

Rajasthan State Pollution Control Board



Environmental Guidance Manual

Sector: Mines

Prepared by



Administrative Staff College of India
Hyderabad

Zero Draft

Environmental Guidance Manual
Sector: Mining Projects



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Foreword

(To be given by RPCB)



Acknowledgements

(To be given latter by ASCI)



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About the Manual

The purpose of developing sector specific guidance manual for **Mining projects** is to provide clear and concise information to all the stakeholders i.e. project proponent, environmental consultant, Rajasthan State Pollution Control Board officials and the public to have a better understanding on the relevant environmental aspects in the initial stage itself. This manual covers the legal requirements, clearance process, environmental standards and maintenance of statutory records. The manual will also covers the environmental concerns related mining of minerals. The project proponent may use this manual to ensure that all the aspects of the environment due to the project are addressed and adequate mitigation measures are planned in the environmental management plan and he will be fully aware of the environmental process and requirements. The consultants will have similar understanding of the sector and the procedures involved, so that the quality EMP reports will be improved. The reviewers across the Board may also have better understanding about the sector and helps them in the process of review and appraisal. Public who are concerned about mining of minerals, will have information about the environmental aspects, standards, regulatory requirements etc., and have a better understanding about the mining activity.

The preparation of sector specific guidance manual by **Rajasthan State Pollution Control Board** is in line with National Environmental Policy 2006, which emphasizes on:

- Formulate and periodically update, codes of good practices for environment for different category of industries
- Ensure faster decision making with greater transparency and access to information, together with necessary capacity building

The manual is meant to serve as a guidance purpose. In case of interpretation of any question related to law, the provisions of the original law and the rules made thereunder with various government directions/resolutions will have to be read and followed. In case of amendment to the original Act/Rules/Notifications made thereunder, the provisions as amended from time to time shall be applicable.

Introduction

1.0 About Rajasthan State Pollution Control Board

The Rajasthan State Pollution Control Board (**RSPCB**) is a statutory authority entrusted to implement environmental laws & rules within the jurisdiction of the State of Rajasthan. The Board ensures proper implementation of the statutes, judicial and legislative pronouncements related to environmental protection within the state. The Board was established in the year 1975 under the provisions of the Water (Prevention & Control of Pollution) Act 1974. Over the years, RSPCB was entrusted with various responsibilities under different enactments made. Currently RSPCB is responsible completely or partially for the implementation of following Acts and rules:

- The Water (Prevention & Control of Pollution) Act, 1974 and Rules made there off
- The Air (Prevention & Control of Pollution) Act, 1981 and Rules made there off
- The Water (Prevention & Control of Pollution) Cess Act 1976 and Rules made there off
- The Public Liability Insurance Act, 1991 and Rules made there off
- The Environmental Protection Act, 1986 and Rules made there off
 - Hazardous Wastes (Management, Handling & Transboundary Movement) Rules 2008
 - Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended
 - Municipal Solid Waste (Management and Handling) Rules, 2000
 - Bio Medical Waste (Management and Handling) Rules, 1998 as amended
 - Ozone Depleting Substances (Regulation) Rules, 2000
 - The Batteries (Management and Handling) Rules, 2001
 - Fly Ash Notification as amended S.O. 2804(E) dated 3rd November 2009
 - The Environmental Impact Assessment Notification, 2006 as amended thereof
 - The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996
 - The Recycled plastic (Manufacture and Usage) Rules, 1999 as amended
 - The Manufacture, Use, Import, Export and Storage of Hazardous Micro Organisms, Genetically Engineered Organism or Cells Rules, 1989
 - Notification No. S.O. 319 (E) dated 7th May 1992 (Restricting certain activities in special specified area of Aravalli Range)
 - Notification No. S.O. 1545 (E) dated 25th June 2009 declaring Mount Abu Eco Sensitive Zone
 - The Noise Pollution (Regulation and Control) Rules, 2000

1.1 Vision and Mission Statement - RSPCB

Vision

- To be a nationally respected organization that works towards the sustainable development of the State of Rajasthan by providing effective services to all the stakeholders through innovative systems and procedures to comply with environmental regulations



Mission

- To implement the regulatory requirements to prevent and control various forms of pollution in most effective manner
- Change in the strategy towards achieving better environmental compliance by becoming information provider, awareness builder and a facilitator in addition to the role of enforcer
- To create enabling environment for voluntary compliance to environmental laws and rules
- Continued effort to improve the transparency in decision-making
- Continued effort to improve the staff welfare and development
- Continued effort to develop and maintain competent human resources to meet the challenging environmental concerns
- Building linkages with external resources such as educational institutions, professional organizations, community organizations and industrial organizations in the area of environmental studies and environmental awareness
- Create a positive image for the organization in discharging its duties
- Be prepared for the future challenges

1.2 About Department of Mines and Geology (DMG), Rajasthan

The Department of Mines and Geology has two fold functions, as stated below:

- Search, prospecting and systematic development of mineral deposits
- Mineral administration including grant of leases, collection of revenue, dead rent, ensure systematic and environment friendly mining etc.

The objectives of DMG

- Expeditious search and exploration of mineral wealth of the State by adopting modern exploration techniques
- Increase State's revenue through higher production of minerals & their scientific development
- Encourage value addition of minerals through promotion of mineral based industries in the state
- Promote Research & Development in the fields of identification, analysis, exploration, exploitation and beneficiation of minerals particularly keeping in view mineral conservation, utilization of waste and up gradation of low-grade minerals/ores
- *Adopt adequate measures for protection of environment in mines & restoration of mined out areas*
- Take adequate measures to promote export of minerals & establishment of export oriented units (EOU)
- *Construct approach roads to mines and quarries*



The following are some of the important mineral discoveries at a glance:

- Lead zinc deposit of Rampura-Agucha, Bhilwara district with 58.8 million tones of reserves containing 1.9% Pb and 13.4% Zn. This is country's richest and largest single deposit of lead, zinc and silver and amenable to open cast mining
- Base metal deposit of Deri, Sirohi district having 1 million tones reserves containing 1.98% Cu, 5.4% Pb and 7.52% Zn
- Base metal deposit of Basantgarh, Goliya, Sirohi district with 3.5 million tones of reserves containing 1.22-2.6% Cu and 3.6 Zn
- Base metal deposit of Pipela, Sirohi district with 1.2 million tones reserves containing 1.2-2.2% Cu and 1.3-2.3 Zn
- Copper deposit of Anjani, Udaipur district with 1.0 million tones reserves containing 1.19% Cu
- Iron ore deposit of Chomu, Morija Jaipur district with 54.2 million tones reserves containing 60% Fe
- Iron ore deposit of Nathara-Ki-Pal, Udaipur district with 14.2 million tones reserves containing 50% Fe
- Barites deposit of Jagat-Relpatiya, Udaipur district with 0.10 million tones reserves
- Fluorite deposit of Chowkri-Chapoli, Sikar district with 70 million tones reserves containing 15% CaF₂
- Fluorite deposit of Kahila, Dungarpur district with 0.3 million tones reserves containing 15.20% CaF₂
- Magnesite deposit of Sarupa-Gafa, Ajmer district with 0.15 million tones reserves. Rock phosphate deposits of Jhamarkotra, Udaipur district with 74 million tones of reserves having 16 to 38% P₂O₅
- SMS grade limestone deposits in Jaisalmer district have been proved having reserves of more than 1000 million tones
- Cement grade limestone deposits in Jaisalmer, Nagaur, Pali, Banswara, Bundi, Bhilwara, Jhalwar, Udaipur districts etc. were established
- Lignite deposits in Biakner (Palana, Barsinghsar, Guda); Nagaur (Merta Road, Kasnau, Igiyar, Matasukh); Barmer (Giral, Kapurdi and Jalipa) districts. Geological Survey of India and Mineral Exploration Corporation Ltd. Have also contributed significantly in lignite exploration in Rajasthan

(Source: Department of Mines & Geology, Government of Rajasthan - www.dmg-raj.org)

The DMG has introduced VISION 2020 document with an objective to serve the people of the state in cost effective manner. The salient features of the VISION 2020 document are as follows:

- Due care is being paid to imbibe new technologies and upgrade technological perception of the human involved
- Reorientation strategy for the department to the new requirements and to address the issue of Governance afresh. Systems and procedures be simplified
- A Human Resource Renewal Plan along with introduction of modern hi-tech equipments in a phased manner shall be implemented

- Department shall act as facilitator in mineral prospecting. Logistic support and market intelligence is being provided to the mining industry
- *Ecological concerns shall be given due regard. Mining has to be in conformity with local eco-systems. Micro eco-management plan for each area shall be drafted and promulgated*
- *Suitable safeguards shall be provided in mining clusters*
- Underground mining be encouraged keeping in view economy, safety and ecology of the region
- Overall human resource management plan of the State shall be built up and implemented. District wise manpower requirements shall be assessed and steps shall be taken up to train the laborers for skilled jobs to cater to the needs of local industries
- Department has felt the need for a comprehensive prospecting policy in view of the inflow of new survey technologies in the wake of liberalization of economy. The twenty-year VISION plan concentrates on extensive prospecting of industrial minerals, hydrocarbons, precious stones and metallic minerals
- For speedy development of decorative stones and other minor minerals, 5 year wise programme shall be formulated and implemented
- Minerals whose prospecting is expensive should be identified and given to private sector for detailed prospecting

Conservation of Environment

- Mining operations will be eco-friendly by adhering scientific mine planning and systematic exploration of minerals
- Reclamation of minerals exhausted pits shall be attended in a phased manner
- Mechanism has to be put in place to control overburden and mine dust by either having a free screen or by adopting dust management techniques (drenching etc)
- Safety norms and systems have to be computed and enforced across the board
- Health and safety of those working in mines shall be ensured by setting norms and enforcing their observance

1.3 Mineral Statistics - Rajasthan

The district wise major minerals and minor minerals for the year 2008-09 are given in Table No 1.1 & 1.2

S.No	District	Lease	Area	Production	Employment
		No.	(In Hector)	(Tons)	(Nos)
1.	Ajmer	397	4582.760	1567330	2913
2.	Alwar	7	111.103	7557	23
3.	Banswara	5	296.228	20238	70
4.	Barmer	14	3509.379	1001519	3902
5.3	Bharatpur	22	651.046	181210	756
6.	Bhilwara	487	6793.959	6745074	3172
7.	Bikaner	89	12306.316	3408817	1350
8.	Bundi	4	4304.500	860044	210



9.	Chittorgarh	57	4368.572	11221720	810
10.	Dausa	11	400.404	36921	100
11.	Dungarpur	42	2127.760	58420	800
12.	Hanumangarh	3	2609.000	118867	30
13.	Jaipur	95	2418.300	260403	6959
14.	Jaisalmer	17	3665.640	3061563	282
15.	Jalore	6	1277.600	77592	94
16.	Jhunjhunu	40	1192.446	1091070	2315
17.	Jodhpur	9	431.920	0	0
18.	Karoli	49	1751.070	279612	740
19.	Kota	1	895.420	1826713	135
20.	Nagaur	72	4923.859	1136142	534
21.	Pali	41	2962.816	11017024	747
22.	Pratapgarh	49	2104.409	485916	907
23.	Rajsamand	498	4727.938	1321984	5052
24.	Sawai Madhopur	7	548.660	5880	20
25.	Shri Ganganagar	11	1791.797	605451	110
26.	Sikar	111	2943.432	323306	477
27.	Sirohi	10	1400.580	10746840	1295
28.	Tonk	51	746.010	148470	480
29.	Udaipur	155	11852.835	2516712	4133
	Gr. Total	2360	87695.758	60132395	38416

Table No. 1.1 District wise Major Minerals Statistics

S.No	District	Lease	Area	Production	Employment
		No.	(In Hector)	(Tons)	(Nos)
1.	Ajmer	259	292.915	4724957	9878
2.	Alwar	215	285.660	4912080	11133
3.	Banswara	106	103.051	271500	1200
4.	Baran	36	36.760	6717019	602
5.	Barmer	370	579.350	5535389	4175
6.	Bharatpur	486	3108.234	6797136.08	12314
7.	Bhilwara	173	260.016	11296233	15194
8.	Bikaner	45	1421.334	5072142	1494
9.	Bundi	956	2005.855	3523274	13074
10.	Chittorgarh	62	251.399	5190756	2745
11.	Churu	188	217.811	3790430	1414
12.	Dausa	99	225950	1943350	5215
13.	Dholpur	169	3520.534	752660	1404
14.	Dungarpur	131	138.257	538509.47	1800
15.	Hanumangarh	0	0.000	3199875	2120
16.	Jaipur	969	1408.854	14396131	8136
17.	Jaisalmer	585	936.070	2111289	3519



18.	Jalore	529	870.090	109470	2380
19.	Jhalawar	122	326.390	4082451	4410
20.	Jhunjhunu	454	637.061	8024849	1995
21.	Jodhpur	354	1578.321	20597966.4	47133
22.	Karoli	266	9002.522	2376684	17032
23.	Kota	84	1858.781	11313733	5381
24.	Nagaur	557	7359.275	7852435.18	13470
25.	Pali	273	2383.240	2969421.44	880
26.	Pratapgarh	77	110.020	42148	150
27.	Rajsamand	1300	1516.304	6150454.13	32707
28.	Sawai Madhopur	117	151.859	7544095	1046
29.	Shri Ganganagar	1	0.000	4021173	2663
30.	Sikar	363	1779.559	8551760.5	1880
31.	Sirohi	212	230.200	1800966	3855
32.	Tonk	100	95.935	10962825	1303
33.	Udaipur	455	522.350	2710640	2923
	Gr. Total	10113	43213.955	179883802	235075

Table No 1.2 District wise Minor Minerals Statistics

The mineral wise summary report for major and minor minerals for the year 2008-09 are given in **Table No 1.3 & 1.4**

S.No	Mineral	Lease	Area	Production	Employment
		No.	(In Hector)	(Tons)	(Nos)
1.	Bentonite	24	103.430	143255	258
2.	Brick Earth	16	12.760	16557565	21913
3.	Chert	6	9.460	3807	16
4.	Chips Powder	51	36.061	191559	463
5.3	Fuller's Earth/Kharia	28	1642.630	29577	255
6.	Granite	746	1593.019	358213	4039
7.	Jhinkara	0	0.000	258100	135
8.	Kankar-Bajri	27	77.494	50400980	16396
9.	Limestone (Burning)	355	11679.150	5859326	3021
10.	Limestone (Dimnl)	481	2420.261	5486410	9137
11.	Marble	1946	3082.338	8560351	45326
12.	Masonry Stone	4420	5374.048	58184828	45853
13.	Mill Stone	6	108.000	2296	50
14.	Murram/Gravel/Gitti	0	0.000	17169533	3170
15.	Phylite-shist/Patti Ka	92	148.450	468400	777
16.	Quartzite	31	31.800	6671	46
17.	Rhyolite	124	126.000	1136853	540
18.	Salt Petre	1	0.000	198	15
19.	Sandstone	1300	16296.209	10467051	80170
20.	Serpentine	311	338.107	1009562	2840



21.	Slate Stone	31	48.400	1359	75
22.	Stone Balast	117	86.340	3587909	580
	Inc. from Govt. Dept	0	0.000	0	0
	Misc. Income	0	0.000	0	0
	Total	10113	43213.955	179883802	235075

Table No1.3 Mineral wise Major Minerals summary report

S.No	Mineral	Lease	Area	Production	Employment
		No.	(In Hector)	(Tons)	(Nos)
1.	Cadmium		0.000	434	0
2.	Copper Ore	0	700.750	1050614	2000
3.	Iron Ore	3	581.779	56340	155
4.	Lead Zinc (ROM)	16	6705.493	6612959	4325
5.	Lead Conc.	6	0.000	133769	
6.	Zinc Conc.	0	0.000	1224077	
7.	Silver (Kg)	0	0.000	82817	0
8.	Manganese	0	18.898	7288	70
9.	Asbestos	1	488.446	0	14
10.	Ball Clay	9	5097.784	1210500	575
11.	Barytes	72	35.686	3387	22
12.	Calcite	2	863.192	32200	737
13.	China Clay	40	2282.239	750496	1213
14.	Dolomite	135	1541.222	134125	438
15.	Emrald	17	54.960	0	0
16.	Fire Clay	2	55.987	300	0
17.	Fluorite	3	1304.540	0	250
18.	Garnet (Abr. & Crude)	10	243.540	0	5
19.	Graphite	19	76.800	0	0
20.	Gypsum	1	11964.989	4142652	1045
21.	Jasper	37	232.880	7592	9
22.	Kyanite	7	10.000	0	0
23.	Lignite	2	6733.990	1126479	3960
24.	Limestone	5	18312.015	38386593	8559
25.	Magnesite	30	145.500	32	5
26.	Mica	4	160.880	2616	89
27.	Ochres	14	1022.977	969987	148
28.	Phyrophilite	35	224.943	3462	100
29.	Quartz	7	4792.475	608615	5162
30.	Felspar	798742	4939.961	615048	3130
31.	Rock-Phosphate	6	2533.981	1323359	1150
32.	Selenite	4	920.620	15466	67
33.	Silica Sand	97	2722.782	883741	1791
34.	Siliceous Earth	13	479.999	301	2



35.	Soapstone	215	12318.640	716394	3131
36.	Varmiculite	2	9.930	0	1
37.	Wollastonite	6	117.880	113487	263
	Misc. Income	0	0.000	0	0
	Total	2360	87695.758	60132395	38416

Source: www.dmg-raj.org

Table No 1.4 Mineral wise Minor Minerals Summary report

1.4 The Mines and Mineral (Development and Regulation) Act, 1957 (MMDR Act)

Management of mineral resources is the responsibility of both the Central Government and the State Governments in terms of Entry of 54 of the Union List (List I) and Entry 23 of the State List (List II) of the Seventh Schedule of the Constitution of India. The Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act), lays down the legal frame-work for the regulation of mines and development of all minerals other than petroleum and natural gas. The Central Government has framed the Mineral Concession Rules, 1960 (MCR) for regulating grant of reconnaissance permits (RP), prospecting licenses (PL) and mining leases (ML) in respect of all minerals other than atomic minerals and minor minerals. The State Governments have framed the rules in regard to minor minerals. The Central Government has also framed the Mineral Conservation and Development Rules, 1988 (MCDR), for conservation and systematic development of minerals. These are applicable to all minerals except coal, atomic minerals and minor minerals

1.5 About Indian Bureau of Mines (IBM)

The Indian Bureau of Mines (IBM) is a subordinate office under the Ministry of Mines. It is engaged in the promotion of scientific development of mineral resources of the country, conservation of minerals, protection of environment in mines for minerals, other than coal, petroleum and natural gas, atomic mineral and minor minerals. It performs regulatory functions, namely enforcement of the Mineral Conservation and Development Rules, 1988, the relevant provisions of the Mines and Minerals (Development and Regulation) Act, 1957, Mineral Concession Rules, 1960 and Rules made thereunder. It also undertakes scientific, techno-economic, research oriented studies in various aspects of mining, geological studies, ore beneficiation and environmental studies.

IBM provides technical consultancy services to the mining industry for the geological appraisal of mineral resources, and the preparation of feasibility reports of mining projects, including beneficiation plants. It prepares mineral maps and a countrywide inventory of mineral resources of leasehold and freehold areas. It also promotes and monitors community development activities in mining areas. IBM also functions as data bank of mines and minerals and publishes statistical periodicals. It also brings out technical publications/monographs on individual mineral commodities and bulletins of topical interest. It advises the Central and State Governments on all aspects of mineral industry, trade, legislation etc. IBM imparts training to technical and non-technical officials of IBM and also persons from the mineral industry and other agencies.



IBM also advises the Central and State Governments on matters concerning mines and minerals, mining legislation, export and import policies, mineral consumption and industrial utilization, recovery of by-products, demand and supply of minerals, renewal of mining leases.

IBM is also organizing Mines Environment and Mineral Conservation (MEMC) weeks every year in important mining centres through its regional offices to promote awareness amongst mine owners for minimizing environmental pollution.

Measures for Abatement of Pollution and Environmental Protection

The IBM undertake inspections/studies for the enforcement of provisions of MCDR 1988 which include provision on protection of mines environment. During inspection it ensures that mine operators are taking due care for preservation and utilization of top soil, storage of overburden/waste rocks, reclamation and rehabilitation of land, precaution against ground vibration, control of ground subsidence, abatement measures against air, water and noise pollution, restoration of flora etc. in addition to other conservation and developmental measures. Necessary guidance to mine managements/operators are also given for systematic and scientific development of mine including protection of environment. 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.

IBM Advisory Board

IBM Advisory Board was reconstituted under the chairpersonship of Secretary, Ministry of Mines, government of India on 14 November 2008 for a tenure of two years. The IBM have constituted working groups on the following aspects (Ministry of Mines, GoI -Annual Report 2009-10):

- To suggest incentives to be given to mine operators to promote adoption of mechanization, computerization and automation
- To develop a plan for Private Sector, networking of institutions and jobs in the field of mineral beneficiation
- *To develop legal and institutional framework for zero waste mining and strengthening of mechanization in mining*
- *To evolve guidelines for operating small deposits in scientific and efficient manner safeguarding vital environmental and ecological aspects; and*
- *To examine improved coordination between State and IBM*



1.6 About Director General of Mines Safety (DGMS)

The mission of DGMS is to reduce the risk of occupational diseases and injury to persons employed in mines. In order to fulfill its mission, DGMS performs the following functions

- Periodic inspections of mines to keep vigil over the status of safety
- Investigations into accidents, dangerous occurrence and complaints
- Granting statutory permissions for specific mining operations and laying down precautionary measures while working
- Developing Safety Legislation and Standards
- Undertaking safety promotional initiatives through safety campaigns, awareness programmes and workers' participation in safety management

1.7 Steps to Curb Illegal Mining – Ministry of Mines, GoI

Illegal mining is a bane to the entire mining sector as it not only leads to loss of revenue but also encourages unscientific mining practices, and there is a need to curb this menace. In the recent past increasing incidents of illegal mining have come to the knowledge of the Central Government through various reports, including media. *The illegal mining has ramifications for the ecology*, internal security and for the proper management of the sector. In order to evolve a holistic plan using modern technology to curb illegal mining, all the State Governments have been requested to prepare an Action Plan on the following points:

- Use of satellite imagery sourced from State Remote Sensing Organizations to curb illegal mining
- Developing reliable mechanism in the State Government for collecting and monitoring of data regarding prices of various minerals, wherein the price trend could indicate possible chances of illegal mining in certain minerals
- Developing a mechanism for integrated monitoring of information on movement of trucks/vehicles from mining areas to ports/markets/manufacturing units, which use mineral ores, and correlating the same with the production data to capture any spurt in mining activity
- Maintaining and collecting information from ports, custom authorities, Ministry of Commerce on export of ores out of the country
- Bar-coding, use of Holograms for transport permits, royalty paid permits etc., as a means of tracing unauthorized transport or sale of ores
- Compulsory registration of all the end-users and issue of directives to the end-user industries to mandatory check payment of royalty before purchase of ores for various manufacturing processes, with penalties for violations
- Development of reporting mechanism for the traders of mineral ores and end-use industries to report receipt of ore for which royalty payments have not been made
- Constituting and empowering joint teams of officials from various Departments of the State Government including Police, Forest, Revenue department to conduct checks and file cases



- Coordinating and concentrating efforts of both State Government and Indian Bureau of Mines through combined inspection in specific areas in which illegal mining is suspected and to ensure safety and effective cessation of illegal mining
- Creation of a Special Cell in Police force to tackle illegal mining

The details of return on illegal mining for the year 2009-10 (up to September 2009) as published in the Annual Report (2009-10) of Ministry of Mines, GoI is given in the **Table No 1.5**

Major Minerals (2009-10 up to Sept 09)						
States	No. of Cases	Quantum of mineral/ore excavated /stacked / transported (lakh tonnes)	Value of Mineral (lakh)	FIR lodged	Cases filed	Fines realized (lakh)
Andhra Pradesh	267	8.49545	15.41	0	0	28.775
Chhattisgarh	71	0.0650194	15.06415	0	2	22.76583
Goa	1	0	0	0	0	0
Gujarat	520	0.27665635	131.215	7	0	231.265
Haryana	0	0	0	0	0	0
Himachal Pradesh	0	0	0	0	0	0
Jharkhand	13	0	0	3	0	0
Karnataka	334	0.0382925	34.948	20	29	129.42
Kerala	9	0	0	0	0	1.25
Madhya Pradesh	31	0.00487	1.65161	0	31	5.04006
Maharashtra	0	0	0	0	0	0
Mizoram	0	0	0	0	0	0
Orissa	210	0.0721363	119.3808	5	32	242.7545
Punjab	0	0	0	0	0	0
Rajasthan	952	0.2142948	82.88349	58	2	98.93249
Sikkim	0	0	0	0	0	0
Tamilnadu	8	0.02828	0.80218	0	1	6.83185
Tripura	0	0	0	0	0	0
West Bengal	80	0.00093	0	134	35	0
Total	2496	9.19592935	401.35523	227	132	767.03473
Minor Minerals (2009-10 up to Sept 09)						
States	No. of Cases	Quantum of mineral/ore excavated /stacked / transported (lakh tonnes)	Value of Mineral (lakh)	FIR lodged	Cases filed	Fines realized (lakh)
Andhra Pradesh	7303	2.9333298	561.51	0	0	748.6
Chhattisgarh	997	0.7030852	194.06207	0	158	124.03136
Goa	7	0.0012842	0	0	0	1.03995
Gujarat	2134	12.15752477	395.605	6	0	395.605
Haryana	661	0.35239	32.04468	0	19	38.71085
Himachal Pradesh	739	0	0	0	247	9.9328
Jharkhand	2	0	0	0	0	0
Karnataka	1353	0.62216	128.756	53	0	335.011
Kerala	1092	0	0	0	0	89.84306
Madhya Pradesh	2454	27.2051604	4521.32107	4	2454	251.73312
Maharashtra	8370	0.07141	22.73	0	0	833.303
Mizoram	0	0	0	0	0	0



Orissa	4	0.004202	0.29	0	0	0.7405
Punjab	25	0.0315	0.465	0	0	0.695
Rajasthan	2806	1.065701	119.82214	96	0	180.83743
Sikkim	0	0	0	0	0	0
Tamilnadu	108	0.71171	31.65235	479	296	940.08782
Tripura	0	0	0	0	0	0
West Bengal	0	0	0	0	0	0
Total	28055	45.85945737	6008.25831	638	3174	3950.17089

(Source: Annual Report 2009-10, Ministry of Mines, GOI)

Table No 1.5 Return on Illegal Mining for the Year 2009-10 (up to September 2009)

1.8 Classification of Mining projects by RSPCB for consent management

S.No	Project Description	Category	S.No in the corresponding category
1.	Mining Units: a. All mines having area of 5.0 hectares and above. b. All mines of scheduled Major Minerals (Schedule of MMDR Act, 1957) irrespective of their area c. All mines of Marble and Granite irrespective of their area	Red Category	S.No. 48 of List of Industries under Red Category
2.	All the mines not included in Red category and having area of 1.0 hectare or above but less than 5.0 hectares.	Orange category	S.No. 33 of List of Industries under Orange Category
3.	All mines not included in Red & Orange Categories and having area less than 1.0 hectare	Other category	S.No. (b) of List of Industries under Other Category

Reference: RSPCB office order dated 08.01.2007 & 03.04.2008

1.9 Classification of Mining projects by MoEF for EC applicability

Project or activity	Category with threshold limit		Conditions
	A	B	
Mining of minerals	<p>≥ 50 ha of mining lease area in respect of non-coal mine lease.</p> <p>>150 ha of mining lease area in respect of coal mine lease.</p> <p>Asbestos mining irrespective of mining area.</p>	<p><50 ha ≥ 5 ha of mining lease area in respect of non-coal mine lease.</p> <p>≤ 150 ha ≥ 5 ha of mining lease area in respect of coal mine lease.</p>	<p>General conditions shall apply*</p> <p>Note: Mineral prospecting is exempted</p>



Slurry pipelines (coal lignite and other ores) passing through national parks /sanctuaries/coral reefs, ecologically sensitive areas	All projects		
<p>*General Conditions: Any project or activity specified in Category 'B' will be treated as Category 'A' if located in whole or in part within 10km from the boundary of: (i). Protected areas notified under the Wildlife (Protection) Act 1972; (ii) Critically pollutes areas as identified by the Central Pollution Control Board from time to time; (iii) Eco-sensitive areas as notified under section 3 of the Environment (Protection) Act 1986, such as Mahabaleswar, Panchgani, Matheran, Pachmarhi, Dahanu, Doon Valley and (iv) Inter-state boundaries and international boundaries</p> <p>Provided that the requirement regarding distance of 10km of the inter-state boundaries can be reduced or completely done away with by an agreement between the respective states or U.Ts sharing the common boundary in the case the activity does not fall within 10 kilometers of the areas mentioned at item (i), (ii) and (iii) above</p>			

Important Definitions

2.0 Definitions - Water Act

The Water (Prevention & Control of Pollution) Act, 1974		
Section	Key word	Definition
Section 2 (d)	Occupier	In relation to any factory or premises, means the person who has control over the affairs of the factory or the premises, and includes, in relation to any substance, the person in possession of the substance
Section 2 (dd)	Outlet	Any conduit pipe or channel, open or closed, carrying sewage or trade effluent or any other holding arrangement which causes or is likely to cause pollution
Section 2 (e)	Pollution	Contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms
Section 2 (g)	Sewage effluent	Effluent from any sewerage system or sewage disposal works and includes sullage from open drains
Section 2 (gg)	Sewer	Any conduit pipe or channel, open or closed, carrying sewage or trade effluent
Section 2 (j)	Stream	Includes river, water course (whether flowing or for the time being dry), inland water (whether natural or artificial), subterranean waters, sea or tidal waters to such extent or, as the case may be, to such point as the state government may, by notification in the official gazette specify in this behalf
Section 2 (k)	Trade effluent	Includes any liquid, gaseous or solid substance, which is discharged from any premises used for carrying on any industry, operation or process, or treatment and disposal system, other than domestic sewage
Section 47 (2) (a)	Company	Any body corporate, and includes a firm or other association of individuals
Section 47 (2) (b)	Director	In relation to a firm means a partner in the firm

2.1 Definitions - Air Act

The Air (Prevention & Control of Pollution) Act, 1981		
Section 2 (a)	Air pollutant	Any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment



Section 2 (b)	Air pollution	The presence in the atmosphere of any air pollutant
Section 2 (c)	Approved appliances	Any equipment or gadget used for the bringing of any combustible material or for generating or consuming any fume, gas of any particulate matter and approved by the State Board
Section 2 (d)	Approved fuel	Any fuel approved by the State Board for the purpose of the Act
Section 2 (h)	Chimney	Includes any structure with an opening or outlet from or through which any air pollutant may be emitted
Section 2 (i)	Control equipment	Any apparatus, device, equipment or system to control the quality and manner of emission of any air pollutant and includes any device used for securing the efficient operation of any industrial plant
Section 2 (k)	Industrial plant	Any plant used for any industrial or trade purposes and emitting any air pollutant into the atmosphere
Section 2 (j)	Emission	Any solid or liquid or gaseous substance coming out of any chimney, duct or flue or any other outlet
Section 2 (m)	Occupier	The person who has control over the affairs of the factory or the premises, and includes, in relation to any substance, the person in possession of the substance
Section 40 (2) (a)	Company	Any body corporate, and includes a firm or other association of individuals
Section 40 (2) (b)	Director	In relation to a firm means a partner in the firm

2.2 Definitions - Cess Act

The Water (Prevention & Control of Pollution) Cess Act, 1977		
Section 2 (a)	Local Authority	Municipal corporation or a municipal council (by whatever name called) or a cantonment board or any other body, entrusted with the duty of supplying the water under the law by or under which it is constituted
Section 2 (c)	Industry	Any operation or process, or treatment and disposal system, which consumes water or gives rise to sewage effluent or trade effluent, but does not include any hydel power unit
Section 15 (2) (a)	Company	Any body corporate, and includes a firm or other association of individuals
Section 15 (2) (b)	Director	In relation to a firm means a partner in the firm



2.3 Definitions - E (P) Act

The Environment (Protection) Act, 1986		
Section 2 (a)	Environment	Includes water, air, land and the inter-relationship, which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property
Section 2 (b)	Environmental pollutant	Any solid, liquid or gaseous substance present in such concentrations as may be, or tend to be, injurious to environment
Section 2 (c)	Environmental pollution	Presence in the environment of any environmental pollutant
Section 2 (d)	Handling	Manufacture, processing, treatment, package, storage, transportation, use, collection, destruction, conversion, offering for sale, transfer or the like of such substance
Section 2 (e)	Hazardous substance	Any substance or preparation which by reason of its chemical or physico-chemical properties or handling, is liable to cause harm to human beings, other living creatures, plant, micro-organism, property or the environment
Section 2 (f)	Occupier	A person who has control over the affairs of the factory or the premises and includes in relation to any substance, the person in possession of the substance

2.4 Definitions - HW (MH&TM) Rules, 2008

The Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008		
Rule 3 (1)	Hazardous waste	Any waste which by reason of any of its physical, chemical, reactive, toxic, flammable, explosive or corrosive characteristics causes danger or is likely to cause danger to health or environment, whether alone or when in contact with other wastes or substances, and shall include <ul style="list-style-type: none"> • Waste specified under column (3) of Schedule-I • Wastes having constituents specified in Schedule-II if their concentration is equal to or more than the limit indicated in the said Schedule, and • Wastes specified in Part A or Part B of the Schedule-III in respect of import or export of such wastes in accordance with rules 12,13 and 14 or the wastes other than those specified in Part A or Part B if they possess any of the hazardous characteristics specified in Part C of that Schedule

2.5 Definitions - MMD Act

Mines & Minerals (Development & Regulations) Act, 1957		
Section 3 (a)	Minerals	All minerals except mineral oils
Section 3 (b)	Mineral oils	Natural gas and petroleum
Section 3 (c)	Mining	Lease granted for the purpose of undertaking mining operations,



	lease	and includes a sub-lease granted for such purpose
Section 3 (d)	Mining operations	Any operations undertaken for the purpose of winning any mineral
Section 3 (e)	Minor minerals	<p>Building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes and any other mineral which the central government may, by notification in the official gazette, declare to be a minor mineral*</p> <p>* The term 'ordinary sand' used in clause (e) of section 3 of the MMDR Act, 1957 has been further clarified in rule 70 of the MCR, 1960 as "Sand shall not be treated as minor mineral when used for any of the following purposes namely; (i) purposes of refractory and manufacture of ceramic, (ii) metallurgic purposes, (iii) optical purposes, (iv) purposes of stowing in coal mines, (v) for manufacture of silvitrete cement, (vi) manufacture of sodium silicate and (vii) manufacture of pottery and glass</p> <p>Additionally, the Central Government has declared the following minerals as minor minerals; (i) boulder, (ii) shingle, (iii) chalcedony pebbles used for ball mill purposes only, (iv) limeshell, kankar and limestone used in kilns for manufacture of lime used as building material, (v) murrum, (vi) brick-earth, (vii) fuller's earth, (viii) bentonite, (ix) road metal, (x) reh-matti, (xi) slate and shale when used for building material, (xii) marble, (xiii) stone used for making household utensils, (xiv) quartzite and sandstone when used for purposes of building or for making road metal and household utensils, (xv) saltpeter and (xvi) ordinary earth (used or filling or leveling purposes in construction or embankments, roads, railways, building)</p>
Section 3 (g)	Prospecting licence	Granted for the purpose of undertaking prospecting operations
Section 3 (h)	Prospecting operations	Any operations undertaken for the purpose of exploring, locating or proving mineral deposits
Section 3 (ha)	Reconnaissance operations	Any operations undertaken for preliminary prospecting of a mineral through regional, aerial, geophysical or geo-chemical surveys and geological surveys and geological mapping, but does not include pitting, trenching, drilling (except drilling of boreholes on a grid specified from time to time by the central government) or sub-surface excavation
Section 3 (hb)	Reconnaissance permit	Permit granted for the purpose of undertaking reconnaissance operations



2.6 Frequently Asked Questions (FAQ) - Ministry of Mines, GoI

Question:	Who is the owner of minerals in India?
Answer:	In the federal structure of India, the State (provincial) Governments are the owners of minerals located within the boundary of the State concerned. The Central Government is the owner of the minerals underlying the ocean within the territorial waters or the Exclusive Economic Zone of India
Question:	Who grants mineral concessions?
Answer:	<p>The State Governments grant the mineral concessions for all the minerals located within the boundary of the state, under provisions of the Mines and Minerals (Development and Regulation) Act, 1957 and Mineral Concession Rules, 1960. For minerals specified in the First Schedule to the Mines and Minerals (Development and Regulation) Act, 1957, before granting the mineral concession, approval of the Central Government is necessary</p> <p>Also, the Central Government notifies certain minerals as 'minor' minerals from time to time for which the absolute powers for deciding on procedures of seeking applications for and granting mineral concessions, fixing rates of royalty, dead rent, and power to revise orders rest only with the State Government</p>
Question:	What are the different mineral concessions in India?
Answer:	<p>Three kinds of mineral concessions are recognized in Indian law, viz Reconnaissance Permit (RP), Prospecting License (PL) and Mining Lease (ML)</p> <p>RP is granted for preliminary prospecting of a mineral through regional, aerial, geophysical or geo-chemical surveys and geological mapping</p> <p>PL is granted for undertaking operations for purpose of exploring, locating or proving mineral deposit</p> <p>ML is granted for undertaking operations for winning any mineral</p>
Question:	What is the period and tenure for which a 'mining lease' is granted?
Answer:	<ol style="list-style-type: none">A ML for nay mineral or prescribed group of associated minerals is granted for a minimum period of 20 years and a maximum period of 30 years and for a maximum area of 10 square kilometerA ML can be renewed for periods not exceeding 20 yearsIn a <u>State (Province)</u>, a person can be granted a maximum area of 10 square kilometer in 1 or more MLs, but if the Central Government is of the opinion that in the interest of development of any mineral it is necessary to do so, the maximum area limit can be relaxedA person may obtain MLs in various States simultaneously up to the State-wise area limits. However, a person acquiring in the name of another person a ML which is intended for himself shall be deemed to be acquiring it himself, and limits would apply accordingly



Question:	After applying for the mineral concession, how long does it take to know the decision?
Answer:	As per MCR, 1960, the State Government should <u>convey the decision</u> on a mineral concession applied for as follows Reconnaissance Permits: 6 months Prospecting License: 9 months Mining Lease: 12 months In case of delay, the State Governments are required to indicate the reasons for the delay in writing Also, in case the State Government does not find the application worthy of grant of the concession applied for, the law requires that the applicant should be given an opportunity of being heard before the application is rejected
Question:	Can a mining lease be granted without first granting a prospecting license?
Answer:	Yes, if the State Government is satisfied that there is evidence to show that the area for which the lease is applied for has been prospected earlier or the existence of mineral contents therein has been established otherwise than by means of prospecting such area
Source: www.mines.gov.in	

2.7 UNFC - Definitions of Stages of Geological Study

Guidelines under MCDR for United Nations Framework Classification of Mineral Reserves/Resources	
Reconnaissance	A Reconnaissance study identifies areas of enhanced mineral potential on a regional scale based primarily on results of regional geological studies, regional geological mapping, airborne and indirect methods, preliminary field inspection, as well as geological inference and extrapolation. The objective is to identify mineralized areas worthy of further investigation towards deposit identification. Estimates of quantities should only be made if sufficient data are available and when an analogy with known deposits of similar geological character is possible, and then only within an order of magnitude
Prospecting	Prospecting is the systematic process of searching for a mineral deposit by narrowing down areas of promising enhanced mineral potential. The methods utilised are outcrop identification, geological mapping, and indirect methods such as geophysical and geo-chemical studies. Limited trenching, drilling, and sampling may be carried out. The objective is to identify a deposit, which will be the target for further exploration. Estimates of quantities are inferred, based on interpretation of geological, geophysical and geo-chemical results
General Exploration	General exploration involves the initial delineation of an identified deposit. Methods used include surface mapping, widely spaced sampling, trenching and drilling for preliminary evaluation of mineral quantity and quality

	(including mineralogical test on laboratory scale if required), and limited interpolation based on indirect methods of investigation. The objective is to establish the main geological features of a deposit, giving a reasonable indication of continuity and providing an initial estimate of size, shape, structure and grade. The degree of accuracy should be sufficient for deciding whether a Prefeasibility Study and Detailed Exploration are warranted
Detailed Exploration	Detailed Exploration involves the detailed three-dimensional delineation of a known deposit achieved through sampling, such as from outcrops, trenches, boreholes, shafts and tunnels. Sampling grids are closely spaced such that size, shape, structure, grade and other relevant characteristics of the deposit are established with a high degree of accuracy. Processing tests involving bulk sampling may be required. A decision whether to conduct a feasibility study can be made from the information provided by Detailed Exploration
(Source: www.ibm.nic.in)	

National Mineral Policy 2008 (For Non-fuel and Non-Coal Minerals)

3.0 Policy preamble

Minerals are a valuable natural resource being the vital raw material for infrastructure, capital goods and basic industries. As a major resource for development the extraction and management of minerals has to be integrated into the overall strategy of the country's economic development. The exploitation of mineral has to be guided by long-term national goals and perspectives. Just as these goals and perspectives are dynamic and responsive to the changing global economic scenario so also the national mineral policy has to be dynamic taking into consideration the changing needs of industry in the context of the domestic and global economic environment. It is, therefore, necessary to revisit the National Mineral Policy, 1993, as provided in Para 4 of the same, and to spell out in a revised statement the different elements of policy, including elements newly evolved, for the development of the mineral resources of the country.

3.1 Strategy for Mineral Development

The National Mineral Policy 2008 covers the strategy of mineral development under the following headings:

- General strategy
- Conservation and Mineral Development
- Scientific Methods of Mining
- Mining as an Industry with Linkages
- Mining Equipment and Machinery
- Manpower Development
- Infrastructure Development
- Financial Support for Mining
- Small Deposits
- Mineral Development & Protection Environment
- Relief & Rehabilitation of Displaced and Affected Persons
- Mine Closures
- Mine Safety

Conservation and Mineral Development

Conservation of minerals shall be constructed not in the restrictive sense of abstinence from consumption or preservation for use in the distant future but as a positive concept leading to augmentation of reserve bas through improvement in mining methods, beneficiation and utilization of low grade ore and rejects and recovery of associated minerals. There shall be an adequate and effective legal and institutional framework mandating zero-waste mining as the ultimate goal and a commitment to prevent sub-optimal and unscientific mining. Non-adherence to the Mining Plan based in these parameters will carry repercussions. Mineral sectoral value addition through latest techniques of beneficiation, calibration, blending, sizing, concentration, pelletisation, purification and general customization of product will be



encouraged. This is particularly important in iron ore mining as about 80% of the iron ore produced in the country is in the form of Fines and to promote such value addition fiscal and non-fiscal incentives will be considered. A thrust will be given to exploitation of mineral resources in which the country is well endowed so that the needs of domestic industry are fully met keeping in mind both present and future needs, while at the same time exploiting the external markets for such minerals

Infrastructure Development

Mineral deposits generally occur in remote and backward areas with poor infrastructural facilities, which often inhibit their optimum development. A major thrust needs to be given to development of infrastructural facilities in mineral bearing areas with special emphasis on Linking Infrastructure. Financial resources available with government will be leveraged to the maximum extent possible through recourse to user charge based public-private-partnership arrangements wherever possible by providing an institutional framework. An enabling environment will be created to motivate large capacity mining companies to undertake construction of transportation net works (road and rail) on their own.

The contribution of mineral development to regional and more specifically peripheral development, commensurate with the huge investment in large mining projects, is substantial. In so far as public funding of infrastructure is concerned a much greater thrust will be given to development of health, education, drinking water, road and other related facilities and infrastructure in mineral bearing areas so that an integrated approach emerges, encompassing mineral development, regional development and the social and economic well being of the local, and particularly, tribal population

Small Deposits

Small and isolated deposits of minerals are scattered all over the country. These often lend themselves to economic exploitation through small-scale mining. With modest demand on capital expenditure and short lead-time, they provide employment opportunities for the local population. However, due to diseconomies of scale they can also lead to sub-optimal mining and ecological disturbance. Efforts will be made to promote small-scale mining of small deposits in a scientific and efficient manner while safeguarding vital environmental and ecological imperatives. Regulation of these conditionalities will be tightened so as to control and prevent the growth of illegal mining

Where small deposits are not susceptible to viable mining a cluster approach will be adopted by granting the deposits together as a single lease within a geographically defined boundary. Efforts would be made to grant such mineral concessions to consortia of small-scale miners so that such clusters of small deposits will enable them to reap the benefits of economies of scale.

In grant of mineral concessions for small deposits in Schedules Area, preference shall be given to Scheduled Tribes singly or as cooperatives



Mineral Development & Protection of Environment

Extraction of minerals closely impacts other natural resources like land, water, air and forest. The areas in which minerals occur often have other resources presenting a choice of utilization of the resources. Some such areas are ecologically fragile and some are biologically rich. It is necessary to take a comprehensive view to facilitate the choice or order of land use keeping in view the needs of development as well as needs of protecting the forests, environment and ecology. Both aspects have to be properly coordinated to facilitate and ensure a sustainable development of mineral resources in harmony with environment.

Mining activity often leads to environmental problems like land degradation in opencast mining and land subsidence in underground mining, deforestation, atmospheric pollution, pollution of rivers and streams, soil erosion due disposal of solid wastes like overburden and so on, all affecting the ecological balance of the area. Opencast mining in areas with actual forest cover leads to deforestation. Prevention and mitigation of adverse environmental effects due to mining of minerals and repairing and re-vegetation of the affected forest area and land covered by trees in accordance with the latest internationally acceptable norms and modern Afforestation practices shall form integral part of mine development strategy in every instance. All mining shall be undertaken within the parameters of a comprehensive Sustainable Development Framework, which will be so devised as to take all these aspects into consideration. The guiding principle shall be that a miner shall leave the mining area in better ecological shape than he found it.

Mining operations shall not ordinarily be taken up in identified ecologically fragile and biologically rich area. Strip mining in forest areas should be avoided and it should be permitted only when accompanied with comprehensive time-bound reclamation programme.

No mining lease would be granted to any party, private or public, without a proper mining plan including the environmental management plan approved and enforced by statutory authorities. The environmental management plan should adequately provide for controlling the environmental damage, restoration of mined areas and for planting of trees according to the prescribed norms. As far as possible, reclamation and afforestation will proceed concurrently with mineral extraction.

Efforts would be made to convert old disused mining sites into forests and other appropriate forms of land use

Relief & Rehabilitation of Displaced and Affected Persons

Mining operations often involve acquisition of land held by individuals including those belonging to the weaker sections. In all such cases a social impact assessment will be undertaken to ensure that suitable Relief and Rehabilitation are evolved. While compensation is generally paid to the owner for his acquired land, rehabilitation of affected persons in the form of substitute land, land for housing and jobs is not always adequate. Appropriate compensation will form an important aspect of the Sustainable Development Framework mentioned in Para



2.3 and 7.10 above. In so far as indigenous (tribal) populations are concerned the Framework shall incorporate models of stakeholder interest for them in the mining operation, especially in situations where the weaker sections like the local tribal populations are likely to be deprived of their means of livelihood as a result of the mining intervention.

In areas in which minerals occur and which are inhabited by tribal communities and weaker sections it is imperative to recognize resettlement and rehabilitation issues as intrinsic to the development process of the affected zone. Thus all measures proposed to be taken will be formulated with the active participation of the affected persons, rather than externally imposed. A careful assessment of the economic, environmental and social impact on the affected persons will be made. A mechanism will be evolved which would actually improve the living standards of the affected population and ensure for them a sustainable income above the poverty line. For this purpose, all the provisions of the National Rehabilitation and Resettlement Policy or any revised Policy or Statute that may come into operation, will be followed.

Mine Closures

Once the process of economical extraction of a mine is complete there is need for scientific mine closure which will not only restore ecology and regenerate bio mass but also take into account the socio-economic aspects of such closure. Where mining activities have been spread over a few decades, mining communities get established and closure of the mine means not only loss of jobs but also disruption of community life. Whenever mine closure becomes necessary, it should be orderly and systematic and so planned as to help the workers and the dependent community rehabilitate themselves without undue hardship.

Mine safety

Mining operations are hazardous in nature. Accidents happen and often result in the loss of life or limb of persons engaged in it. Efforts must be directed towards the development and adoption of mining methods, which would increase the safety of workers and reduce the accidents. Towards this end, participation and cooperation of mine workers shall be secured. Steps will also be taken to minimize the adverse impact of mining on the health of workers and the surrounding population.

Environmental Acts and Legal Requirements

4.0 Legal Requirements - Water Act

Section 25 (1) Restrictions on new outlets and discharges	<p>Subject to the provisions of this section, no person shall, without the previous consent of the State Board:</p> <p>a. Establish or take any steps to establish any industry, operation or process, or any treatment and disposal system or an extension or addition thereto, which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land (such discharge being hereafter in this section referred to as discharge of sewage); or</p> <p>b. Bring into use any new or altered outlets for the discharge of sewage; or</p> <p>c. Begin to make any new discharge of sewage</p>
Section 44 Penalty of contravention of section 25	<p>Whoever contravenes the provision of section 25 shall be punishable with imprisonment for a term which shall not be less than two years but which may extend to six years and with fine</p>

4.1 Legal Requirements - Air Act

Section 21 (1) Restrictions on use of certain industrial plants	<p>Subject to the provisions of this section, no person shall, without the previous consent of the State Board, establish or operate any industrial plant in an air pollution control area</p>
Section 37 (1) Penalty of contravention of Section 21	<p>Whoever fails to comply with the provisions of section 21, be punishable with imprisonment for a term which shall not be less than one year and six months but which may extend to six years and with fine</p>

4.2 Requirements for Ground Water Extraction

Keeping in view of the requirements stated in the Policy guidelines for clearance of ground water abstraction for various uses issued by the Central Ground Water Authority, Ministry of Water Resources, GoI vide their letter dated 14.10.2009, the following guidelines regarding the requirement of NOC from CGWA for abstraction of ground water by any industry/ infrastructure project/ mine (**proposed/existing**) are being followed:

S. No	Guidelines
1.	NOC from CGWA shall not be required for abstraction of ground water in the following cases: <ul style="list-style-type: none"> In case of over-exploited areas abstraction <math><25\text{m}^3/\text{day}</math> In case of critical areas abstraction <math><50\text{m}^3/\text{day}</math> In case of semi critical areas abstraction <math><100\text{m}^3/\text{day}</math>
2.	The exemption shall not be applicable to industries, which are using water as raw material such as packaged drinking water industries, distilleries and breweries
3.	Industry/infrastructure project/time (proposed/existing) located in safe category areas, are required to obtain NOC from CGWA if ground water abstraction exceeds 1000 m ³ /day for hard rock areas and 2000 m ³ /day for alluvial areas
4.	For the industry/infrastructure project/mine which proposed to abstract ground water more than the exempted quantity referred above, the Consent to Establish application will be considered only after submission of NOC from CGWA
5.	<ul style="list-style-type: none"> The following conditions shall be imposed while issuing Consent to Establish: The artificial recharge proposal shall be vetted by the component authority viz. Regional Director, Central Ground Water Board (WR), Jaipur/State Ground Water Department, Jaipur Industry shall undertake artificial recharge measures Recycled and /or treated water shall not be used for recharge to ground water Industry shall provide suitable meter system and maintain proper record of the daily abstraction of ground water
6.	A copy of consent letter containing will be endorsed to Regional Director, Central Ground Water Board (WR), 6A, Jhalana Institutional Area, Jaipur for their information and necessary action by RPCB
Please refer RPCB Circular dated 08.01.2010 for further information	

4.3 Legal Requirements - Hazardous Waste Rules

Schedule I: Processes generating hazardous waste (S.No 5) Industrial operations using mineral/synthetic oil as lubricant in hydraulic systems or other applications	5.1 Used/spent oil 5.2 Wastes/residues containing oil
Rule 5 (1) Grant of authorization for handling hazardous waste	Every person who is engaged in generation, processing, treatment, package, storage, transportation, use, collection, destruction, conversion, offering for sale, transfer or the like of the hazardous waste shall require to obtain an authorization from the SPCB



4.4 Restrictions - Aravalli Range

The MoEF, GoI had stipulated restrictions on certain activities in specified area of Aravalli Range vide Notification No. S.O. 319 (E) dated 7th May 1992 and as amended. As per the Notification the Central Government prohibits the carrying on the following processes and operations, except with its prior permission, in the specified area.

Processes and activities which require prior permission	<ul style="list-style-type: none"> • Location of new industry including expansion/modernization • A. All new mining operations including renewals of mining lease • B. Existing mining leases in sanctuaries/national park and areas covered under Project Tiger and/or • C. Mining is being done without permission of the competent authority • Cutting of trees • Construction of any clusters of dwelling units, farms houses, sheds, community centres, information centres and any other activity connected with such construction (including roads a part of any infrastructure relating thereto) • Electrification (laying of new transmission lines)
Areas covered under the Notification	<ul style="list-style-type: none"> • All reserved forests, protected forests or any other area shown as “forest in the land records maintained by the State Government as on the date of this notification in relation to Gurgaon District of the State of Haryana and the Alwar District of the State of Rajasthan • All areas shown as <ol style="list-style-type: none"> a. Gair Mumkin Pahar, or b. Gair Mumkin Rada, or c. Gair Mumkin Behed, or d. Banjad Beed, or e. Rundh <p>In the land records maintained by the State Government as on the date of this notification in relation to Gurgaon district of the State of Haryana and the Alwar district of the State of Rajasthan</p> • All areas covered by notifications issued under Section 4 and 5 of the Punjab Land Preservation Act, 1900, as applicable to the State of Haryana in the district of Gurgaon up to the date of this notification • All areas of Sariska National Park and Sariska Sanctuary notified under the Wildlife (Protection) Act, 1972 (53 of 1972)
Clearance process	<p>Any person desirous of undertaking any of the activities mentioned in the Notification No. 319 (E) dated 7th May 1992 shall submit an application to the Secretary, Department of Environment of the Government of Haryana/Rajasthan, as the case may be. The applicant shall also furnish environment impact statement and an environment management plan and such other information as may be prescribed by such State Governments. The application after due scrutiny shall be placed before the Expert Committee for its recommendations. Based on the recommendations of the Expert Committee, the Department of Environment in the State Government concerned shall take</p>



	a final decision and convey the same to the applicant within the three months from the date of receipt of application or when further information has been asked for from the applicant within three months from the date of receipt of such information
Monitoring mechanism	Monitoring Committee, under the Chairmanship of District Collector concerned (Gurgaon in Haryana and Alwar in Rajasthan) shall inter alia monitor the compliance of the conditions stipulated while according Environmental Clearance by State Government The District collectors of Gurgaon in Haryana and Alwar in Rajasthan shall be authorized by the respective State Governments to take necessary action under section 5 of the said Act in respect of cases where the project proponents fail to implement the conditions
Appeal provision	The MoEF retains appellate power against rejection of any proposal and the National Environmental Appellate Authority constituted under the National Environment Appellate Authority Act, 1997 (22 of 1997) shall continue as an Appellate Authority against approval
<i>Note: Refer the Notification for details</i>	

4.5 Restrictions - Mount Abu Eco Sensitive Zone

Mount Abu area has significant ecological importance comprising of tropical dry deciduous forests at lower altitude and evergreen forests at higher altitude and the flora and fauna of the region comprise of several endemic and rare species; besides Mount Abu has natural heritage such as Nakki Lake and man-made heritage like Dilwara temples and other heritage buildings and structures. To conserve and protect the area from ecological and environmental point of view, the MoEF had issued Notification No. S.O. 1545 dated 25th June 2009 regulating certain activities in the eco-sensitive zone

Boundaries of the eco-sensitive zone	<p>a. The said eco-sensitive zone is situated in the southern area of Rajasthan in Sirohi District between 24° 33'42'' and 24° 39' 00'' North latitude and between 72° 41' 36'' and 72° 48' 06'' East longitude and the configuration of land is hilly and rugged with high altitudinal variation ranging from 300 meter to 1727 meter. Gurushikar, the highest peak of the Aravalli, is the highest peak between the Himalayas and the Nilgiris. The boundaries of the said eco-sensitive zone comprise</p> <p>North - Southern boundary of Abu Forest Block No.3 South - Northern Boundary of Abu Forest Block No. 1 East - Western and Southern Boundary of Abu Forest Block No.2 West - Eastern boundary of Abu Forest Block No. 3</p> <p>b. The Eco-sensitive zone covers the entire area of Notified Urban Area Limit, including Mount Abu Municipal Limits adjoining Forest Block Areas c. The list of the villages in the eco-sensitive zone - Sanigaon, Machgaon, Goagaon, Delwara, Oriya, Jawal, Achalgarh, Salgaon, Torna, Dudhai, Hetamji, Ama</p>
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	<p>d. All activities in the Forest Block Areas (both within and outside Municipal Areas) shall be governed by the provisions of the Rajasthan Forest Act, 1953 and the Forests (Conservation) Act, 1980 (69 of 1980) and all the activities in the Protected Areas (Sanctuary) shall be governed by the provisions of the Wildlife (Protection) Act, 1972 (53 of 1972)</p>
Regulated Activities	<p>Zonal Master Plan</p> <p>Pending the preparation of the Zonal Master Plan for Eco-sensitive zone and approval thereof by the Central Government in the MoEF, there shall be no increase in the existing parameters of permissible floor area ratio, permissible ground coverage, maximum number of floors and maximum height and all new constructions shall be allowed only after the proposals are scrutinized and approved by Monitoring Committee and all other development activities including additions, alterations, demolitions, repairs, renovations and restorations of buildings shall require prior approval of the Monitoring Committee provided that these do not involve structural changes and are on the existing authorized plinth areas in the Mount Abu Municipal Limits and there shall be no consequential reduction in Tribal area, Forest area, Green area and Agricultural area</p>
Industrial units	<p>Only non-polluting, non-hazardous cottage industries like ice cream, hosiery, embroidery or ready made garments, sewing works, ayurvedic drugs, etc. situated in the villages in the Notified area and service industries, agriculture, floriculture, horticulture or agro-based industries producing products from Mount Abu shall be permitted as per the guidelines drawn by the Government of Rajasthan</p> <p>Structure connected with small agro-based industries activities related to the needs of the local village economy and processing or storage of local agro-based products may be allowed subject to the usual “non Agricultural permission requirements and a maximum of 1/8th of the plot areas being built up”</p>
Quarrying and mining	<p>The quarrying and mining activities shall be restricted in the Eco-sensitive zone</p> <p>The monitoring committee shall have the authority to grant special permission for limited quarrying of materials required for the construction of local residential housing and traditional road making and maintenance work in Mount Abu, based on site evaluation</p> <p>No quarrying shall be permitted on steep hill slopes with a gradient of 20 degrees or more or areas with a high degree of erosion, or on forestland</p>
Trees	<p>There shall be no felling of trees whether on Forest, Government, Revenue or Private lands within the Eco-sensitive zone without the prior permission of the State Government in case of forest land and the respective District Collector in case of Government, Revenue and Private land as per the procedure which shall be laid down by the State Government</p>
Water	<p>All future and existing buildings, where possible, in the Municipal Are shall provide roof-top rain water harvesting structures with plinth area and the Institutional and commercial buildings shall not draw water from existing water</p>



	<p>supply schemes in a manner that adversely affects water supply especially to local villages or settlements</p> <p>In Non-Municipal Areas rain water harvesting shall be undertaken through such structures as percolation tanks and storage tanks and only other means. Ground water aquifer recharge structures shall be constructed wherever such structures do not lead to slope instabilities</p> <p>The extraction of ground water shall be permitted only for the bona-fide agricultural and domestic consumption of the occupier of the ply and the extraction of ground water for industrial or commercial or residential estates or complexes shall require prior written permission, including of the amount that can be extracted, from the State Ground Water Department. However, the areas rich in ground water may not be delivered for construction activities</p>
Development on and protection of hill slopes	<p>The zonal Master Plan shall indicate areas of hill slopes where development shall not be permitted</p> <p>No development shall be undertaken in areas having a steep slope or areas which fall in fault or hazard zones or areas falling on the spring lines and first order streams or slopes with a high degree of erosion as identified by the State Government on the basis of available scientific evidence</p> <p>No development on existing steep hill slopes or slopes with a high degree of erosion shall be permitted</p>
Discharge of sewage and effluents	<p>No untreated sewage or effluent shall be permitted to be discharged into any water body or forests within the eco-sensitive zone and the local authority shall provide proper drainage and treatment system for collection, treatment and disposal of untreated/and treated effluent in accordance with the provisions of the Water (Prevention and Control of Pollution) Act, 1974. Moreover, the treated sewage and treated effluent shall be disposed only at or into a point(s) identified and approved by the local authorities and the Monitoring Committee</p>
Monitoring Committee	<p>Under the provisions of sub-section (3) of Section 3 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government shall constitute a committee to be called the Monitoring Committee to monitor the compliance of the provisions of this notification</p> <p>In case of activities requiring prior permission on environmental In clearance, such activities shall be referred to the State Level Environmental Impact Assessment Authority, which shall be the Competent Authority for grant of such clearances</p>
<p><i>Note: Refer the Notification for complete details</i></p>	

Statutory Clearance Process

5.0 Environmental Clearance

As per EIA Notification S.O.1533 (E) of 14th September 2006 as amended in 2009 has made it mandatory to obtain prior environmental clearance for certain mining projects. The following is the categorization made for applicability of EIA Notification:

Project or activity	Category with threshold limit	
	A	B
Mining of minerals	<p>≥ 50 ha of mining lease area in respect of non-coal mine lease.</p> <p>>150 ha of mining lease area in respect of coal mine lease.</p> <p>Asbestos mining irrespective of mining area.</p>	<p><50 ha ≥5 ha of mining lease area in respect of non-coal mine lease.</p> <p>≤150 ha ≥5 ha of mining lease area in respect of coal mine lease.</p>
Authority for approval of TOR & issue/reject of EC	MoEF, GOI on the recommendations of Expert Appraisal Committee (EAC)	State/Union territory Environmental Impact Assessment Authority (SEIAA) on the recommendations of State or Union territory level Expert Appraisal Committee (SEAC)
<p>(a) General condition should apply*</p> <p>General Condition (GC): Any project or activity specified in Category 'B' will be treated as Category A, if located in whole or in part within 10 km from the boundary of: i) Protected areas notified under the Wild Life (Protection) Act, 1972, ii) Critically polluted areas as notified by the Central Pollution Control Board from time to time, iii) Notified Eco-sensitive areas, iv) Inter-state boundaries and international boundaries</p>		

The environmental clearance process will comprise the following four stages. The stages in sequential order are as follows:



Stage (1) - Screening (only for category - B projects)

'Screening' refers to Category 'B' projects or activities, the process of scrutiny of application seeking EC made in Form 1 by the SEAC to determine whether the project or activity requires further environmental studies for preparation of an Environmental Impact Assessment (EIA) or not for its appraisal prior to the grant of environmental clearance depending up on the nature and location specificity of the project. The projects requiring an Environmental Impact Assessment report shall be termed Category 'B1' and remaining projects shall be termed Category 'B2' and will not require an Environment Impact Assessment report. For categorization of projects into B1 or B2 except item 8 (b), the updated guidelines from time to time by Ministry of Environment and Forests shall be followed.

Stage (2)- Scoping

'Scoping' refers to the process by which the EAC in the case of category 'A' projects or activities, and SEAC in the case of category 'B1' projects or activities, including applications for expansion and/or change in product mix of existing projects or activities, determine detailed and comprehensive TOR addressing all relevant environmental concerns for the preparation of an EIA report in respect of the project or activity for which prior Environmental Clearance is sought. The EAC and SEAC concerned shall determine the TOR on the basis of information furnished in the prescribed application Form 1 including TOR proposed by the applicant, a site visit by a sub-group of EAC only if considered necessary by the EAC or SEAC concerned and other information that may be available with the EAC or SEAC.

Stage (3) - Public Consultation

"Public consultation" refers to the process by which the concerns of local affected persons and others who have plausible stake in the environmental impact of the project or activity are ascertained with a view to taking into account all the material concerns in the project or activity design as appropriate.

After completion of the public consultation, the applicant shall address all the material environmental concerns expressed during this process, and make appropriate changes in the draft EIA and EMP. The final EIA report, so prepared, shall be submitted by the applicant to the concerned regulatory authority for appraisal. The applicant may alternatively submit a supplementary report to draft EIA and EMP addressing all the concerns expressed during the public consultation.



Stage (4)- Appraisal

Detailed scrutiny by the EAC of the application and other document like the final EIA report, outcome of the public consultations including public hearing proceedings, submitted by the applicant to the regulatory authority concerned for grant of EC.

Flow-chart depicting the stages involved in obtaining the prior Environmental Clearance for Category - A is presented in **Figure 5.1** and for Category - B projects is presented in **Figure 5.2**.

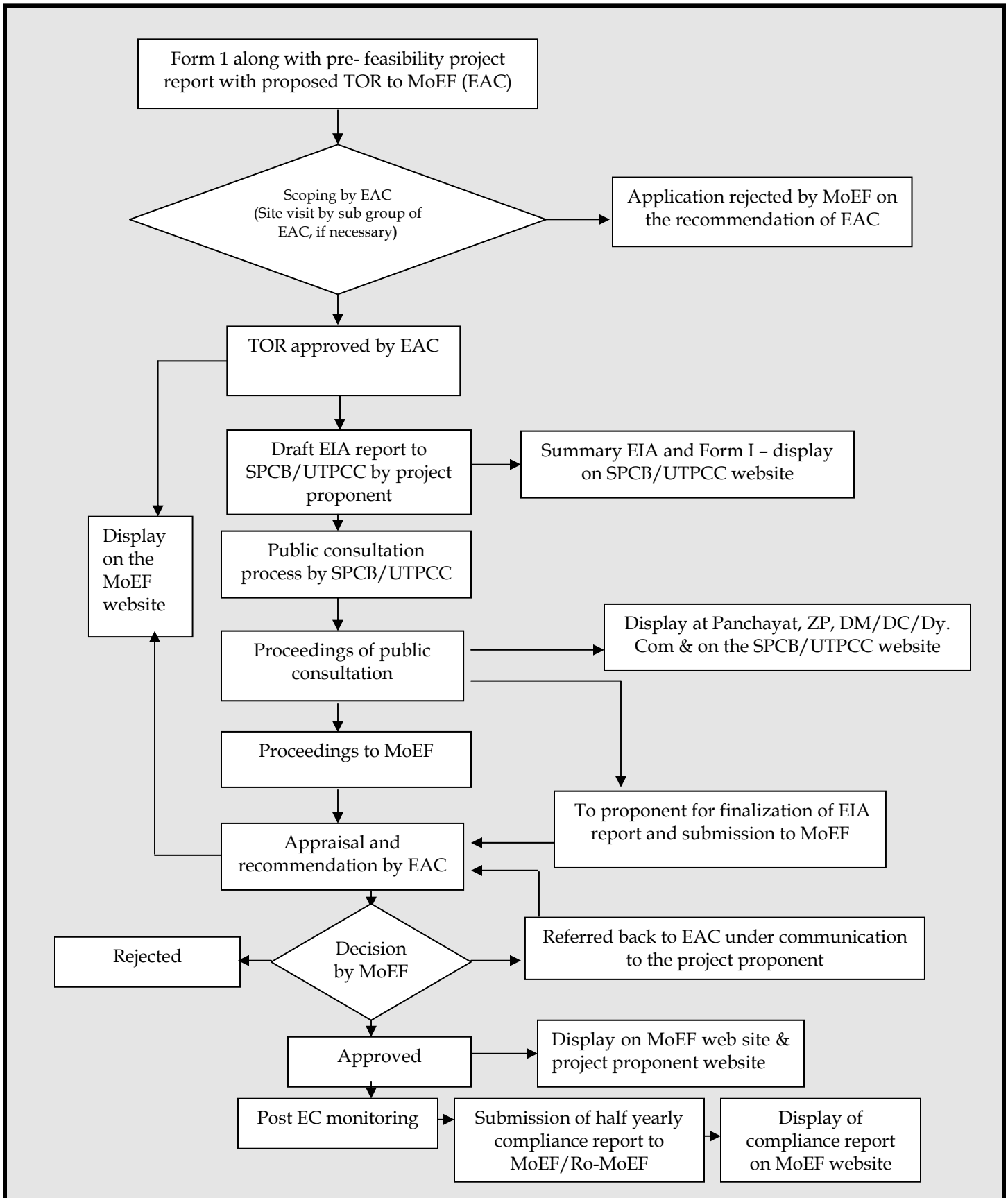


Figure 5.1 Prior Environmental Clearance Process for Category A Projects

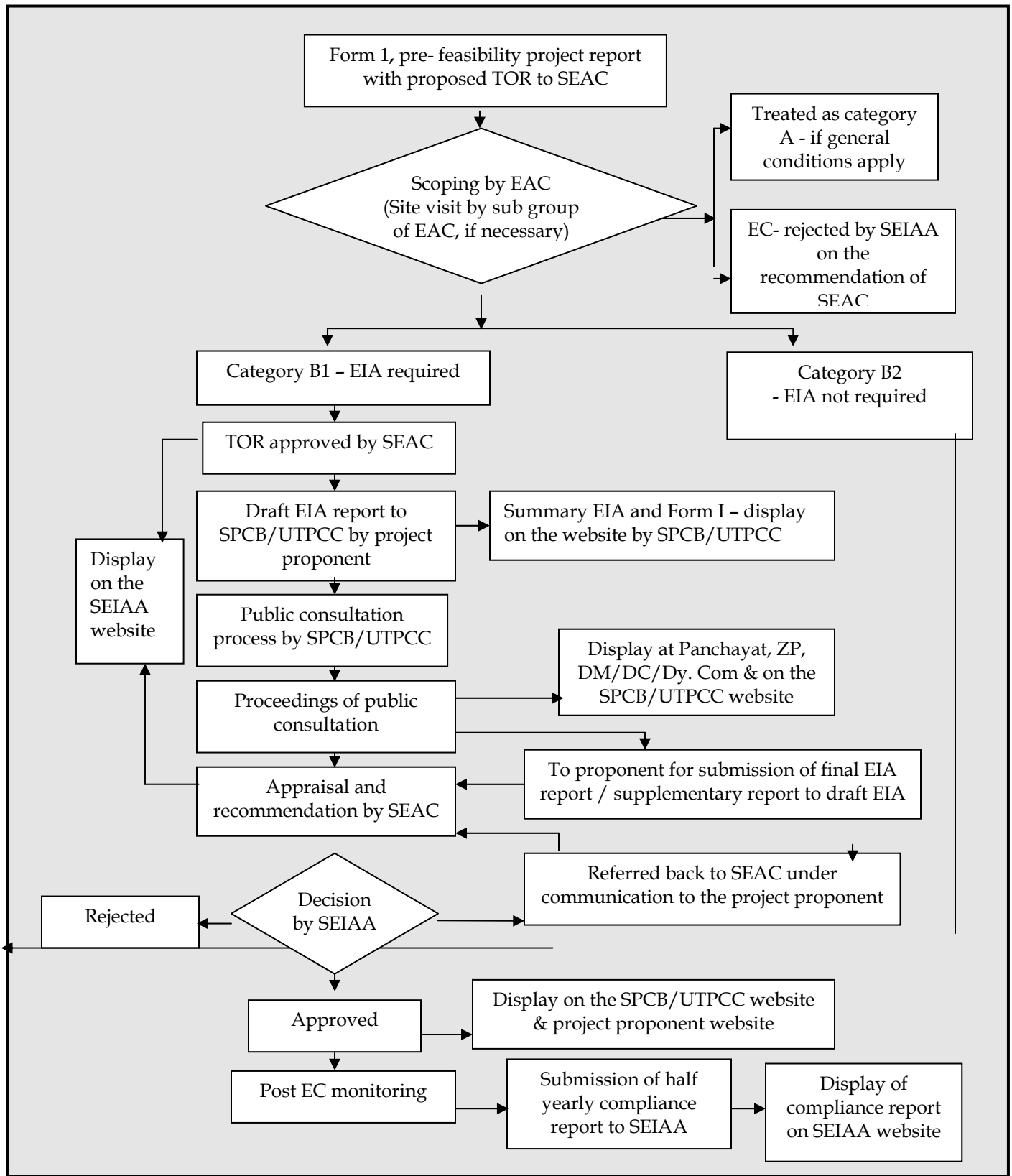


Figure 5.2 Prior Environmental clearance process for category B projects



Validity of the TOR

From 01.04.2010, the prescribed TORs would be valid for a period of two years for submission of the EIA reports, after public consultation where so required. This period will be extended to the 3rd year, based on the proper justification and approval of the EAC/SEAC, as the case may be (MoEF circular dated 22nd March 2010).

Validity of Environmental Clearance

The prior environmental clearance granted is valid for a maximum period of 30 years for mining projects. The regulatory authority concerned may extend this validity period by a maximum period of five years.

Post Environmental Clearance Monitoring

In respect of category A projects, it shall be mandatory for the project proponent to make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the district or state where the project is located and in addition, this shall also be displayed in the project proponent's website permanently.

In respect of category B projects, irrespective of its clearance by MoEF/SEIAA, the project proponent shall prominently advertise in the newspapers indicating that the project has been accorded environmental clearance and the details of MoEF website where it is displayed.

The Project management shall submit half-yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions on 1st June and 1st December of each calendar year. All such reports shall be public documents. The latest such compliance report shall also be displayed on the website of the concerned regulatory authority.

Transferability of Environmental Clearance

A prior Environmental Clearance granted for a specific project or activity to an applicant may be transferred during its validity to another legal person entitled to undertake the project or activity on application by the transferor or the transferee with a written "no objection" by the transferor, to, and by the regulatory authority concerned, on the same terms and conditions under which the prior environmental clearance was initially granted, and for the same validity period.

Criteria for EIA consultants

The MoEF, GoI had stipulated certain criteria for EIA consultants as per the Ministry's office memorandum dated 2nd December 2009 & 18th March 2010, and the same is kept in the public domain of Ministry's website (www.envfor.nic.in). Accordingly, the EIA consultants shall have accreditation with Quality Control of India (QCI)/National Accreditation Board of Education and Training (NABET). The consultants shall include the copy of the accreditation certificate



and that provided by the other organizations/laboratories including their status of approvals etc. the EIA/EMP reports prepared by the consultants who are not registered with NABET/QCI shall not be considered by the Ministry after 30th July 2010.

Authorized Signatory

All correspondence with the regulatory authority including submission of application for TOR/Environmental Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC Meeting on behalf of the project proponent shall be made by the authorized signatory only. The authorized signatory shall also submit a document in support of his claim of being an authorized signatory for the specific project (EIA amendment Notification dated 1st December 2009).

Participation of the project proponent during the EAC meetings

As per the office memorandum dated 25th February 2010 of MoEF, the authorized representative of the project proponent shall only attend the EAC meetings. The authorized representative of the project proponent should be a reasonably senior officer / executive duly authorized in writing. In case, a consultant is to be nominated as the authorized representative, it should be through a irrevocable power of attorney executed and formally registered with the Sub-Registrar concerned. A copy of the authorization / registered power of attorney, as the case may be should be submitted to the ministry for record. The authorized representative, so nominated should only participate in the EAC meetings on behalf of the project proponent. The consultant (s) and other experts may, however, assist the authorized representative during the meeting. In the absence of the authorized representative, the proposal will not be considered by the EAC.

Projects requiring recommendation of the Chief Wildlife Warden

If the project is located within 10 km radial distance from the national parks, sanctuaries, biosphere reserves, migratory corridors of wild animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden thereon at the stage of EC (EIA amendment Notification dated 1st December 2009).

EIA Guidance Manual for mining projects of MoEF, GoI.

The MoEF, GoI has released EIA Guidance annual for “Mining of Minerals”. The same is available on MoEF web site (www.moef.nic.in)



5.1 Consent to Establish (CTE)

It is mandatory on the part of the project proponent to obtain Consent To Establish from the RSPCB, before start of the project. The CTE process adopted by RSPCB is explained below in the form of different questions and answers to facilitate better understanding for the project proponent as well as other stakeholders.

01. What projects are required to apply for CTE?	<p>Mining projects are required to obtain CTE as per the following categorization:</p> <p>Red All mines having area of 5.0 hectares and above. All mines of scheduled Major Minerals (Schedule of MMDR Act, 1957) irrespective of their area All mines of Marble and Granite irrespective of their area</p> <p>Orange All the mines not included in Red category and having area of 1.0 hectare or above but less than 5.0 hectares</p> <p>Other Category All mines not included in Red & Orange Categories and having area less than 1.0 hectare</p>
02. Whether the CTE is required under the provisions of Water Act & Air Act?	<p>Shall obtain CTE under section 21(1) of the Air (P&CP) Act, 1981 as amended</p> <p>Shall obtain CTE under section 25(1) of the Water (P&CP) Act, 1974 as amended to discharge of sewage or trade effluent in to stream or well or sewer or on land</p>



<p>03. What are the documents required for submission?</p>	<p>The project proponent shall apply in the prescribed CTE application form (Annexure 1) along with the following documents. The CTE application form can be downloaded from RSPCB web also (www.rpcb.nic.in).</p> <ul style="list-style-type: none">• Requisite consent fee• Requisite declaration on Rs. 10/- non-judicial stamp paper duly attested by notary public (Annexure 2)• Ownership document for land/lease deed• Details of various sources of Water/air pollution & solid waste and mitigation measures to meet the norms• All Red category units and Large & Medium category units shall submit Environmental Management Plan broadly covering information such as facilities proposed with capacities, environmental aspects on land, water, air, noise and solid waste - generation/mitigation• Copy of partnership deed/MoU & Article of Association as the case may be• Site layout plan of plan• Location plan• Project report duly attested by Chartered Accountant
<p>04. What is the fee to be submitted?</p>	<p>CTE fee is to be paid along with CTE application as notified by the DoE, Government of Rajasthan under section 64 of the Water (P&CP) Act, 1974 as amended and under section 54 of the Air (P&CP) Act, 1981 as amended (Annexure 3 & 4).</p> <p>The CTE fee is to be paid on the following basis as per the Notification dated 25th May 2009:</p> <ul style="list-style-type: none">• Capital investment• Categorization of the project• Whether the project attracts the provision of the Hazardous Waste (Management & Handling) Rules, 1989? If yes, then fee equal to one and half times fee prescribed in the schedule of the Notification shall be paid• Whether the project requires environmental clearance under the provisions of E (P) Act, 1986? If yes, shall pay an extra amount of Rs 15,000/-, as one time consent fee to establish in addition to the fee mentioned in the schedule under the provisions of Water Act & Air Act
<p>05. What is meant by capital investment of the industry?</p>	<p>For calculating the investment in plant and machinery, the cost of pollution control, research & development, industrial safety devices and such other items as may be specified by the notification, shall be excluded (RSPCB office order amendment dated 18.12.2008).</p>

06. What is the mode of payment of CTE fee?	Instrument	Demand Draft
	Infavour of	Member Secretary, Rajasthan State Pollution Control Board
07. Where to submit the CTE application?	Red Category	Inputs requested from RSPCB
	Orange & other category	The application with requisite documents shall be submitted at the concerned Regional Office of the Board
08. Is there any provision to apply CTE application on-line?	The Board is in the process of upgrading the systems to accept the applications on line. For details visit RSPCB web site.	
09. What is the procedure to apply on line?	Inputs requested from RPCB	
10. Whether system will generate self-acknowledgement?	Yes. For details visit RSPCB web site RSPCB to confirm	
11. Whether NOC from CGWA is a pre-requisite for processing CTE application?	<p>Yes, in the following cases:</p> <ul style="list-style-type: none"> • If the abstraction of ground water is ≥ 25 m³/day, in case of over exploited areas • If the abstraction of ground water is ≥ 50 m³/day, in case of critical areas • If the abstraction of ground water is ≥ 100 m³/day, in case of semi critical areas • The exemption shall not be applicable to industries, which are using water as raw material such as packaged drinking water industries, distilleries and breweries • Industry/infrastructure project/mine (proposed/existing) located in safe category areas, are also required to obtain NOC from CGWA if ground water abstractions exceeds 1000m³/day for hard rock areas and 2000m³/day for alluvial areas • CTE application will be considered by RPCB only after submission of NOC from CGWA in above cases <p>(Please refer RPCB Circular Guidelines dated 08.01.2010)</p>	
12. What are the areas as identified by CGWA as – safe areas, semi – critical areas, critical areas & over exploited areas?	The details are given in Annexure 5	
13. Whether NOC from Local authority is a pre – requisite to submit CTE application?	Inputs requested from RPCB	
14. Whether conversion of land, wherever required,	Inputs requested from RPCB	



is a pre - requisite to submit CTE application?										
15. Who is the authority to accord the CTE application?	<table border="1"> <tr> <td data-bbox="695 317 979 394">Red category projects</td> <td data-bbox="979 317 1295 394">Chairperson</td> </tr> <tr> <td data-bbox="695 394 979 432">Orange category</td> <td data-bbox="979 394 1295 432">Regional officer</td> </tr> <tr> <td data-bbox="695 432 979 541">Other category</td> <td data-bbox="979 432 1295 541">Assistant Environmental Engineer*</td> </tr> <tr> <td data-bbox="695 541 979 688">Units covered by the Aravalli Notification</td> <td data-bbox="979 541 1295 688">Dealt at Head Office level and not at R.O level</td> </tr> </table>	Red category projects	Chairperson	Orange category	Regional officer	Other category	Assistant Environmental Engineer*	Units covered by the Aravalli Notification	Dealt at Head Office level and not at R.O level	
Red category projects	Chairperson									
Orange category	Regional officer									
Other category	Assistant Environmental Engineer*									
Units covered by the Aravalli Notification	Dealt at Head Office level and not at R.O level									
* As per RSPCB office order dated 18.12.2009										
16. What is the maximum time period to process the CTE application?	<p><u>Statutory time limit:</u></p> <p>Section 25(7) of Water (P&CP) Act, 1974 as amended: Four months on submission of application, complete in all aspects</p> <p>Section 21(4) of Air (P&CP) Act, 1981 as amended: Four months after receipt of the application</p> <p><u>Administrative time limits of RPCB:</u></p> <table border="1" data-bbox="630 1087 1360 1163"> <tr> <td data-bbox="630 1087 995 1125">Red category projects</td> <td data-bbox="995 1087 1360 1125">6 weeks</td> </tr> <tr> <td data-bbox="630 1125 995 1163">Orange category projects</td> <td data-bbox="995 1125 1360 1163">4 weeks</td> </tr> </table>		Red category projects	6 weeks	Orange category projects	4 weeks				
Red category projects	6 weeks									
Orange category projects	4 weeks									
17. What is the mode of communication of the approval / rejection order of CTE?	<p>RPCB to confirm the following:</p> <table border="1" data-bbox="618 1199 1360 1318"> <tr> <td data-bbox="618 1199 995 1239">Hard copy</td> <td data-bbox="995 1199 1360 1239">By RPAD</td> </tr> <tr> <td data-bbox="618 1239 995 1278">Soft copy</td> <td data-bbox="995 1239 1360 1278">By mail</td> </tr> <tr> <td data-bbox="618 1278 995 1318">Down loads</td> <td data-bbox="995 1278 1360 1318">From RSPCB web</td> </tr> </table>		Hard copy	By RPAD	Soft copy	By mail	Down loads	From RSPCB web		
Hard copy	By RPAD									
Soft copy	By mail									
Down loads	From RSPCB web									
18. Is there any appeal mechanism?	<p>Section 28 (1) of Water (P&CP) Act, 1974 as amended: Any person aggrieved by the order made by the State Board under section 25, 26 and 27 may within 30 days from the date on which is communicated to him, prefer an appeal before Appellate Authority constituted by the State Government.</p> <p>Section 31 (1) of Air (P&CP) Act, 1981 as amended: Any person aggrieved by an order made by the State Board under this Act may, within thirty day from the date on which the order is communicated to him, prefer an appeal to Appellate Authority constituted by the State Government</p> <p>The appellate authority may entertain the appeal after the expiry of the said period of thirty days if such authority is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time</p>									



19. Whether the CTE obtained from the board can be transferred to any other person?	Where a person to whom consent has been granted by the State Board, transfers his interest in the industry to other person, such consent shall be deemed to have been granted to such other person and he shall be bound to comply with all the conditions subject to which it was granted as if the consent was granted to him originally. Such changes shall be notified to the Board
20. What is the validity period for CTE?	CTE will be valid for a period of three years or till the commissioning of the unit (RPCB Office order dated. 10.08.2001)
21. What is the procedure for extension of CTE?	Shall submit a request letter to the concerned Regional Office duly furnishing the stage of the project and action taken to comply the CTE conditions so far
22. What are the areas identified by CPCB as critically polluted in Rajasthan?	Yes. Ecological Impact Assessment Series: EIAS/4/2009-10,CPCB (Annexure 6)
23. What are the key parameters to be monitored in case of mining projects?	Key parameters for monitoring are given by MoEF, GoI vide office circular no. J-20012/1/2006 - IA.II(M) dated 27 th May,2009 (Annexure 7)
24. Are there any specific noise standards applicable to D.G. Sets?	Notification No. 371(E) dated 27.05.2002 - E (P) Act, 1986: Noise limit for Diesel Generator Sets (up to 1000 KVA) manufacture on or after the 1st July, 2003 The maximum permissible sound pressure level for new diesel generator (DG) sets with rated capacity up to 1000 KVA, manufactured on or after the 1 st July, 2003 shall be 75 dB (A) at 1 meter from the enclosure surface The diesel generator sets should be provided with integral acoustic enclosure at the manufacturing stage itself Noise limit for DG sets not covered above Noise from the DG set should be controlled by providing an acoustic enclosure on by treating the room acoustically, at the users end The acoustic enclosure or acoustic treatment of the room shall be designed for minimum 25 dB (A). Insertion Loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure/acoustic treatment. Under such circumstances the performance may be checked for noise reduction up to actual ambient noise level, preferably, in the nighttime. The measurement for Insertion Loss may be done at different points at 0.5m from the acoustic

	<p>enclosure/room, and then averaged</p> <p>The DG set shall be provided with proper exhaust muffler with Insertion Loss of minimum 25 dB (A)</p> <p>Requirement of certification</p> <p>Every manufacturer or importer of DG set to which these regulations apply must have valid certificates of type approval and also valid certificates of conformity of production for each year, for all the product models being manufactured or imported from 1st July 2003 with the noise limit specified in the Notification.</p> <p>The conformance label must contain the following information</p> <ol style="list-style-type: none"> Name and address of the supplier (if the address is described in the owner's manual, it may not be included in the label) Statement "This product confirms to the Environment (Protection) Rules, 1986" Noise limit viz. 75 dB (A) at 1m Type approval certificate number Date of manufacture of the product 																				
<p>25. Is there any guideline to calculate the minimum requirement of the stack of D.G set?</p>	<p>The CPCB had evolved the minimum height of the stack to be provided to the DG set and published in Emission Regulations Part IV: COINDS/26/1986-87.</p> $H = h + 0.2 \times \sqrt{KVA}$ <table border="1" data-bbox="565 1115 1305 1268"> <tr> <td>H</td> <td>Total height of stack in meter</td> </tr> <tr> <td>h</td> <td>Height of the building in meters where the generator set is installed</td> </tr> <tr> <td>KVA</td> <td>Total generator capacity of the set in KVA</td> </tr> </table> <p>Based on the above formula the minimum stack height to be provided with different range of generator sets may be categorized as follows:</p> <table border="1" data-bbox="565 1409 1292 1675"> <thead> <tr> <th>For generator Sets</th> <th>Total height of stack in meter</th> </tr> </thead> <tbody> <tr> <td>50 KVA</td> <td>Ht. Of the building +1.5 meter</td> </tr> <tr> <td>50-100 KVA</td> <td>Ht. Of the building +2.0 meter</td> </tr> <tr> <td>100-150 KVA</td> <td>Ht. Of the building +2.5 meter</td> </tr> <tr> <td>150-200 KVA</td> <td>Ht. Of the building +3.0 meter</td> </tr> <tr> <td>200-250 KVA</td> <td>Ht. Of the building +3.5 meter</td> </tr> <tr> <td>250-300 KVA</td> <td>Ht. Of the building +3.5 meter</td> </tr> </tbody> </table>	H	Total height of stack in meter	h	Height of the building in meters where the generator set is installed	KVA	Total generator capacity of the set in KVA	For generator Sets	Total height of stack in meter	50 KVA	Ht. Of the building +1.5 meter	50-100 KVA	Ht. Of the building +2.0 meter	100-150 KVA	Ht. Of the building +2.5 meter	150-200 KVA	Ht. Of the building +3.0 meter	200-250 KVA	Ht. Of the building +3.5 meter	250-300 KVA	Ht. Of the building +3.5 meter
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<p>26. Is there fuel specification applicable for Diesel Gen sets?</p>	<p>Notification No. G.S.R 371 (E) dated 17th May 2002:</p> <p>The specification of commercial fuel applicable for diesel gen-sets shall be the same as applicable for commercial HSD (High Speed Diesel) applicable for diesel vehicles in the area, from time to time</p>																				
<p>27. Are standards notified for ambient noise level?</p>	<p>CPCB notified National Ambient Air Quality Standards dated 18th November 2009 (Annexure 8)</p>																				



28. Where shall the ambient noise levels be monitored for compliance?	The ambient air quality standards in respect of noise as notified under E (P) Act, 1986 shall be monitored at the boundary of the project for compliance
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5.2 Consent To Operate (CTO)

01. Whether mining activity is required to apply for Consent To Operate?	Yes. Prior to commercial production, it is obligatory on the part of the occupier of the unit to apply for CTO in the prescribed format.			
02. What is the procedure to apply for Consent To Operate (first time)?	<p>The application (Annexure 9) in the prescribed form along with the following documents shall be submitted</p> <ul style="list-style-type: none"> • Requisite consent fee • Requisite declaration on Rs. 10/- non-judicial stamp paper (Annexure 2) • Report of compliance of conditions of consent to establish in tabular form <p>Copies of the following documents, if not submitted earlier:</p> <ul style="list-style-type: none"> • Ownership document for land/lease deed • Details of various sources of Water/air pollution & solid waste and mitigation measures to meet the norms • All Red category units and Large & Medium category units shall submit Environmental Management Plan broadly covering information such as facilities proposed with capacities, environmental aspects on land, water, air, noise and solid waste - generation/mitigation • Copy of partnership deed/MoU & Article of Association as the case may be • Site layout plan of plant • Location plan of the project site • Project report duly attested by Chartered Accountant 			
03. What is the procedure to apply for Consent To Operate (renewal)?	<p>The application in the prescribed form along with the following documents shall be submitted</p> <ul style="list-style-type: none"> • Requisite consent fee • Requisite declaration on Rs. 10/- non-judicial stamp paper (Annexure 2) • Report of compliance of conditions of CTO in tabular form • Copy of the periodical reports • Latest copy of Form V, environmental statement 			
04. Who is the authority to	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;">Red Category Projects</td> <td style="width: 33%; text-align: center;">Chairperson</td> <td style="width: 34%;"></td> </tr> </table>	Red Category Projects	Chairperson	
Red Category Projects	Chairperson			



accord CFO?	Orange Category	Regional officer										
	Other Category	Assistant Environmental Engineer*										
	Units located in the area covered by Aravalli Notification	Head Office										
* As per RSPCB office order dated 18.12.2009												
05. Who should submit the application for consent and reply to the notices etc?	The application for consent and reply to notices etc., shall be furnished by owner (including lawfully empowered attorney for such purpose) of the crusher industry. Where the owner of the Minerals mining is a juristic person (company, firm, association etc.) the applications must be filed/information must be furnished under the seal and signature of a person authorized for such purpose and the document confirming the authorization shall be attached											
06. What is the maximum time period to process the CTO application?	<p><u>Statutory time limit:</u></p> <p>Section 25(7) of Water (P&CP) Act, 1974 as amended: Four months on submission of application, complete in all aspects</p> <p>Section 21(4) of Air (P&CP) Act, 1981 as amended: Four months after receipt of the application</p> <p><u>Administrative time limits of RPCB:</u></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Red category projects</td> <td>6 weeks</td> </tr> <tr> <td>Orange category projects</td> <td>4 weeks</td> </tr> <tr> <td>Other category projects</td> <td>4 weeks</td> </tr> </table>		Red category projects	6 weeks	Orange category projects	4 weeks	Other category projects	4 weeks				
Red category projects	6 weeks											
Orange category projects	4 weeks											
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07. What is the validity period for CTO?	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Red category projects</td> <td>3 years</td> </tr> <tr> <td>Orange category projects</td> <td>5 years</td> </tr> <tr> <td>Other category projects</td> <td>15 years</td> </tr> <tr> <td colspan="2">Provided fee amount is paid for the entire period</td> </tr> <tr> <td colspan="2"><i>Ref: No. F. 14 (15) Policy / RPCB/Plg./2260-2286 dated 10.08.2001</i></td> </tr> </table>		Red category projects	3 years	Orange category projects	5 years	Other category projects	15 years	Provided fee amount is paid for the entire period		<i>Ref: No. F. 14 (15) Policy / RPCB/Plg./2260-2286 dated 10.08.2001</i>	
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5.3 Hazardous Waste Authorization

01. Whether mining projects are required to apply for Hazardous Waste Authorization?	Yes - if the mining activity generates any HW as mentioned in Rule 3 (l) of HW (MH & TM) Rules, 2008 as amended	
	In general the mining activity may generate:	
	S.No	Process
	05. Industrial operations using mineral/synthetic	5.1 Used/spent oil 5.2 Wastes/residues

	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;">oil as lubricant in hydraulic systems or other applications</td> <td style="width: 50%; text-align: center;">containing oils</td> </tr> </table> <p>If the industry is using D.G. set on standby use or on regular for operation of the Minerals mining, the spent oil generating from the D.G. sets is categorized as Hazardous waste, which need to be disposed off to the authorized recyclers/ reclamation units duly obtaining authorization from the RSPCB. The prescribed application form to apply for HWA is given as Annexure 9</p>	oil as lubricant in hydraulic systems or other applications	containing oils
oil as lubricant in hydraulic systems or other applications	containing oils		
<p>02. What is the procedure to apply for Authorization for Hazardous Waste (first time)?</p>	<p>The application (Annexure 9) in the prescribed form along with the following documents shall be submitted.</p> <ul style="list-style-type: none"> • Requisite declaration on Rs. 10/- non-judicial stamp paper (Annexure 2) • Report of compliance of conditions of consent to establish in tabular form • Details method of pre-treatment (if any) and disposal of wastes • Details of storage facilities provided to store the hazardous waste <p><u>Copies of the following documents, if not submitted earlier:</u></p> <ul style="list-style-type: none"> • Ownership document for land/lease deed • Copy of partnership deed/MoU & Article of Association as the case may be • Site layout plan of plant & area earmarked for storage of hazardous wastes • Monitoring reports of soils, ground water and ambient air around the hazardous wastes storage area 		
<p>03. What is the maximum time period to process the authorization application?</p>	<p><u>Statutory time limit:</u></p> <p>Rule 5(4) & 5(5) of HW (M, H&TM) Rules, 2008, the completely filled up application will be processed within 120 days from the date of receipt of application</p>		
<p>04. What is the validity period for authorization?</p>	<p>Rule 5(4) - Valid for five years and shall be subject to such conditions as may be laid therein</p>		
<p>05. How to apply for renewal of authorization</p>	<p>The application in the prescribed form along with the following documents shall be submitted.</p> <ul style="list-style-type: none"> • Requisite declaration on Rs. 10/- non-judicial stamp paper (Annexure 2) • Report of compliance of conditions of earlier authorization • Details method of pre-treatment (if any) and disposal of wastes • Details of storage facilities provided to store the hazardous 		

	<p>waste</p> <ul style="list-style-type: none"> • Membership from waste disposal facility • Copy of Form 4(annual returns) for all the preceding 5 years • Waste minimization measures adopted
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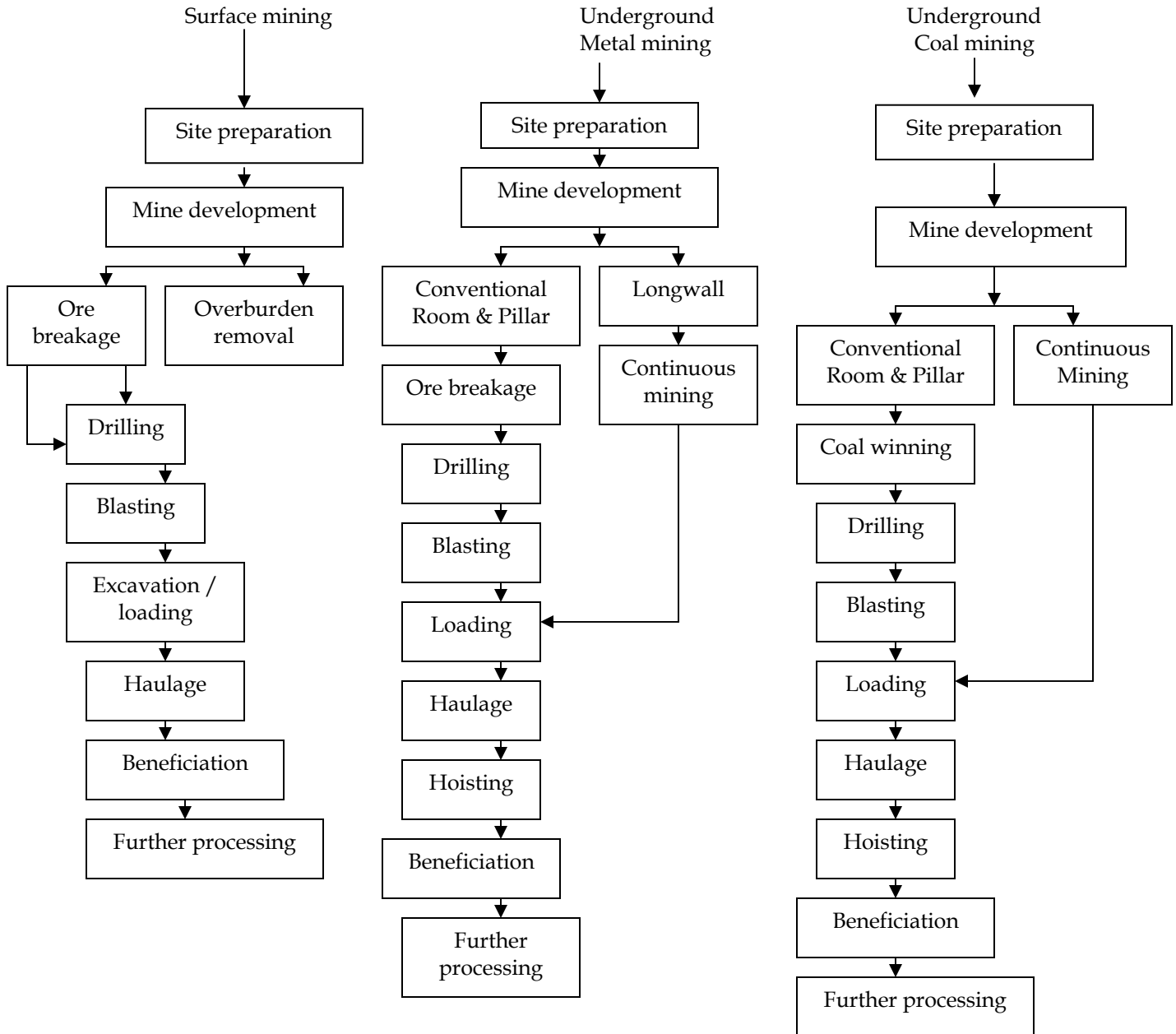
5.4 Water Cess Assessment

34. Whether mining activity is required to file water cess returns?	<p>S.O. 49 (E) dated 6th May 2003</p> <p>If the industry consumes water for different applications including domestic more than 10 KLD shall file the water cess returns in the prescribed format.</p>
35. Self Assessment Scheme for the industries	<p>RSPCB had simplified the cess assessment procedure for certain category units.</p> <p>The scheme shall be applicable to small assesseees whose cess liability under the existing rates does not exceed Es. 6,000/- PA. Under this scheme the eligible assesseees shall submit a self-assessment before 31st May of every year, for the ensuing year as a whole, based on earlier year's data and as per the latest rates. The amount payable shall be submitted in the form of Demand Draft taken in favor of Member Secretary, Rajasthan State Pollution Control Board and the same shall be submitted to the Member Secretary, Rajasthan State Pollution Control Board, Jaipur with a copy to the concerned Regional Officer of the Board.</p> <p>Note: The Assessing Authority may accept the self assessment given by the industry, in which case, it will be deemed to have become final assessment u/s 6 of Act. The Assessing Authority, however, reserves the right to make its own investigation to ascertain the quantity of water used, and raise a demand for cess</p>

Environmental Aspects and Guidance

6.0 Mining Operations

The sequence of mining operations in surface mining, underground metal mining and coal mining is broadly illustrated in **Figure No. 6.0**



6.1 Mining Methods

The various mining methods are broadly given in **Table No 6.1**

Method	Deposit
Surface Mining <ul style="list-style-type: none"> • Quarrying • Opencast Mining (incl. Strip mining) Auger/High wall mining • Placer mining (mineral and mining) Hydraulicking Dredging • Solution Mining Borehole mining In-Site leaching 	Nonmetallic Coal, Metal, Non-metallic Coal Metal, Non-metallic Metal, Non-metallic Non-metallic Metal
Underground Mining <ul style="list-style-type: none"> • Unsupported / minimum supported <ul style="list-style-type: none"> - Room and pillar / Bord and pillar mining - Stope and pillar mining - Shrinkage stopping - Sub level stopping - Hydraulic mining • Supported (with fill) <ul style="list-style-type: none"> - Cut and fill stopping - Longwall mining - Room-and-pillar mining - Sub-level mining • Caving <ul style="list-style-type: none"> - Longwall mining - Sub-level / caving - Block caving 	Coal, Non metallic Metal, Non metallic Metal, Non metallic Metal, Non metallic Coal Metal Coal Coal, Metal Coal Coal, Metal Coal, Metal Metal
<i>(Source: EIA Guidance Manual for Mining of Minerals, MoEF)</i>	

6.2 Study Area for Mining Projects

In case of new mine proposals are for expansion or modernization of the existing mines, while preparing the CTE application the following criteria for study area should be considered.

- Mine lease area should be the “core zone”
- 10km. Radius from the boundary limits of the mine lease area of more than 50 hectares should be the “buffer zone”
- 5km radius from the boundary limits of mine lease area of 5-50 hectares would be “buffer zone”

- Maps (appropriate scale) of the study area (core and buffer zones) clearly delineating the locations of various monitoring stations (air/water/noise/soil), superimposed on locations of habitats are to be shown
- Indicate 2km, 5km distance from the boundary limits of mine lease by appropriate line
- Monitoring and testing should be done as per guidelines of CPCB/MoEF

6.3 Sources of Air Pollution

S.No.	Activities in Mines	Air Pollutants
1.	Drilling	SPM
2.	Blasting	SPM, SO ₂ , NO _x
3.	Loading & Unloading	SPM
4.	Haul Road	SPM
5.	Transportation	SPM, SO ₂ , NO _x
6.	Crushing of ore	SPM
7.	Waste / Top soil handling	SPM
8.	DG Set	SO ₂ , NO _x , SPM

6.4 Air Pollution Control Measures

Some of the air pollution control measures are mentioned below. The APC system requirement should be assessed based on the mining activity and location aspects.

Potential sources of air pollution	Magnitude of air pollution	Control measures
Drilling	High dust generation Risk of occupational hazard	Wet drilling technology or dry drilling fitted with bag filter Driller shall be equipped with closed cabin personal protective gear to reduce occupational hazard
Blasting	High dust generation (Impact lasts for short period)	<ul style="list-style-type: none"> • By improvising blasting technique and adopting controlled blasting methods • Water spray prior to blasting • No blasting should be allowed in the areas close to human habitation - Rock breakers should be employed instead of blasting
Loading of material on dumper	Air emission	<ul style="list-style-type: none"> • Air conditioned cabin for loading operator • Water spray on mineral ore / overburden material prior to loading
Transportation	High dust potential	<ul style="list-style-type: none"> • Both dumper and conveyor transportation. Provision for automatic water sprinkle system on permanent road and water spray by tankers on temporary road • Covering of the material with turpentine in case of long haulage or in case the road is passing through in



		<p>close proximity of habitation</p> <ul style="list-style-type: none"> • Green belt of trees with good footage on both side of haul road • Provision of water spay on the dumper to arrest fine dust before it is transported to crusher
Crushing of ore	High potential of dust and occupational hazard	<ul style="list-style-type: none"> • Automatic water spray in crusher hopper and unloading point. Suitable enclosure for the conveyor system • Provision of bag filter in crusher unit • Barrier in form of greenbelt all around in the vicinity of the crusher to trap fugitive dust
Storage of ore	High potential and occupational hazards	Covered storage yards with greenbelt of adequate width all around

6.5 Environmental Management Plan - Guidance

The project proponent should address the following mitigation measures, depending upon the type of the mining activity, its size and location.

- **Compensation and rehabilitation of affected/displaced people** - will reduce the distress caused by the loss of land and land-based livelihood
- **Topsoil management** - During the planning stage itself waste storage yard and topsoil storage area should be done on slope and run off characteristics
- **In-pit dumping of mine waste** - in-pit dumping of mine waste should be promoted wherever possible rather than external dumping. In case of external dumping, it should be stabilized by suitable plantations
- **Rain water runoff management** - runoff from the mine and waste dumps should be regulated by constructing check dams and garland drains
- **Mine drainage management** - mine drainage is to be treated adequately before discharge to stream outside the boundary of the project area
- **Overburden dumps management** - should be stabilized by mechanical and biological reclamation
- **Rain water harvesting** - check dams on natural nallah and developing water bodies should be planned for recharging water
- **Fugitive emissions** - adequate dust control/suppression system during blasting, transportation, crushing, storage etc should be planned. In case dust suppression is planned proper assessment on water quantity requirement and reliable source should be addressed
- **Noise control** - engineering noise control by noise reduction at the source and by interpretation of the noise path from the source of the receiver
- **Noise and ground vibration from blasting** - be carefully designing a blast hole drilling pattern or blast geometry with appropriate burden distance, spacing as holes, hole size, hole depth and stemming height, and powder factor



- **Stress on road network** – the number of vehicles for transportation of ROM, capacity of the vehicles and stress on the existing road network and requirements for improvement should be assessed
- **Mine waste management** – phase wise waste management should be shown on surface plan in the mine leased area for the 5th, 10th, 15th, 20th, 25th & 30th year
- **Mine closure plan** – whether mine closure plan is prepared as per IBM guidelines
- **Green belt development** – identification of areas for development of greenbelt, suitable plant species, suitability of the soil conditions, any requirement of soil treatment and water availability should be addressed
- **Monitoring** – The monitoring requirement (parameters & frequency) should be outlined based on MoEF circular guidelines on this subject

6.6 Guidelines for Eco - Friendly Mining – DMG, Rajasthan

The Department of Mines and Geology has formulated the following guidelines for Eco-friendly mining

1. Whenever the lessees dig out the available top soil they may store it separately in such a manner that it could be utilized for stabilizing of dumps created by depositing over burden, by intensive plantation
2. For minerals like Gypsum, brick earth etc. where mining is done for very shallow depth (1m to 5m), waste & overburden generated during mining operations, must be refilled. After leveling, top soil collected must be spread over it and suitable plantations should be done
3. All leaseholders should check the water channels in their mining lease areas and clear/clean them before the rains start. Water should flow in its natural path and there should be no obstruction created by way of unplanned mining activities
4. If some diversion of water channels becomes necessary due to availability of mineral in lease area at a particular location only, new drains following the contours be constructed by lessees, so that water flows un-obstructed to main water bodies/ponds / tanks/natural reservoirs
5. The over burden should not be dumped in such a manner that it flows with water in the nearby tanks, reservoirs and ponds etc. The leaseholders should dump the over burden in such a manner that it does not gets washed away to the nearby water tanks and lakes etc. during the rainy season
6. All mining lease holders/quarry license holders are requested to plant a specific number of trees based on their area of lease so that they survive for longer time to come. It has to be ensured here that the mine owners should report the achievement of the target of tree plantation by way of giving number of plants that survive and not by the number of plants planted by them
7. The lessees of major and minor minerals having areas more than 5.00 hectares shall develop thick afforestation zone on the boundary of lease in at least 10meter strip. This can be achieved in steps and exact plan should be submitted to ME/AME. The plan must contain year wise afforestation programme including site and nature of plantation. It shall also be duty of lessee to maintain growth of these plants and survival rate should not be less than 80%. Proper protection of these plantations is also to be ensured by the lessee



8. The norms for plantation for each lease holder /quarry license holder would be as under:

S. No	Category	Norms
1.	Major Mineral lessee	5plants/ hect. Or part / year
2.	Marble, Serpentine and granite leases and Q.L	20 plants / hect. Or part / year
3.	Other minor mineral leases and Q.L	10 plants / hect. Or part / year
4.	Q.L. of minerals other than Marble and Granite having area less than 1.00 hectare	5 plant / Q.L. / year

9. In all leases that are located adjacent to forest areas, a safe distance as provided in the rules should be left by leaseholders between the actual mining area and the forest boundary. The lessees of such leases should plant a specific number of trees to create a green buffer zone between the mining area and the forest. Such lessees may also construct loose stone/Pakka stone wall showing their working boundaries between the forest and the lease so that there is no possibility of even unintentionally movement towards the forest areas
10. Whenever mining reaches to the water table, the leaseholder should dig a separate well in the lease area itself in which water from the mining pit is disposed with the objective of recharging the water table. By doing so there would be no wastage of ground water due to mining operations close to the water table
11. Water pollution and air pollution clearances, wherever required are duly obtained by the lessees from the State Pollution Control Board

The lessees should prepare “Eco - friendly Mining Plan” on the above guideline and submit the mining plan in the proforma given in **Annexure 10** to DMG

(Points for discussion: RSPCB may review the green belt guidelines as suggested by DMG in the eco mining plan)

6.7 Environmental Norms

S. No	Description of the norms	Notification/Circular
02.	General Standards for discharge of effluents	G.S.R 422 (E) dated 19.05.1993 and G.S.R 801 (E) dated 31.12.1993, MoEF, GoI (Annexure 11)
03.	National Ambient Air Quality Standards	CPCB Notification No. B-29016/20/90/PCI-I dated 18 th November 2009 (Annexure 8)
04.	National Noise Ambient Air Quality Standards	The Noise Pollution (Regulation & Control) Rules, 2000 - S.O. 123 (E) dated 14 th February 2000 and as amended in S.O. 1046 (E) dated 22.11.2000 and S.O 50 (E) dated 11 th January 2010 (Annexure 12)
05.	Noise Limit for Generator Sets Run With Diesel	Notification No. G.S.R 371 (E) dated 17 th May, 2002 (Annexure 13)
06.	Hazardous waste categorization	Hazardous Material (Management, Handling and Transboundary Movement) Rules, 2008 (www.moef.nic.in)

Environmental Aspects of Quarrying of Minor Minerals – Evolving of Model Guidelines, MoEF

7.0 Background

Mines and Minerals (Development & Regulation) Act, 1957, under Section 15, empowers the State Governments to make rules in respect of minor minerals. There have, however, been reports regarding adverse impacts on lakes, riverbeds and groundwater due to quarrying/mining of minerals. Concerns have therefore been raised to address the issues and evolve guidelines for sustainable mining of minor minerals. It has also been felt that while proposals for mining of major minerals typically undergo rigorous environment impact assessment and environmental clearance procedure, less attention has been given to environmental aspects of mining of minor minerals. Ministry of Environment & Forests vide order dated 24th March, 2009 had constituted a group under the Chairmanship of Secretary (E&F) to look into the environmental aspects associated with mining of minor minerals.

7.1 Issues and Recommendations

The following are the issues addressed by the Group and related recommendations made by the Group:

Issues	Recommendations
Definition of Minor Mineral	Recommended that Ministry of Mines along with Indian Bureau of mines, in consultation with the State Governments may re-examine the classification of minerals into major and minor categories so that the regulatory aspects and environment mitigation measures are appropriately integrated for ensuring sustainable and scientific mining with least impacts on environment
Size of the Mine Lease	Recommended that the minimum size of mine lease should be 5 ha. Further, preparation of comprehensive mine plan for contiguous stretches of mineral deposits by the respective State Governments may also be encouraged. This may suitably be incorporated in the Mineral Concession Rules, 1960 by Ministry of Mines
Period of mine lease	Recommended that a minimum period of mine lease should be 5 years, so that eco friendly scientific and sustainable mining practices are adopted. However, under exceptional circumstances arising due to judicial interventions, short term mining leases/contracts could be granted to the State Agencies to meet the situation arising there from
Cluster of Mine Approach for Small Sized Mines	Desirable to adopt cluster approach in case of smaller mine leases being operated presently. Further, these clusters need be provided with processing/crusher zones for forward integration and minimizing excessive pressure on road infrastructure. The respective State Governments/Mine Owners Associations may facilitate implementation of Environment Management Plans in such cluster of mines
Requirement of Mine Plan for Minor	Recommended that provision for preparation and approval of mine plan, as in the case of major minerals may appropriately be provided in the



Minerals	Rules governing the mining of minor minerals by the respective State Governments. These should specifically include the provision for reclamation and rehabilitation of mined out area, progressive mine closure plan and post mine land use
Creation of separate corpus for Reclamation / Rehabilitation of Mines of Minor Minerals	There is a need to create a separate corpus, which may be utilized for reclamation and rehabilitation of mined out areas. The respective State Governments may work out a suitable mechanism for creation of such corpus on the "polluter pays" principle. An organizational structure may also need to be created for undertaking and monitoring these activities
Depth of Mining	Recommended that detailed hydro-geological report should be prepared in respect of any mining operation for minor minerals to be undertaken below groundwater table. Based on the finding of the study so undertaken and the comments/recommendations of Central Ground Water Authority/State Groundwater Board, a decision regarding restriction on depth of mining for any area should be taken on case to case basis
Uniform Minor Mineral Concession Rules	Recommended that Model Minor Mineral Concession Rules may be framed for minor minerals as well and the minor minerals may be subjected to a simpler regulatory regime, which is, however, similar to major minerals regime
River Bed Mining	<ol style="list-style-type: none"> 1. In the case of mining leases for river bed sand mining, specific river stretches should be identified and mining permits/lease should be granted stretch wise, so that the requisite safeguard measures are duly implemented and are effectively monitored by the respective Regulatory Authorities 2. The depth of mining may be restricted to 3m/water level, whichever is less 3. For carrying out mining in proximity to any bridge and/or embankment, appropriate safety zone should be worked out on case to case basis, taking into account the structural parameters, locational aspects, flow rate etc. and no mining should be carried out in the safety zone so worked out
<p>Conclusion of the working group:</p> <p>Mining of minor minerals, though individually, because of smaller size of mine leases is perceived to have lesser impact as compared to mining of major minerals. However, the activity as a whole is seen to have significant adverse impacts on environment. It is therefore, necessary that the mining of minor minerals is subjected to simpler but strict regulatory regime and carried out only under an approved framework of mining plan, which should provide for reclamation and rehabilitation of the mined out areas. Further, while granting mining leases by the respective State Governments, location of any eco-fragile zone(s) within the impact zone of the proposed mining area, the linked Rules/Notifications governing such zones and the judicial pronouncements, if any, need be duly noted. The Union Ministry of Mines along with Indian Bureau of Mines and respective State Governments should therefore make necessary provisions in this regard under the Mines and Minerals (Development and Regulation) Act, 1957, Mineral Concession Rules, 1960 and adopt model guidelines to be followed by all the States</p> <p><i>(Source: Environmental Aspects of Quarrying of Minor Minerals: Report of the Group -March 2010, MoEF)</i></p>	

Marble Policy 2002

8.0 General

In exercise of the powers conferred by Rule 65A of the Rajasthan Minor Mineral Concession Rules, 1986 the State Government in the interest of mineral development, notified the procedure for marble (including serpentine/green marble etc) vide notification dated 01.03.2002

8.1 Conditions of the Mining lease /Quarry license

The following conditions are required to be stipulated in every lease/license granted under this notification:

- The sides of the open cast pit shall be kept benched as per provisions of the Metalliferous Mines Regulations, 1961 and the other provisions in these regulations relating to safety of mines and the persons employed therein shall also be complied with
- The provisions relating to the health, sanitation, first-aid, medical appliances, welfare amenities and the conditions of labour employment as provided in the Mines Rules, 1955 and provisions of any other law applicable to the labour employed in mines shall be complied with
- Topsoil recovered during surface operations shall be properly stacked and used for plantation
- Overburden shall be dumped on suitable land devoid of any mineral deposit and the site of wasteland shall be identified before grant of mining lease/quarry license

Provided that overburden/mine waste shall not be dumped anywhere other than the prescribed site. In case of breach of this condition, penalty up to 100% of the security shall be imposed

- Mined out area shall be regularly reclaimed at the cost of lease/quarry holder as per the scheme approved by the Director or any officer authorized for this purpose
- Every lease/license holder shall take immediate measures for plantation of trees in such a way that it will create a "green belt" around mining activities so that dust, smoke, gaseous emission etc. shall be controlled and kept within "Permissible Limits" under environmental laws
- At the time of renewal of a mining lease/quarry license, due weightage of environmental angle shall be given. Any accident taken place in the lease/quarry areas shall also be given due consideration at the time of renewal

Checklist

9.0 Checklist for CTE

The project proponent and the reviewer may use the following checklist to have a better understanding on the environmental aspects and requirements concerned with **Mining projects**:

A. Documentation Check List				
SNo.	Document	Yes	No	Remarks
01.	Completely filled application form duly signed by authorized signatory			
02.	Document authorizing the applicant for signing application and other documents			
03.	Copy of memorandum of article of Association/Partnership deed			
04.	Demand Draft for consent fee			
05.	Copy of the DIC Registration or enlistment/copy of SIA acknowledgement			
06.	Copy of the duly signed project report			
07.	Certificate from Chartered Accountant for capital investment (In case capital investment is 25 lakhs or more)			
08.	Copy of letter of land allotment/conversion letter from the competent authority			
09.	Copy of the site plan			
10.	Environmental Management Plan (For all Red category units and large/medium scale units in Orange and other category)			
11.	Legal undertaking in the prescribed format on non-judicial stamp paper of RS. 10/- only duly attested by notary public			
B. Environmental Check List				
General				
12.	Category of industry (Red/Orange/Others)			
13.	Requirement of Consent To Establish (Water Act only/ Air Act only/ Both Acts)			
14.	Applicability of HW (MH&TM) Rules 2008 as amended?			
15.	Whether E.C. is required under the provisions of EIA notification, 2006 as amended? If yes, then E.C. has obtained or not?			
16.	Whether NOC from CGWA is required? If yes, whether approval is taken?			



17.	Whether the IBM approval is needed for the proposed project? If yes, whether approval is taken?			
18.	Whether details of Mine Lease registration furnished?			
19.	Whether the proposed mining activity is expansion or new one?			
20.	Whether the mineral proposed to mine is major or minor mineral?			
21.	Whether R & R plan is required?			
C. Land Environment				
22.	Whether location falls under restrictions on development projects in Aravali region?			
23.	Whether location falls under restrictions on development projects in Mount Abu zone?			
24.	Whether the proposed site falls under catchment of any drinking water source and or highly polluted areas as identified by CPCB?			
25.	Whether adequate open area is available for disposal of over burden from mine area?			
26.	Whether the proposed mineral mining activity is involved in deforestation of forest area?			
27.	Whether topsoil management plan is prepared?			
28.	Whether Mine over burden management plan is furnished?			
29.	Whether Mine closure plan is addressed?			
D. Water Environment				
30.	Whether any displacement of any natural drains/realignment is involved?			
31.	Whether the proposed mineral mining is generating excess mine water? If yes, mode of collection and disposal of the same is considered in the project?			
32.	Whether estimation of water demand for peak requirement is assessed?			
33.	Whether reliable source of water for peak demand is identified?			
34.	Whether any rainwater harvesting structures proposed to re-charge ground water?			
35.	Whether adequate number of water meters proposed to record the water consumption as per cess criteria?			
36.	Whether all outlet(s) are properly notified?			
37.	Whether adequate storm water drainage is planned and measures taken to avoid contamination of storm water?			
E. Air Environment				
38.	Whether all sources of air pollution identified and included in CTE application?			

39.	Whether fugitive emission sources identified and if so measures proposed?			
40.	Mitigation measures during the blasting operations			
41.	Whether monitoring programme requirements (parameters & frequency) are identified?			
F. Hazardous Wastes				
42.	Whether all sources of hazardous wastes are identified/ quantified/ categorized as per the norms?			
43.	Whether adequate provisions made for collection and storage of hazardous waste?			
G. Noise Environment				
44.	Whether noise due to unit operations and DG set is addressed?			
H. Green belt				
45.	Whether EMP outlined the green belt development?			
46.	Whether soil suitability for the development of green belt is addressed?			

6.1 Check List CTO & HWA

A. Documentation Check List				
01.	Completely filled application form duly signed by authorized signatory			
02.	Document authorizing the applicant for signing application and other documents			
03.	Demand Draft for consent fee			
04.	Legal undertaking in the prescribed format on non-judicial stamp paper of RS. 10/- only duly attested by notary public			
05.	Certificate from Chartered Accountant for capital investment (In case capital investment is Rs.25 lacs or more)			
B. Environmental Check List				
General				
06.	Category of industry (Red/Orange/Others)			
07.	Requirement of Consent To Establish (Water Act only/ Air Act only/ Both Acts)			
08.	Whether the unit applied for the same line of products and capacity as per CTE (in case of first CTO) or CTO (in case of renewal of CTO)?			
09.	Whether any change in the categorization of the unit due to expansion/modernization or due to change in the Board guidelines?			
10.	Whether Document proof for capital investment is furnished?			



11.	Is there any change in capital investment with reference to previous CTE/CTO application?			
12.	Whether any HW is generated? If yes, whether correct CTO fee paid?			
13.	Whether copy of the environmental statement (in case of renewal of CTO) is furnished?			
14.	Whether copy of Annual return of HW is furnished (in case of renewal of CFO)?			
15.	Whether E.C. is required under the provisions of EIA notification, 2006 as amended? If yes, then E.C. has obtained or not?			
16.	Whether NOC from CGWA is required? If yes, whether approval is taken?			
17.	Whether the IBM approval is needed for the proposed project? If yes, whether approval is taken?			
18.	Whether the mineral proposed to mine is major or minor mineral?			
19.	Applicability of the Mount Abu Eco Sensitive Notification? If applicable, whether required clearance obtained?			
20.	Applicability of Aravalli Notification? If applicable, whether required clearance obtained?			
C. Consent To Operate				
21.	Whether report of compliance of the CTE conditions (for first CTO) / CTO conditions (for the renewal of consent) are submitted?			
22.	Whether any amendment to CTE/CTO conditions is sought?			
23.	Whether environmental monitoring reports (in case of renewal CTO) are furnished?			
24.	Whether any court judgment issued against the unit? If yes, whether compliance report/ status report furnished?			
25.	Whether the unit falls under the purview of "Self assessment Scheme - Cess"? If yes, whether cess paid as per the RSPCB scheme (in case of CTO renewal)			
26.	Whether the unit filed the cess returns as per the requirements? Cess returns filed up to.... and cess paid up to... and copies are furnished?			
27.	Whether the unit is claiming the cess rebate?			
28.	Whether any change in the quantity of water requirement?			
29.	Whether any change in the quantity of effluent generated and disposal mechanism?			
30.	Whether the EMP implemented as per the CTE / CTO application?			



31.	Whether any change in the pollution control systems?			
32.	Whether water meters provided?			
33.	Whether energy meters for Pollution Control Systems are provided?			
34.	Whether the unit is a member of CETP? If yes, whether details such as name of CETP, manifest maintained, details of the quantity of effluent sent to CETP (monthly basis for the last 12 months) are furnished?			
35.	Whether CETP issued any notice to the unit for not meeting the in let standards and or any time rejected the effluent? If yes, details to be furnished.			
36.	Whether all sources of air pollution are identified and included in CTO application? Whether any changes in sources and APC system from that CTE/CTO given earlier?			
37.	Whether measures adopted for abatement of noise pollution identified?			
38.	Whether green belt provided as submitted in the CTE/CTO application?			
39.	Whether unit had implemented any CPC or identified CPC for implementation?			
D. Hazardous Waste Authorization				
40.	Whether HW quantities are furnished for different categories as per the norms?			
41.	Whether report of compliance of the previous HWA conditions is submitted in case of renewal of HWA?			
42.	Whether provisions made for collection, storage and use of hazardous waste?			



Annexures



Annexure 1

FORM No.....

Common Application Form for Consent To Establish under section 25/26 of the Water (P & CP) Act, 1974 and under section 21 of the Air (P & CP) Act 1981, as amended

(Application for Mining Units)

From

.....
.....
.....
.....

Date

--	--	--	--	--	--	--	--

To
The Member Secretary,
Rajasthan State Pollution Control Board,
4, Industrial Area,
Jhalana Doongri,
Jaipur 302 004
(Through the concerned Regional Officer)

To be submitted in triplicate

Explanatory Note for Filing the Application Form



“Occupier” - in relation to factory or premises, means the person who has control over the affairs of the factory or the premises, and includes, in relation to any substance, the person in possession of the substance

“Out let”- Any conduit pipe or channel, open or closed, carrying sewage or trade effluent or nay other holding arrangement which causes or is likely to cause pollution

“Trade Effluent” - Includes any liquid, gaseous or solid substance, which is discharged from any premises used for carrying on nay industry, operation or process, or treatment and disposal system, other than domestic sewage

“Chimney” - Includes nay structure with an opening or outlet from or through which any air pollutant may be emitted

“Industrial Plant” - Any plant used for any industrial or trade purposes and emitting any air pollutant into the atmosphere

“Emission” - Any solid or liquid or gaseous substance coming out of any chimney, duct or flue or any other outlet

Sir,

I/We hereby apply for:

1.	Consent To Establish under Section 25/26 of the Water (P & CP) Act 1974 as amended, to discharge or continue to discharge sewage/trade effluent owned by.....	Yes	No
2.	Consent To Establish under Section 21 of the Air (P & CP) Act 1981 as amended, to discharge emissions from industrial plant owned by.....	Yes	No

Part A: General Information

01.	Name & Address of the occupier: Phone No: Fax No: Mobile No: E-mail:	
02.	Name & Location of the Mine: Survey No: Village: Tehsil:	



	District:													
03.	Name of the Mineral(s)													
04.	Category of the Mine: a. Red/Orange/Others:													
05.	Type of the Mineral(s):	<table border="1"> <thead> <tr> <th>Type</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>Major Non-Schedule</td> <td></td> <td></td> </tr> <tr> <td>Major Schedule</td> <td></td> <td></td> </tr> <tr> <td>Minor</td> <td></td> <td></td> </tr> </tbody> </table>	Type	Yes	No	Major Non-Schedule			Major Schedule			Minor		
Type	Yes	No												
Major Non-Schedule														
Major Schedule														
Minor														
06.	Surrounding details (with in 10 Kms)													
	Human settlement (Please specifically mention the nearest human settlement with distance and population)													
	Forest/Sanctuary/National Park/Hill Resort/National Monument/Inter state boundaries													
	Water Bodies - Nallah/Stream/River/Pond/Dam and any other water bodies													
	Other Mines (Please specifically mention the mines with in 1 km from the proposed mine boundary)													
07.	Site details:													
	Total Mine Lease Area in Ha													
	Actual Mining area in Ha													
	Green belt area in Ha													
	Latitude													
	Longitude													
08.	Mine Lease Registration	Yes/No If yes, Registration No..... Valid up to..... Lease Area..... Permitted type & quantity.....												
09.	Boundaries of the unit													
	North/East/West/South													
09.	Number of employees working in the mine													
10.	Total residents in the mine colony and distance from the mine area?													
11.	Capital investment (in lakhs):													
12.	Capital investment proposed for pollution control (in lakhs):													
13.	Applicability of EIA Notification	Yes/No If yes:												



		EC No.....Date.....												
14.	Applicability of HW (MH&TM) Rules 2008 as amended	Applicable/Not applicable												
15.	Whether the mine is required to obtain NOC from CGWA for extraction of ground water?	Yes/No If yes: NOC No.....Date.....												
16.	Whether permission for intersection of ground water table is requires?	Yes/No If yes: NOC No.....Date.....												
17.	Whether Mining Plan/Scheme is approved?	Yes/No If yes: Approval No...Date...												
18.	Applicability of Aravalli Notification 1992 of MoEF, GoI?	Applicable/Not applicable If applicable: Clearance No...Date...												
19.	Applicability of Mount Abu Eco Sensitive Zone Notification 2009 of MoEF, GoI	Applicable/Not applicable If applicable: Clearance No...Date...												
20.	Whether permission for diversion of forestland is required?	Yes/No If yes: Clearance No...Date...												
21.	Whether the industry attracts the provisions of the Water (P & CP) Cess Act, 1977 as amended?	Applicable/Not applicable												
22.	Process Details													
	A Method of mining	<table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>Manual</td> <td></td> <td></td> </tr> <tr> <td>Semi-mechanized</td> <td></td> <td></td> </tr> <tr> <td>Mechanized</td> <td></td> <td></td> </tr> </tbody> </table>		Yes	No	Manual			Semi-mechanized			Mechanized		
	Yes	No												
Manual														
Semi-mechanized														
Mechanized														
	B Type of mining	<table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>Open Cast</td> <td></td> <td></td> </tr> <tr> <td>Under Ground</td> <td></td> <td></td> </tr> <tr> <td>Both</td> <td></td> <td></td> </tr> </tbody> </table>		Yes	No	Open Cast			Under Ground			Both		
	Yes	No												
Open Cast														
Under Ground														
Both														
23.	Products & by-products at installed capacity (on daily/annual basis)	<table border="1"> <thead> <tr> <th>Name</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	Name	Quantity										
Name	Quantity													
24.	Details of explosives required	<table border="1"> <thead> <tr> <th>Type</th> <th>Requirement /day</th> <th>Max. Storage</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Type	Requirement /day	Max. Storage									
Type	Requirement /day	Max. Storage												
25.	Details of fuel requirement													
26.	Furnish a brief note on mining activity showing input and output in terms of products, waste generated	Pl attach as Annexure												



	including for captive power generation and de-mineralized water:	
27.	Mode of transportation of ROM? Adequacy of road network? Impact on the nearby villages/habitation due to truck movement shall be assessed?	

Part B: Information Required in Connection with Prevention and Control of Water Pollution

28.	Source of water: Municipal Supply/Well/Tube Well/Canal/River/mine water / Others	
29.	Water consumption per day for the following streams: Spraying in mine pits/stock piles/roads/transfer points: Domestic purpose: Plantation: Others (specify) Total Water requirement:	KLD
30.	Wastewater generation per day: Trade effluent: Domestic: Total wastewater generation per day:	KLD
31.	Characteristics of effluent before and after treatment (Designed values shall be furnished)	If not applicable - Say No If applicable - Attach as Annexure....
32.	Whether water meters proposed?	Yes/No If yes, location (s) of water meters proposed: Meter 1 at Meter 2 at
33.	Proposed details of mine water recycle/reuse/conservation measures:	If not applicable - Say No If applicable - attach as Annexure
34.	Treatment and Mode of disposal of waste water:	

Part C: Information Required in Connection with Prevention and Control of Air Pollution

35.	Sources of Air Emissions:	
	A From mining activity (Name the unit operations causing emission of pollutants - attach additional sheet if required)	----- ----- ----- Annexure attached Yes/No
	B From Diesel Generator Sets	
	a. No. of DG Sets:	
	b. Capacity of each DG set:	



	c.	Height of the stack above DG room:					
	d.	Noise pollution control measures:					
	i.	Acoustic enclosure/acoustic treatment of DG room:					
	ii.	Exhaust muffler:					
	C	Fugitive emissions:	<table border="1"> <thead> <tr> <th>Source(s)</th> <th>Mitigation Measures</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Source(s)	Mitigation Measures		
Source(s)	Mitigation Measures						
	D	Mitigative measures during blasting:					
36.	Characteristics of critical parameters of air emissions before and after APC, as per the designs:		If not applicable - Say No If applicable - Please furnish details				
37.	Mine overburden If applicable - furnish details on: a) Rate of generation of over burden b) Proposed over burden dumping site (please attach map along with ownership document of the proposed dumpsite) c) Treatment and disposal of over burden, if any d) Chemical characteristics of the over burden (attach separate sheets if required...Annexure)		If not applicable - Say No				
38.	Is your industry likely to cause noise pollution?		If not applicable - Say No If applicable - furnish details				
39.	Is your industry likely to cause any other pollution?		If not applicable - Say No If applicable - furnish details				

Part D: Information Related to Hazardous Waste

40.	Code No:		
41.	Whether the unit falls in a critically polluted area as identified by MoEF?		Yes/No
42.	Hazardous waste generation		
	A	Type of hazardous waste generated as defined under the rules:	
	B	Quantum of hazardous waste generated (TPD/KLD) Category wise:	
	C	Sources and waste characteristics (also indicate wastes amenable to recycling, re-processing and reuse):	
	D	Mode of storage within the plant, method of disposal and capacity (provide details):	
43.	Disposal of hazardous waste:		

Part E: Other Information, in case of expansion/modernization



44.	Status of Environmental Clearance and compliance for the terms and conditions for the existing mining activity	If not applicable - Say No If applicable - Attach as Annexure....
45.	Notices / Directions issued under section 33(A) of the Water Act, 1974 as amended and section 31(A) of the Air Act, 1981 as amended during the last one year along with compliance report	
46.	Compliance to the conditions stipulated in the Consent and HW Authorization to the existing activity	

Declaration

I/We further declare that the information furnished in the application form, Annexure / Appendices and plans is correct to the best of my / our knowledge

I/We hereby submit that in case of change either of the point, or the quantity of discharge/emissions or its quality, a fresh application for Consent shall be made and until such consent is granted, no change shall be made

I/We undertake to furnish any other information within one month of its being called by the State Board.

Enclosures

1. I/We enclose herewith Bank Draft No.....Dated.....for Rs.....(Rs. In words.....) in favor of the Member Secretary, Rajasthan Pollution Control Board, payable under Section 25/26 of the Water Act. The Consent Fee paid is for the period from.....to.....

2. I/We enclose herewith Bank Draft No.....Dated.....for Rs.....(Rs. In words.....) in favor of the Member Secretary, Rajasthan Pollution Control Board, payable under Section 21 of the Air Act. The Consent Fee paid is for the period from.....to.....

3. In support of amount paid as fee, document on capital investment on the industry must be enclosed. An application not accompanied with the prescribed fee and support document shall not be entertained by the Board

4. Affidavit in the prescribed proforma

5. Land allotment/ land conversion order

6. Site map of the mine area



7. Site map of overburden dump site, if any
8. Document in support of authorizing the person to sign the application
9. Different Annexures duly giving numbers as mentioned in the application

Yours faithfully,

Signature of the Applicant.....

Name.....

Designation.....

Office Seal



Annexure 2

Performa Affidavit for CTE/CTO AFFIDAVIT

I, _____ (with name and designation) S/o Shri _____ Resident of _____ do solemnly affirm and declare as under:-

1. That I am responsible for establishing / operating the unit named M/s. _____ (Name & address of the unit).
2. That, I, _____ (with name and designation) am authorized to sign the consent application form and other enclosures with the application.
3. That the plot area of the unit is _____ Sq. Meters.
4. That the number of workers to carry out various activities in the unit is _____.
5. That the total number of employees proposed in the unit is _____.
6. That the total capital investment on the project is Rs. _____.
7. That this Consent to Establish/Operate is being obtained for manufacturing of/providing service for _____ up to _____ per year. In case of any increase/change in capacity or addition/modification/alteration or change in process or raw material or project or discharge points, we will obtain fresh Consent to Establish.
8. That the quantity of trade/domestic effluent shall not exceed _____ KLD. The mode of disposal shall be _____. In case of any increase in quantity of effluent or alteration in outlet or mode of disposal, we shall obtain prior consent from the Board.

OR

That there will no effluent discharge from the premises (applicable only in the case of dry units).

9. That the industry is a small/medium/large scale unit with SSI Registration No. / DGTD Registration No. /Letter to Intent No. _____.
10. That all adequate measures for control and treatment of water/air pollution from the various processes/activities shall be taken to meet the prescribed standards as per the Environment (Protection) Rules, 1986 as amended to date.
11. That the adequate pollution control measures (if required) shall be prescribed to meet the prescribed standards.



12. That the adequate Emission Control System (ECS) (if required) shall be provided to meet the prescribed standards.
13. That the adequate pollution control measures shall be taken to meet the prescribed ambient noise standards.
14. That if Diesel Generator Sets (of capacity 5 KVA or more) shall be installed it will be Eco-Friendly or with inbuilt acoustic enclosures to meet the prescribed norms w.r.t. noise as per the Gazette Notification on Ministry of Environment & Forests, Government of India dated 2.1.1999. Adequate stack height with D.G. Set(s) shall also be provided and maintained and shall submit noise monitoring report.
15. That all orders and directions issued by the Board from time to time shall be complied with.
16. That the name and addresses of Managing Director or other working Directors or Partner shall be given _____ under. Any change there of shall be intimation immediately to the State Board.

DEPONENT

VERIFICATION

Verified at _____ on this _____ (day, month and year) that the above contents of this affidavit are true and correct to the best of my knowledge and belief and nothing has been concealed there from.

DEPONENT

Note: The aforementioned Affidavit must be duly signed by the Deponent and duly attested by the Notary Public thereof.

Note: Please omit whatever is not applicable.



Annexure 3

Consent Fee Under the Provisions of Water Act SCHEDULE IV (See rule 29) Part I Fee for Mining Units

A. Minor Minerals							
S. No	Area of the Mine/Quarry	One time Consent Fee to Establish (in Rs.)			Annual Consent Fee to Operate (in Rs.)		
		Red	Orange	Other	Red	Orange	Other
1.	All mines less than 1.0 hectare	8000	6000	1000	6000	8000	1000
2.	Mines of 1.0 hectare but less than 5.0 hectare	10000	8000	6000	8000	4000	3000
3.	Mines of 5.0 hectare but less than 50.0 hectare	12000	N.A*	N.A*	10000	N.A*	N.A*
4.	Mines of 50.0 hectare and more	25000	N.A*	N.A*	12000	N.A*	N.A*
B. Major Minerals							
S. No	Area of the Mine/Quarry	One time Consent Fee to Establish (in Rs.)			Annual Consent Fee to Operate (in Rs.)		
		Red	Orange	Other	Red	Orange	Other
1.	All mines less than 1.0 hectare	12000	8000	2000	6000	5000	2000
2.	Mines of 1.0 hectare but less than 5.0 hectare	15000	10000	4000	8000	6000	4000
3.	Mines of 5.0 hectare but less than 50.0 hectare	20000	N.A*	N.A*	15000	N.A*	N.A*
4.	Mines of 50.0 hectare and more	50000	N.A*	N.A*	30000	N.A*	N.A*

Note:

1. The categorization of the industries / mining units into Red, Orange and Other categories shall be as specified by the State Board.
2. All industries and mining units requiring environmental clearance under the Environmental (Protection) Act, 1986 shall pay an extra amount of Rs. 15,000/- as one time consent fee to establish in addition to that mentioned in Schedule IV.
3. Provided that where a person who is establishing or carrying on any industry, operation or process and is generating hazardous waste as defined under the Hazardous Wastes (Management & Handling) Rules, 1989; and requiring authorization thereunder; the application for consent shall be accompanied with a fee equal to one and half times of the amount of fee prescribed under Schedule IV.

(Please refer Notification dated 25th May 2007 of Dept. of Environment, Govt. of Rajasthan)

**Annexure 4****Consent Fee Under the Provisions of Air Act**
SCHEDULE (See rule 5) Part I Fee for Mining Units

A. Minor Minerals							
S. No	Area of the Mine/Quarry	One time Consent Fee to Establish (in Rs.)			Annual Consent Fee to Operate (in Rs.)		
		Red	Orange	Other	Red	Orange	Other
1.	All mines less than 1.0 hectare	8000	6000	1000	6000	8000	1000
2.	Mines of 1.0 hectare but less than 5.0 hectare	10000	8000	6000	8000	4000	3000
3.	Mines of 5.0 hectare but less than 50.0 hectare	12000	N.A*	N.A*	10000	N.A*	N.A*
4.	Mines of 50.0 hectare and more	25000	N.A*	N.A*	12000	N.A*	N.A*
B. Major Minerals							
S. No	Area of the Mine/Quarry	One time Consent Fee to Establish (in Rs.)			Annual Consent Fee to Operate (in Rs.)		
		Red	Orange	Other	Red	Orange	Other
1.	All mines less than 1.0 hectare	12000	8000	2000	6000	5000	2000
2.	Mines of 1.0 hectare but less than 5.0 hectare	15000	10000	4000	8000	6000	4000
3.	Mines of 5.0 hectare but less than 50.0 hectare	20000	N.A*	N.A*	15000	N.A*	N.A*
4.	Mines of 50.0 hectare and more	50000	N.A*	N.A*	30000	N.A*	N.A*

Note:

1. The categorization of the industries / mining units into Red, Orange and Other categories shall be as specified by the State Board.
2. All industries and mining units requiring environmental clearance under the Environmental (Protection) Act, 1986 shall pay an extra amount of Rs. 15,000/- as one time consent fee to establish in addition to that mentioned in Schedule IV.
3. Provided that where a person who is establishing or carrying on any industry, operation or process and is generating hazardous waste as defined under the Hazardous Wastes (Management & Handling) Rules, 1989; and requiring authorization thereunder; the application for consent shall be accompanied with a fee equal to one and half times of the amount of fee prescribed under Schedule IV.

(Please refer Notification dated 25th May 2007 of Dept. of Environment, Govt. of Rajasthan)



Annexure 5

Areas as Identified by CGWA as - Safe Areas, Semi - Critical Areas, Critical Areas & Over Exploited Areas

S.No	District	No of Blocks	Safe	Semi-Critical	Critical	Over-Exploited
1	2	3	4	5	6	7
8	Bikaner	5	1. Lunkaransar 2. Kolayat	- -	1. Dungargarh	1. Bikaner 2. Nokha
9	Bundi	4		-	1. Kesorai Patan 2. Talera	1. Hindoli 2. Nainwa
10	Chittorgarh	14	-	1. Bhainsrorgarh	-	1. Amod 2. Bari Sadri 3. Begun 4. Bhadesar 5. Bhopalsagar 6. Chhotisadri 7. Chittorgarh 8. Dungla 9. Gangrar 10. Kapasan 11. Nimbahera 12. Pratapgarh 13. Rashmi
11	Churu	6	1. Churu 2. Atangarh 3. Sardarshahar	-	1. Sujangarh	1. Rajgarh
12	Dausa	5				1. Bandikui 2. Dausa 3. Lalsot 4. Mahua 5. Sirai
13	Dholpur	4	1. Bari		1. Baseri	1. Dholpur 2. Rajakhera
14	Dungarpur	5	1. Aspur	1. Bichhiwara 2. Dungarpur	1. Sagwara 2. Simalwara	
15	Ganganagar	7	1. Anupgarh 2. Ganganagar 3. Karanpur 4. Padampur 5. Raisingh nagar 6. Sadulshahar 7. Suratgarh			



16	Hanumangarh	3	1. Bhadra 2. Hanumangarh 3. Nohar			
17	Jaipur	13			1. Dudu 2. Phagi	1. Amer 2. Bairath 3. Bassi 4. Chaksu 5. Govindgarh 6. Jamwa Ramgarh 7. Jhotwara 8. Kotputli 9. Sambher 10. Sanganer 11. Shahpura
18	Jaisalmer	3	1. Sam			1. Jaisalmer 2. Sankra
19	Jalore	7				1. Ahore 2. Bhinmal 3. Jalore 4. Jaswantpura 5. Raniwara 6. Sanchore 7. Sayla
20	Jhalawar	6			1. Bakani 2. Dag 3. Jhalra Patan 4. Khanpur	1. Manoha Thana 2. Pirawa
21	Jhunjhunu	8	1. Alsisar			1. Bhuhana 2. Chirawa 3. Jhunjhunu 4. Khetri 5. Nawalgarh 6. Surajgarh 7. Udaipurwati
22	Jodhpur	9	1. Bap	1. Phalodi	1. Luni 2. Shergarh	1. Balesar 2. Bhopalgarh 3. Bilara 4. Mandore 5. Osaian
23	Karauli	5		1. Nadauti	1. Sapotra	1. Hindaun 2. Karauli 3. Todabhim



24	Kota	5			1. Sultanpur	1. Itawa 2. Khairabad 3. Ladpura 4. Sangod
25	Nagaur	11	1. Nagaur	1. Ladnu	1. Jayal 2. Makrana	1. Degana 2. Didwana 3. Kuchaman 4. Merla 5. Mundwa 6. Parbaisar 7. Riyan
26	Pali	10			1. Bali 2. Desuri 3. Pali 4. Raipur 5. Rohit	1. Jaitaran 2. Kharchi 3. Rani 4. Sojat 5. Sumerpur
27	Rajsamand	7			1. Railmagra 2. Rajsamand	1. Amet 2. Bhim 3. Deogarh 4. Khamnor 5. Kumbhalgarh
28	Sawaimadhohpur	5			1. Bamanwas 2. Bonli 3. Khandar	1. Gangapur 2. Sawai Madhopur
29	Sikar	8	1. Fatehpur			1. Danta Ramgarh 2. Dhod 3. Khandella 4. Lachhmangarh 5. Neem Ka Thana 6. Piprali 7. Sri Madhopur
30	Sirohi	5			1. Abu Road 2. Pindwara 3. Sirohi	1. Reodar 2. Sheoganj
31	Tonk	6			1. Deoli 2. Malpura 3. Newai 4. Toda Rai Singh 5. Tonk	1. Untara



32	Udaipur	11			1. Kherwara 2. Kotra 3. Sarada	1. Badgaon 2. Bhinder 3. Dhariawad 4. Girwa 5. Gogunda 6. Jhadot 7. Mavli 8. Salumber
	Total	237	32	14	50	140

(Source: CGWA No: 21-4/Guidelines/CGWA/2009-832 dated 14.10.2009)

RSPCB inputs requested for other districts, as the same is not available on the web



Annexure 6

List of critically polluted industrial cluster/area identified by CPCB in Rajasthan

S. No	Critically Polluted Industrial Area and CEPI	Industrial Clusters/Potential Impact Zones
1.	Bhiwadi (Rajasthan) CEPI-82.91 (Ac_Wc_Ls)	a) RIICO Industrial areas Phase I to IV b) Bhiwadi town c) Other surrounding industrial areas: Chopanki, Rampura, Mundana, Khuskhera Phase I to III

Key Parameters for Monitoring - MoEF, GoI

Sub: Key parameters to be monitored in respect of Mining Projects by the Project Proponents for putting on their website and for display on display board in the public domain-regarding

It has been recognized that self-monitoring of key environmental parameters by the respective project proponents and placing the same for information all concerned in the public domain is crucial for ensuring effective compliance of the stipulated conditions and environmental safeguards. Accordingly, in respect of mining projects, it has been decided as under:

1. The information to be put in public domain will be in two parts comprising of (i) static information relating to physical data about the mine lease in terms of its area, production, lease duration and date of commencement of work and (ii) dynamic parameters to be monitored periodically and put into public domain such as AAQ, quality of discharged water, area under plantation and number of trees planted and vibration due to blasting (peak particle velocity)
2. The broad parameters to be monitored and their frequency as decided by the Committee are as under:

(i) Ambient Air Quality:

SPM, RSPM and NO_x for opencast mining

Name of the Mineral	Production Capacity (≥)	Frequency of Monitoring
Iron Ore	0.5 MTPA	15 days
Bauxite	0.1 MTPA	15 days
Lime Stone (Cement/Chemical Grade)	0.5 MTPA	15 days
Lead, zinc, copper	0.5 MTPA	15 days
Chromite	0.1 MTPA	15 days
Silica Sand (Glass)	0.1 MTPA	30 days
Building Stone (Dimensional Stone)	0.5 MTPA	15 days

(ii) Vibration:

Peak particle velocity at 300m distance or within the nearest habitation, whichever is closer, for opencast mine using large diameter hole blasting (100mm and above)

(iii) Quality of Discharge Water:

TDS, DO, PH, Total Suspended Solids (TSS), Cr⁺⁶ (only for chromite mine)

(iv) Greenbelt/Plantation:



Number of trees planted, calendar year wise (progressive) and area covered

3. In case of small mines operating in clusters, it would be desirable that these mines form a cooperative and monitor the environmental parameters as a group of mines and display the monitored parameters on a display board to be located at a suitable location in the area to show the environmental conditions in the public domain

It is thus brought to the information of all the project proponents of mining projects to take note of the above instructions for compliance with immediate effect

This issues with the approval of the Competent Authority

(S.K. Aggarwal)
Director

To

1. All the Officers of IA Division
2. All the Regional Offices of MoEF } With a request to give
3. Member Secretary, CPCB } wide publicity to this
4. Member Secretary of all SPCBs } circular for compliance

Copy to

1. PPS to AS (JMM)
2. Advisor (GKP)
3. Advisor (NB)

(Source: MoEF Circular No. J-20012/1/2006-IA.II (M) dated 27th May 2009)

Annexure 8
National Ambient Air Quality Standards (NAAQS)

S. No	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and other areas	Ecologically sensitive area (notified by central government)	Methods of measurement
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur dioxide (SO ₂), µg/m ³	Annual* 24 hours**	50 80	20 80	-Improved West & Gaeke -Ultraviolet fluorescence
2	Nitrogen Dioxide (NO ₂), µg/m ³	Annual* 24 hours**	40 80	30 80	-Modified Jacob & Hochheiser (Na-arsenite) -Chemiluminescence
3	Particulate Matter (Size less than 10µm) or PM ₁₀ µg/m ³	Annual* 24 hours**	60 100	60 100	- Gravimetric - TOEM - Beta attenuation
4	Particulate Matter (Size less than 2.5µm) or PM _{2.5} µg/m ³	Annual* 24 hours**	40 60	40 60	- Gravimetric - TOEM - Beta attenuation
5	Ozone (O ₃) µg/m ³	8 hours** 1 hour**	100 180	100 180	- UV photometric - Chemiluminescence - Chemical method
6	Lead (Pb) µg/m ³	Annual* 24 hours**	0.50 1.0	0.50 1.0	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper -ED-XRF using Teflon filter
7	Carbon Monoxide (CO) mg/ m ³	8 hours** 1 hour**	02 04	02 04	-Non Dispersive Infra Red (NDIR) spectroscopy
8	Ammonia (NH ₃) µg/m ³	Annual* 24 hours**	100 400	100 400	- Chemiluminescence - Indophenol blue method
9	Benzene (C ₆ H ₆) µg/m ³	Annual*	05	05	-Gas chromatography based continuous analyzer -Adsorption and Desorption followed by GC analysis



10	Benzo(a)Pyrene (BaP) - particulate phase only, ng/m ³	Annual*	01	01	-Solvent extraction followed by HPLC/GC analysis
11	Arsenic (As) ng/m ³	Annual*	06	06	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni) ng/m ³	Annual*	20	20	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals

** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note:

Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation

(Source: National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009)



Annexure 9

FORM No.....

Common Application Form for Consent To Operate under section 25/26 of the Water (P & CP) Act, 1974, under section 21 of the Air (P & CP) Act 1981 & Authorization under HW (MH& TM) Rules, 2008 as amended

(Application for Mining Units)

From

.....
.....
.....
.....

Date

--	--	--	--	--	--	--	--

To
The Member Secretary,
Rajasthan State Pollution Control Board,
4, Industrial Area,
Jhalana Doongri,
Jaipur 302 004
(Through the concerned Regional Officer)

To be submitted in triplicate

Explanatory Note for Filing the Application Form



“Occupier” - in relation to factory or premises, means the person who has control over the affairs of the factory or the premises, and includes, in relation to any substance, the person in possession of the substance

“Out let”- Any conduit pipe or channel, open or closed, carrying sewage or trade effluent or nay other holding arrangement which causes or is likely to cause pollution

“Trade Effluent” - Includes any liquid, gaseous or solid substance, which is discharged from any premises used for carrying on nay industry, operation or process, or treatment and disposal system, other than domestic sewage

“Chimney” - Includes nay structure with an opening or outlet from or through which any air pollutant may be emitted

“Industrial Plant” - Any plant used for any industrial or trade purposes and emitting any air pollutant into the atmosphere

“Emission” - Any solid or liquid or gaseous substance coming out of any chimney, duct or flue or any other outlet

Sir,

I/We hereby apply for:

1.	Consent To Operate/Renewal under Section 25/26 of the Water (P & CP) Act 1974 as amended, to discharge or continue to discharge sewage/trade effluent owned by.....	Yes	No
2.	Consent To Operate/ Renewal under Section 21 of the Air (P & CP) Act 1981 as amended, to discharge emissions from industrial plant owned by.....	Yes	No
3.	Authorization / Renewal of Authorization under sub-rule (3) of Rule (5) of HW (MH & TM) Rules 2008 as amended	Yes	No

Part A: General Information

01.	Name & Address of the occupier: Phone No: Fax No: Mobile No: E-mail:	
02.	Name & Location of the Mine: Survey No: Village:	



	Tehsil: District:													
03.	Name of the Mineral(s)													
04.	Category of the Mine: a. Red/Orange/Others:													
05.	Type of the Mineral(s):	<table border="1"> <thead> <tr> <th>Type</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>Major Non-Schedule</td> <td></td> <td></td> </tr> <tr> <td>Major Schedule</td> <td></td> <td></td> </tr> <tr> <td>Minor</td> <td></td> <td></td> </tr> </tbody> </table>	Type	Yes	No	Major Non-Schedule			Major Schedule			Minor		
		Type	Yes	No										
		Major Non-Schedule												
		Major Schedule												
Minor														
06.	Year and Month of production													
07.	Surrounding details (with in 10 Kms) (Please specifically mention the details with in 1 km from the proposed mine boundary)													
	Human settlement (Please specifically mention the nearest human settlement with distance and population)													
	Forest/Sanctuary/National Park/Hill Resort/National Monument/Inter state boundaries													
	Water Bodies - Nallah/Stream/River/Pond/Dam and any other water bodies													
	Other Mines													
08.	Site details:													
	Total Mine Lease Area in Ha													
09.	Actual Mining area in Ha													
	Green belt area in Ha													
	Latitude													
	Longitude													
10.	Mine Lease Registration	Yes/No If yes, Registration No..... Valid up to..... Lease Area..... Permitted type & quantity.....												
11.	Boundaries of the unit													
	North/East/West/South													
12.	Number of employees working in the mine													
13.	Total residents in the mine colony and distance from the mine area?													
14.	Capital investment (in lakhs):													
15.	Capital investment incurred/proposed for pollution	Incurred...												



	control (in lakhs):		Proposed....		
16.	Applicability of EIA Notification		Yes/No If yes: EC No.....Date.....		
17.	Applicability of HW (MH&TM) Rules 2008 as amended		Applicable/Not applicable If not applicable-Part D, information not to be filled		
18.	Whether the mine is required to obtain NOC from CGWA for extraction of ground water?		Yes/No If yes: NOC No.....Date.....		
19.	Whether permission for intersection of ground water table is requires?		Yes/No If yes: NOC No.....Date.....		
20.	Whether Mining Plan/Scheme is approved by IBM?		Yes/No If yes: Approval No...Date...		
21.	Applicability of Aravalli Notification 1992 of MoEF, GoI?		Applicable/Not applicable If applicable: Clearance No...Date...		
22.	Applicability of Mount Abu Eco Sensitive Zone Notification 2009 of MoEF, GoI		Applicable/Not applicable If applicable: Clearance No...Date...		
23.	Whether permission for diversion of forestland is required?		Yes/No If yes: Clearance No...Date...		
24.	Whether the mine attracts the provisions of the Water (P & CP) Cess Act, 1977 as amended?		Yes/No If yes: Cess paid up to:		
25.	Whether the mine is meeting the criteria of RSPCB of Self Assessment Scheme (Cess)?		Yes/No If yes: Cess paid up to: Self Assessment amount:		
26.	Process Details				
	A	Method of mining		Yes	No
			Manual		
			Semi-mechanized		
			Mechanized		
	B	Type of mining		Yes	No
			Open Cast		
			Under Ground		
			Both		
27.	Products & by-products at installed capacity (on		Name		Quantity



	daily/annual basis)			
28.	Details of explosives requirement (Tons)	Type	Requirement /day	Max. Storage
29.	Details of fuel requirement (KLD)			
30.	Furnish a brief note on mining activity showing input and output in terms of products, waste generated including for captive power generation and de-mineralized water:	Pl attach as Annexure.....		
31.	Mode of transportation of ROM? Adequacy of road network? Impact on the nearby villages/habitation due to truck movement shall be assessed?			

Part B: Information Required in Connection with Prevention and Control of Water Pollution

32.	Source of water: Municipal Supply/Well/Tube Well/Canal/River/mine water / Others	
33.	Water consumption per day for the following streams: Spraying in mine pits/stock piles/roads/transfer points: Domestic purpose: Plantation: Others (specify) Total Water requirement:	KLD
34.	Wastewater generation per day: Trade effluent: Domestic: Total wastewater generation per day:	KLD
35.	Latest 'monitoring report' of the Board or Board's recognized laboratory:	If not applicable - Say No If applicable - Attach as Annexure....
36.	Whether water meters proposed?	Yes/No If yes, location (s) of water meters proposed: Meter 1 at Meter 2 at
37.	Proposed details of mine water recycle/reuse/conservation measures:	If not applicable - Say No If applicable - attach as Annexure
38.	Treatment and Mode of disposal of waste water:	



Part C: Information Required in Connection with Prevention and Control of Air Pollution

39.	Sources of Air Emissions:						
	A	From mining activity (Name the unit operations causing emission of pollutants - attach additional sheet if required).	----- ----- Annexure attached Yes/No				
	B	From Diesel Generator Sets					
	a.	No. of DG Sets:					
	b.	Capacity of each DG set:					
	c.	Height of the stack above DG room:					
	d.	Noise pollution control measures:					
	i.	Acoustic enclosure/acoustic treatment of DG room:					
	ii.	Exhaust muffler:					
	C	Fugitive emissions:	<table border="1"> <thead> <tr> <th>Source(s)</th> <th>Mitigation Measures</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Source(s)	Mitigation Measures		
Source(s)	Mitigation Measures						
	D	Mitigative measures during blasting:					
40.	Latest 'monitoring report' of the Board or Board's recognized laboratory:		If not applicable - Say No If applicable - Please furnish details				
41.	Mine overburden If applicable - furnish details on: a) Rate of generation of over burden b) Proposed over burden dumping site (please attach map along with ownership document of the proposed dumpsite) c) Treatment and disposal of over burden, if any d) Chemical characteristics of the over burden (attach separate sheets if required...Annexure)		If not applicable - Say No				
42.	Details of Mine closure Plan. Whether IBM approved the mine closure plan?		If not applicable - Say No If applicable - furnish details				
43.	Is your industry likely to cause noise pollution?		If not applicable - Say No If applicable - furnish details				
44.	Is your industry likely to cause any other pollution?		If not applicable - Say No If applicable - furnish details				

Part D: Information required in connection with Hazardous Waste (Management Handling & Transboundary Movement) Rules, 2008 for obtaining Authorization for Collection/Reception/Treatment/Transport/Storage/Disposal of HW*

* Delete which ever is not applicable



45.	Code No:	
46.	Whether the unit is situated in a critically polluted area as identified by MoEF?	Yes/No
47.	Authorization required for (please tick mark appropriate activity/activities)	
	A Collection	Yes/No
	B Reception	Yes/No
	C Treatment	Yes/No
	D Transport	Yes/No
	E Storage	Yes/No
F Disposal	Yes/No	
48.	In case of renewal of authorization previous authorization number, date of issue and validity period:	HWA No..... Date of issue..... Validity period.....
49.	Hazardous waste	
	A Type of hazardous waste generated as defined under these rules:	
	B Quantum of hazardous waste generated (TPD/KLD) Category wise:	
	C Sources and waste characteristics (also indicate wastes amenable to recycling, re-processing and reuse):	
D Mode of storage within the plant, method of disposal and capacity (provide details):		
50.	Disposal of hazardous waste:	
51.	Category wise inventory of HW onsite as on date of the submission of the application:	
52.	Treatment, Storage and Disposal Facility	
	Detailed proposal of the facility (to be attached) to include:	
	A Location of site (provide map):	
	B Name of waste processing technology:	
	C Details of processing technology:	
	D Type and quantity of waste to be processed per day:	
	E Site clearance (from local authority, if any):	
	F Utilization programme for waste processed (product utilization):	
	G Method of disposal (details in brief be given):	
	H Quality of waste to be displayed per day:	
	I Nature and composition of waste:	
	J Methodology and operational details of land filling/incineration:	
	K Measures to be taken for prevention and control of environmental pollution including treatment of leachate:	



	L	Investment on project and expected returns:	
	M	Measures to be taken for safety of workers working in the plant:	
53.		Annual Returns in Form 4 as per Rule 5 (6):	Letter No..... Date..... For the year.....

Part E: Other Information

54.	Notices / Directions issued under section 33(A) of the Water Act, 1974 as amended and section 31(A) of the Air Act, 1981 as amended during the last one year along with compliance report	If not applicable - say no If applicable - attach as Annexure
55.	Compliance to the conditions stipulated in the Consent and HW Authorization to the existing activity	
56.	Submission of Environmental Statement in Form V	Yes/No If yes, submitted vide letter.....dated.....

Declaration

I/We further declare that the information furnished in the application form, Annexure / Appendices and plans is correct to the best of my / our knowledge

I/We hereby submit that in case of change either of the point, or the quantity of discharge/emissions or its quality, a fresh application for Consent shall be made and until such consent is granted, no change shall be made

I/We undertake to furnish any other information within one month of its being called by the State Board.

Enclosures

1. I/We enclose herewith Bank Draft No.....Dated.....for Rs.....(Rs. In words.....) in favor of the Member Secretary, Rajasthan Pollution Control Board, payable under Section 25/26 of the Water Act. The Consent Fee paid is for the period from.....to.....

2. I/We enclose herewith Bank Draft No.....Dated.....for Rs.....(Rs. In words.....) in favor of the Member Secretary, Rajasthan Pollution Control Board, payable under Section 21 of the Air Act. The Consent Fee paid is for the period from.....to.....



3. In support of amount paid as fee, document on capital investment on the industry must be enclosed. An application not accompanied with the prescribed fee and support document shall not be entertained by the Board

4. Affidavit in the prescribed proforma

5. Land allotment/ land conversion order

6. Site map of the mine area

7. Site map of overburden dump site, if any

8. Document in support of authorizing the person to sign the application

9. Different Annexures duly giving numbers as mentioned in the application

Yours faithfully,

Signature of the Applicant.....

Name.....

Designation.....

Office Seal



Model Eco-Friendly Mining Plan - DMG, Rajasthan

1. OVERVIEW OF THE AREA

1-1 General Information:

- a. Name of lessee
- b. Address of lessee
- c. C. Phone No.
- d. Status of the lessee
Individual / Company
- e. Details of the Area
- f. District and State
- g. Tehsil
- h. Village
- i. M.L. No.
- j. Area (may be shown on map) -----Hect.
- k. Whether area falls in forest?
- l. Lease period

1-2 General Topography :

- a. G.T. Sheet No.
- b. Description of FRP of the lease
- c. Longitude and Latitude of nearest FRP (if available)
- d. Nearest Railway Station
- e. Land Status
- f. Details of forest area adjoining to the lease Pvt. / Govt.
- g. Ground water level in the region.

1-3 Availability of basic infrastructure:

- Road
- Electricity
- Telephone
- Water Supply
- Dispensary
- Post Office
- School

1-4 Details of Abadi nearby mining area

1-5 Plantation in the area:

- a. Number of plants naturally
Existing in the lease area
- b. Plants to be grown (Location
Should be shown in the map) No. per year



1-6 Condition of top soil cover and its present use:

- a. Depth of topsoil
- b. Details of place for stacking the top soil (may be shown in map)
- c. Details of re-use of topsoil

1-7 Existing Nalas, Water Bodies, Channels in the lease hold area and Nearby: (may be shown in map)

- Nala
- River
- Ponds
- Water Channel
- Others

1-8 Do you propose to carry out mining operations up to the water table

2 SURFACE MANAGEMENT PLAN

- 2-8 Pattern of stacking top soil for future use
- 2-9 Details of approved / declared dumping site
- 2-10 Effects of dumping on mineral zone and natural water channel / stream
- 2-11 Back filling of land and leveling of surface
- 2-12 Rehabilitation of dumps by crating Contour bunds and filling them with soil and leveling
- 2-13 Maintenance of dumps and monitoring

3 WATER MANAGEMENT

3-1 Present water scenario of area:

- a. Availability of water in the mining area
 - b. Duration in which water is available
 - c. Details of dug wells in nearby mine areas
 - d. Recharging of water (if proposed)
- 3-2 Details of diversion of rain water from the mining area, if required (may be shown on the map)
- 3-3 Details of Obstruction of water channels and measures taken
- 3-4 Impact and measures of Mining / blasting on water sources as well as natural water channels in the area
- 3-5 Measures taken for minimizing Silting and contamination of water Plan for mining water utilizing in (may be shown on the map)
- a. Drinking and irrigation purpose
 - b. Artificial recharge
 - c. Water harvesting

4 AREA REHABILITATION

- 4-1 Details of storage of top soil in Reusable form (may be shown on the map)
- 4-2 Details of stabilization of dumps after leveling
- 4-3 Details of plantation plan (may be shown on the map)



- 4-4 Details of group plantation on land Allotted, if any
- 4-5 Details of measures for maintenance of Plantation done in top soil/ OB dump / Boundaries / other places.

5 AIR, NOISE AND WELFARE MEASURES

- 5-1 Plan for air, dust suppression
- 5-2 Measures taken for air / dust control as Per permissible limit
- 5-3 Plan for noise level
- 5-4 Measures taken for noise level control
- 5-5 Welfare measures taken for mining laborers:
 - a. Drinking water
 - b. Sanitary condition
 - c. First Aid facility
 - d. Labour Health
 - e. Social Welfare and Upliftment
 - f. Child care facility

6 METHOD OF MINING (OPEN CAST / UNDERGROUND)

- 6-1 Bench Height
- 6-2 Bench Width
- 6-3 Machinery used
- 6-4 Explosive used (if blasting done)
- 6-5 Details of crusher or any plant (if Constructed within lease area)

7 PERMISSIONS FROM PCB / FOREST

- 7-1 Details of NOC received from PCB (if Applicable)
- 7-2 Details of ECC received from MOEF (if applicable)

(Signature of Lessee)

Note:

1. For quarry licences existing in clusters combined eco-friendly mining plan would be prepared for the whole area by the Mines Department in consultation with the Quarry holder will abide this plan in true spirit.
2. In case of any confusion, lease holder may contact the concern Mining Engineer / AME for details.
3. No fees or other charges are required to be deposited for submission of Eco-friendly mining plan.
4. Lessee/Licence Holder should give as much information as he can give relating to Environment friendly mining.

(Source: www.dmg-raj.org)

**Annexure 11****General Standards for Discharge of Effluents**

S. No	Parameter	Standards			
		Inland surface water	Public sewers	Land for irrigation	Marine coastal areas
		(a)	(b)	(c)	(d)
1	Color & odour	*	-----	*	*
2	Suspended solids mg/l, Max	100	600	200	1. For process waste water-100 2. For cooling water effluent 10% above total suspended matter of influent
3	Particle size of suspended solids	Shall pass 850 Micron IS sieve	--	--	1. Floatable solids max. 3 mm 2. Settleable solids max. 850 microns
4	pH Value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
5	Temperature	Shall not exceed 5 ⁰ C above the receiving water temperature	--	--	Shall not exceed 5 ⁰ C above the receiving water temperature
6	Oil and grease mg/l Max.	10	20	10	20
7	Total residual chlorine mg/l Max.	1.0	--	--	1.0
8	Ammonical Nitrogen (as N), mg/l Max.	50	50	--	50
9	Total Kjeldahl nitrogen (as NH ₃), mg/l Max.	100	--	--	100
10	Free ammonia (as NH ₃), mg/l Max.	5.0	--	--	5.0
11	Bio-chemical oxygen demand (3 days at 27 ⁰ C), mg/l max.	30	350	100	100
12	Chemical oxygen demand, mg/l max.	250	--	--	250
13	Arsenic (as As), mg/l max.	0.2	0.2	0.2	0.2
14	Mercury (as Hg), mg/l max.	0.01	0.01	--	0.01
15	Lead (as Pb), mg/l max.	0.1	1.0	--	2.0
16	Cadmium (as Cd),	2.0	1.0	--	2.0



	mg/l max.				
17	Hexavalent chromium (as Cr +6), mg/l max.	0.1	2.0	--	1.0
18	Total chromium (as Cr), mg/l max.	2.0	2.0	--	2.0
19	Copper (as Cu), mg/l max.	3.0	3.0	--	3.0
20	Zinc (as Zn), mg/l max.	5.0	15	--	15
21	Selenium (as Se), mg/l max.	0.05	0.05	--	0.05
22	Nickel (as Ni), mg/l max.	3.0	3.0	--	5.0
23	Cyanide (as CN), mg/l max.	0.2	2.0	0.2	0.2
24	Fluoride (as F), mg/l max.	2.0	15	--	15
25	Dissolved phosphates (as P), mg/l max.	5.0	--	--	--
26	Sulphide (as S), mg/l max.	2.0	--	--	5.0
27	Phenolic compounds (as C ₆ H ₅ OH), mg/l max.	1.0	5.0	--	5.0
28	Radio active materials:				
	a. Alpha emitter micro curie/ml	10 ⁻⁷	10 ⁻⁷	10 ⁻⁸	10 ⁻⁷
	b. Beta emitter micro curie/ml	10 ⁻⁶	10 ⁻⁶	10 ⁻⁷	10 ⁻⁶
29	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
30	Manganese (as Mn), mg/l	2	2	--	2
31	Iron (as Fe), mg/l	3	3	--	3
32	Vanadium (as V), mg/l	0.2	0.2	--	0.2
33	Nitrate nitrogen, mg/l	10	--	--	20

* All efforts should be made to remove colour and unpleasant odour as far as practicable

These standards shall be applicable for industries, operations or processes other than those industries, operations or process for which standards have been specified of the Environment Protection Rules, 1989

Source: G.S.R 422 (E) dated 19.05.1993 and G.S.R 801 (E) dated 31.12.1993 issued under the provisions of E (P) Act 1986

Noise Ambient Air Quality Standards

Area code	Category of area	Limits in db (A) Leq	
		Day time	Night time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence zone	50	40

Note:

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area, which is declared as such by the competent authority.
4. Mixed categories of areas may be declared as one of the four above-mentioned categories by the competent authority.

* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A “decibel” is a unit in which noise is measured.

“A”, in dB(A) L_{eq} , denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

L_{eq} : It is an energy mean of the noise level over a specified period.

(Source: Noise pollution (Regulation and control) Rules, 2000)



Annexure 13

Noise Limits for Generator Sets run with Diesel

1. Noise limit for diesel generator sets (up to 1000 KVA) manufacture on or after the 1st July 2003

The maximum permissible sound pressure level for new diesel generator (DG) sets with rated capacity up to 1000 KVA, manufactured on or after the 1st July, 2003 shall be 75 dB (A) at 1 meter from the enclosure surface

The diesel generator sets should be provided with integral acoustic enclosure at the manufacturing stage itself

The implementation of noise limit for these diesel generator sets shall be regulated as given in paragraph 3 below

2. Noise limit for DG sets not covered by paragraph 1

Noise limits for diesel generator sets not covered by paragraph 1, shall be as follows:

2.1 Noise from DG set shall be controlled by providing an acoustic enclosure or by treating the room acoustically, at the users end

2.2 The acoustic enclosure or acoustic treatment of the room shall be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure/acoustic treatment. Under such circumstances the performance may be checked for noise reduction up to actual ambient noise level, preferably, in the nighttime). The measurement for insertion loss may be done at different points at 0.5m from the acoustic enclosure/room, and then averaged

2.3 The DG set shall be provided with proper exhaust muffler with insertion loss of minimum 25 dB (A)

2.4 these limits shall be regulated by the State Pollution Control Boards and the State Pollution Control Committees

2.5 Guidelines for the manufacturers/users of Diesel Generator sets shall be as under:

01. The manufacturer shall offer to the user a standard acoustic enclosure of 25 dB (A) insertion loss and also a suitable exhaust muffler with insertion loss of 25 dB(A)

02. The user shall make efforts to bring down the noise levels due to the DG set; outside his premises, within the ambient noise requirements by proper siting and control measures



03. Installation of a DG set must be strictly in compliance with the recommendations of the DG set manufacturer

04. A proper routine and preventive maintenance procedure for the DG set should be set and followed in consultation with the DG set manufacturer which would help prevent noise levels of the DG set from deteriorating with use

3. Limits of noise for DG Sets (Up to 1000 KVA) Manufactured on or after the 1st July 2003

3.1 Applicability

01. These Rules apply to DG sets up to 1000 KVA rated output, manufactures of imported in India, on or after 1st July 2003

02. These rules shall not apply to

- a. DG sets manufactures or imported for the purpose of exports outside India; and
- b. DG sets intended for the purpose of sample and not for sale in India

(Please refer Notification No. G.S.R. 371 (E) dated 17th May, 2002 for details)



Form-V

(See rule 14)

Environmental statement for the financial year ending the 31st March

Part A

- Name and address of the owner/occupier of the industry operation or process
- Industry category primary- (STC Code) Secondary- (SIC Code)
- Production capacity
- Year of the establishment
- Date of last environmental statement submitted

Part B

Water and raw material consumption

- (1) Water consumption m³/d
- Process
 - Cooling
 - Domestic

Name of Products	Process Water consumption per unit of product output	
	During the Previous Financial year	During the current financial year
	(1)	(2)
(1)		
(2)		
(3)		

Raw material consumption

* Name of raw Materials	Name of products	Consumption of raw material per unit of output	
		During the previous Financial year	during the current financial year

*Industry may use codes if disclosing details of raw material would violate contractual obligations; otherwise all industries have to name the raw materials used.



Part C

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

(1) Pollutants	Quality of pollutants discharged (mass/day)	Concentrations of pollutants discharges (Mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water (b) Air			

Part D

HAZARDOUS WASTES

(As specified under hazardous wastes (Management and Handling) Rules, 1989)

Hazardous Wastes	Total Quantity (Kg)	
	During the Previous Financial year	During the current financial year

- a. From process
- b. From pollution control facilities

Part E

Solid Wastes

	Total Quantity	
	During the Previous Financial year	During the current financial year

- a. From process
- b. From pollution control facilities
- c. (1) Quantity recycled or reutilized within the unit.
(2) Sold
(3) Disposed

PART F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.



PART G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

PART H

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution

PART I

Any other particulars for improving the quality of the environment



Annexure 15

Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008

FORM 4

[See rules 5 (6) and 22 (2)]

FORM FOR FILING ANNUAL RETURNS BY THE OCCUPIER OR OPERATOR OF FACILITY

To be submitted by occupier/operator of disposal facility of State Pollution Control Board/Pollution Control Committee by 30th June of every year for the preceding period April to March]

1.	Name and address of the generator/operator of facility	:				
2.	Name of the authorized person and full address with telephone and fax number	:				
3.	Description of hazardous waste	:	Physical form with description	Chemical form		
4.	Quantity of hazardous wastes (in MTA)	:	Type of hazardous waste	Quantity (in Tonnes KL)		
			(a)			
			(b)			
			(c)			
			
5.	Description of Treatment	:				
6.	Description of transportation	:				
7.	Details of transportation	:	Name & Address	Mode of packing	Mode of transportation	Date of transportation
8.	Details of disposal of hazardous waste	:	Name & address of consignee	Mode of packing	Mode of transportation	Date of transportation
9.	Quantity of useful materials sent back to the manufacturers "and others"	:	Name and type of material sent back to		Quantity in Tonnes/KL	
			Manufacturers*			
			Others#			

*Delete whichever is not applicable

Enclose list of other agencies

Date:

Place:

Signature:

Designation:



Geo-referenced Cadastral Map

As per the procedure in vogue, a Mining Lease map/Prospecting License map showing the area/areas with details on a cadastral map with the Khasra numbers/Survey Nos. for mining lease/prospecting license, granted by the State governments under Act and Rules made thereunder, is a basic requirement which is enclosed along with the Mining Plan/Scheme of Mining /Progressive Mine Closure Plan and Scheme of Prospecting. The Mining Lease map/Prospecting License map is a certified copy obtained from the state/district authorities, which is essential for planning purpose in mining plan/Scheme of Mining etc.

In suppression to all the instructions issued on the subject, it is decided that:

1. The Mining Lease/Prospecting License boundary showing all Khasra numbers/Survey Nos. on a Cadastral Map (Khasra Plan) on original plan (not the photo copy) and duly certified by State Government on a scale of 1:3960 shall be submitted with Mining Plan/Scheme of Mining/Progressive Mine Closure Plan and Scheme of Prospecting by the Lessee/Applicant/Licensee
2. The boundary pillars of each mine lease/prospecting license are to be fixed precisely. Each boundary pillars shall be surveyed using DGPS (at least 2 hours observation) for its ground position by an agency recognized by the State Government)
3. The Geo-referenced mining lease/prospecting licenses map prepared using DGPS shall be superimposed on Geo-referenced vectorised cadastral maps
4. On integration, the Geo-referenced mining lease/prospecting licenses map shall duly matched with geo-referenced vectorised cadastral maps
5. In case of forest areas, the boundary pillars shall be fixed on ground with reference to at least three permanent ground features in and around mining leases/prospecting licenses
6. The geo-referenced mining leases/prospecting licenses map shall be superimposed on latest high-resolution satellite data (cloud-free) derived from merging of Cartosat-2 and LISS-IV (Scale 1:5,000) covering an area of 500 meters from the mining lease/applied area boundary
7. The satellite data products are available from NRSC, Hyderabad. The superimposed output in the form of soft copy and hard copy should be submitted along with the Mining plan/Scheme of Mining/Progressive Mine Closure Plan and Scheme of Prospecting. The soft copy submission should be in the standard format and digitized maps should be in shape file, which can be imported in any GIS database
8. The above maps will be base for preparation of all statutory as well as working plans of the mines

This circular may be given wide publicity amongst RQPs/Mine Owners / Lessee's / Licensee's / Applicants for implementation. Further, this may be intimated to all the states.

(Source: Circular No. 2/2010, No.N-11013/3/MP/90-CCOM Vol-VII dated 06.04.2010-IBM)



Useful Links

The National Portal of Govt. of India	www.india.gov.in www.goidirectory.nic.in
The Rajasthan State Govt. Portal	www.rajasthan.gov.in
Rajasthan State Pollution Control Board	www.rpcb.nic.in
Department of Mines and Geology	www.dmg-raj.org
Central Pollution Control Board	www.cpcb.nic.in
Ministry of Environment and Forests	www.moef.nic.in
Ministry of Mines, Govt. of India	www.mines.gov.in
Indian Bureau of Mines	www.ibm.nic.in
Geological Survey of India	www.gsi.gov.in
Institute of Miners Health	www.nimh.gov.in
Institute of Rock Mechanics	www.nirm.in
Survey of India	www.surveyofindia.gov.in
Director General of Mines Safety	www.dgms.net
Federation of Indian Mineral Industries	www.fedmin.com