

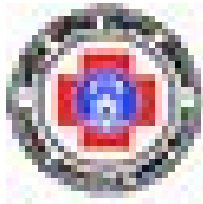


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ANNUAL REPORT

वार्षिक प्रतिवेदन
2008 - 09



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National Institute of Miners' Health, Nagpur

Safe Mines and Healthy Miners



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RECTOR'S REPORT

Dear Members,

We have great pleasure in presenting 19th Annual Report of the National Institute of MinersqHealth for the period from 1.4.2008 to 31.3.2009.

As members are aware, National Institute of Minersq Health (NIMH) was established for promotion of occupational health and hygiene in mining and mineral based industry and develops trained manpower in these fields. It was registered as a Society under Karnataka Societies Registration Act, 1960 on 21st February 1990, having Registered Office at Kolar P.O. Champion Reefs, Kolar Gold Fields . 563 117 (BGML complex) in the state of Karnataka. On closure of BGML, a camp office was established at Amravati Road, Wadi, Nagpur . 440 023 (Maharashtra) on 17th April 2002.

Members are also aware that I was assigned the additional charge of Director, National Institute of MinersqHealth, w.e.f. 25th April, 2007 which was extended time and again covering the entire said Financial Year.

During the year under review, S & T Project on Coal, Bauxite and Zinc which was taken up in Coal Mines of Western Coalfields Limited in the first phase was completed. The study elicits the prevalence of diseases such as Diabetes mellitus, hypertension, various eye disorders, Muscular Skeletal Disorders (MSD), Noise Induced Hearing Loss, Pulmonary Disorders etc among the mining population under this study. The report recommended intense health education for the employees as one of the options for prevention of diseases.

In the same period, the Institute also conducted studies on environmental parameters in four mines of ACC Limited and two mines of National Mineral Development Corporation Limited (NMDC). The team of Occupational Medicine Department of the Institute conducted Periodical Medical Examination (PME) of two Limestone Mines of ACC Limited at Coimbatore. I express my sincere thanks towards all clientele organizations and expect their inevitable support for nurturing the Institute in future.

Furthermore, establishment of a Medical Examination Room with modern Audiometry booth and Biochemistry Laboratory having state-of-the-art facilities is in progress. I express my sincere gratitude to the Governing Body for extending whole hearted support and encouragement for the same.

I also express my sincere gratitude towards Hon^{ble} Chairperson and members of Governing Body, General Body for their consistent support and guidance in the development of the Institute.

Dr. J Mukhopadhyay
Director

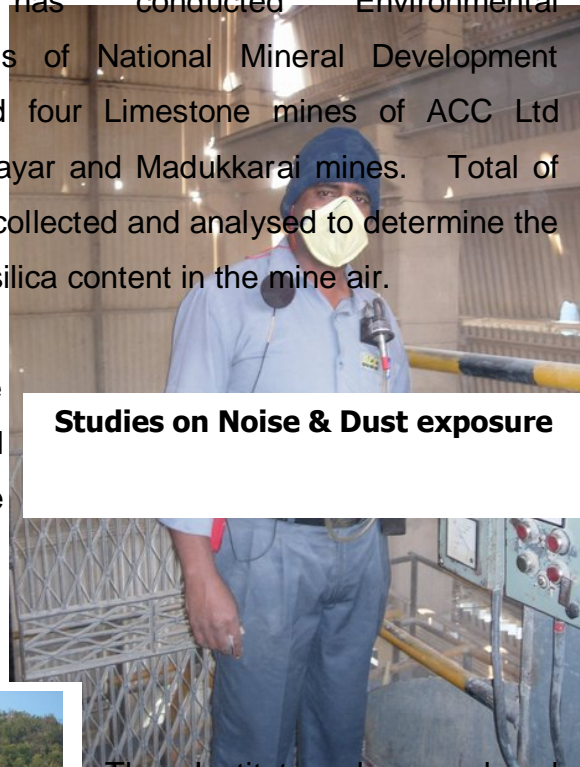
2 SURVEYS AND SPONSORED STUDIES

National Institute of MinersqHealth conducts applied research in the field of occupational health, hygiene for subjects employed in mining and mineral based Industry. Pursuing its vision of “**Safe Mines and Healthy Miners**”, the Institute has carried out following studies in the year 2008-09 with total staff strength of 17 Including 3 Administrative staff.

I Environmental Monitoring studies in Mines

During the year 2008-09, NIMH has conducted Environmental Monitoring studies in two mines of National Mineral Development Corporation Limited (NMDC) and four Limestone mines of ACC Ltd namely, Kymore, Bamangarh Walayar and Madukkarai mines. Total of 146 respirable dust samples were collected and analysed to determine the dust concentration as well as free silica content in the mine air.

Reports on findings of the above said studies have been handed over to the respective Clientele Organizations.



Studies on Noise & Dust exposure



The Institute also analyzed dust, noise and whole body vibration samples collected from the opencast coal mines of Western Coal Fields Limited

assessment report under S & T project entitled Coal, Bauxite & Zinc Mines+ sponsored by the Ministry of Mines.

II Medical Studies

The Institute conducted Periodical Medical Examination (PME) of employees engaged in Madukkarai and Walayar Limestone Mine of ACC Limited. The study was conducted as per the provisions of Mines Rules, 1955.



Medical Examination of a Mine Worker by a Research Officer

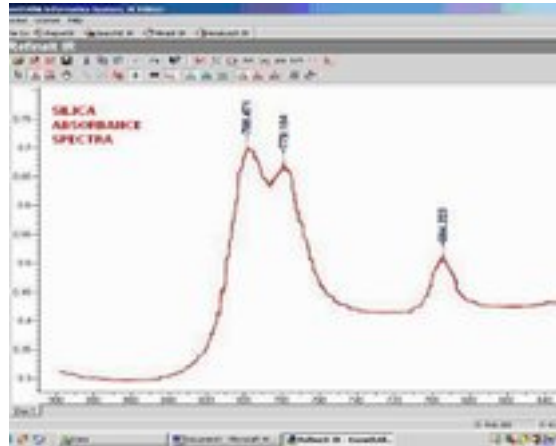


Audiometry of Mine Worker to determine Noise Induced Hearing Loss

Lung Function Test (Spirometry), Audiometry, Vision Screening, Chest X-ray etc. were carried out to examine 83 employees of ACC Limited.

III S & T project of Coal - Phase I

The project on coal was completed at Western Coal Fields Limited (WCL). Report of Epidemiological studies on a database of 1553 employees working in Nagpur area of Western Coal Fields Limited (WCL) was prepared. The study highlights the prevalence of diseases such



Silica Absorbance Spectra (FTIR Lab)

as Diabetes mellitus, hypertension, various eye disorders, Muscular Skeletal Disorders (MSD) etc among the mining population under this study. The report recommended intense health education for the employees as one of the options for prevention of diseases.

On the basis of the Epidemiological studies, the detailed medical examination of a sub-sample of 280 employees for audiometric, Spirometry, hematology and biochemical variables has been completed and the final report of the same has been submitted to the Ministry of Mines after due recommendation of project monitoring committee.

The remaining phases of the project will focus on the environmental and occupational health aspects in Aluminium and Zinc Mines.

IV Projects in Hand



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urvey with free silica analysis project in Chibasa
; Limited, Jharkhand.

- Investigation into the Vibration characteristics of Mining Equipments and assessment of health risk . Jayprakash Associates Limited, Rewa (MP)



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v Projects in Pipeline

- 1) Institute has received offers for conducting noise, dust and vibration monitoring project at NALCO
- 2) Institute has received proposal for conducting dust, noise and vibration studies at **10 Iron Ore Mines** of M/s Steel Authority of India Limited.
- 3) Institute has received offer for conducting dust and noise survey in two mines of Grasim Industries (Tamil Nadu and Karnataka)

3 HUMAN RESOURCE DEVELOPMENT

- Mr. Sachin Narwadiya attended a training programme on Basic DNA Techniques at Hi Media Labs Pvt. Ltd. from 1st to 5th April 2008.
- Training on Free Silica Analysis - The Institute deputed scientific staffs of Hygiene, Medicine and Biochemistry department to participate in a training program on free silica analysis by Fourier Transform Infra-red spectrophotometry at Indian School of Mines, Dhanbad from 1st to 5th December 2008 as a capacity building measure.
- Dr. Shubhangi Pingle, Ms. Rajani G. Tumane of Biochemistry department are deputed to Central India Institute of Medical Sciences (CIIMS), Nagpur from 4th to 24th Dec 2008 for participating in the workshop on Immunological, Molecular, and Animal cell culture technique.
- A training programme on noise dust and vibration has been organised in the institute to impart training to participants of National Aluminium Company Limited.
- Miss. Rajani G. Tumane has registered for Ph.D Biochemistry in RTM Nagpur university Nagpur in Jan 2008 on the topic entitled, ~~%~~ Delineation of risk in population occupationally exposed to copper using biomarker and proteomics.
- Prashant D. Zade has received young chemist award from IUPAC
- Mrs. Aruna Bhagat was awarded M. Phil. (Biochemistry) from RTM University, Nagpur

- Mr. B.B.Mandal was awarded M.Tech (by research) in Mining Engineering by Visvesvaraya National Institute of Technology, Nagpur. His topic of research was %Analysis of human response to equipment induced vibration in Indian Mining Industry+.

Welfare of SC/ST/Women

National Institute of MinersqHealth has deputed one woman staff member of SC community to acquire training on free silica analysis using FTIR. The training programme was organized by Indian School of Mines University, Dhanbad.

The Institute also deputed one woman staff member of Biochemistry department, belonging to SC community, to Central India Institute of Medical Sciences (CIIMS), Nagpur for participating in the workshop on Immunological, Molecular, and Animal cell culture technique.

4 PUBLICATION

- Kamavisdar, R. M. Patel, Studies on Lead, Iron and Mercury in Water samples near metalliferous mining industries of Chhattisgarh, Indian Journal of Environmental Protection, Vol. 28 (5), May 2008.
- Subroto S. Nandi, Sarang V. Dhatrik, Occupational noise induced hearing loss in India, Indian Journal of Occupational and Environmental Medicine, Vol.12 (2): 53-56, August 2008.
- Debasis Chatterjee, Sarang Dhatrik, Subroto Nandi, B. B. Mandal, Sachin Narwadiya, Respiratory morbidity among miners in Rajasthan State . Report of a pilot study, Asian-Pacific Newsletter on Occupational Health and Safety, Vol.15 (2): 42-43, September 2008.
- S. C. Narwadiya, S. V. Saoji, U. L. Dhumne, P. M. Tumane, V. G. Meshram, Activity of Indian habitat plants extracts against Mycobacterium tuberculosis to treat tuberculosis, Bioscience, Biotechnology research Asia, Vol. 5(1): 455-459, 2008.
- Prashant D. Zade, Dattatrey M. Dharmadhikari, "Retrieval of mercury from wastewater as stable mercury ferrite", Water Quality Research Journal of Canada, 42(4): 311 . 318, 2007.
- Prashant D. Zade, Atul P. Vanerkar, Dattatrey M. Dharmadhikari, "Structural and electrical properties of arsenic ferrites" International Journal of Material Research, 3: 313 . 321, 2008.

- P. Vanerkar, N. P. Kulkarni, P. D. Zade and A. S. Kamavisdar, "Vibration exposure of heavy earth moving machineries in metalliferrous mines of India", Journal of Environmental Monitoring and Assessment, 143 (1-3): 239 . 245, 2008.
- Prashant D. Zade, Atul P. Vanerkar, Chandrasekhar A. Moghe, Dattatrey M. Dharmadhikari, "Arsenic Removal from Groundwater by Ferritization Technique", Published in the proceedings of International Conference on Green Chemistry, Moscow (Russia) sponsored by IUPAC, September 16. 20, 2008.
- Prashant D. Zade, Dattatrey M. Dharmadhikari, "Removal of arsenic in aqueous medium as stable metal ferrite by using an oxidant", abstract published in Proceeding of National Conference on Green Chemistry and its Perspective, Amravati, MS, India, AE-10: Page F-3, February 11-12, 2008.
- Dr. Subhangi Pingle. Periodicity of Estrus cycle in rats: Response to Ficus bengalensis in Bark extract. Adv. Pharmacol. Toxicol. Vol. 9 (2) 2008, 85-89.
- B B Mandal & A K Srivastava. Risk from vibration in Indian mines. In: Book . Mining: Social & Economic Issues+ Ed. Preeti Phuskule. ICFAI University Press, 2008.

IMPORTANT EVENTS

- 17th Annual General Meeting of NIMH was held on 23rd May 2008 in the Chamber of Hon^{ble} Secretary (Mines), at New Delhi.
- Shri Palash Chandra Karan joined NIMH on 17th June 2008 in the capacity of Administrative Officer.
- First meeting of the Project Monitoring Committee of the Institute was held on 6th November, 2008 to review the progress of ongoing S & T Project on ~~Intervention~~ intervention studies in Coal, Bauxite and Zinc Mines+.
- 29th Governing Body and 18th Annual General Meeting of NIMH was held on 26th November 2008 in the Chamber of Hon^{ble} Secretary (Mines), at New Delhi.
- Dr. K Ayyasami, Director (Technical), Ministry of Mines, New Delhi, made official visit to NIMH on 15th January 2009. He also observed NIMH and facilities available at various Labs.



**Visit of Director (Technical)
Ministry of Mines**

ION PLAN – 2009-10

- Initialization of Phase II of Ministry of Mines sponsored S&T project on receipt of 2nd installment of S&T plan grant.
- Setting up of Central Biochemistry Laboratory.
- Setting up Medical Examination Room.
- Studies on Equipment Vibration and Assessment of Health Risk in the Mines of Jaiprakash Associates, Rewa (MP).
- Respirable Dust Survey and Free Silica Analysis in the Mines of NMDC.
- Environmental Studies at NALCO, Steel Authority of India Limited and Grasim Industries Limited subject to receipt of Work Orders.

Governing Body members for the year 2008-09

1	1	Secretary to the Govt. of India, Ministry of Mines, Department of Mines, Shastri Bhavan, New Delhi – 110 001.	Chairman
2	2	Additional Secretary to GOI, Ministry of Mines, Department of Mines, Shastri Bhavan, New Delhi – 110 001.	Member
	3	The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur – 440 001.	Member
	4	Chief Labour Commissioner (Central) Ministry of Labour, Shram Shakti Bhavan, Rafi Marg, New Delhi – 110 001.	Member
	5	Joint Secretary, Ministry of Health & Family Welfare, New Delhi – 110 003.	Member
	6	Joint Secretary, Ministry of Environment and Forest, Paryavaran Bhavan, C.G.O Complex, Lodhi Road, New Delhi – 110 003.	Member
	7	Director (Finance) Ministry of Mines, Department of Mines, Shastri Bhavan, New Delhi – 110 001.	Member
	8	Director (Technical), Ministry of Mines, Department of Mines, Shastri Bhavan, New Delhi – 110 001.	Member
	9	Director General of Mines Safety, Directorate-General of Mines Safety, Ministry of Labour, Govt. of India, Dhanbad – 826 001.	Member

10	Secretary General FIMI House, B-311, Okhla Industrial Area, Phase-I, New Delhi-110 020	Member
11	Director Jawaharlal Nehru Aluminium Research Design and Development Centre Amravati Road, Wadi, Nagpur – 440 023	Member
12	The Chairman-cum-Managing Director, National Mineral Development Corpn. Ltd., Khanij Bhavan, 10-3-311/A, Castle Hills, Masab Tank, Hyderabad – 500 028.	Member
13	Director, National Institute of Miners' Health, JNARDDC Campus, Opp. Wadi Police Station, Wadi, Nagpur – 440 023.	Member
14	Chairman-cum-Managing Director, National Aluminium Company Limited, NALCO Bhavan, Nayapalli P/1, Bhubaneswar – 751 013	Member
15	Chairman-cum-Managing Director, Manganese Ore India Limited, Katol Road, Nagpur.	Member
16	Chairman-cum-Managing Director, Western Coal Fields Limited Nagpur.	Member
17	Managing Director, Rajasthan State Mines & Minerals Limited, (A Government of Rajasthan Enterprise), 4 Meera Marg, Udaipur (Rajasthan)	Member
18	Secretary, Dept. of Mines & Geology, Govt. of Jharkhand, Nepal House, Doranda, Ranchi – 834 002.	Co-opted Member
19	Director Department of Geology & Mining P.O. Kahilipara Guwahati – 781 019	Co-opted Member

General Body members for the year 2008-09

1	1	Secretary to the Govt. of India, Ministry of Mines, Department of Mines, Shastri Bhavan, New Delhi . 110 001.	Chairman
2	2	Additional Secretary to GOI, Ministry of Mines, Department of Mines, Shastri Bhavan, New Delhi . 110 001.	Member
	3	The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur . 440 001.	Member
	4	Chief Labour Commissioner (Central) Ministry of Labour, Shram Shakti Bhavan, Rafi Marg, New Delhi . 110 001.	Member
	5	Joint Secretary, Ministry of Health & Family Welfare, New Delhi . 110 003.	Member
	6	Joint Secretary, Ministry of Environment and Forest, Paryavaran Bhavan, C.G.O Complex, Lodhi Road, New Delhi . 110 003.	Member
	7	Director (Finance) Ministry of Mines, Department of Mines, Shastri Bhavan, New Delhi . 110 001.	Member
	8	Director (Technical), Ministry of Mines, Department of Mines, Shastri Bhavan, New Delhi . 110 001.	Member
	9	Director General of Mines Safety, Directorate-General of Mines Safety, Ministry of Labour, Govt. of India, Dhanbad . 826 001.	Member
	10	Secretary General FIMI House, B-311, Okhla Industrial Area, Phase-I, New Delhi-110 020	Member

		Managing Director, Development Corpn. Ltd.,	
11	Khanij Bhavan, 10-3-311/A, Castle Hills, Masab Tank, Hyderabad . 500 028.		Member
12	Director, National Institute of Miners & Health, JNARDDC Campus, Opp. Wadi Police Station, Wadi, Nagpur . 440 023.		Member
13	Chairman-cum-Managing Director, National Aluminium Company Limited, NALCO Bhavan, Nayapalli P/1, Bhubaneswar . 751 013		Member
14	Chairman-cum-Managing Director, Manganese Ore India Limited, Katol Road, Nagpur.		Member
15	Chairman-cum-Managing Director, Western Coal Fields Limited Nagpur.		Member
16	Chairman-cum-Managing Director, ACC Limited Cement House, 21, Maharishi Karve Road, Mumbai . 400 020		Member
17	Secretary Department of Mines & Geology No. 49, Khanija Bhavan Race Course Road Bangalore . 560 002		Member
18	Director, Department of Mines & Geology, Government of Jharkhand, Nepal House, Doranda, Ranchi . 834 002		Member
19.	The Director National Environmental Engineering Research Institute (NEERI) Nehru Marg Nagpur . 440 012		Member
20	The Director, Industrial Toxicology Research Centre (ITRC) Mahatma Gandhi Marg, Lucknow . 226 001 (UP)		Member
21	The Director National Institute of Occupational Health (NIOH) Meghani Nagar, Ahmedabad - 380 016		Member

Project Monitoring Committee members for the year 2008-09

Sr. No.	Name & address
1	Dr. Tapan Chakrabarti Acting Director National Environmental Engineering Research Institute (NEERI) Nehru Marg, Nagpur . 440 020
2	Shri C S Gundewar Acting Controller General Indian Bureau of Mines 2 nd Floor, Indira Bhavan, Civil Lines, Nagpur . 440 020
3	Shri C R Pradhan Director (Proj. & Tech.) & Chairman-cum-Managing Director I/C National Aluminium Company Limited Nalco Bhawan, P/1, Nayapalli, Bhubaneswar-751061 (Orissa)
4	Shri C Ramesh Kumar Dy Director of Mines Safety Directorate General of Mines Safety West Zone A Block, 6 th Floor, CGO Complex, Seminary Hills, Nagpur – 440 006
5	Chief of Medical Services Western Coalfields Limited Coal Estate, Civil Lines, Nagpur . 440 001

Appendix - IV

Staff of NIMH in 2008-09

1.	Dr. J Mukhopadhyay, Director in charge
2.	Mr. Bibhuti B. Mandal, Senior Research Officer
3.	Mr. P C Karan, Administrative Officer
4.	Dr. Sarang V. Dhattrak, Research Officer
5.	Dr. S. S. Nandi, Research Officer
6.	Mr. Debasis Chatterjee, Research Officer
7.	Dr. Anand Kamavisdar, Research Officer
8.	Dr. (Mrs.) Shubhangi Pingle, Research Officer
9.	Mr. Nikhil P. Kulkarni, Senior Scientific Assistant
10.	Mr. Prashant D. Zade, Senior Scientific Assistant
11.	Mr. Umesh Dhumne, Senior Scientific Assistant
12.	Mrs. Aruna Jawade, Senior Scientific Assistant
13.	Mrs. Shilpa V. Ingole, Sr. Scientific Assistant
14.	Dr. Atul P. Vanerkar, Scientific Assistant
15.	Mr. S.C. Narwadiya, Scientific Assistant
16.	Miss. Rajani Tumane, Scientific Assistant
17.	Mr. Milind Dixit, Personal Assistant to Director
18.	Mr. K. Ramachandran, Upper Division Clerk



Conducting ECG of Mine Worker



Lung Function Test (Spirometry)



Personal Noise Dosimetry