

HALF YEARLY COMPLIANCE REPORT

NAME OF THE PROJECT : **THANDIBERI LIMESTONE MINES OF BINANI CEMENT LIMITED**

MOEF LETTER NO. & DATE : ENVIRONMENT CLEARANCE (EC) J-11015/3/95-IA-II(M) dated 23.04.1996

ALL THE CONDITIONS OF EC HAVE BEEN COMPLIED. PRESENT STATUS OF AIR QUALITY, WATER EFFLUENT ETC. VIDE EC No. J-11015/22/2006-IA II (M) dated 10 Nov, 2006 FOR 1.065 MTPA THANDIBERI LIME STONE MINE OF BCL IS MENTIONED HEREUNDER.

PERIOD OF COMPLIANCE REPORT : **01.04.09 to 30.09.09**

COMPLIANCE TO THE STIPULATED ENVIRONMENTAL CONDITIONS OF EC DATED 10/11/2006

S. No.	Conditions	Compliance
A. SPECIFIC CONDITIONS		
1	All the conditions stipulated by the SPCB in their NOC shall be effectively implemented.	All the conditions of RPCB NOC vide letter NO. F.5(SR-107)RPCB/Gr.II/5992 dated 7/1/06 have been implemented.
2	Topsoil, if any, shall be stacked with proper slope with adequate measures and should be used for reclamation and rehabilitation of mined out areas.	Since Limestone is outcropped off the surface, there is negligible quantity of top soil available in the mine.
3	Over burden should be stacked at earmarked dump sites and should not be kept active for long period. The maximum height of the dump should not exceed 40m having three stages of 10 m each and the overall slope of the dump shall not exceed to 28 degrees. The OB dump should be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self sustaining. Compliance status should be submitted to the Ministry of Environment & Forests on six monthly basis.	The waste generated while mining is used for widening of roads & ramps. Additional quantity is dumped in the earmarked dump yards & shall be used for filling of non-mineralised valley portion to level it for future plantation & development of Green Belt.
4	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working, OB and mineral dumps. The water so collected should be utilised for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after monsoon and maintained properly. Garland drain (Size, gradient and length) shall be constructed for both mine pit and for waste dump and sump capacity should be designed keeping 50% safety	Catch drains and siltation ponds have been constructed so as not to allow flow of debris, silt & sediment into the drainage channels. Collected water is used for plantation. Garland drains have been constructed for mine pit & waste dumps which are de-silted and properly maintained, especially during rainy season.

	margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.													
5	Plantation shall be raised in an area of 55 ha including a green belt of adequate width around ML area, roads, waste dump etc. by planting the native species in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha.	<p>Green Belt development is under progress. Year wise number of trees planted are as follows:-</p> <p style="text-align: center;">Year wise plantation</p> <table border="1"> <thead> <tr> <th>Area</th> <th>Upto 2007</th> <th>Upto 2008</th> <th>Upto 2009</th> <th>Total area covered (Hect.)</th> <th>% Green Belt</th> </tr> </thead> <tbody> <tr> <td>Mines</td> <td>9265</td> <td>10265</td> <td>11265</td> <td>11.5</td> <td>8.85</td> </tr> </tbody> </table> <p>* % Green Belt – percentage of the non mineralized area + the area allocated for dumps & roads =130 Hect.</p> <p>The tree species planted are Neem, Gulmor, Serus, Jamun, Mango, Cassia, Shisham, Amalthas, Karanj, Pepal, Accassia, etc.</p>	Area	Upto 2007	Upto 2008	Upto 2009	Total area covered (Hect.)	% Green Belt	Mines	9265	10265	11265	11.5	8.85
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6	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers at suitable locations by the project proponent in and around the project area in consultation with Regional Director, CGWB. The frequency of monitoring should be four times a year – pre monsoon (April / May), Monsoon (August), post monsoon (November) and winter (January). Data thus collected should be sent at regular intervals to MoEF, CGWA and CGWB Western region, Jaipur.	<p>Ground water level & water quality is monitored as per prescribed schedule. Hydrological network has been set up.</p> <p>The Annual Report of monitoring from Post Monsoon 2006 to Post Monsoon 2007 indicates that there is no adverse impact on the quantity & quality of the static reserves of Malap Basin due to abstraction of water.</p>												
7	Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Regional Director, CGWB	<p>The conservation measures implemented till March.'09 for augmenting groundwater sources are as under :-</p> <p>(a) Construction of 6 Check Dams (2 in Amla Mine & 4 in Thandiberi Mine area)</p> <p>(b) Construction of Five Roof Top Rain Water Harvesting (RWH) schemes (2007-08).</p> <p>(C) Construction of Pond in colony to collect the entire rooftop water of residential quarters (08-09).</p>												
8	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, CGWB.	Few more water harvesting structures will be taken up in the coming years.												
9	Prior permission from the competent authority, if any, required shall be obtained for drawl of ground water.	Permission for drawl of ground water obtained from CGWA vide No. 21-4(28)/WR/CGWA/05-1567dated 28.11.2008.												

10	Blasting operation should be carried out only during the daytime. Controlled blasting should be practised. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Blasting operations are carried out ONLY during the daytime. Mitigatory measures for control of ground vibration & to arrest fly rocks are as follows: <ul style="list-style-type: none"> ◆ Blast holes are initiated by short delay Non-electric detonators. ◆ Low grain detonating fuse is used for trunk line connections. NONEL initiating system is used. ◆ Use of low velocity detonation ANFO is used to reduce ground vibration. ◆ Adequate stemming column is maintained to reduce fly rock. Ground vibrations from the studies of the blasts, conducted by Indian Bureau of Mines, Gulf Oil Co. etc. were found to be within the permissible limits.
11	Drills should be wet operated or operated with dust extractors.	Wet drilling is carried out.
12	Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.	Proper maintenance & monitoring of the mining equipment is carried out. Vehicles are loaded upto 80% of their capacity.
13	Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to MoEF and its Regional Office.	Digital processing of the entire mining area using remote sensing technique carried out in 08-09 & report submitted to MoEF in Nov'08.
14	Consent to operate should be obtained from SPCB before enhancing the production from mine.	Consent to operate has been granted by RSPCB vide letter No. F.5 (SR-47)RPCB/Gr.II/Mine/349 dated 20/10/07
15	Sewage treatment plant should be installed for the colony, ETP should also be provided for workshop and mineral separation plant waste water	STP is installed in the colony (common for Plant & Mines) The STP effluent is used for afforestation. ETP has been installed in Amlu Mine workshop. Treated water is used for Green Belt development.
16	The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as Sloth Bear, Desert Cat, Peacock etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest & Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. Copy of action plan may be submitted to the Ministry and its Regional Office within three months.	Action Plan for the conservation of flora and fauna has been prepared and is being implemented as per scheduled action plan.

17	A final mine closure plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure, for approval.	Final mine closure plan will be submitted to the MoEF 5 years in advance of final mine closure.
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B. GENERAL CONDITIONS

1	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	No change / modification shall be done without approval of the MoEF																							
2	No change in the calendar plan including excavation, quantum of limestone and waste should be made.	No change in the calendar plan will be made																							
3	<p>Four ambient air quality monitoring stations should be established in the core zone as well as the buffer zone for RPM, SPM, SO₂ and NO_x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.</p> <p>Data on ambient air quality (RPM, SPM, SO₂ & NO_x) should be regularly submitted to the Ministry including its Regional Office located at Lucknow and the State Pollution Control Board / Central Pollution Control Board once in six months</p>	<p>A total of Seven Ambient Air Quality Monitoring stations have been set up in plant & mine area. Results of Ambient Air quality monitored in south block of Thandiberi mine are as under :-</p> <table border="1"> <thead> <tr> <th rowspan="2">Parameters</th> <th colspan="3">Values in microgram per cubic meter</th> </tr> <tr> <th>Min.</th> <th>Max.</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>SPM</td> <td>275.90</td> <td>332.13</td> <td>301.31</td> </tr> <tr> <td>RPM</td> <td>121.57</td> <td>137.16</td> <td>128.51</td> </tr> <tr> <td>SO₂</td> <td>3.00</td> <td>6.00</td> <td>4.50</td> </tr> <tr> <td>NO_x</td> <td>3.00</td> <td>9.00</td> <td>6.33</td> </tr> </tbody> </table>	Parameters	Values in microgram per cubic meter			Min.	Max.	Average	SPM	275.90	332.13	301.31	RPM	121.57	137.16	128.51	SO ₂	3.00	6.00	4.50	NO _x	3.00	9.00	6.33
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4	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangements on haul roads, loading & unloading and at transfer points should be provided and properly maintained.	<p>Following measures are adopted for controlling the fugitive dust emission from various sources :</p> <ul style="list-style-type: none"> - Water spraying at the Faces/site and on haul roads. - Use of sharp drill bits & wet drilling - Provided Bag Filter at Limestone crusher. - Proper maintenance of vehicles. - Automised water spray system at LS Crusher dump hopper. 																							
5	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM etc. should be provided with ear plugs/muffs.	<p>Adequate measures have been taken to control the work place noise level within stipulated limits. Some of the measures are</p> <ul style="list-style-type: none"> - Mining equipment are provided with noise proof cabins. - Regular maintenance of noise generating machinery - Blasting operations using milliseconds detonators and cord relay to avoid high noise intensity. - Development of green belt along the roads - Workmen engaged in HEMM operation are provided with ear plugs /muffs. 																							

6	<p>Industrial waste water (Workshop & waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed in the GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil & Grease trap should be installed before discharge of workshop effluents.</p>	<p>Workshop is common for both Amli & Thandiberi mines. Effluent generated is treated in ETP & the treated effluent is used for plantation.</p> <p>Results of Mine effluent samples collected from Amli workshop are as under:</p> <table border="1" data-bbox="735 323 1513 667"> <thead> <tr> <th rowspan="2">Parameters</th> <th colspan="3">All parameters, except pH, are in mg/L</th> </tr> <tr> <th>Min.</th> <th>Max.</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.67</td> <td>7.11</td> <td>7.39</td> </tr> <tr> <td>TSS</td> <td>95.00</td> <td>60.00</td> <td>77.50</td> </tr> <tr> <td>Oil & Grease</td> <td>9.00</td> <td>2.00</td> <td>5.50</td> </tr> <tr> <td>Fluoride as F</td> <td>1.41</td> <td>0.45</td> <td>0.93</td> </tr> <tr> <td>Iron as Fe</td> <td>0.45</td> <td>NT</td> <td>0.45</td> </tr> </tbody> </table>	Parameters	All parameters, except pH, are in mg/L			Min.	Max.	Average	pH	7.67	7.11	7.39	TSS	95.00	60.00	77.50	Oil & Grease	9.00	2.00	5.50	Fluoride as F	1.41	0.45	0.93	Iron as Fe	0.45	NT	0.45
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7	<p>Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.</p> <p>Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and corrective measures, if needed.</p>	<p>Dust masks are provided to workers engaged at dust generation points like drills, loading, unloading, crushing etc. Regular training programs on OHS are conducted.</p> <p>Occupational Health Surveillance programme for workmen is done as per DGMS guidelines.</p>																											
8	<p>A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the Organisation.</p>	<p>Environment Management Cell has been set up this includes DGM (Mines), Manager (Environment), Chemist, Horticulturist, Environmental Engineer, Sample boys etc.</p>																											
9	<p>The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Yearwise expenditure should be reported to the Ministry and its Regional Office located at Lucknow.</p>	<p>Allocations made & actual expenditures incurred on Environment Management till March'08 are given in the enclosed Data Sheet. However, the capital as well as the recurring expenses incurred during the current f.y. will be reported in the next compliance report, i.e, June'09.</p>																											
10	<p>The Regional Officer of this Ministry located at Lucknow shall monitor compliance of the stipulated conditions. The project authorities should provide a set of filled-in questionnaire and EIA/EMP report to them and extend full cooperation to the Officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.</p>	<p>A set of EIA/EMP and detailed Project Report has been submitted to MoEF vide our letter BCL/ENV/MoEF/GMTS/06-07/2778 dated 19.03.2007.</p>																											
11	<p>The project authorities should inform to the Regional Office located at Lucknow as well as to the Ministry of Environment & Forests regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.</p>	<p>Date of final approval of the project : 20.06.2005 (by IDBI) Date of financial closure : 20.06.2006 Date of commencing land development work : NA (Mine is in operation since 1997)</p>																											

12	A copy of the clearance letter will be marked to the concerned Panchayat / NGO, if any, from whom suggestions / representation has been received while processing the proposal.	Copy of the clearance letter given to Amlı Village Panchayat on 18.11.2006
13	The project authorities should advertise atleast in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within 7 days of the issue of the clearance letter informing that the project has been accorded environment clearance and a copy of the clearance letter is available with the state pollution Control board and also at web site of the Ministry of Environment & Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Lucknow.	Public has been informed about grant of EC by advertisement in the Rajasthan Patrika 20 th November 2006 and Dainik Bhaskar dated 19 th November, 2006.

EVP (Operations)

DATA-SHEET

November 13, 2009

1. Project type : **Mining**
2. Name of the project : **Binani Cement Ltd., (Thandiberi Mine)**
3. Clearance letter(s)/
2006
OM No. & Dates : **No.J-11015/22/2006- IA II (M) dated 10 Nov,
for Thandiberi Limestone Mine**
4. Locations :
 - a) District(s) : **Sirohi**
 - b) State(s) : **Rajasthan**
 - c) Latitudes/Longitudes : **N 24°48'28" to 24°50'18"
E 73°08'07" to 73°08'56"**
5. Address for correspondence :
 - a) Address of concerned project chief engineer (with pin code & telephone/telex/fax nos.) : **Shri P. Acharya
CEO & Whole Time Director
Binani Cement Ltd., Binanigram
Pindwara – 307 022 , Sirohi (Raj.)
Phones: 02971 - 225005 /225012
Fax: 02971- 225020**
 - b) Address of concerned executive project engineer : **Shri Darshan Lal
Executive Vice President (Oprns)
Binani Cement, Binanigram**
6. Salient features:
 - a) of the project : Already **Submitted** vide our letter dt.19.03.07 in response to letter F.No.IV/ENV/R/Mine-22/471/2006/654 dt.22.02.07
 - b) of the environmental management plans : **Enclosed**
7. Break up of the project area :
 - a) Submergence area (forest & non-forest) : **N.A.**
 - b) Others : **Lease area of Thandiberi Mine – 254.125 hectare**
8. Break up of project affected population with enumeration of those losing houses/dwelling units only, agricultural land only, both dwelling units and agricultural land and landless labourers/artisans :
 - a) SC,ST/Adivasis : None
 - b) Others : None
 - c) Number of villages affected : None
 - d) Name & other particulars of identified area for settlement. : None
 - e) Compensation package : Nil
 - f) Budget : Nil
 - g) Status : No settlement.

(Please indicate whether these figures are based on any scientific and systematic survey carried out or any provisional figures. If a survey is carried out give details and year of survey)

Contd...2

9. **Financial details:**

- (a) Project cost as originally planned & subsequent revised estimates and the years of price reference: : 1.04 Crore
- (b) Allocations made for environmental management plans, with item-wise and year-wise break up. : Rs. 27.65 Crores (Plant & Mines)
- (c) Benefit cost ratio / internal rate of return and the year of assessment. : *Not estimated*
- (d) Whether includes the cost of environmental management as shown in (b) above : *N. A*
- (e) Actual expenditure incurred on the project so far : **Rs. 1.04 Crore** (up to 31.03.09)
- (f) Actual expenditure incurred on the environmental management plans so far : Rs. 41.52 Crore (31.03.09)
(Including Cement Plant & Amla Mines)
10. Forest land requirement : No forest land involved
- (a) The status of approval for a diversion of forest land for non-forestry use : NA
- (b) The status of compensatory afforestation, if any : NA
- (c) The status of clear felling : NA
- (d) Comments on viability & sustainability of compensatory afforestation programme in light of actual field experience so far : NA
11. The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any, with quantitative information : N.A.
12. Status of construction :
(under operation)
- (a) Date of commencement (actual and /of planned) : 24/07/1995
- (b) Date of completion (actual and /or planned) : 31/03/1997
13. Reasons for the delay if the project is yet to start : NA
14. Environmental clearance condition wise compliance report : Attached as Annexure-II

Signature with Seal

BINANI CEMENT LIMITED

Capital Investment for environment Management plans for the Existing and New plant (Entire facilities) is Rs. 2765 Lacs & Rs. 7267 Lacs respectively while the recurring cost per annum for existing & New plant (Entire facilities) are estimated as Rs. 159.7 Lacs & 218 Lacs respectively.

Additional capital investment on environment protection management for Thandiberi Mine will not be required as the facilities already exist for the same. However, the details of recurring cost on environment management for the increased mining are as follows:

S.No.	Particulars	Total Cost (Rs. in Lacs)
1	Pollution Control	01
2	Pollution Monitoring	01
3	Occupational Health	02
4	Green Belt Development (Mine & Township)	02
5	Reclamation & Rehabilitation of mined out area	01
Total		07