	**Programme**	**Annual Target**	**Achievement (as on 31.03.2016)**
1.	Ore Dressing Investigations	60	56
2.	Chemical Analysis	40,000	35,376
3.	Mineralogical Examinations	2,300	2,423
4	In-plant Studies	-	1

Scheme No. 3 - Technological Up-gradation and Modernization			
S. No	**Programme**	**Annual Target**	**Achievement (as on 31.03.2016)**
1.	Updation of NMI adopting UNFC as on 01.04.2015	Updation of NMI as on 1.4.2015 for 71 minerals in 8990 deposits. Summary outputs for 21 minerals.	10431 leasehold sheets updated. Summary outputs for 14 minerals completed.
2.	Updation of mineral maps with forest overlays	100 Multi Mineral Maps with forest covering the states of Tamil Nadu, Andhra Pradesh and Kerala	100 completed
3.	Technical Consultancy Mining and Geological assignments	3 Assignments	02 survey assignments completed
4.	Mining Research Environmental and Geo-Technical studies	1-2 Assignments	01 ground vibration study completed
5.	Imparting training to IBM personnel, industry people and foreign personnel	16 Training courses	19

Scheme No. 4 - Collection, Processing, Dissemination of data on Mines and Minerals through various publications.			
S. No	**Programme**	**Annual Target**	**Achievement (as on 31.03.2016)**
1.	Collection, compilation, scrutiny, storage, Dissemination of data through various services		
	1)Monthly Statistics of Mineral Production (Monthly)	Release of 12 issues	2014 completed. Jan to Oct' 2015 released. Nov'15 & Dec'15 are under printing.
	2)Indian Mineral Industry at a Glance (Annual)	*1 issue (2013-14)*	2013-14 issue released 2014-15 in progress
	3) Statistical Profiles of Minerals (Annual)	*1 issue (2013-14)*	2013-14 issue released 2014-15 in progress
	4) Updation of Directory of Mining Leases	*To update as on 31.3.2015*	Work in progress
	Indian Mineral Year Book/Monographs/Technical Bulletins		
2	Indian Minerals Year Book	Preparation of IMYB 2014 issue	Vol. 1, 2 & 3 web versions are released
3	Bulletin on Mineral Information	2 issues (Oct 14 - Mar15 & Apr-Sept 2015)	Oct' 14 – Mar' 15 issue and Apr-Sept 2015 issue completed. Oct' 15 – Mar' 16 issue in progress
4	Bulletin on ML & PL	2014 issue	Web version released.
5.	Publications released	-	Total 19 publications are released.
	Advisory Services		
6.	Ministry references and Parliament Questions /Assurances	As and when received	471- Min. ref. and 197-Parliament questions/ Assurances replied.

Scheme No. 5 - Mining Tenements System. (MTS)			
S. No	**Programme**	**Annual Target**	**Achievement (as on 31.03.2016)**
1.	To develop an online National Mineral Inf. System by linking Central and State organizations engaged in administration of mineral resources in the country.	Initiation of process for tendering the RFP. Floating of tender document and pre-bidding process. Processing of bids for identification of software agency. Issue of work order and initiation for development of software.	Technical Evaluation Committee (post bid for MTS) meetings were held on 2-3 March & 28 March 2016 through video conference to discuss the observations prepared by M/s E &Y against each bidder & to analyse the adequacy of clarification submitted by the bidders. TEC, after going through the details of observations and validation of documents, discussed that IBM may decide to invite further clarification/ fresh documents from TCS & L&T info-tech against the observations recorded in the minutes and in line with the provisions of RFP. Accordingly IBM has sought necessary clarifications from the vendors.

Annexure-VII-B

STATEMENT SHOWING THE SCHEMEWISE EXPENDITURE OF PLAN
FOR & UPTO THE MONTH OF MARCH, 2016

(Rs.In crores)

Sl. No.	Name of Scheme/ Programme	Revised Estimates 2015-16	Expdr. during the Month of Mar,2016	Comulative expdr. incurred for the year 2015-16 (upto Mar, 2016)	Percentage of expndr.
1	2	3	4	5	6
1	Inspection of Mines for Scientific and systematic mining, mineral conservation and mines environment.	20.82	0.71	16.87	81.03
2	Mineral beneficiation studies- utilization of low grade and sub grade ores and analysis of environmental samples.	7.45	0.65	7.08	95.03
3	Technological upgradation & Modernization.	5.78	0.20	5.65	97.75
4	Collection,processing dissemination of data on mines and minerals through various publications	3.14	0.30	2.98	94.90
5	Computerised online register of Mining tenament system	0.00	0.00	0.00	0.00
6	Tribal Area Sub-Plan Tribal Welfare fund	0.74	0.00	0.00	0.00
7	Works Outlay	0.00	0.00	0.00	0.00
8	Major Head-2552- NER (Revenue)	0.00	0.00	0.00	0.00
9	Major Head-4552- NER (Capital)	0.00	0.00	0.00	0.00
	TOTAL:	37.93	1.86	32.58	85.90

ANNEXURE-VIII

RETURN ON ILLEGAL MINING FOR THE YEAR 2015-16

Major Minerals

SR. No.	STATE	No. of cases	Quantum of mineral/ Ore excavated / stacked / Transported (in lakh tonnes)	Value of Mineral /Ore (Rs.Lacks)	FIR Lodged (Nos.)	Court Cases Filed (Nos.)	Fine realised (Rs. Lakh)
1	**ANDHRA PRADESH**	270	0.052	57.390	0	0	96.24
2	**CHHATTISGARH**	108	0.015	23.09	0	104	69.94
3	**GOA***	2	0.000	0.000	0	0	0.00
4	****	277	2.337	782.960	3	0	232.90
5	**HARYANA**	0	0.000	0.000	0	0	0.00
6	**JHARKHAND**	167	0.010	34.260	79	131	5.00
7	**KARNATAKA**	221	0.009	8.580	6	4	36.00
8	**KERALA**	7	0.005	37.970	0	0	1.61
9	**MADHYA PRADESH***	86	0.000	45.030	0	86	108.17
10	**MAHARASHTRA**	0	0.000	0.000	0	0	0.00
11	**ODISHA**	44	2.009	88.17	0	0	43.68
12	**RAJASTHAN**	126	0.143	8.790	50	0	51.05
13	**SIKKIM**	0	0.000	0.000	0	0	0.00
14	**TAMILNADU**	2	0.645	75.620	1	0	142.53
15	**TELENGANA**	12	0.002	2.270	0	0	4.87
16	**UTTARPRADESH**	0	0.000	0.000	0	0	0.00
17	**WEST BENGAL**	575	0.008	3.770	575	0	0.00
Total		**1897**	**5.235**	**1167.9**	**714**	**325**	**791.99**
Note	Quantity of mineral /ore excavated/stacked/transported given in Cu.mt/other unit	Madhya Pradesh*	4450 cu.mt				
		Goa	00 cu. mt.				

Minor Minerals							
SR. No.	STATE	No. of cases	Quantum of mineral/ Ore excavated / stacked / Transported (in lakh tonnes)	Value of Mineral /Ore (Rs.Lacks)	FIR Lodged (Nos.)	Court Cases Filed (Nos.)	Fine realised (Rs. Lakh)
1	**ANDHRA PRADESH**	9683	12.946	2607.83	0	0	2809.73
4	**CHHATTISGARH**	5754	2.388	202.09	0	5722	875.49
5	**GOA***	0	0.000	0.00	0	0	0.00
6	**GUJARAT**	6222	20.458	3007.88	81	2	3065.73
7	**HARYANA**	3912	13.022	304.320	78	0	878.58
8	**JHARKHAND**	1478	0.471	85.540	517	98	108.07
9	**KARNATAKA**	8964	5.846	1359.13	218	47	2789.59
10	**KERALA**	3694	51.265	32137.00	0	0	1364.57
11	**MADHYA PRADESH***	13541	0.000	88533.07	0	13420	10897.88
12	**MAHARASHTRA**	30979	0.000	0.00	36	0	4791.4
14	**ODISHA**	18	0.105	113.51	0	0	82.62
15	**RAJASTHAN**	3535	31.014	653.51	374	11	1407.42
16	**SIKKIM**	0	0.000	0.00	0	0	0.00
17	**TAMILNADU**	56	5.013	38.08	4015	0	3041.52
18	**TELENGANA**	6526	20.870	1225.85	0	0	1636.60
19	**UTTARPRADESH**	11350	0	1216.06	0	0	3529.73
17	**WEST BENGAL**	0	0	0	0	0	0
Total		**105712**	**163.398**	**131483.87**	**5319**	**19300**	**37278.929**
Note	Quantity of mineral /ore excavated/stacked/transported given in	Madhya Pradesh*	1730650.50 cu. mt				
		Goa	00 cu. mt.				

3. खनिज उत्पादन, मार्च 2016
(परमाणु खनिजों और गौण खनिजों को छोडकर)
खनिजवार

3. MINERAL PRODUCTION, MARCH 2016
(Excluding Atomic Minerals and Minor Minerals)
MINERAL-WISE

(मूल्य '000 रुपये/ Value in Rs.'000)

खनिज	Mineral	इकाई Unit	मार्च 2016 March 2016		फरवरी 2016 February 2016		अप्रेल 2015 . मार्च 2016 Apr 2015 - Mar 2016		अप्रेल 2014 . मार्च 2015 Apr 2014 - Mar 2015	
			मात्रा/ Qty.	मूल्य/ Val.	मात्रा / Qty.	मूल्य/ Val.	मात्रा / Qty.	मूल्य/ Val.	मात्रा / Qty.	मूल्य / Val.
सभी खनिज	All Minerals			228801625		204225762		2341714290		2377774206
ईंधन खनिज	Fuel Minerals			187096533		169869074		1940099128		1933720761
कोयला	Coal	'000t	69411	100753608	60007	87710772	639021	934944048	609200	892871700
लिग्नाइट	Lignite	'000t	5734	10542800	5067	8869234	44008	76226809	48300	81627000
प्राकृतिक गैस (उपभुक्त)	Natural Gas (ut.)	m c m	2436	20146031	2495	20633970	31114	257316760	33656	278339428
पेट्रोलियम (अपरिष्कृत)	Petroleum (crude)	'000t	3062	55654094	2897	52655098	36951	671611511	37461	680882633
धात्विक खनिज	Metallic Minerals			35351065		28600767		334689103		379091115
बॉक्साइट	Bauxite	t	1952412	1061887	1855154	939159	28133516	14095083	22493671	11922367
क्रोमाइट	Chromite	t	427369	2919089	350061	2435965	2893997	23047531	2164163	18800279
ताम्र अयस्क	Copper Ore	t	367417	0	335854	0	3907823	0	3505348	0
ताम्र सान्द्र	Copper Conc.	t	13737	666074	12355	497308	142649	6259863	107604	5289409
सोना अयस्क	Gold Ore	t	49156	0	65163	0	534907	0	447278	0
सोना (कुल)	Gold (total)	kg	147	387966	101	261052	1323	3214623	1441	3602722
सोना (प्राथमिक)	Gold (primary)	kg	147	387966	101	261052	1323	3214623	1441	3602722
सोना (उप उत्पाद)	Gold (by-product)	kg	0	0	0	0	0	0	0	0
लोह अयस्क (कुल)	Iron Ore (total)	'000t	17586	21739890	16331	19279820	155910	221158219	129321	276636789
लोह अयस्क (ढेले)	Iron Ore (lumps)	'000t	5953	9428780	5371	7940679	53761	101543175	47331	126896782
लोह अयस्क (चूरा)	Iron Ore (fines)	'000t	11544	12149271	10874	11151689	101058	118071110	80912	146560518
लोह अयस्क सान्द्र	Iron Ore Conc.	'000t	89	161839	86	187452	1091	1543934	1078	3179489
सीसा व जस्त अयस्क	Lead & Zinc Ore	t	1023119	0	871993	0	10453037	0	9362659	0
सीसा सान्द्र	Lead Conc.	t	27840	994152	20665	648872	261858	7885168	197668	5640013
जस्त सान्द्र	Zinc Conc.	t	128092	5047877	90368	2544573	1473812	34943111	1489374	31572181
मैंगनीज अयस्क	Manganese Ore	t	265170	979050	187969	669809	2147629	8864926	2369481	13661799
चांदी	Silver	kg	45697	1554582	40249	1323265	426443	15212365	327647	11947028
टिन सान्द्र	Tin Conc.	kg	797	498	1651	944	13541	8214	24685	18528
अधात्विक खनिज	Non-metallic Minerals			6354027		5755921		66926059		64962330
एपेटाइट	Apatite	t	0	0	0	0	150	332	930	2065
फॉस्फोराइट	Phosphorite	t	92282	303173	57428	198981	1473722	3275250	1607215	3759071
एस्बेस्टोस	Asbestos	t	0	0	0	0	0	0	0	0
हीरा	Diamond	crt	4006	71112	4153	75693	36070	621441	36107	613504
फ्लिन्ट स्टोन	Flint Stone	t	15	5	20	6	253	76	244	79
फ्लूओराइट (श्रेणीकृत)	Fluorite (graded)	t	897	5029	0	0	2333	13012	2946	13761

(क्रमशः / Contd.....)

3. खनिज उत्पादन, मार्च 2016
(परमाणु खनिजों और गौण खनिजों को छोडकर)
खनिजवार
3. MINERAL PRODUCTION, MARCH 2016
(Excluding Atomic Minerals and Minor Minerals)
MINERAL-WISE

(मूल्य '000 रुपये/ Value in Rs.'000)

खनिज	Mineral	इकाई Unit	मार्च 2016 March 2016		फरवरी 2016 February 2016		अप्रेल 2015 . मार्च 2016 Apr 2015 - Mar 2016		अप्रेल 2014 . मार्च 2015 Apr 2014 - Mar 2015	
			मात्रा/ Qty.	मूल्य/ Val.	मात्रा / Qty.	मूल्य/ Val.	मात्रा / Qty.	मूल्य/ Val.	मात्रा / Qty.	मूल्य / Val.
गार्नेट (अपघर्ष)	Garnet (abrasive)	t	7819	64053	6580	53750	81794	685899	91394	800998
गार्नेट (रत्न)	Garnet (gem)	kg	0	0	0	0	0	0	0	0
ग्रेफाइट (खान निर्गत)	Graphite (r.o.m.)	t	22866	3736	21310	5109	134568	66197	116712	83996
आयोलाइट	Iolite	kg	0	0	0	0	0	0	0	0
कायनाइट	Kyanite	t	511	2479	190	784	2901	14029	6255	12185
सिलिमेनाइट	Sillimanite	t	8165	63375	4909	33781	70447	498992	66273	456050
चूना पत्थर	Limestone	'000t	29197	5721181	26700	5278973	303815	60529552	293273	58000375
लाइम शैल	Limeshell	t	1317	3502	593	1685	10029	27259	16353	37137
मैग्नेसाइट	Magnesite	t	26087	68406	24396	63928	265022	700931	285009	748792
मार्ल	Marl	t	285873	34803	238161	29437	2389706	319146	2179488	257598
मोल्डिंग सैन्ड	Moulding Sand	t	8651	1879	3771	820	25852	6068	6383	1671
परलाइट	Perlite	t	0	0	0	0	0	0	0	0
नमक (सैंधा)	Salt (rock)	t	0	0	0	0	0	0	0	0
सेलेनाइट	Selenite	t	403	903	416	932	3103	6938	207	456
गंधक (1)	Sulphur (1)	t	39984	0	41979	0	441153	0	429258	0
वर्मिकुलाइट	Vermiculite	t	775	833	766	753	23267	10573	19336	12479
वोलेस्टोनाइट	Wollastonite	t	12494	9558	13577	11289	175348	150364	186524	162113

(समाप्त / Concld.)

ANNEXURE-X

All India Mineral Resources as on 01.04.2010/*2013

Sl. No	Mineral	Unit	Reserves	Remaining Resources	Total Resources
1	Alexandrite	NA	NE	NE	NE
2	Andalusite	000' tonnes	0	18,450	18,450
3	Antimony*	tonnes			
	Ore		0	10,588	10,588
	Metal		0	174	174
4	Apatite*	tonnes	30,792	22,630,348	22,661,140
5	Asbestos	tonnes	2,510,841	19,655,762	22,166,603
6	Ball clay	tonnes	16,777,842	66,615,662	83,393,504
7	Barytes	tonnes	31,584,128	41,149,746	72,733,874
8	Bauxite*	000' tonnes	830,195	2,908,856	3,739,051
9	Bentonite	tonnes	25,060,508	543,306,838	568,367,346
10	Borax	tonnes	0	74,204	74,204
11	Calcite	tonnes	2,664,338	18,281,110	20,945,448
12	Chalk	000' tonnes	4,332	585	4,917
13	China clay	000' tonnes	177,158	2,528,049	2,705,207
14	Chromite*	000' tonnes	107,221	214,530	321,751
15	Cobalt (Ore)*	Million tonnes	0	44.91	44.91
16	Copper*	000' tonnes			
	Ore		237,573	1,273,445	1,511,018
	Metal		2,996.97	9,221.56	12,219
17	Corundum*	tonnes	598	267,219	267,817
18	Diamond*	carats	984,875	30,876,432	31,861,307
19	Diaspore	tonnes	2,859,674	3,125,144	5,984,818
20	Diatomite	000' tonnes	0	2,885	2,885
21	Dolomite*	000' tonnes	783,905	7,300,667	8,084,572
22	Dunite	000' tonnes	17,137	168,232	185,369
23	Emerald	NA	NE	NE	NE
24	Feldspar	tonnes	44,503,240	87,832,212	132,335,452
25	Fire clay	000' tonnes	30,104	683,415	713,519
26	Fluorite*	tonnes	4,573,348	13,614,193	18,187,541
27	Fullers Earth	tonnes	58,200	256,593,879	256,652,079
28	Garnet	tonnes	19,324,793	37,638,032	56,962,825
29	Gold*	tonnes			
	Ore (Primary)		14,615,965	480,188,061	494,804,026
	Metal (Primary)		71.91	568.5	640.41
	Ore (Placer)		0	26,121,000	26,121,000
	Metal (Placer)		0	5.86	5.86

Sl. No	Mineral	Unit	Reserves	Remaining Resources	Total Resources
30	Granite (Dimension Stone)	000' cum	263,692	45,966,608	46,230,300
31	Graphite*	tonnes	8,468,677	180,204,794	188,673,471
32	Gypsum	000' tonnes	39,096	1,247,402	1,286,498
33	Iron Ore * Haematite	000' tonnes	6,606,562	13,969,145	20,575,707
34	Iron Ore* Magnetite	000' tonnes	34,592	10,712,763	10,747,355
35	Kyanite	tonnes	1,574,853	101,670,767	103,245,620
36	Laterite*	000' tonnes	59,898	498,777	558,675
37	Lead and zinc*	000' tonnes			
	Ore		102,795	606,248	709,043
	Metal Lead		2,114.91	9,888.89	12,003.80
	Zinc		10,893.10	24,963.00	35,856.10
	Lead +Zinc		0	140.82	140.82
38	Limestone	000' tonnes	14,926,392	170,008,720	184,935,112
39	Magnesite*	000' tonnes	20,773	307,339	328,112
40	Manganese ore*	000' tonnes	204,510	379,666	584,176
41	Marble	000' tonnes	276,495	1,654,968	1,931,463
42	Marl	tonnes	139,976,150	11,704,870	151,681,020
43	Mica	Kg.	190,741,448	341,495,531	532,236,979
44	Molybdenum *	tonnes			
	Ore		0	19,371,698	19,371,698
	Contained MoS_2		0	12,668.37	12,668.37
45	Nickel (Ore)*	Million tonnes	0	189	189
46	Ochre	tonnes	54,942,176	89,319,089	144,261,265
47	Perlite	000' tonnes	428	1,978	2,406
48	PGM (Metal)	tonnes of metal content	0	15.7	15.7
49	Potash	Million tonnes	0	21,816	21,816
50	Pyrite	000' tonnes	0	1,674,401	1,674,401
51	Pyrophyllite	tonnes	23,275,451	32,807,451	56,082,902
52	Quartz/ Silica Sand	000' tonnes	429,223	3,069,808	3,499,031
53	Quartzite	000' tonnes	86,599	1,164,649	1,251,248
54	Rock Phosphate*	tonnes	65,391,551	249,119,998	314,511,549
55	Rock Salt	000' tonnes	16,026	0	16,026
56	Ruby	Kg.	236	5,112	5,348
57	Sapphire	Kg.	0	450	450
58	Shale	000' tonnes	15,331	580	15,911
59	Sillimanite	tonnes	4,085,052	62,902,385	66,987,437
Sl. No	Mineral	Unit	Reserves	Remaining Resources	Total Resources

60	Silver*	tonnes			
	Ore		118,281,065	401,288,894	519,569,959
	Metal		7,907.97	21,880.38	29,788.35
61	Slate	000' tonnes	0	2,369	2,369
62	Sulphur (Native)	000' tonnes	0	210	210
63	Talc/Steatite/Soapst	000' tonnes	90,026	178,996	269,022
64	Tin*	tonnes			
	Ore		6,973	83,719,193	83,726,166
	Metal		1,181.19	101,093.65	102,274.84
65	Titanium minerals	tonnes	22,030,223	371,965,694	393,995,917
66	Tungsten*	tonnes			
	Ore		0	87,387,464	87,387,464
	Contained WO_3		0	142,094.35	142,094
67	Vanadium*	tonnes			
	Ore		0	24,633,855	24,633,855
	Contained V_2O_5		0	64,594.01	64,594
68	Vermiculite	tonnes	1,704,007	803,003	2,507,010
69	Wollastonite	tonnes	2,487,122	14,082,751	16,569,873
70	Zircon	tonnes	1,347,470	1,786,482	3,133,952

Figures rounded off.
N.E. - Not Estimated
** Reserves/resources as on 1-04-2013*

E-mail / Speed Post

भारत सरकार / Government of India
खान मंत्रालय / Ministry of Mines
भारतीय खान ब्यूरो / Indian Bureau of Mines
मुख्य खान नियंत्रक का कार्यालय / Office of the Chief Controller of Mines
****

No. No. O-11011/3/MMDR15 & 31MM/2015-CCOM **Nagpur, dated: 12-06-2015**

To,

Regional Controller of Mines
Indian Bureau of Mines
Ajmer / Bangalore / Bhubaneshwar / Chennai / Dehradun / Goa / Hyderabad / Jabalpur / Kolkata / Nagpur / Ranchi / Udaipur.

Sub: Issues related to implementation of MCDR-1988/MCR-1960 arising after MMDR (Amendment) Act- 2015 and declaration of 31 minerals as minor minerals- regarding.

Sir,

Consequent to introduction of MMDR (Amendment) Act -2015 and declaration of 31 minerals as minor minerals Vide Gazette Notification No. S.O.423(E) dated 10-02-2015 by Ministry of Mines, Govt. of India, New Delhi, this office received number of queries from Regional/Zonal offices requesting clarification/guidelines etc. Ministry of Mines circulated minutes of meeting held on 13th March, 2015, vide letter no.7/3/2015 M. IV dated 24th March, 2015 and against Item No. 7 of the minutes it is stated that "The Government of India recently notified 31 minerals as minor minerals on 10-02-2015. Entire regulation of these 31 minerals will be with the State Governments."

The issues raised by Regional/Zonal Offices have been examined and the clarification/guidelines are as under:-

1. As per Section 8A(3) of the MMDR Amendment Act 2015, henceforth all the mining leases granted before the commencement of this act shall be deemed to have been granted for 50 years. As per Section 8A(5)&(6) of MMDR Amendment Act 2015 the existing leases deemed to have been extended upto 31st March, 2030 in case of captive and upto 31st March 2020 in case of non-captive mines respectively or till the completion of renewal period whichever is later. Whether there is need of modified Mining Plan or Scheme of Mining?

   Although the provision of Rule 24A of MCR'60 regarding renewal of mining lease exists, yet renewal of mining lease has been dispensed with under Mines & Minerals (Development & Regulation) Amendment Act 2015. It has been held by the Hon'ble Supreme Court (AIR 1960 SC 12) that if a rule goes beyond what the Section contemplates, the rule must yield to the statute. The similar view was upheld by the Hon'ble Supreme Court in WP435/2012 (Goa Foundation Vs. Union of India & Others) in its judgement dated 21st April 2014.

   As such there is no need to further process/approve the Mining Plan submitted under Rule 24A of MCR 1960 for renewal of mining lease.

As per the existing provision of Rule 22(6) of MCR, 1960 the Mining Plan once approved shall be valid for entire duration of lease.

Therefore it is advised that the Modified Mining Plan may be called for the extended period of lease under Rule 22(6) of MCR, 1960 incorporating proposals for the balance period of mining lease or 5 years period and thereafter Scheme of Mining shall be submitted by the lessee under Rule 12 of MCDR 1988.

2. Consequent to Gazette Notification dated 10/02/15 declaring 31 minerals as minor minerals, the following actions are required to be taken against the issues listed below :-

(a) Whether the processing and approval of Mining Plan/Scheme of Mining of these 31 minerals shall be continue to be done by IBM or to be returned to the lessee ?

Mining Plans/Scheme of Mining shall be returned to the respective lessee by the Regional Office.

(b) Whether violations observed during the recent MCDR inspections before recent notification is to be communicated to the respective lessee or not ?

(c) The outstanding violations/show cause notice issued for these 31 minerals are to be followed up for its logical conclusion or not?

(d) The process to be adopted for suspension of mining operations and recommendation of termination of mining lease to the State Govt. in respect of 31 minerals declared as minor minerals to be continued or not?

All these cases as reflected above under (b), (c) and (d) should be referred to the State Government for further necessary action by concerned Regional offices.

(e) Whether the Financial Assurance of these 31 minerals should be returned to the lessee?

All the Financial Assurance pertaining to 31 minor minerals should be returned to the lessee under intimation to the concerned State Govt. However, the list of all such Financial Assurance in the tabulated format with all the details should be kept by Regional offices.

3. For the Mining Plans/Schemes which are under process at the Regional offices for major minerals in association with these 31 minerals, if any, then what will be the further course of action?

It is advised that Regional Offices should return back the Mining Plans/Schemes containing proposal for minor minerals to the lessee asking them to submit revised proposal in respect of major minerals only.

Yours faithfully,

(R. K. Sinha)
Chief Controller of Mines

Copy to:-

1. Shri. Prithul Kumar, Director, Ministry of Mines, Shastri Bhawan, New Delhi for information.
2. The Controller of Mines (CZ/SZ/NZ), Indian Bureau of Mines, Nagpur / Bangalore/Ajmer for necessary action and follow up.
3. The Technical Secretary, IBM, Nagpur for information.

(R. K. Sinha)
Chief Controller of Mines

By Speed Post/Email

भारत सरकार / Government of India
खान मंत्रालय / Ministry of Mines
भारतीय खान ब्यूरो / Indian Bureau of Mines
मुख्य खान नियंत्रक का कार्यालय / Office of the Chief Controller of Mines
****

No. N-11013/36/RQP-MISC/89-CCOM Vol-II Nagpur, dated: 22-03-2016

To,
The Regional Controller of Mines,
Indian Bureau of Mines,
Ajmer / Bangalore / Bhubaneswar / Chennai / Dehradun / Goa / Hyderabad / Jabalpur / Kolkata / Nagpur / Raipur / Ranchi / Udaipur

Sub. : Grant of RQP certificate to the Recognized Qualified persons under Rule 22(C) of MCR, 1960.

Sir,

Qualified Persons in accordance with the provisions of Rules 22(C) of MCR, 1960 were being granted the certificate under Rule 22(C)(2) of MCR, 1960 to prepare the Mining Plan/Scheme for approval of the officers authorized under the statute.

Since the MCR, 1960 has been repealed by MCR, 2016 wherein the provision for grant of recognition has been dispensed with.

In view of the above, the qualified persons who have sought recognition under Rule 22(C) of MCR, 1960 may be informed accordingly and their application submitted earlier may be returned intimating them that the grant of recognition under MCR, 2016 to prepare the mining plan/scheme is not required quoting the Rule 15 of the MCR, 2016.

This issues with the approval of Controller General, In-Charge, IBM.

Yours faithfully,

22.3.16

(Parag M. Tadlimbekar)
Senior Mining Geologist

Copy for information to

1. The Controller of Mines/OIC (NZ / SZ / CZ), Indian Bureau of Mines, Ajmer / Bangalore / Nagpur.
2. The Technical Secretary, Indian Bureau of Mines, Nagpur.

22 3 16

(Parag M. Tadlimbekar)
Senior Mining Geologist

SCHEDULE OF CHARGES FOR CONSULTANCY SERVICES RENDERED BY
MINING RESEARCH CELL INDIAN BUREAU OF MINES
(with effect from- 01.03.2013)

Sr. No.	Category of Personnel		Rates for A-Category Mines (Rs.)	Rates for B-Category Mines (Rs.)
1.	A	DCOM / RMG / SMG / Sr. ACOM /ACOM / JMG	4,200/-	2,500/-
	B	AME / AMG / STA / JTA / D'Man	2,400/-	1,500
	C	Group'C'	1,500/-	900/-
2.	Charges for Sub-contractor's services			
	1. Sub-contractor's Fee		Actual charges by the sub-contractor.	
	2. Service Charges of IBM		5% of sub-contractor's fee subject to minimum Rs.5,000/-	
3.	Charges for report	• First Three Copies	20,000/-	10,000/-
		• Each additional copy	5,000/-	1,500/-
		• Each additional copy at later stage after completion of the project	10,000/-	5,000/-
4.	Due diligence of Mineral Property		5% of the total cost.	
5.	Service Taxes		Service Tax & Educational Cess extra.	
6.	Agreement Registration Charges		Actual to be borne by the party.	
7.	Sample analysis (Water & Soil)		Rates as notified by CPCB & MOEF.	
8.	Monitoring charges for Air Quality / Station / Season		Rs.19,716/- say Rs.20,000/-	Rs.15,816/- say Rs.16,000/-

NOTE :

For the purpose of levying the above charges for consultancy services of Mining Research Cell, the following clarifications will apply :

1. Charges towards installation / depreciation of instruments / equipment and consumable required for the field study will be borne by the client.

2. In case of B-Category Mines, no charge will be leviable for the days spent in journey from the IBM Headquarter to the mine and from the mine to the IBM Headquarter.

3. In addition to the charges mentioned above, the client will be required to pay for the expenses of TA & DA admissible to the individuals for the entire period of their tour undertaken in connection with the services, except in the case of B-Category Mines who will not be charged the TA & DA expenses.

4. If the client wants, the personnel of IBM may undertake journey by air even if they are not entitled for the same under general rules of the Government, provided that the client pays for the same.

5. For field work, transport has to be provided by the client. But, if he is unable to do so and if departmental vehicle is available, this may be provided on payment of actual for POL and other contingent expenses etc.

6. The rates mentioned above are exclusive of labour charges in connection with the cleaning of bushes, assistance in survey work, drawing of samples etc. These are to be charged for separately at actual if the labour is not provided by the client.

7. Any other ancillary work such as Chemical analysis, Mineralogical and other tests of Ore dressing investigation, if done in the IBM Laboratory / Pilot Plant / other recognized laboratories will be payable by the client separately as per the Schedule of charges fixed by the Government in this respect from time to time.

8. In case of long term investigations, (i.e. which has not been completed within one year from the date of receipt of advance), the above schedule will apply for the work done within one year from the date of receipt of advance and for the work done during each successive period of one year or part thereof, the schedule of charges as prevailing at the beginning of the period concerned will apply.

Mines will be categorised as follows:

- **A-Category** : A mine where the average employment exceeds 75 in workings below ground or 150 in all the mine or a mine where work is being carried on by a system of deep hole blasting and / or with the help of heavy machinery for drilling, excavation and transport of earth, stone, minerals etc.

- **B-Category** : Any other mine than that covered under A-Category Mine.

Explanation : The expression ‘average employment’ means the average per day of the total employment of the mine during the preceding quarter (obtained by dividing the number of working days excluding rest days and other non-working days).

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GOVERNMENT OF INDIA
MINISTSRY OF MINES
INDIAN BUREAU OF MINES
ORE DRESSING DIVISION

SCHEDULE OF CHARGES FOR THE ORE DRESSING DIVISION, INDIAN BUREAU OF MINES WITH EFFECT FROM 1st MARCH, 2013

Sl.No.	Item of Work	Charges for 'A' Category Mines (Rs.)	Charges for 'B' Category Mines (Rs.)
A.	**LABORATORY SCALE ORE DRESSING INVESTIGATIONS:**		
I	**Full Scale Laboratory Investigations (Involving Physical , Chemical and Mineralogical characterisation)**		
1.	Complete Laboratory Scale Ore Dressing investigation involving studies for recovery of **one mineral** by various physical beneficiation methods (per sample)	2,05,000	1,45,000
2	Complete Laboratory Scale Ore Dressing investigation involving studies for recovery of **two or more minerals** by various physical beneficiation methods (per sample)	4,10,000	2,90,000
II	**Amenability Tests Involving Single Beneficiation Technique (Including Sample Preparation, Chemical Analysis and Mineralogy)**		
1.	Flotation	1,65,000	1,20,000
2.	Gravity Separation (Jigging, Tabling, Heavy Media Separation, etc.)	1,65,000	1,20,000
3.	Magnetic Separation	1,65,000	1,20,000
4.	Deflocculation and bleaching studies (with PSA, Brightness, Chemical Analysis)	1,65,000	1,20,000
5.	Thickening / Filtration Studies	1,65,000	1,20,000
6.	Air Classification /Wet Classification	1,65,000	1,20,000
7.	Electrostatic Separation	1,65,000	1,20,000

Sl.No.	Item of Work	Charges for 'A' Category Mines (Rs.)	Charges for 'B' Category Mines (Rs.)
III	**Single Ore Dressing Unit Operation Under Specified Conditions Including Chemical Analysis and Mineralogy (Per Test)**		
1.	Flotation	35,000	25,000
2.	Gravity Separation (Jigging, Tabling, Humphreys Spiralling, Heavy Media Separation, Floatex Density Separation, Stub Cycloning etc)	35,000	25,000
3.	Magnetic Separation , Dry or Wet	35,000	25,000
4.	Bond's Work Index Determination (Ball / Rod Mill) (Per sample)	40,000	28,000
5.	Grindability Index Determination (Per Sample)	25,000	18,000
6.	Cyclosizing	25,000	18,000
7.	Attrition Scrubbing followed by Sizing	25,000	18,000
8.	Tumbler Index Determination	25,000	18,000
9.	Shatter Index Determination	25,000	18,000
10.	Screening	17,000	12,000
11.	Particle Size Analysis (Sub micron sizes) (Per Test)	7,000	5,000
12.	Brightness Measurement (Per sample)	1,700	1,200
13.	Surface Area by BET Technique per sample (Minimum 10 samples)	5,000	3,500
14.	Bottle Roll Cyanidation and CIP (Per test)	70,000	50,000

Sl.No.	Item of Work	Charges for 'A' Category Mines (Rs.)	Charges for 'B' Category Mines (Rs.)
B	**PILOT PLANT SCALE INVESTIGATIONS**:		
I	Complete Pilot Plant Investigation (Quantity of ore to be specified by IBM depending on the complexity of the sample)		
a	Studies for recovery of **one mineral**	4,10,000	2,90,000
b	Studies for recovery of **two or more minerals**	6,15,000	4,35,000
II	Pilot Plant Test comprising of a single Ore Dressing Unit Operation under specified conditions including chemical and mineralogical analysis. (Quantity of Ore to be specified by IBM)		
1.	Gravity Separation viz Heavy Media Separation, Jigging, Tabling with Classification, Spiralling, Bowl Concentration, GEC Duplex Table, Centrifugal Separator, Floatex Density Separator etc.)	2,05,000	1,45,000
2.	Magnetic Separation	2,05,000	1,45,000
3.	Column Floatation	3,30,000	2,35,000
4.	Scrubbing and Classification	2,05,000	1,45,000
5.	Classification / Hydrocycloning	2,05,000	1,45,000
6.	Crushing and Screening	1,65,000	1,20,000
7.	Sintering Studies	3,30,000	2,35,000
8.	Pelletisation Studies	3,30,000	2,35,000
III	Techno-Economic Pre-Feasibility Studies on the basis of available laboratory and pilot plant report (for selection of equipment and operating costs)	4,10,000	--
NOTE:			
1.	The above charges do not include cost of production of concentrate for end use testing.		
2.	The charges for Indian companies/ organizations which are directly involved in consultancy jobs in mining and exploration for foreign samples are to be levied **Twice** the charges of "A" Category Mines.		
3.	The charges for overseas companies/organizations which are directly involved in consultancy jobs in mining and exploration are to be levied **Three times** the charges of "A" Category Mines.		
4.	**Service Taxes and Education Cess Extra (as applicable).**		
5.	**'B' category charges would be applicable only after producing the 'B' category certificate of recent time/date issued by respective Regional Controller of Mines, Indian Bureau of Mines.**		

Sl.No.	Item of Work	Charges for 'A' Category Mines (Rs.)	Charges for 'B' Category Mines (Rs.)
C.	**SCHEDULE OF CHARGES FOR CHEMICAL ANALYSIS**:		
1.	Quantitative chemical analysis of radicals by Classical Wet Analysis method	Rs.850/- for the first radical and Rs.600/- for each of the subsequent radical	Rs.600/- for the first radical and Rs.450/- for each subsequent radicals
2.	Elemental Analysis using instruments viz. XRF, AAS, ICPA, FTIR, Ion Chromatograph, Mercury Analyser, Flame Photo Meter, Isotope Analyser, UV / VIS Spectrometer, C & S Analyser etc.	Rs.600/- for the first radical and Rs.300/- for each of the subsequent radical	Rs.450/- for the first radical and Rs.210/- for each of the subsequent radicals
3.	XRF Scanning per sample	Rs.1,000/-	Rs. 700/-
4.	Proximate Analysis of Coal or Determination of Fixed Carbon in Coal	Rs. 600/-	Rs.450/-
5.	Determination of Volatile Matter / Ash / Moisture in Coal	Rs.200/- for each radical	Rs. 140/- for each radical
6.	Platinum Group of Minerals for one element of PGM Analysis, Estimation of Gold by Fire Assay	Rs.4,000/- for the first radical and Rs.350/- for subsequent radicals	No concession for small mines.
7.	Estimation of Gold by Fire Assay	Rs.1,200/- per radical	Rs. 850/- per radicals
8.	Sample preparation upto 500 gm including crushing, grinding and drawing 25 gm representative sample of minus 300# size for Chemical Analysis	Rs. 175/- per sample	Rs.130/- per sample
9.	Environmental Analysis	Standard cost as proposed by Central Pollution Control Board	No concession for 'B' Category mines

NOTE:

The Controller General, Indian Bureau of Mines shall have the discretionary power to charge 50% of that of 'B' Category mines for **Chemical Analysis** for academic & research students on production of recommendation letter from their respective head of academic institutions.

Sl.No.	Item of Work	Charges for 'A' Category Mines (Rs.)	Charges for 'B' Category Mines (Rs.)
D	**SCHEDULE OF CHARGES FOR MINERALOGICAL STUDIES**:		
1.	Mineralogical examination on rocks, ores, minerals and sinters etc. by microscopic studies (only mineral identification).	2,000	1,400
2.	* Detailed mineralogical studies for identification and quantitative estimation of minerals and liberation characteristics involving mineral separation by heavy liquid and magnetic separation	6,000	4,200
3.	* Mineralogical studies to assess the amenability to mineral beneficiation involving size analysis, Frantz Isodynamic Magnetic Separation including necessary Chemical Analysis	10,000	7,000
4.	*Electron Probe Micro Analyser (EPMA) studies (Per hour per sample)	5,000	3,500
5.	Identification of mineral phases in ore and rock samples by X-Ray Diffraction / DTA / DTG (Per sample).	3,000	2,100
6.	Photomicrographs (three prints)	1,000	700
7.	Determination of specific gravity (by Walker steel yard balance)	200	140
8.	Determination of Hardness by Mohs Scale	165	120

NOTE:

The Controller General, Indian Bureau of Mines shall have the discretionary power to charge 50% of that of 'B' Category mines for **Mineralogical Studies** to be carried out for academic research students on production of recommendation letter from a respective head of academic institutions.

* The investigation will be considered as one limited ore dressing investigation.

E. SCHEDULE OF CHARGES FOR CONSULTANCY SERVICES PER DAY RENDERED BY OFFICERS OF ORE DRESSING DIVISION, INDIAN BUREAU OF MINES IN INDIA AND FOREIGN ASSIGNMENTS

Sl.No.	ITEM OF WORK	CONSULTANCY CHARGES (FOR INDIAN ASSIGNMENTS)	CONSULTANCY CHARGES (FOR FOREIGN ASSIGNMENTS)
1.	Officers of Group 'A ' Category'	4,200	12,000
2.	Officers of Group 'B' Category'	2,400	7,200
3.	Officers of Group 'C' Category'	1,500	4,500
NOTE:			
1.	Actual travel expenses (to and fro) of the officers including hotel accommodation as per their entitlement is to be borne by the client.		
2.	If the client prefers, the technical personnel may be allowed to travel by higher class even if they are not allowed under the Govt. rules		
3	The daily rates are payable for the total period of absence from the head quarter inclusive of the period of journey.		
4.	**The following job will be carried out under consultancy services and the charges will be calculated based on the quantum of work, actual man-power involved in the job and man-days.**		
	➢ Plant Auditing studies of a mineral processing plant.		

SCHEDULE OF CHARGES FOR CONSULTANCY SERVICES RENDERED BY
TECHNICAL CONSULTANCY , INDIAN BUREAU OF MINES
(With effect from- 01.03.2013)

1.	**Charges for Services of IBM personnel (Basic Rate Per Day)**		
	Category of personnel	**Rates for Category-A Mines (Rs.)**	**Rates for Category-B Mines (Rs.)**
		Revised	**Revised**
	Group-A Officers	4,200/-	2,500/-
	Group-B Officers	2,400/-	1,500/-
	Group-C Officers	1,500/-	900/-
2.	Bulk Sample Collection	As per actual Man-days	As per actual Man-days
3.	Geological Mapping on 1:1000 / 1:2000 Scale	46,000/-	
4.	Geological Logging of boreholes (Charge per meter)	200/-	
5.	Topographic / Mine Survey	46,000/-	
6.	Mine Excavation / Dump Measurement	46,000/-	
7.	Connection of Mining Lease with National Grid	46,000/-	
8.	Mine Planning & Designing	As per actual Man-days	As per actual Man-days
9.	Preparation of Pre-feasibility Report	As per actual Man-days	As per actual Man-days
10.	Due diligence of Mineral Property	5% of total cost	5% of total cost
11.	Charges for the Report* • First 3 copies. • Each additional copy requested at the time of work order. • Additional copy requested at a later stage after completion of the project.	20,000/- 5,000/- 10,000/-	10,000/- 1,500/- 5,000/-

* For Plates, extra charges, as per actual may be levied considering the volume of work.

NOTE : For the purpose of levying the above charges for technical consultancy services, the following clarifications will apply :

1. Service Tax, Education Cess and Agreement Registration Charges extra.

2. The cost of deployment of IBM personnel depending on the nature of terrain and quantum of work involved in the assignment will be charged extra for Item Numbers at Sr. Nos. 2, 3, 5, 7, 8 & 9 as per the Basic Rate per day mentioned at Sr.No.1.

3. In case of B-Category Mines, no charge will be leviable for the number of days spent in journey from the IBM Headquarter, Nagpur, to the mine-site and from the mine-site to IBM Headquarter, Nagpur.

4. If the client wants, the personnel of IBM may undertake journey by air even if they are not entitled for the same under general rules of the Government, provided that the client pays for the same.

5. The rates mentioned above are exclusive of labour charges for field work assistance for Items at Sr. Nos.2, 3, 4, 5, 6, 7, 8 & 9. These are to be charged for separately at actual if the labour is not provided by the client.

6. Any other ancillary work such as Chemical analysis, Mineralogical and other tests of Ore dressing investigation, if done in the IBM Laboratory / Pilot Plant, will be payable by the client separately as per the Schedule of charges fixed by the Government from time to time, in this respect.

7. In addition to the charges mentioned above, the client will be required to pay the expenses of TA & DA admissible to the individual for the entire period of their tour undertaken in connection with the services, except in the case of B-Category Mines who will not be charged the TA & DA expenses.

8. Mines will be categorised as follows :

- **A-Category** : A mine where the average employment exceeds 75 in workings below ground or 150 in all the mine or a mine where work is being carried on by a system of deep hole blasting and / or with the help of heavy machinery for drilling, excavation and transport of earth, stone, minerals etc. OR prospect area covering more than 75 Hect.

- **B-Category**: Any other mine than that covered under A-Category OR Prospect area upto 75 Hect.

Explanation: The expression ‘average employment’ means the average per day of the total employment of the mine during the preceding quarter (obtained by dividing the number of working days excluding rest days and other non-working days).

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ANNEXURE-XIII-A

Status of Reconnaissance Permits in India
As On 31/03/2016

Sr. No.	State Name	Total No. of RPs approved for grant	No. of RPs whose Final Exploration report submitted to IBM
1	Andhra Pradesh	56	44
2	Arunachal Pradesh	1	-
3	Chhattisgarh	42	26
4	Gujarat	4	-
5	Jharkhand	4	2
6	Karnataka	66	26
7	Kerala	1	-
8	Madhya Pradesh	91	28
9	Maharashtra	10	8
10	Manipur	1	-
11	Odisha	26	19
12	Rajasthan	74	29
13	Uttar Pradesh	21	8
14	West Bengal	4	1
	Total	401	191

ANNEXURE-XIII-B

Status of Prospecting Licences (Major & Minor) in India
As On 31/03/2016

Sl. No.	Name of State	Total No. of PL grant order received during 2015-16	Total No. of PL granted by the State Government (from November, 2007 to 31.03.2016)	No. of PL where final exploration data submitted to IBM
1	Andhra Pradesh	-	92	36
2	Arunachal Pradesh	-	17	01
3	Chhattisgarh	-	150	74
4	Gujarat	-	18	01
5	Himachal Pradesh	-	07	03
6	Jharkhand	-	01	00
7	Jammu & Kashmir	-	27	05
8	Karnataka	-	10	06
9	Kerala	-	01	00
10	Madhya Pradesh	04	549	151
11	Maharashtra	-	44	07
12	Manipur	-	16	01
13	Meghalaya	-	15	04
14	Odisha	-	13	06
15	Rajasthan	05	234	08
16	Tamil Nadu	-	18	00
17	Telangana	-	44	09
18	Uttarakhand	-	03	00
19	Uttar Pradesh	-	43	00
20	West Bengal	-	03	00
	Total	**09**	**1305**	**312**

* To the extent grant orders, reports received as well as information received from regional Offices.

ANNEXURE-XIII-C

State Wise Summary of Lease Distribution
As On 31/03/2015
(All India)

Sl. No.	State	No. of Leases	Lease area (Hect.)
1	Andhra Pradesh	419	25238.40
2	Assam	7	889.50
3	Bihar	12	387.47
4	Chhattisgarh	188	22997.03
5	Goa	90	7402.98
6	Gujarat	456	22174.43
7	Haryana	4	46.85
8	Himachal Pradesh	41	2532.63
9	Jammu & Kashmir	35	2012.48
10	Jharkhand	166	23671.72
11	Karnataka	398	44753.79
12	Kerala	15	2246.49
13	Madhya Pradesh	613	32112.90
14	Maharashtra	172	12534.42
15	Manipur	1	132.78
16	Meghalaya	17	601.29
17	Odisha	397	68930.28
18	Rajasthan	167	47268.35
19	Sikkim	3	96.32
20	Tamil Nadu	543	9373.58
21	Telangana	110	10966.12
22	Uttar Pradesh	5	3397.80
23	Uttarakhand	5	183.04
24	West Bengal	4	20.88
	Total	**3868**	**339971.53**

Excludes the mining leases of the minerals declared as 'Minor" vide Gazette Notification Part II, Section 3, Sub-section (ii) dated 10th February, 2015.

ANNEXURE-XIII-D

Mineral Wise Summary of Lease Distribution As on 31/03/2015

Sl. No.	Mineral	No. of Leases	Lease Area (Hect.)
1	Amethyst	3	7.83
2	Apatite	2	20.17
3	Aquamarine	1	24.29
4	Asbestos	7	394.74
5	Bauxite	339	25724.38
6	Borax	1	159
7	Chromite	35	9068.5
8	Copper Ore	14	4678.25
9	Diamond	2	275.96
10	Emerald	1	46.32
11	Epidote	2	220.83
12	Flint Stone	2	11.77
13	Fluorite	11	1289.6
14	Garnet	107	1544.74
15	Garnet(Gem)	3	51.03
16	Gold	11	7445.46
17	Graphite	136	4256.73
18	Iolite	14	195.7
19	Iron ore	541	83360.2
20	Kyanite	30	1349.5
21	Lead & Zinc ore	13	10618.88
22	Limeshell	25	2889.58
23	Limestone	1972	158972.12
24	Magnesite	36	1871.03
25	Manganese Ore	297	15491.19
26	Marl	1	4.9
27	Moulding Sand	35	841.85
28	NephelineSyenite	1	14.28
29	Phosphorite	11	2158.71
30	Red oxide	4	193.42
31	Ruby	6	130
32	Sapphire	1	673.4
33	Semi-precious Stones	13	134.43
34	Siliceous Earth	26	300.63
35	Sillimanite	7	3027.06
36	Tin	16	324.72
37	Vermiculite	66	1035.74
38	White clay	44	663.74
39	White shale	15	77.34
40	Wollastonite	17	423.51
	Total	**3868**	**339971.53**

* ***Excludes the mining leases of the minerals declared as 'Minor" vide Gazette Notification Part II, Section 3, Sub-section (ii) dated 10th February, 2015.***

6 (a). State wise Average Sale Price of minerals by Grades

[see rules under MCDR, 1988 / Mineral (Auction) Rules, 2015 / Minerals(Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016]

Month : March 2016

State / Mineral / Grades	Unit	ASP
India		
Bauxite	Rs./t	
Non-Metallurgical		
Cement		396
Abrasive		NA
Refractory		876
Chemical		650
Chromite	Rs./t	
Lumps		
Below 40% Cr2O3		4800
40% to below 52% Cr2O3		NA
52% Cr2O3 and above		NA
Fines		
Below 40% Cr2O3		1874
40% to below 52% Cr2O3		8008
52% Cr2O3 and above		10352
Concentrates		8140
Iron Ore (lumps)	Rs./t	
Below 55% Fe		923
55% to below 58% Fe		1326
58% to below 60% Fe		1326
60% to below 62% Fe		1428
62% to below 65% Fe		1893
65% Fe and above		2244
Iron Ore (fines)	Rs./t	
Below 55% Fe		496
55% to below 58% Fe		848
58% to below 60% Fe		1394
60% to below 62% Fe		1394
62% to below 65% Fe		1394
65% Fe and above		1998
Iron Ore Conc.	Rs./t	2329
Manganese Ore	Rs./t	
Dioxide ore		18136
Below 25% Mn		1572
25% to below 35% Mn		2888
35% to below 46% Mn		5542
46% Mn and above		7362
Apatite	Rs./t	NA
Phosphorite	Rs./t	
Below 25% P2O5		522
25% to below 30% P2O5		1933
30% P2O5 and above		5763
Asbestos	Rs./t	
Amphibole		NA
Diamond	Rs./crt	17751
Flint Stone	Rs./t	300
Fluorite (graded)	Rs./t	
Below 30% CaF2		NA
30% to below 70% CaF2		NA
70% to below 85% CaF2		NA
85% CaF2 and above		NA
Garnet (abrasive)	Rs./t	7649
Garnet (gem)	Rs./kg	NA
Kyanite	Rs./t	
Below 40% Al2O3		1882
40% Al2O3 and above		7708
Sillimanite	Rs./t	8113
Limestone	Rs./t	
LD		863
SMS		265
Chemical		427
BF		524
Cement		397
Magnesite	Rs./t	2672
Moulding Sand	Rs./t	217
Perlite	Rs./t	NA
Pyrites	Rs./t	NA
Salt (rock)	Rs./t	NA
Selenite	Rs./t	2240
Vermiculite	Rs./t	1624
Wollastonite	Rs./t	788
Andhra Pradesh		
Iron Ore (lumps)	Rs./t	
Below 55% Fe		642
55% to below 58% Fe		NA
58% to below 60% Fe		NA
60% to below 62% Fe		NA
62% to below 65% Fe		NA
Iron Ore (fines)	Rs./t	
Below 55% Fe		269
55% to below 58% Fe		NA
60% to below 62% Fe		NA
62% to below 65% Fe		NA
Manganese Ore	Rs./t	
Dioxide ore		NA
Below 25% Mn		1744
25% to below 35% Mn		1941
35% to below 46% Mn		4663
46% Mn and above		NA
Apatite	Rs./t	NA
Asbestos	Rs./t	
Amphibole		NA
Garnet (abrasive)	Rs./t	8566
Sillimanite	Rs./t	9518
Limestone	Rs./t	
LD		472
SMS		265
Chemical		291
BF		955
Cement		397
Vermiculite	Rs./t	500
Assam		
Limestone	Rs.\t	
Cement		397
Bihar		
Limestone	Rs.\t	
Cement		397
Pyrites	Rs./t	NA
Chhattisgarh		
Bauxite	Rs./t	
Non-Metallurgical		
Abrasive		NA
Refractory		NA
Iron Ore (lumps)	Rs./t	
Below 55% Fe		NA
55% to below 58% Fe		NA
58% to below 60% Fe		NA
60% to below 62% Fe		1296
62% to below 65% Fe		1567

NA : Not Available t : Tonne ASP : Average Sale Price

6 (a). State wise Average Sale Price of minerals by Grades

[see rules under MCDR, 1988 / Mineral (Auction) Rules, 2015 / Minerals(Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016]

Month : March 2016

State / Mineral / Grades	Unit	ASP
65% Fe and above		2269
Iron Ore (fines)	Rs./t	
Below 55% Fe		NA
55% to below 58% Fe		NA
58% to below 60% Fe		1267
60% to below 62% Fe		1402
62% to below 65% Fe		1838
65% Fe and above		2008
Fluorite (graded)	Rs./t	
85% CaF2 and above		NA
Limestone	Rs./t	
LD		472
BF		890
Cement		397
Moulding Sand	Rs./t	217
Goa		
Bauxite	Rs./t	
Non-Metallurgical		
Cement		NA
Iron Ore (lumps)	Rs./t	
Below 55% Fe		788
55% to below 58% Fe		2156
58% to below 60% Fe		NA
60% to below 62% Fe		2391
62% to below 65% Fe		2391
65% Fe and above		NA
Iron Ore (fines)	Rs./t	
Below 55% Fe		418
55% to below 58% Fe		1455
58% to below 60% Fe		1997
60% to below 62% Fe		1997
62% to below 65% Fe		1997
65% Fe and above		NA
Iron Ore Conc.	Rs./t	NA
Manganese Ore	Rs./t	
Below 25% Mn		NA
25% to below 35% Mn		NA
35% to below 46% Mn		NA
46% Mn and above		NA
Gujarat		
Bauxite	Rs./t	
Non-Metallurgical		
Cement		449
Abrasive		NA
Refractory		921
Chemical		650
Manganese Ore	Rs./t	
Below 25% Mn		351
Fluorite (graded)	Rs./t	
Below 30% CaF2		NA
Limestone	Rs./t	
Chemical		427
Cement		397
Perlite	Rs./t	NA
Himachal Pradesh		
Limestone	Rs./t	
LD		472
SMS		265
Cement		397
Salt (rock)	Rs./t	NA

State / Mineral / Grades	Unit	ASP
Jammu & Kashmir		
Limestone	Rs.\t	
Cement		397
Jharkhand		
Bauxite	Rs./t	
Non-Metallurgical		
Cement		NA
Refractory		440
Iron Ore (lumps)	Rs./t	
Below 55% Fe		1120
55% to below 58% Fe		1326
58% to below 60% Fe		1326
60% to below 62% Fe		1326
62% to below 65% Fe		2439
65% Fe and above		NA
Iron Ore (fines)	Rs./t	
Below 55% Fe		542
55% to below 58% Fe		NA
58% to below 60% Fe		678
60% to below 62% Fe		678
62% to below 65% Fe		1164
65% Fe and above		NA
Manganese Ore	Rs./t	
Dioxide ore		NA
Below 25% Mn		NA
25% to below 35% Mn		6145
35% to below 46% Mn		NA
46% Mn and above		NA
Flint Stone	Rs./t	300
Kyanite	Rs./t	
Below 40% Al2O3		NA
40% Al2O3 and above		NA
Limestone	Rs.\t	
Cement		475
Karnataka		
Bauxite	Rs./t	
Non-Metallurgical		
Cement		NA
Chromite	Rs./t	
Lumps		
Below 40% Cr2O3		NA
40% to below 52% Cr2O3		NA
Fines		
Below 40% Cr2O3		NA
40% to below 52% Cr2O3		NA
Concentrates		NA
Iron Ore (lumps)	Rs./t	
Below 55% Fe		738
55% to below 58% Fe		1033
58% to below 60% Fe		1280
60% to below 62% Fe		1280
62% to below 65% Fe		1525
65% Fe and above		1749
Iron Ore (fines)	Rs./t	
Below 55% Fe		554
55% to below 58% Fe		554
58% to below 60% Fe		959
60% to below 62% Fe		959
62% to below 65% Fe		1446
65% Fe and above		1755
Iron Ore Conc.	Rs./t	NA

NA : Not Available t : Tonne ASP : Average Sale Price

6 (a). State wise Average Sale Price of minerals by Grades

[see rules under MCDR, 1988 / Mineral (Auction) Rules, 2015 / Minerals(Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016]

Month : March 2016

State / Mineral / Grades	Unit	ASP
Manganese Ore	Rs./t	
Below 25% Mn		NA
25% to below 35% Mn		2569
35% to below 46% Mn		NA
46% Mn and above		NA
Kyanite	Rs./t	
40% Al2O3 and above		NA
Limestone	Rs./t	
LD		472
SMS		265
BF		278
Cement		397
Magnesite	Rs./t	4740
Kerala		
Sillimanite	Rs./t	9002
Limestone	Rs.\t	
Cement		633
Madhya Pradesh		
Bauxite	Rs./t	
Non-Metallurgical		
Cement		619
Refractory		2308
Chemical		NA
Iron Ore (lumps)	Rs./t	
Below 55% Fe		1102
55% to below 58% Fe		NA
58% to below 60% Fe		NA
60% to below 62% Fe		NA
Iron Ore (fines)	Rs./t	
Below 55% Fe		410
55% to below 58% Fe		NA
58% to below 60% Fe		NA
60% to below 62% Fe		NA
Manganese Ore	Rs./t	
Dioxide ore		NA
Below 25% Mn		1683
25% to below 35% Mn		2356
35% to below 46% Mn		4491
46% Mn and above		7345
Phosphorite	Rs./t	
Below 25% P2O5		833
25% to below 30% P2O5		2516
30% P2O5 and above		NA
Diamond	Rs./crt	17751
Limestone	Rs./t	
LD		472
SMS		265
Chemical		291
BF		266
Cement		397
Maharashtra		
Bauxite	Rs./t	
Non-Metallurgical		
Cement		206
Chromite	Rs./t	
Lumps		
Below 40% Cr2O3		4800
Iron Ore (lumps)	Rs./t	
Below 55% Fe		2192
55% to below 58% Fe		2192
58% to below 60% Fe		2192
60% to below 62% Fe		2192
62% to below 65% Fe		NA
Iron Ore (fines)	Rs./t	
Below 55% Fe		665
55% to below 58% Fe		1485
58% to below 60% Fe		1485
60% to below 62% Fe		NA
62% to below 65% Fe		NA
Manganese Ore	Rs./t	
Dioxide ore		30995
Below 25% Mn		2030
25% to below 35% Mn		2587
35% to below 46% Mn		5688
46% Mn and above		7340
Fluorite (graded)	Rs./t	
30% to below 70% CaF2		NA
70% to below 85% CaF2		NA
85% CaF2 and above		NA
Kyanite	Rs./t	
Below 40% Al2O3		1882
40% Al2O3 and above		7708
Sillimanite	Rs./t	3078
Limestone	Rs./t	
BF		266
Cement		397
Meghalaya		
Limestone	Rs./t	
Chemical		291
Cement		397
Odisha		
Chromite	Rs./t	
Lumps		
Below 40% Cr2O3		NA
40% to below 52% Cr2O3		NA
52% Cr2O3 and above		NA
Fines		
Below 40% Cr2O3		1874
40% to below 52% Cr2O3		8008
52% Cr2O3 and above		10352
Concentrates		8140
Iron Ore (lumps)	Rs./t	
Below 55% Fe		350
55% to below 58% Fe		979
58% to below 60% Fe		1274
60% to below 62% Fe		1518
62% to below 65% Fe		2047
65% Fe and above		2047
Iron Ore (fines)	Rs./t	
Below 55% Fe		581
55% to below 58% Fe		805
58% to below 60% Fe		805
60% to below 62% Fe		805
62% to below 65% Fe		1180
65% Fe and above		1416
Iron Ore Conc.	Rs./t	2329
Manganese Ore	Rs./t	
Dioxide ore		16092
Below 25% Mn		3218
25% to below 35% Mn		4078

NA : Not Available t : Tonne ASP : Average Sale Price

6 (a). State wise Average Sale Price of minerals by Grades

[see rules under MCDR, 1988 / Mineral (Auction) Rules, 2015 /
Minerals(Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016]

Month : March 2016

State / Mineral / Grades	Unit	ASP
35% to below 46% Mn		6630
46% Mn and above		10420
Garnet (abrasive)	Rs./t	3489
Sillimanite	Rs./t	6556
Limestone	Rs.\t	
Cement		397
Rajasthan		
Iron Ore (lumps)	Rs./t	
Below 55% Fe		441
55% to below 58% Fe		NA
Iron Ore (fines)	Rs./t	
Below 55% Fe		NA
Manganese Ore	Rs./t	
25% to below 35% Mn		2775
Phosphorite	Rs./t	
Below 25% P2O5		489
25% to below 30% P2O5		1933
30% P2O5 and above		5763
Fluorite (graded)	Rs./t	
Below 30% CaF2		NA
30% to below 70% CaF2		NA
70% to below 85% CaF2		NA
Garnet (abrasive)	Rs./t	1725
Garnet (gem)	Rs./kg	NA
Limestone	Rs./t	
LD		472
Chemical		291
Cement		397
Selenite	Rs./t	2240
Vermiculite	Rs./t	771
Wollastonite	Rs./t	788
Tamil Nadu		
Bauxite	Rs./t	
Non-Metallurgical		
Cement		NA
Garnet (abrasive)	Rs./t	8546
Limestone	Rs./t	
LD		863
Chemical		291
Cement		397
Magnesite	Rs./t	2999
Vermiculite	Rs./t	2242
Telangana		
Manganese Ore	Rs./t	
Below 25% Mn		3046
Limestone	Rs.\t	
Cement		397
Uttar Pradesh		
Limestone	Rs.\t	
Cement		397
Uttarakhand		
Magnesite	Rs./t	1100
West Bengal		
Apatite	Rs./t	NA
Moulding Sand	Rs./t	NA

NA : Not Available t : Tonne ASP : Average Sale Price

Annexure- XV

State Wise Plans/ Schemes Approved By IBM in Year 2015-16

Sl. No.	State	Mining Plan		Scheme Of Mining		Final Mine Closure Plan	
		Approved	Not Approved	Approved	Not Approved	Approved	Not Approved
1	Assam	0	0	0	1	0	0
2	Andhra Pradesh	2	1	13	27	0	0
3	Jharkhand	1	1	8	4	3	0
4	Bihar	0	0	0	0	1	0
5	Chhattisgarh	4	1	13	6	0	0
6	Delhi	0	0	0	0	0	0
7	Goa	0	0	10	0	0	0
8	Gujrat	3	1	48	14	3	0
9	Himachal	1	1	2	0	0	0
10	Haryana	0	0	0	0	0	0
11	Jammu & Kashmir	2	0	4	0	0	0
12	Karnataka	2	3	33	5	5	0
13	Kerala	1	0	1	0	1	0
14	Madhya Pradesh	18	8	80	18	3	0
15	Maharashtra	1	1	19	0	1	0
16	Meghalaya	1	0	0	1	0	0
17	Orissa	4	4	36	16	2	4
18	Rajasthan	23	28	11	3	4	0
19	Sikkim	0	0	0	0	0	0
20	Tamilnadu	1	7	84	28	0	1
21	Telangana	0	0	2	1	0	0
22	Uttar Pradesh	0	0	0	0	0	0
23	Uttaranchal	0	0	2	0	0	0
24	West Bengal	1	0	0	0	0	0
	Total	**65**	**56**	**366**	**124**	**23**	**5**

Annexure-XVI

SWACHH BHARAT ABHIYAN
INDIAN BUREAU OF MINES
22 – 26 June 2015

Ministry of Mines vide their e-mail dated 15.06.2015 forwarded D.O. letter No. CS-8683/2015 dated 08.06.2015 issued by the Cabinet Secretary regarding ensuring an improved work culture and work environment including hygiene and cleanliness of the work place. In compliance of the said letter, a weeklong cleanliness drive was held during the week 22 to 26 June 2015 in all the offices of Indian Bureau of Mines.

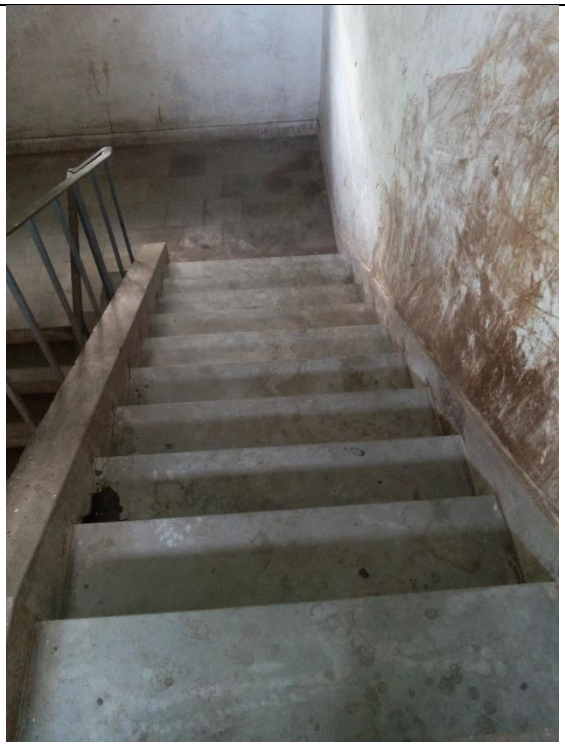
During the week long activities special emphasis was given to upkeep and cleaning of internal places such as working areas, , toilets, corridors, stairs, record rooms, store rooms, terraces, emergency exits, waste disposal ducts, cooling system rooms, un occupied places etc. and areas outside office buildings including parking lots, roads within office premises, garden areas etc. All the employees participated in this cleanliness drive enthusiastically.

A Brief report on the activities carried out during the weeklong observation in IBM Head Quarter as well as all the Regional /Zonal Offices and Regional Ore Dressing Laboratories spread all over India is given below:

IBM HQ, INDIRA BHAVAN, Nagpur:

At Head Quarter building, the work started with identifying untidy and cluttered work places and cleaning and upkeep of such places, which included cleaning tables, and dusting of files, computers etc. Old files were stitched and shifted to record rooms. Emergency exits were cleared by removing /shifting furniture, unused items etc. and were cleaned thoroughly. CPWD is carrying out renovation of the toilets in the building. The debris stored in the corridors was removed and stored properly within office premises. A few Photographs of the cleanliness drive carried out in Indira Bhavan are given below:

Cleaning of Emergency stair cases. Before & After



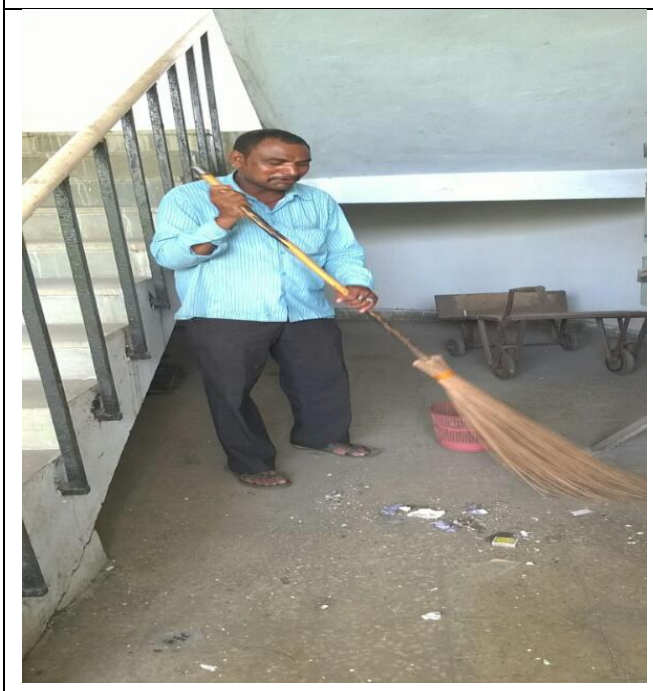
Cleaning of Emergency stair cases. Before & After

Cleaning inside section

Cleaning of corridors

Cleaning of corridors

Modern Mineral Processing Laboratory and Pilot Plant, Nagpur



Cleaning of Chemical Laboratory

Cleaning of various instruments in mineralogical laboratory

Ajmer :

Regional Office, Zonal Office and Regional Ore Dressing Laboratory at Ajmer:

During the week following activities were carried out in Regional Ore Dressing Laboratory, Ajmer:

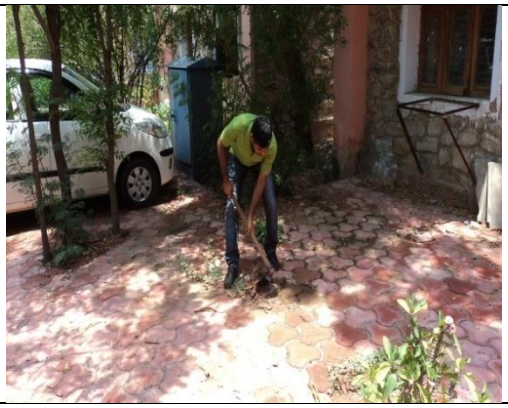
1) Pilot plant sample yard cleaning. 2) Cleaning of mineralogy lab sample display racks. 3) Cleaning of Chemical lab. 4) Cleaning Pilot plant conveyor side. 5) Building outside premises 6) Cleaning of Chemical rest room lab Cleaning in Pilot plant. 7) Cleaning of Chemical fume chamber room lab 8) Cleaning in Pilot plant. 9) Cleaning of Chemical fume chamber room lab

In Ajmer Regional / Zonal Office following activities were carried out:
1) Cleaning of staircases, Window panes, Tube lights and Fans, Corridors etc. 2) Weeding out of old returns and files shifting old registers in record room. 3) Upkeep and maintenance of plants in office premises.

Cleaning of office premises at Ajmer – Before

Cleaning of office premises at Ajmer –After

Cleaning of office premises at Ajmer

Cleaning of office premises at Ajmer

Bangalore :

Regional / Zonal office & RODL Bangalore:

The activities carried out included cleaning of office and premises. Disposal of waste electrical items, weeding out /shredding of unwanted old record /files etc. Photographs are given below:

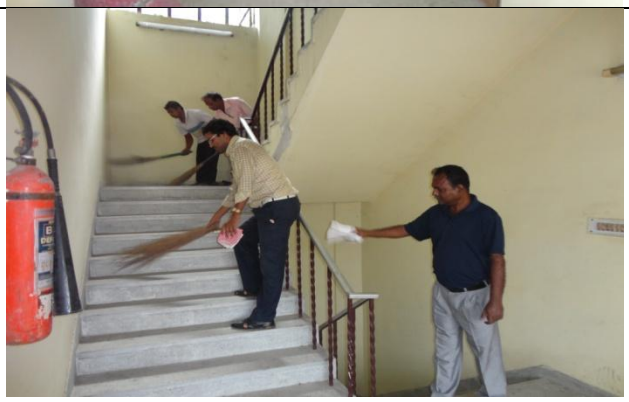
Office premises cleaning at Bangalore office

Regional /Sub-regional Offices :

Similar work was carried out in all the regional offices where less used places such as corners, emergency exits, store rooms, record rooms etc. were cleaned. Some of the old records/files were weeded out and other old record /files which were required for future reference/use were shifted to record rooms. Pot holes / low lying areas were filled by debris /soil to avoid rain water accumulation. In some offices action has been initiated for disposal of unused electrical items, furniture etc. by preparing inventory of such items. In addition to above cleanliness activities carried out by various offices; cleanliness work of routine nature such as dusting of files, cleaning of file racks and almirah, cleaning of computers and accessories, furniture in office buildings and cleaning of office premises was also carried out by the employees of all the offices. Photographs of weeklong activities in regional offices are given below:

Cleaning of office premises in Goa Regional Office

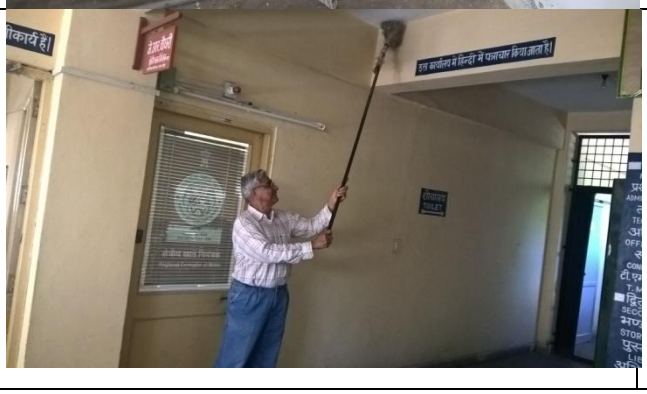
Cleanliness drive in Kolkata Regional Office



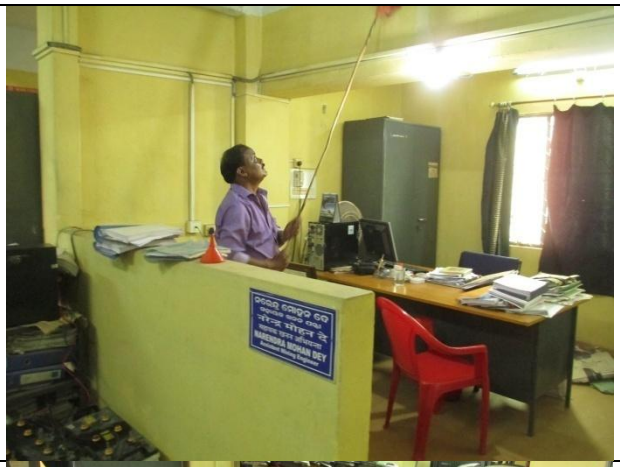
Cleanliness drive in Ranchi Regional Office

Cleanliness drive in Guwahati Sub-regional Office

Cleanliness drive in Udaipur Regional Office



Cleanliness drive in Bhubaneswar Regional Office



Cleanliness drive in Chennai Regional Office

Cleanliness drive in Jabalpur Regional Office

Cleanliness drive in Hyderabad Regional Office

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Annexure-XVII

A NOTE ON OBSERVANCE OF "KHANIJ DIWAS" ON 1ST MARCH, 2016

AT IBM HEADQUARTER, NAGPUR:

The 69th Foundation Day of Indian Bureau of Mines, Khanij Diwas was observed on 1st March, 2016 with full enthusiasm and fervor by the Officials of Indian Bureau of Mines, at Headquarters, Indira Bhavan, Civil Lines, Nagpur. The Mineral Processing Division of IBM was nodal office for organizing Khanij Diwas and Director(OD), Mineral Processing Division was the Convener of the event. Various Committees were formed for smoothly conducting the programme and wide publicity was given in the electronic & print media before and after observance of the event. Shri N. Kutumba Rao, Additional Director General, Geological Survey of India, Central Region, Nagpur graced the occasion as Chief Guest and Dr. Lokendra Singh, renowned Neuro Surgeon and Director, CIIMS, Nagpur graced the occasion as Guest of Honour. Shri R.K. Sinha, Controller General (I/c), IBM presided over the function. The programme was attended by an august audience comprising of officials from IBM Headquarters, Regional Offices &Mineral Processing Division, retired officers of IBM, dignitaries from GSI, JNARDDC, RTM Nagpur University & other departments and invited guests. A social/welfare program of free eye check-up was organized for benefit of the employees of IBM by M/s Vasan Eye Care, Nagpur

The programme commenced with welcome of the Chief Guest, Guest of Honour, dignitaries on the dais, invited guests, delegates and all the officials present on the occasion followed by lighting of traditional lamp and subsequently, recitation of Shri Ganesh and Saraswati Vandanaby Swar Sakhi Group, Nagpur. Mrs. Indira Ravindran, Director (OD) & Convener, in her welcome address enlightened

the audience about the formation and journey of Indian Bureau of Mines since 1st March, 1948, challenges faced and achievements till date. The guest of honour Dr. Lokendra Singh in his address spoke about the similarities and importance of human mind and mines. He further expressed that the minerals may be exhausted from the mother earth due to extensive mining but good thoughts which are mined extensively from the human brain will never get exhausted and always get boosted. His narrations and exquisite poetry enthralled the audience. The chief guest Shri N. Kutumba Rao in his address informed the gathering about the mutual relationship of Indian Bureau of Mines & Geological Survey of India which comes under the umbrella of Ministry of Mines, Government of India. He further stressed on the future of minerals for growth of the nation, role of IBM in systematic development of mines and conservation of minerals and future challenges in view of changed scenario. Shri R.K. Sinha, Controller General (I/c) presided over the function and expressed his greetings to the gathering on the 69th Foundation Day and best wishes for the prosperity of IBM. He urged the officials to continue their hard work with positive spirit, great zeal and interest to keep the flag of IBM high. He informed the gathering about the new projects taken up and also highlighted some recent achievements of IBM. He also felicitated the chief guest and guest of honour on this occasion with a shawl and memento .

The programme was compered by Ms. Shruti Vishwakarma. Dr. Dillip R. Kanungo, Suptdg. Officer (OD) & program coordinator proposed vote of thanks. The programme was successfully organized by the Officers & Staff of Mineral Processing Division with the active support and cooperation from officials of Headquarters. The programme concluded with recitation of National Anthem.

Shri N. Kutumba Rao, Additional Director General, GSI, Central Region, Nagpur speak on this occasion. On the Dias (L-R) Mrs. Indira Ravindran, Director (OD) & Convener, Shri R.K. Sinha, Controller General (I/c), IBM and Dr. Lokendra Singh, Neuro Surgeon & Director, CIIMS, Nagpur

Jurisdiction of Zonal/Regional Offices

North Zone

Ajmer Regional Office

STATE : RAJASTHAN (27)
Districts : Ajmer, Alwar, Baran, Barmer , Bharatpur, Bhilwara, Bikaner, Bundi, Churu, Dausa, Dholpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Sawai Madhopur, Sikar, Sirohi , Tonk.

Dehradun Regional Office

STATE : DELHI (1)
Districts : Delhi
UNION TERRITORY: Chandigargh
STATE : HARYANA (21)
Districts : Ambala, Bhiwani, Faridabad, Fatehabad, Gurgaon, Hissar, Jhajjar, Jind, Kaithal, Karnal, Kurukshetra, Mahendargarh, Mewat, Palwal, Panchkula, Panipat, Rewari, Rohtak, Sirsa, Sonepat, Yamuna Nagar.
STATE : HIMACHAL PRADESH (12)
Districts : Bilaspur, Chamba, Hamirpur, Kangra, Kinnaur, Kulu, Lahul & Spiti, Mandi, Shimla, Sirmaur, Solan, Una.
STATE : JAMMU & KASHMIR (22)
Districts : Anantnag, Bandipore, Baramula, Badgam, Doda, Ganderbal, Jammu, Kargil, Kathua, Kishtwar, Kulgam, Kupwara, Ladakh, Poonch, Pulwama, Rajauri, Ramban, Reasi, Samba Srinagar, , Shupiyan, Udhampur.
STATE : PUNJAB (22)
Districts : Amritsar, Barnala, Bhatinda, Faridkot, Fatehgarh Sahib, Fazilka Ferozpur, Gurdaspur, Hoshiarpur, Jallandur, Kapurthala, Ludhiana, Mansa, Moga, Muktsar, Nawan Shehar, Pathankot Patiala, Rup Nagar, Sangrur, Sahibzada Ajit Singh Nagar (Mohali), Taran.

STATE : UTTAR PRADESH (65)
Districts : Agra, Aligarh, Ambedkar Nagar, Amroha, Auraiya, Azamgarh, Badaun, Baghpat, Bahraich, Ballia, Balrampur, Bara-Banki, Bareilly, Basti, Bijnor, Bulandshahr, Chandauli, Chitrakut, Deoria, Etah, Etawah, Faizabad, Farrukhabad, Fatehpur, Firozabad, Gautam Buddha Nagar, Ghaziabad, Gazipur, Gonda, Gorakhpur, Hapur, Hardoi, Hathras, Jalaun, Jaunpur, Kannauj, Kanpur Dehat, Kanpur Nagar, Kasganj, Kushinagar, Lakhimpur Kheri, Lucknow, Maharajganj, Mainpuri, Mathura, Mau, Meerut, Moradabad, Muzaffarnagar, Pilibhit, Pratapgarh, Raebareli, Rampur, Saharanpur, Sambhal, Sant Kabir Nagar, Sant Ravidas Nagar, Shahjahanpur, Shamli, Shravasti, Siddarth Nagar, Sitapur, Sultanpur, Unnao, Varanasi.
STATE : UTTARAKHAND (13)
Districts : Almoda, Bageshwar, Chamoli, Champawat, Dehradun, Haridwar, Nainital, Pauri Garhwal, Pithoragarh, Rudraprayag, Tehri Garhwal, Udhamsing Nagar, Uttar Kashi.

Udaipur Regional Office

UNION TERRITORY: DADRA & NAGAR HAVELI
UNION TERRITORY: DAMAN & DIU
STATE : GUJARAT (33)
Districts : Ahmedabad, Amreli, Anand, Aravalli, Banaskantha, Bharuch, Bhavnagar, Botad, Dahod, Dang, Devbhoomi Dwarka, Gandhinagar, Gir Somnath, Jamnagar, Junagarh, Kheda, Kuchch, Mahisagar, Mehesana, Morbi, Narmada, Navasari, Panchmahals, Patan, Porbandar, Rajkot, Sabarkantha, Surat, Surendranagar, Vadodara, Valsad, Tapi.

STATE : RAJASTHAN (6)
Districts : Banswara, Chittorgarh, Dungarpur, Pratapgarh, Rajsamand, Udaipur.

South Zone

Hyderabad Regional Office (Including Nellore Sub-Regional Office)

STATE : ANDHRA PRADESH (23)
Districts : Adilabad, Anantapur, Chittoor, Cuddapah, Godavari East, Godavari West, Guntur, Hyderabad, Karimnagar, Khammam, Krishna, Kurnool, Mahaboobnagar, Medak, Nalgonda, Nellore, Nizamabad, Prakasam (Ongole H.Q.), Rangareddy, Srikakulam, Visakhapatnam ,Vizianagaram, Warangal.
STATE : MAHARASHTRA (3)
Districts : Latur, Nanded, Osmanabad.

Goa Regional Office

STATE : GOA (2)
Districts : North Goa, South Goa .
STATE : MAHARASHTRA (7)
Districts : Kolhapur, Pune, Ratnagiri, Sangli, Satara, Sholapur, Sindhudurg.
STATE : KARNATAKA (7)
Districts : Bagalkot, Belgaum, Bijapur, Dharwar, Gadag, Haveri, Uttar Kanada.

Bangalore Regional Office

STATE : KARNATAKA (23)
Districts : Bangalore, Bangalore Rural, Bellary, Bidar, Chamarajanagar, Chikkaballapura, Chikmagalur, Chitradurga, Davangere, Gulbarga, Hassan, Kodagu, Kolar, Koppal, Mandya, Mysore, Raichur, Ramanagara, Shimoga, South Kanara, Tumkur, Udupi, Yadgir.

STATE :KERALA (14)
Districts : Alappuzha (Alleppy), Ernakulam, Idukki (Iddiki), Kannur, Kasargod, Kollam, Kottayam, Kozhikode, Malappuram, Palakkad, Pathanamthitta, Thiruvananthapuram, Trissur, Wynad.
UNION TERRITORY: LAKSHADWEEP

Chennai Regional Office

STATE : TAMIL NADU (32)
Districts : Ariyalur, Chennai, Coimbatore, Cuddalore, Dharmapuri, Dindigul, Erode, Kanchipuram, Kanyakumari, Karur, Krishnagiri, Madurai, Nagapattinam, Namakkal, Niligiris, Perambaloor, Pudukkottai , Ramnathapuram , Salem, Sivaganga, Thanjavur ,Theni (Madurai), Thiruvallur (Chengalpattu), Thiruvannamalai, Thiruvarur, (Nagapattinam) , Trichirapalli , Tirunelveli, Tiruppur, Turicorin, Vellore, Villupuram, Virudhunagar.

STATE : PONDICHERRY (4)
Districts : Karaikal , Mahe, Pondicherry, Yanam.

Central Zone

Bhubaneswar Regional Office

STATE : ODISHA (30)

Districts : Angul ,Balasore, Bargarh, Bhadrak, Bolangir, Boudh, Cuttack, Deogarh, Dhenkanal, Gajapati, Ganjam, Jagatsingpur, Jajpur, Jharsuguda, Kalahandi, Kandhamal, Kendrapara, Keonjhar, Khurda, Koraput, Malkanagiri, Mayurbhanj, Nabrangpur, Nayagarh, Nuapada, Puri, Raygada, Sambalpur, Sonpur, Sundargarh.

Jabalpur Regional Office

STATE : MADHYA PRADESH (25)
Districts : Ashoknagar, Anuppur, Bhind, Chhatarpur, Damoh, Datia, Dindori, Guna, Gwalior, Jabalpur, Katni, Mandla,

Morena, Narasinhapur, Panna, Rewa, Sagar, Satna, Shahdol, Shivpuri, Shyopur, Sidhi, Singrauli, Tikamgarh, Umaria.

STATE : UTTAR PRADESH (10)
Districts : Allahabad, Banda, Chatrapati Shahuji Maharaj Nagar, Hamirpur, Jhansi, Kaushambi, Lalitpur, Mahoba, Mirzapur, Sonbhadra.

Ranchi Regional Office

STATE : BIHAR (38)
Districts : Araria, Arwal, Aurangabad, Banka, Begusarai, Bhagalpur, Bhojpur, Buxar, Darbhanga, East Champaran, Gaya, Gopalganj, Jahanabad, Jamui, Kaimur, Katihar, Khagaria ,Kishanganj, Lakhisarai, Madhepura, Madhubani, Munger, Muzaffarpur, Nalanda, Nawadha, Patna, Purnia, Rohtas, Saharsa, Samastipur, Saran, Sheikhpura, Sheohar, Sitamarhi, Siwan, Supaul ,Vaishali, West Champaran.
STATE : JHARKHAND (21)
Districts : Bokaro, Chatra, Deogarh, Dhanbad, Dumka, Garhwa, Giridih, Godda, Gumla, Hazaribagh, Jamtara, Khunti, Kodarma, Latehar, Lohardaga, Pakur, Palamau, Ramgarh, Ranchi, Sahebganj, Simdega.

Kolkata Regional Office

STATE : JHARKHAND (3)
Districts : Saraikela-Kharsawan, Singhbhum (East), Singhbhum (West).
STATE : SIKKIM (4)
Districts : Sikkim East, Sikkim West, Sikkim North, Sikkim South
STATE : WEST BENGAL (19)
Districts : 24- Parganas North , 24-Parganas South , Bankura ,Birbhum, Bardhaman, Cooch Behar, Darjeeling , Dakshin Dinajpur , Uttar Dinajpur, Hooghly, Howrah, Jalpaiguri, Kolkata, Malda, Murshidabad, Nadia, Paschim Midnapore, Purba Medinipur, Purulia

UNION TERRITORY: Andaman Nicobar
Districts : Nicobar, North & Middle Andaman , South Andman.

GUWAHATI SUB-REGION

STATE : ARUNACHAL PRADESH (18)
Districts : Anjaw, Changlang, Dibang Valley, East Kameng, East Siang, Kurung Kumey, Lohit, Lower Dibang Valley, Lower Subansiri, Paum Pare, Tawang, Tirap, Upper Siang, Upper Subansiri, West Kameng, West Siang.

STATE : ASSAM (27)
Districts : Barpeta, Baksa, Bongaigaon, Cachar, Chirang, Darrang, Dhemaji ,Dhubri, Dibrugarh, Goalpara, Golaghat, Hailakandi, Jorhat, Kamrup, Metropolitan, Karbi Anglong, Karimganj, Kokrajhar, Lakhimpur, Morigaon, Nagaon, Nalbari, North Cachar Hills (Dima Hasao), Sibsagar, Sonitpur, Tinsukia, Udalguri.

STATE : MANIPUR (9)
Districts : Bishnupur, Chandel, Churachandpur, Imphal East, Imphal West, Senapati, Tamenglong, Thoubal, Ukhrul.
STATE : MEGHALAYA (11)
Districts : West Jaintia Hills (Jowai),East Jaintia Hills (Khliehriat),East Khasi Hills (Shillong),West Khasi Hills (Nongstoin),South West Khasi Hills (Mawkyrwat),Ri-Bhoi (Nongpoh),North Garo Hills (Resubelpara),East Garo Hills (Williamnagar), South Garo Hills (Baghmara), West Garo Hills (Tura),South West Garo Hills (Ampati),
STATE : MIZORAM (8)
Districts : Aizwal, Champhai, Kolasib, Lawngtlai, Lunglei, Mamit, Saiha, Serchhip.
STATE : NAGALAND (11)
Districts : Dimapur, Kiphire, Kohima, Longleng, Mokokchung, Mon, Peren, Phek, Tuensang, Wokha, Zunheboto.

STATE : TRIPURA (4)
Districts : Dhalai, Sipahijala, Khowai, Gomati, Unakot, North Tripura, South Tripura, West Tripura

Nagpur Regional Office

STATE : CHHATTISGARH (27)
Districts : Balod, Baloda Bazar, Balrampur, Bastar, Bemetara, Bijapur, Bilaspur, Dantewada, Dhamtari, Durg, Gariyaband, Janjgir-Champa, Jashpur, Kanker, Kawardha, Kondagaon, Korba, Koriya, Mahasamund, Mungeli, Narayanpur, Raigarh, Raipur, Rajnandgaon, Sukma, Surajpur, Surguja.

STATE : MADHYA PRADESH (26)
Districts : Agar Malwa, Alirajpur, Badwani, Balaghat, Betul, Bhopal, Burhanpur, Chhindwara, Dewas, Dhar, Harda, Hoshangabad, Indore, Jhabua, East Nimar (Khandwa), West Nimar (Khargaon), Mandsaur, Neemuch, Raisen, Rajgarh ,Ratlam, Sehore, Seoni, Shajapur, Ujjain, Vidisha.

STATE : MAHARASHTRA (25)
Districts : Ahmednagar, Akola, Amravati, Aurangabad, Bhandara, Beed, Buldhana, Chandrapur, Dhule, Gadchiroli, Gondia, Greater Mumbai, Hingoli, Jalgaon, Jalna, Mumbai (Suburban), Nagpur, Nandurbar, Nashik, Parbhani, Raigad, Thane, Wardha, Washim, Yavatmal and Bombay High.

Annexure - XIX

Contact Details of Divisional / Zonal / Regional Offices of Indian Bureau of Mines

1. Divisional Offices

Name of the Division / Office	Designation of the Divisional Head & Postal Address	Telephone No.	Fax No.	E-Mail
Mineral Development & Regulation Division	**Chief Controller of Mines** 2 nd Floor, Block 'A', Indira Bhavan, Civil Lines, Nagpur-440001	91-712-2560961	91-712-2565488	ccom@ibm.gov.in
Mineral Processing Division	**Director (Ore Dressing)** 2 nd Floor, Block 'B', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2565024	91-712-2562631	codo@ibm.gov.in
Planning & Co-Ordination Division	**Controller of Mines (Planning & Co-ordination)** 2 nd Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712-2561824	91-712-2561824	com.plcdn@ibm.gov.in
Technical Consultancy, Mining Research & Publication Division	**Controller of Mines (TMP)** 7 th Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2562143	91-712 2561110	com.tc@ibm.gov.in com.mr@ibm.gov.in
Mineral Economics Division	**Chief Mineral Economist** 3 rd Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2565471	91-712-2565471	cme@ibm.gov.in
Mining & Mineral Statistics Division	**Deputy Director General (Statistics) & In-charge MMS Division** 5 th Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712-2564934	91-712-2564934	mms@ibm.gov.in

2. Other Important Offices

Name of the Division / Office	Postal Address	Telephone No.	Fax No.	E-Mail
Chief Mining Geologist	1 st Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2561267	91-712 - 2561267	cmg@ibm.gov.in
Technical Secretary	2 nd Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712- 2565136	91-712- 2561824	rcom.ts@ibm.gov.in
Director (Training)	8 th Floor, Block 'A', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2565867	91-712 - 2565867	dir.trg@ibm.gov.in
Chief Administrative Officer	4 th Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2565333	91-712 - 2565333	ho-office@ibm.gov.in
Chief Editor Publication Section	1 st Floor, Block 'B', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2565500 Extn : 1105	91-712 - 2565471	ce.press@ibm.gov.in

3. Zonal Offices of MDR Division

Name of the Zone	Postal Address	Telephone No.	Fax No.	E-Mail
Central	Controller of Mines (CZ) 6 th Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	0712 - 2565603	0712 - 2565603	com.cz@ibm.gov.in
South	Controller of Mines (SZ) 29, Industrial Suburb, IInd Stage, Tumkur Road, Yeshwantpuram, Bangalore-560022	080 - 23373287 080 - 23375366 / 080 - 23375367 (PBX)	080 - 23373287	zo.bangalore@ibm.gov.in
North	Controller of Mines (NZ) Type-IV, Block B/9, IBM Colony, Adarsh Nagar, Balupura Road, Ajmer-308 002	0145 - 2681831	0145 - 2441244 Ext. 28	zo.ajmer@ibm.gov.in

3. Regional Offices of MDR Division

Name of the Region	Postal Address	Telephone No.	Fax No.	E-Mail
Ajmer	Regional Controller of Mines Makhupura Industrial Estate, Nasirabad Road, Ajmer - 305002.	91-0145 - 2695150	0145 - 2695202	ro.ajmer@ibm.gov.in
Bangalore	Regional Controller of Mines Industrial Suburb, II Stage, Tumkur Road, Yeshwantpur, Bangalore - 560 022.	91-080 - 23371027	080 - 23373287	ro.bangalore@ibm.gov.in
Bhubaneswar	Regional Controller of Mines Indian Bureau of Mines, Plot No. 149, In front of CPWD Office, Pokhariput, Bhubaneswar - 751 020	91-0674-2352490	0674-2352463	ro.bhubaneshwar@ibm.gov.in
Chennai	Regional Controller of Mines Rajaji Bhavan, C-4 A, C.G.O. Complex, Besant Nagar, Chennai- 600 090	91-044 - 24911570 91-044 - 24914461	044 - 24911295	ro.chennai@ibm.gov.in
Dehradun	Regional Controller of Mines 100, Old Nehru Colony, Dehradun - 248 001	91-0135 - 2671896 91-0135 - 2676350 91-0135 - 2672610	0135 - 2674962	ro.dehradun@ibm.gov.in
Goa	Regional Controller of Mines IBM Colony, New National Highway , Near Arlem Breweries, P.O. Fatorda, Margao- 403602	91-0832 - 2741757 91-0834 - 2741758	0832 - 2741758	ro.goa@ibm.gov.in
Hyderabad	Regional Controller of Mines Indian Bureau of Mines, Room No. 603, 6th Floor, CGO Towers, Kavadiguda, Secunderabad - 500 080	91-040 - 27539992 91-040 - 27539993	91-040 - 27539991	ro.hyderabad@ibm.gov.in
Jabalpur	Regional Controller of Mines Scheme No. 11, IBM Colony, Kamla Nehru Nagar, Jabalpur – 482 002	91-0761 - 2416780 91-0761 - 2416231 91-0761 - 2416589	0761 - 2416780	ro.jabalpur@ibm.gov.in

Kolkata	Regional Controller of Mines CP-13, Sector V, Salt Lake City , Kolkatta- 700 091	91-033 - 23673986	91-033 - 23673617	ro.kolkata@ibm.gov.in
Nagpur	Regional Controller of Mines 6 th Floor, Block 'B&C', Indira Bhavan, Civil Lines, Nagpur-440 001	91-712-2565089	91-712-2565089	rcom.nr@ibm.gov.in
Ranchi	Regional Controller of Mines 318/B, Ashok Nagar, Road No. 3, Ranchi - 834 002	91-0651 - 2242903 91-0651 - 2242889	0651 - 2242903	ro.ranchi@ibm.gov.in
Udaipur	Regional Controller of Mines 142-C, Sector - XI, Hiran Magri Scheme, Udaipur - 313 001	91-0294 - 2583230 91-0294 - 2583139.	0294 - 2583139	ro.udaipur@ibm.gov.in

4. Sub-Regional Offices of MDR Division

Name of the Sub-Region	Postal Address	Telephone No.	Fax No.	E-Mail
GUWAHATI (Under Kolkata Region)	Officer in Charge House No. 203, Dee Cee Villa, First Floor, Rajgarh Road, Ulubari , Guwahati - 781 007	0361 - 2466184	0361 - 2466184	sro.guwahati@ibm.gov.in
NELLORE (Under Hyderabad Region)	Officer in Charge D.No.26 - II – 830, Flat No. 86, 8th Cross Road, Jyothi Nagar, Vedayapalem, P.O. A.K.Nagar, Nellore-524 004	0861 - 2327294	0861 - 2327294	sro.nellore@ibm.gov.in

5. Mineral Processing Laboratories and Pilot Plants

Location of the Pilot Plant / Regional Ore Dressing Laboratory	Postal Address	Telephone No.	Fax No.	E-Mail
Nagpur Modern Mineral Processing Laboratory and Pilot Plant	Chief Ore Dressing Officer L-8, MIDC, Hingna Road, Nagpur -440 016	07104-236645 / 235541 / 235543 / 235545	07104-235542	indian75@bsnl.in ibmhngn@bsnl.in
Ajmer Regional Mineral Processing Laboratory and Pilot Plant	Suptdg. Officer (Ore Dressing) Makhupura Industrial Estate, Nasirabad Road, Ajmer - 305002	0145 - 2695163 2695150	0145 - 2695163	rmpl.ajmer@ibm.gov.in
Bangalore Regional Mineral Processing Laboratory and Pilot Plant	Suptdg. Officer (Ore Dressing) & Officer in Charge Industrial Suburb, II Stage, Tumkur Road, Gurguntaplayam, Bangalore - 560 022.	080 - 23379824 23375362 23375364	080 - 23375360	rodlbng.ibm.gov@gmail.com

6. Liaison Office

Location of the Liaison Office	Designation of the Officer-in-charge Postal Address	Telephone No.	Fax No.	E-Mail
NEW DELHI	Administrative Officer, Indian Bureau Of Mines 5th Floor,11th Block , CGO Complex , New Delhi-110 003.	011 - 24363199	-	nagarajan.25@nic.in
	Mines - III, Ministry of Mines, Shastry Bhavan, New Delhi - 110 115	011 - 23383085	011 - 23383085	nagarajan.25@nic.in