

MINUTES OF THE 74TH MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE (SEAC), JHARKHAND HELD ON 10TH, 11TH & 12TH JULY, 2019

The 74th meeting of State Level Expert Appraisal Committee (SEAC), Jharkhand was held on 10th, 11th & 12th July, 2019 under the Chairmanship of Sh. K.P. Bhawsinka in the Conference Room at SEAC, Ranchi.

The following members were present :

1. Sri K.P. Bhawsinka - Chairman
2. Dr. B.K. Tewary - Member
3. Dr. V.P. Sinha - Member
4. Sri Y.K. Singh - Member
5. Sri S.P. Srivastava - Member
6. Dr. R.V. Singh - Member
7. Sri M.S. Bhagwat - Member
8. Sri U.P. Singh - Member
9. Sri Om Prakash - Member Secretary

Dr. R. N. Singh, Member, SEAC could not attend the meeting due to personal reason.

SEIAA forwarded various projects to the SEAC for the technical appraisal after the last SEAC meeting held on 12th, 13th & 14th June, 2019. These projects have been put up for discussions. Besides, these Projects, wherein PP's were asked to provide requisite informations / clarifications in SEAC earlier meeting, were also considered for appraisal. The Project Proponents have been asked to make technical presentation for the appraisal of their projects before the committee.

The following observations /recommendations were made during the presentation (Project -wise), as under:-

Day 1 : July 10, 2019 [Wednesday]

• **Discussion on matter related to :**

- i. **"Smart City Project" of M/s Ranchi Smart City Corporation Ltd. at Vill. Latma, Jaganathpur, Kalyanpur, Kachnartoli, Hatia, Tehsil- Namkum, Ranchi.**

The committee is of view that the standards for treated sewage has been prescribed by CPCB. Thereafter, PP should adopt the Sewage Treatment Technology as to comply with prescribed sewage treatment standard best suited to him.

Chairman, SEAC opinion :

The discussion were held in response to PP letter dated 18.06.19 for issuance of SBR as EC condition over MBBR component of technology for their proposed STP which has been requested for change of EC condition.

The Committee felt that the standards for ETP discharge to various discharge points are very well in existence which PP has to compulsorily comply with irrespective of technology package deployed. The PP should have explained the treatment processes & unit operations involved for creation of effluent treatment infrastructure to be created as part of their

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technology components to achieve the prescribed limits. The PP & their Technology Provider should have explained the basis as to SBR should be used and why not MBBR.

The committee feels that conventional SBR deploys plug-flow reactor for reducing certain parameters as part of primary and secondary treatment of effluents and accordingly unit operations sizes are determined and has certain limitations in removal of coarser particles which the MBBR is capable. In addition, the quantum of activated sludge likely to be generated, recycled, method deployed for processing of activated sludge & disposal off surplus sludge, type of reactor to be used and likely kinetics inside the reactor for achievement of discharge standards. SEAC observed that if necessary a presentation by the technology provider and engineering designers may be made for the proposed changes.

ii. New All India Institute of Medical Science (AIIMS) of M/s National Building Construction Corporation Ltd (NBCC) at Vill. : Utimpur, Sultanpur and Rampur, Thana : Deoghar, Dist. : Deoghar.

This discussion note is in respect of the EC granted to the AIIMS of NBCC, Govt. of India at Deoghar earlier by SEAC/SEIAA and an observation received at SEIAA Office.

In this regard the SEAC discussed the matter in this meeting and opines that NBCC is a Central Government organization has been entrusted to works relating to complete Planning, Designing, Execution / Construction of Buildings and Estate services, Furniture, IT (Networking), Commissioning including maintenance (during defect liability period) etc under EPC Contract mode for All India Institute of Medical Sciences at Devipur, District Deoghar, Jharkhand under 'Pradhan Mantri Swasthya Suraksha Yojna' (PMSSY). This is a turnkey basis on the terms and conditions set forth and where as the Executing Agency has agreed to undertake and complete the work accordingly. vide letter no. Z-28016/96/2018-PMSSY-III dt. 15.10.2018 of Ministry of Health & Family Welfare, Govt. of India. Based on this an Agreement has been signed by both the parties, which was submitted earlier with the documents to SEIAA / SEAC.

Thus, as per the above SEAC found that NBCC has been given the responsibility of all the services viz. the maintenance and compliance of all the statutory condition including the EC compliance, too.

In this regard there exists a number of examples as shown in attached NGT Judgment in O.A no. 142/2014, wherein all the issues raised are explained. The MoEF&CC and DPCL (Delhi Pollution Control Committee) had awarded the EC to NBCC only & thereby the decision is upheld by the Hon'ble NGT.

SEAC had rightly considered the purpose for appraisal as Cat. 8(a), as the area falls under a Building Project for Hospital Building which is as per MoEF&CC OM-F no. 22-34/2018-IAIII dated 04.01.2019.

SEAC finally does not find any reason to revisit the decision taken earlier.

• **Matter referred by SEIAA :**

i. Parsabad Sand Ghat of M/s JSMDCLtd. at Vill. : Parsabad, P.O. : Parsabad, P.S. : Jainagr, Dist : Koderma (4.5 Ha Ha).

The project proponent did not attend the meeting. The committee recommends to defer this proposal to the next meeting.

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12/7/19 *[Signatures]* 2 *[Signatures]*

- ii. **Bhartidih Sand Mining of M/s JSMDL Ltd. at Vill. : Bhartidih, P.S. : Devipur, Dist : Deoghar (4.65 Ha).**

The project proponent did not attend the meeting. The committee recommends to defer this proposal to the next meeting.

• **Consideration of Proposals**

- i. **Pahartoli Sand Mining Project of Sri Anil Kumar Gupta at Vill. : Pahartoli, Thana – Basia, Dist.- Gumla (5.66 Ha).**

The project proponent did not attend the meeting. The committee recommends to defer this proposal to the next meeting.

- ii. **Simariya Stone Deposit of M/s Pawanputra Stone Works, Vill. : Simariya, Thana : Jirwabari, Dist. : Sahibganj (6.07 Ha)**

The PP & consultant of the project are absent in the scheduled SEAC meeting for appraisal. They were not appearing since 65th meeting dated 07-09.01.2019, 66th meeting dated 29-31.01.2019, 67th meeting dated 25-27.03.2019, 68th meeting dated 14-15.03.2019, 72nd meeting dated 27-30.05.2019 & 73rd meeting dated 12-14.06.2019.

So, the SEAC request the M.S, SEAC to serve him notice for appearance in the next meeting, failing which SEAC would recommend for delisting of the instant project.

- iii. **Chito Stone Deposit of M/s Harshraj Mining LLP (Shri Abhishek Kumar), Vill. : Chito, Tehsil : Patratu, Ramgarh (3.205 ha).**

(Proposal No. : SIA/JH/MIN/32765/2019)

This is a Stone Mining Project with an area of 3.205 Ha [Khata no. 17, 22, 14, 13, 40, 24 & Plot No.-267 (P), 268, 269, 270 (P), 271 & 273 (P)]. The latitude and longitude of the project site is 23° 35' 05.72" N to 23° 35' 13.43" N and 85° 22' 27.86" E to 85° 22' 35.52" E. The expected life of mine is 9 years. The nearest railway station is Bhurkunda at a distance of 6 km, nearest Highway is 6.0 km and the nearest airport is Ranchi at a distance of 31 km . Total water requirement is about 5.8 KLD (Drinking & Domestic use : 1.2 KLD, Development and Dust Suppression : 3.6 KLD & Green Belt development : 1.2 KLD, will be taken from nearby village.

The project cost of Rs 40 Lakh and a provision of Rs3.60 Lakh has been indicated for Environment management. Budget for Corporate Environmental Responsibility (CER) is Rs. 1.00 Lakh

The details of mine capacity as per Approved Mining Plan are

Proved Mineral Reserve	:	23,46,750t
Probable Mineral Reserve	:	3,20,850t

Year-wise Production as per Approved Mining Plan Report for five years is as follows

1 st Year	:	3,00,000 t
2 nd Year	:	3,00,000 t
3 rd Year	:	3,00,000 t

4th Year : 3,00,000 t
5th Year : 3,00,000 t

The daily production as per Form-I is 1000 t.

DFO, Ramgarh vide letter no. 2482, dated 29.09.18 certified that the distance of notified forest is 260 m from battery point of proposed project site & not within 10 km from National Park, Bio-Diversity & Wildlife Sanctuary and proposed project is not situated in any Eco Sensitive Zone. The CO, Patratu vide letter no. 2052, dated - 12.10.18 has mentioned the class of land is Raiti & Gairmajrua in R.S. Khatiyana and not recorded as Jangal Jhari.

DMO, Ramgarh vide memo no. 306, dated 26.02.19 certified that no other lease is exists within 500 m radius from proposed project site.

In the earlier presentations held on 27-30.05.2019 PP was asked to submit a clarification of the concerned DC wherein LOI has been issued as the mining site is not included in DSR.

The PP has submitted the required clarification / document from the DC, Ramgarh (letter no. 651, dated 10.06.19) requesting Member Secretary, SEIAA to incorporate the details of the project in DSR.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for **Chito Stone Deposit of M/s Harsbraj Mining LLP (Shri Abhishek Kumar), Vill. : Chito, Tehsil : Patratu, Ramgarh (3.205 ha)** be recommended for consideration of SEIAA for grant of EC, in the light of DC, Ramgarh aforesaid letter dated 10.06.19. The various conditions for grant of EC is enclosed as **Annexure - I**.

iv. **Nildaha Stone Mine Project of M/s Jamtara Traders at Vill. : Nildaha, Mihijam, Jamtara (5.87 Ha).**

The PP & consultant of the project are absent in the scheduled SEAC meeting for appraisal. They were not appearing since 67th meeting dated 25-27.03.2019, 69th meeting dated 01-03.04.2019, 72nd meeting dated 27-30.05.2019 & 73rd meeting dated 12-14.06.19.

So, the SEAC request the M.S, SEAC to serve him notice for appearance in the next meeting, failing which SEAC would recommend for delisting of the instant project.

v. **Tepsa Stone Mine Project of Sri Raj Kishore Prasad at Vill. :Tepsa, Ichak, Hazaribagh (8.5 Ha).**

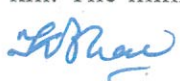
The project proponent did not attend the meeting. The committee recommends to defer this proposal to the next meeting.

vi. **Serka Brick Earth Mining of M/s Sadhu Bricks (Prop :Sri Sadhu CharanSahu) at Vill. : Serka, P.O. :Harup, P.S : Bishunpur, Dist. : Gumla (0.64 Ha).**

(Proposal No. : SIA/JH/MIN/33626/2019)

This is a Brick Earth Mining with an area of 0.64 Ha [Khata no. : 01&Plot No. :1642 & 1643]. The latitude and longitude of the project site is 23° 22' 48.21" N and 84° 24' 7.77" E The nearest railway station is Lohardaga at a distance of 50 km and the nearest airport is Ranchi at a distance of 110 km. The mining operation will need 1.50KLD (Potable water 1.00 KLD and Brick Moulding 0.50

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KLD) of water which will be drawn from open well located close to lease area. It is proposed to mine 07.50 m³ of clay per day or 187.50 m³ / month or 1500 m³/year. Mine will operate for 8 months in a year & bricks will be moulded & dried on mine site and transported to brick kiln proposed at nearby the lease area. It is estimated that 3000 bricks /day will be made, which works out to 6.00 bricks per annum.

The project cost is Rs12.25 Lakh and a provision of Rs3.70 Lakh have been projected for Environment management. Budget for CSR is total of Rs. 15.00 Lakh

With a minerals of soil reserves (resource) of 12,012 m³, the leasehold area will be capable of supplying the brick earth for brick making for around 7.7 say 8 years.

Year-wise Production of brick clay / soil as per Approved Mining Plan Report for five years is as follows

Year	Production of Brick clay / soil	Nos of Bricks Proposed
1 st Year	1560 cum	6,00,000
2 nd Year	1560 cum	6,00,000
3 rd Year	1560 cum	6,00,000
4 th Year	1560 cum	6,00,000
5 th Year	1560 cum	6,00,000
Total	7800	30,00,000

DFO, Lohardaga vide letter no. 1398, dated - 09.02.19 certified that the distance of notified forest is 500 m from battery point of proposed project site & not within 10 km from National Park, Bio-Diversity & Wildlife Sanctuary and proposed project is not situated in any Eco Sensitive Zone.

DMO, Gumla vide memo no. 1183, dated 26.11.18 certified that no other lease is exists within 500 m radius from proposed project site.

The CO, Vishunpur vide letter dated -15.01.19 has mentioned the class of land is not recorded as Jangal Jhari in Khatiyan & Register -II, however plot no. of the project site is not mentioned in certificate, besides certificate does not bear letter no. & date, so clarification is needed.

The proposal was presented in SEAC on 16-17.05.19 in which requisite documents were sought as under -

The CO, Vishunpur vide letter dated -15.01.19 has mentioned the class of land is not recorded as Jangal Jhari in Khatiyan & Register -II, however plot no. of the project site is not mentioned in certificate, besides certificate does not bear letter no. & date, so clarification is needed.

Besides, the DSR of the district has not incorporated the said brick earth mining site, accordingly clarification is required.

The PP has submitted the required certificate from the CO, Vishunpur (letter no. 199, dated 17.06.19) regarding class of land.

PP presented that the DSR for brick-soil mining is not to be prescribed as soil is mostly present in all places & not always suitable. The brick manufactures of Jharkhand therefore adds suitable soil brought from other places.

SEAC opines brick earth is a minor mineral and as per MoEF & CC notification dated 25.07.19 all minor minerals needs DSR.

Thus, PP may get a clarification from concerned DC.

Once the requisite certificate is submitted to SEAC, it will examine the case.

vii. **Rehra Stone Mine of Sri Mukesh Kr. Singh, Vill. : Rehra, Tehsil : Chhatarpur, Dist. : Palamau (1.33 Ha).**

(Proposal No. : SIA/JH/MIN/37878/2019)

This is a Stone Mining Project with an area of 1.33 Ha [Khata no. 17, Plot No.- 119]. The latitude and longitude of the project site is 24° 21' 35.7" N to 24° 21' 36.5" N and 84° 09' 25.90" E to 84° 09' 32.5" E. The nearest railway station is Japla at a distance of 45 km and the nearest airport is Gaya at a distance of 125 km . Total water requirement is 2.047 KLD. Water requirement will be met through boring a bore hole, pumping arrangement and overhead tanks as well as pit sump and settling tanks. Water is required for sprinkling on haul roads, watering of plants and drinking water for workers.

The indicated project cost is Rs 45.00 Lakh and a provision of Rs 5.00 Lakh has been indicated for Environment management.

The details of mine capacity as per Approved Mining Plan are

Proved Mineable Reserve	:	5,64,582 tonne
Probable Mineable Reserve	:	63,376 tonne

Year-wise Production as per Approved Mining Plan Report for five years is as follows

1 st Year	:	56,100.60 tonne
2 nd Year	:	56,100.60 tonne
3 rd Year	:	56,100.60 tonne
4 th Year	:	56,100.60 tonne
5 th Year	:	56,100.60 tonne

The daily production as per Form I is 187 tonne.

DFO, Medininagar vide letter no. 4142, dated – 01.09.18 certified that the distance of notified forest is 255 m from proposed project site. Dy. Director, Palamau Tiger Project, North Division, Medininagar vide letter no. 981, dated - 28.05.19 certified that not within 10 km from National Park, Bio-Diversity & Sanctuary and proposed project is not situated in any ESZ.

DFO, Medininagar vide letter no. 1211, dated – 16.04.19 certified that the proposed site is not under the No Mining Zone.

The CO, Chhatarpur vide letter no. 579, dated – 24.08.18 has mentioned the plot no. of the project is not recorded as “Jangle Jhari” in the R.S. Khatiyani & Register –II.

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DMO, Palamau, Medininagar vide memo no. 532, dated 30.03.19 certified that any other lease is not within 500 m radius from proposed project site.

The DSR of the district available in the SEIAA / SEAC office, is not encompassing the project site.

Thus, the M.S, SEAC will get clarification from the DC, Palamau on this issue. Once the reply is received, SEAC would consider.

viii. **Expansion of Coke Oven Plant of M/s Amit Coke Industries at Vill. : Gahira, Dhanbad.**

The project proponent did not attend the meeting. The committee recommends to defer this proposal to the next meeting.

Day 2 : July 11 & 12, 2019 [Thursday & Friday]

• **Consideration of Proposals**

i. **Proposed 1x 30 MW Coal based Captive Power Plant within Existing 4.6 MTPA Cement Grinding Unit of M/s Nuvoco Vistas Corporation Ltd at Vill. : Jojobera, P.O. :Rahargora, Dist. : E. Singhbhum.**

(Proposal No. : SIA/JH/THE/20890/2017)

M/s Nuvoco Vistas Corporation Ltd proposes for installing 1x30 MW Coal based Captive Power Plant within existing 4.6 MTPA Cement Grinding Unit at Vill.: Jojobera, P.O.: Rhargora, Dist.: East Singhbhum. Proposed CPP will be established over an area of 7.41 acres which is within the existing total plant area of 122.82 acres & no extra land is required.

As per EIA notification, 2006, this project falls under S. No. 1(d) for CPP under Thermal Power Plant as Category B. Accordingly proposal for ToR for undertaking EIA / EMP study for proposed project was applied to SEIAA, Jharkhand. The proposal was presented before the 51st SEAC meeting held on 17th and 18th January, 2018 and recommended to SEIAA for grant of ToR. The ToR was granted by SEIAA vide letter no. EC/SEIAA/2017-18/2063/2017/70, dated 04.04.2018 and the final EIA & EMP was submitted by PP to SEIAA on 22.04.19. The proposal was forwarded to SEAC by SEIAA on 22.04.2019.

Salient Feature :

1.	Name of the Project	Proposed 1x30 MW Coal based Captive Power Plant within existing 4.6 MTPA Cement Grinding Unit at Village- Jojobera, East Singhbhum.
2.	Name of the company	M/s Nuvoco Vistas Corp. Ltd
3.	Area of plant	7.41 Acres Within existing premises of 122.82 Acres
4.	Location	Plot no. 5758, 5759 (P) and 5762 (P), Vill. : Jojobera, Dist. East Singhbhum Latitude 22° 44'59.47"N to 22° 45'38.15"N and Longitude 86° 14'13.85" E to 86° 15'01.21" E

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5.	Proposed capacity	1x30 MW Captive Thermal Power Plant
6.	Cost of project	163.28 Crore
7.	Fuel requirement	Indian Coal – 146578 TPA (100% Indian) or Imported Coal – 79893 TPA (100% Imported) or Fuel mix of above two.
8.	Man Power requirement	Proposed manpower for CPP – 43 and contractual workers – 24
9.	Water requirement	606 m ³ /day for CPP Source – JUSCO (within the existing agreement)
10.	Power requirement	2000 KW – start-up power. Power source from JUSCO.
11.	Nearest Railway Station / Airport along with distance in KMS	Tatanagar Railway Station – 4.0 KM Sonari Airport, Jamshedpur – 12.5 KM Ranchi Airport – 112 KM
12.	Nearest Town, City, District Headquarters along with distance in kms.	Jamshedpur (approx. 9 km in NW direction).

Land use breakup

Sl. No.	Particulars	Area in Acres		Total area in Acres
		Existing	Proposed	
1.	Clinker Grinding Unit	64.36		64.36
2.	CPP	-	7.41	7.41
3.	Greenbelt / Plantation	40.53		40.53
4.	Railway Siding	10.52		10.52
Total				122.82

DCF & Field Director, Elephant Project, Jamshedpur vide letter no. 84, dated - 01.02.18 certified that the distance of notified forest is 10,020 m from battery point of proposed project site & not within 10 km from National Park, Bio-Diversity & Wildlife Sanctuary and proposed project is not situated in any Eco Sensitive Zone. The CO, Jamshedpur vide letter no. 980, dated - 12.04.19 has mentioned the class of land is not recorded as Jangal Jhari in R.S Khatiyani.

Environment Clearance for expansion of the existing cement grinding unit from 4.6 MTPA to 6.6 MTPA has already been granted by SEIAA, Jharkhand vide letter no. EC/SEIAA/2016-17/2001/2017/99, dated 08.05.2018.

The process of project is proposed as CFBC based coal fired thermal power plant. The configuration of proposed plant is as below:

A	Steam Generator
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	a.	No. and ratings of Boiler	1 no. with Maximum Continuous rating 130 tph & ~540°C
	b.	Type of Boiler	CFBC
	c.	No. of Boiler fans	2 x 60 % duty for ID & SA & SA Fan
	d.	Type of Atmospheric pollution control system	Electro static precipitators with outlet dust concentration less than 30 mg / Nm ³ & SOx as 100mg/Nm ³ by considering FGD
B	Steam Turbine Generator		
	a	No. and ratings of turbine	1 no. for each unit of inlet parameters, 107 kg & 535°C
	b	Type	Extraction cum condensing type
	c	Total flow	130 TPH
	d	Capacity	1 x 30 MW MCR
	e	No of controlled extraction	2 Nos HP, 1 No MP, 1 No LP
	f	Type of exhaust order of cooling	Air cooled condenser

Raw material requirement of the project, their source and transportation is as below:

Raw Materials	Source	Transportation	Requirement MTPA
Coal	Open Market	Rail / Road	Indian Coal – 146578 TPA (100% Indian) or Imported Coal – 79893 TPA (100% Imported) or Fuel mix of above two
LDO/ HSD	IOCL/HPCL etc. Local depots	Road	80 KL/Yr

Management Plan for Solid Waste generated from the proposed project will be as given below:

Item	Quantity Per Annum	Unit	Mode of Transport	Mode of Disposal
Fly ash	52768	Ton	Pipeline	Use in existing cement section
Bottom ash	13192	Ton	Covered Trucks/Closed bulkers	Brick/Block Manufacturer or used inhouse
Used Oil	1.6	KL	Covered Trucks In drum	Registered recyclers (as per Hazardous and other waste and Management Rules 2016)

Baseline Environmental Studies were conducted during winter season i.e. from December 2017 to February 2018. AAQ monitoring at 8 locations indicates that the concentration of PM₁₀ ranges from 61.56 µg/m³ to 83.50 µg/m³ and average PM_{2.5} data ranges from 30.16 µg/m³ to 44.15 µg/m³. Also average SO₂ is in ranges from 4.29 µg/m³ to 15.31 µg/m³, average NO₂ data ranges from 9.98 µg/m³ to 19.38 µg/m³, CO data ranges from 0.32 mg/m³ to 0.65mg/m³. Concentrations of the AAQ parameters were within NAAQS limits. The result of the modeling study indicates that the maximum increase of GLC for the proposed project is 4.37 µg/m³ with respect to the PM₁₀, 2.73 µg/m³ with respect to the SO₂ & 3.31 µg/m³ with respect to the NO_x.

Ground Water Quality has been monitored in 8 locations in the study area and analysed. All parameters also found within the limits of IS:10500. Surface water Quality has been monitored in 4 locations in the study area and analysed. Parameters values ranged from - pH 6.68 to 7.26; DO 5.1 to 5.4 mg/l and BOD: 2.4 to 2.8 mg/l. All parameters also found within the limits of "Class - C" surface water.

Noise levels are in the range of 38.5 to 53.0 dB(A) for daytime and 30.9 to 42.8 dB(A) for night time.

There is no human populations residing in the core zone of the project. No R&R is involved. It has been envisaged that no families are to be rehabilitated for the project.

Public hearing for the project was conducted on 18.12.2018 by JSPCB at venue Tube Makers Club, Namdih Road, Gayatri Nagar, Nildih, Jamshedpur, District- East Singhbhum in the chairmanship of Additional District Magistrate (Law and Order). The issues raised by the public and response of the project proponent with action plan has been provided.

Budget for CER has been revised to Rs. 147.95 Lakhs (as per MOEF & CC, O.M. dated 01.05.2019) for implementing Enterprise Social Commitment.

Proposed CER/ESC Activities (based on public hearing issues and need based):

Sl. No.	Proposed Programme	Amount (Rs in Lakh)
1	Educational Promotion Programme	35.75
2	Health And Family Welfare Programme	22.00
3	Sustainable Livelihood Training/Skill Development	32.70
4	Infrastructure Development	43.50
5	Need Based Assessment -- Community Green Belt Development	14.00
	Total	147.95

Proposed ESC activities will be implemented within a span of 5 years along with implementation of the plant.



The Capital Cost of the Project is Rs. 163.8 Crores and the capital cost for environmental protection measures is proposed as Rs. 30.95 Crores. The annual recurring cost toward the environmental protection measures is proposed as Rs. 6.10 Crores. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Sl.	Particulars	Time frame (implementation)	Capital cost (Rs. Lacs)	Recurring cost (Rs. Lacs/annum)
1	Air pollution control <ul style="list-style-type: none"> • Covered Shed, Sprinklers • ESP, BAG Fiter • Fugitive emission control • FGD System etc. 	12-18 month after CTE	1950	210
2	Water pollution control <ul style="list-style-type: none"> • Waste water management • Rain water harvesting • Bunding along yards / storage • Conservation measures etc. 	12-18 month after CTE	560	115
3	Noise pollution control <ul style="list-style-type: none"> • Providing isolation to high noise equipments • Noise barriers as required 	12-18 month after CTE	90	30
4	Solid waste management <ul style="list-style-type: none"> • Boundry of area, water sprinklers • Proper storage and handling system of ash & other waste 	2 – 3 month after CTO	125	40
5	Environment monitoring <ul style="list-style-type: none"> • In house laboratory and • Capacity building for monitoring & analysis 	1 – 2 month After CTO	110	35
6	Occupational health	1 year after CTO	140	70
7	Green belt & plantation	1 - 5 years after CTE	120	110
Total			3095	610

Note - Implementation of above EMP will be carried out along with installation of plant and completed prior to commissioning except for the Occupational health & Green Belt.

There is no court case or litigation relating to environment against the unit.

DCF & Field Director, Elephant Project, Jamshedpur vide letter no. 84, dated - 01.02.18 certified that the distance of notified forest is 10,020 m from battery point of proposed project site & not within 10 km from National Park, Bio-Diversity & Wildlife Sanctuary and proposed project is not situated in any Eco Sensitive Zone. The CO, Jamshedpur vide letter no. 980, dated - 12.04.19 has mentioned the class of land is not recorded as Jangal Jhari in R.S Khatiyar.

The proposal was presented in SEAC on 27-30.05.19 in which requisite documents were sought as under -



- (i) Satisfactory compliance of MoEF site visit report to be provided, authenticated by date & further commitment as a number of quarries are partially complied – (VI)
- (ii) Office order of Environment Management Cell not be provided as per condition- (VII)
- (iii) Public hearing – the replies to point (2) – Educations – is not clear, the answer should be specific with implementable action plan and time line & realist budget estimate be submitted.
- (iv) The replies to social program in 4 needs more clarity.
- (v) CO report- Thick population resides within 150 m. PP should submit the data on number of families, exact population & their socio economic status be furnished along with impact of expansion project.
- (vi) ToR point - (15) – Topography mentioned as gently undulating, whereas DEM quotes – elevation ranges from 165 – 215 m. AMSL.- Please clarify.
- (vii) ToR point - (17) – A certificate may be necessary from the competent authority that the site is not in any mineralized zone.
- (viii) A copy of MOU of brick manufacturer be submitted.
- (ix) Spillage of Ash has been reported in public hearing comment of villagers, please clarify the zero discharge system. A written commitment from PP is needed.
- (x) ToR point – 24 – The document provided is of March 23rd, 2002. An up to date certificate be submitted specifying the expansion requirement.
- (xi) ToR point – 32 – No data provided on tribal population.
- (xii) ToR point – 51 – Correct selection of plant species be provided & green belt be developed in association with Forest Deptt., as

The documents related to the above mentioned discrepancies has been submitted by the PP on 18.06.2019.

Based on the presentation made and information provided, the Committee decided that the proposal for **Proposed 1x 30 MW Coal based Captive Power Plant within Existing 4.6 MTPA Cement Grinding Unit of M/s Nuvoco Vistas Corporation Ltd at Vill. : Jojobera, P.O. :Rahargora, Dist. : E. Singhbhum** be recommended for consideration of SEIAA for grant of EC. The various conditions for grant of EC is enclosed as **Annexure - II**.

ii. **“Ashiana Aditya” of M/s Ashiana Housing Ltd, Vill. : Asangi, Tehsil :Adityapur, Dist. : Saraikela.**

(Proposal No. : SIA/JH/NCP/75825/2018)

The project is a construction project and falls under Category 8(a) of Building and Construction Project as per EIA notification dated 14th September 2006.

The proposed site is located in Khata no. : 1, Plot no. : 266 (P) & 608 (P), Khata no. : 11, Plot no. : 613 (P), Khata no. : 12, Plot no. : 609 (P), 610 (P), 611, 612, 616 (P), 617, 618 (P) & 619, Asangi Village, Tehsil & District- Adityapur, Kharsawan, Jharkhand. The site is accessible from SH-05 at the distance 0.5 km from the project site in West direction. The proposed Project is a residential Project of Ashiana Housing Limited. The proposed project location is at a distance of 2.6 km from Gamharia Railway junction in the West direction. The nearest airport from the project site is Sonari Airport at a distance of 4.73 km, in the North-East direction. The location coordinates of the proposed project is given below :

Latitude and Longitude of the projects :

12

ns, RD, W, (le)

S. No.	Description of point	Latitude	Longitude
1.	A.	22°47'39.95"N	86°7'40.55"E
2.	B.	22°47'39.70"N	86°7'41.21"E
3.	C.	22°47'35.72"N	86°7'40.16"E
4.	D.	22°47'36.86"N	86°7'42.00"E
5.	E.	22°47'33.74"N	86°7'46.24"E
6.	F.	22°47'32.69"N	86°7'45.09"E
7.	G.	22°47'31.58"N	86°7'43.00"E
8.	H.	22°47'32.06"N	86°7'40.57"E
9.	I.	22°47'33.63"N	86°7'37.72"E
10.	J.	22°47'37.05"N	86°7'37.98"E
11.	K.	22°47'37.17"N	86°7'39.37"E

The proposed project is planned to be developed over an area of 7.0 acre (28325.33 m²) & total built-up area is 76331.56 m². Parking and community facilities for the residential occupants will be provided. Development of greenbelt has been planned over an area of 6369.68 m².

The proposed area is vacant land and will be converted into Residential Complex. The total plot area is 7.00 acre (28325.50 m²). The break-up of existing and proposed land use are given below in

Existing and proposed land use of Proposed Project

Sl. No.	Description	Area (m ²)
A. Existing Land use		
A-1	Total Plot Area (as per land document)	28325.50
A-2	Total plot area	28325.33
Ground Coverage Breakup		
Sl. No.	Description	Unit wise area (m ²)
B.1	Total Built-up Area	76331.56
B.2	FAR Permissible as per By laws (2.50)	70813.33
B.3	FAR Purchased	0
B.4	FAR Achieved	60988.98
B.5	Ground Coverage Permissible (35%)	9913.87
B.6	Ground Coverage Achieved (21.27%)	6025.2
Ground Coverage Breakup		
	A-1 Block	2083.30
	B-1 Block	2083.30
	BLOCK D-1(Club house)	868.63
	BLOCK E-1 (EWS)	385.87
	C BLOCK-1 (Residential)	604.10
B.7	Green Area	6369.68
B.8	Open Parking Area	3585
B.9	Road Area/ Paved Area	12345.45
B.10	Total No. of blocks	5
B.11	No. of Floors	Basement +Half stilt+12th floor
B.12	Height of Building upto Terrace Level	38.8
B.13	2 BHK unit	200
B.14	3 BHK unit	250
B.15	Total No. of Dwelling Units	450
B.16	Total No. of LIG	90

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B.17	Total No. Parking Provided	526 Cars and 305 Scooter
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Post-project Level of Service: The Total parking space provided in the project will be 7185 m². The PCU for the project is 628. Assuming 80% vehicles leave during morning, the additional vehicles are 502.

Resultant Level of Service :

Location	Existing PCU / day	Additional PCU / day	Total PCU / day	Road Type	C = Suggested design capacity in PCU / day	V/C ratio	LoS as per IRC
T1: Adityapur Chaibasa road (SH-05)	567	202	769	2 lane divided	1200	0.64	D
T2: Towards Jamshedpur	628	300	928	2 lane divided	1200	0.77	D

- **Water requirement :**

Construction Phase : The water requirement for construction phase will be 7KLD. The Source of water will be private tanker.

Operation Phase: The Total water demand during operation phase will be 420 KLD which include 251 KLD fresh water and 169 recycled water. The source of water will be Adityapur Municipal Corporation.

- **Power requirement :**

Construction Phase : During construction phase power requirement will be 75 KW. The supply will be JUSCO.

Operation Phase: The maximum connected load in the operation phase will be 3365 KW and the maximum demand will be 1584 kVA. The power will be sourced from JUSCO.

Power Backup: The power back-up will be provided by 2 DG sets each of capacity 350 and 380 KVA.

- **Waste water Treatment & Disposal :**

Operation Phase: The total wastewater generation is 305 KLD. A STP of capacity 350 KLD will be installed for treating the wastewater generated from the project.

- **Solid Waste Management :**

Construction Phase: The municipal solid waste generation during the construction phase at the proposed project site will be segregated in terms of Bio-degradable and inert waste. The segregated waste will be transported to nearby waste dumping site by the contractor.

Operation Phase: The solid waste generation during the operation phase will be 522.35 Kg per day. The solid waste will be collected by the Adityapur municipal Corporation (AMC).

- **Rain Water Harvesting**

The water from rainwater harvesting pits will be directly sent to the groundwater through recharge pits. The rainwater collected from the rooftop and other paved areas within the project area will be

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conveyed into the rainwater harvesting system consisting of de-silting-cum-filter chamber, oil & grease separator and recharge pit with bore-well for recharge into the groundwater. The total runoff that needs to be managed is 762m³/hr. Hence, it is proposed to have 7 RWH pits. The Length, width and depth of the recharge pits is 5.0m, 2.2m and 2.5m respectively.

Project cost & Corporate Environmental Responsibility

The estimated cost of the project is Rs. 126.71 Crore. The company intends to spend an amount of Rs. 35 lac approximately in building up infrastructure of a Govt. School along with other developmental works, children education and skill training.

DFO, Saraikela vide letter no. 922, dated - 14.05.2018 certified that the distance of notified forest is 8 m from battery point of proposed project site & not within 10 km from National Park, Bio-Diversity & Wildlife Sanctuary and proposed project is not situated in any Eco Sensitive Zone. Though this project comes under infrastructure category 8 (a) where in general condition is not required, SEAC deliberated that there is a need of buffer zone to be created for better conservation of forest & ecology of the area.

The CO, Gamharia vide letter no. 667, dated - 06.06.2019 has mentioned that the proposed site is not recorded as Jangal Jhari in R.S. Khatiyani & Register II.

The proposal was presented in SEAC on 27-30.05.19 in which requisite documents were sought as under -

- (i) *CO certificate regarding class of land of project site as well as approach road (recorded as Jangal Jhari or not) be modified and submitted.*
- (ii) *Distance from forest boundary is 8 m only & separated by a seasonal Nalla in the project plan and the distance from building plan to the forest boundary is 26 m & 31 m. This intervening area be made as green belt (Buffer zone). For this an undertaking that area will be made a green belt, along with the requisite permission from the concerned DC.*
- (iii) *Environmental cost should include in the cost for buffer zone plantation.*
- (iv) *The DG set should be relocated away from forest.*

The documents related to the above mentioned discrepancies have been submitted by the PP on 10.06.19.

~~Based on the satisfactory presentation made and information provided, the Committee decided that the proposal for "Ashiana Aditya" of M/s Ashiana Housing Ltd, Vill. : Asangi, Tehsil : Adityapur, Dist. : Saraikela be recommended for consideration of SEIAA for grant of EC. The various conditions for grant of EC is enclosed as Annexure - III.~~

iii. Proposed Rehabilitation & Resettlement Package for HEC Displaced Persons of M/s Greater Ranchi Development Agency Ltd. (GRDA) at Site 1, HEC area, Vill. : Aani, Dhurwa, Ranchi. (Proposal No. : SIA/JH/NCP/22997/2018)

The Project Proponent (Executive Engineer, Building Construction Deptt., Jharkhand, Ranchi) has submitted request letter no. 877, dated 10.07.2019 wherein he has submitted that the Building Construction Deptt. has not formally appointed NABET accredited consultant.

Accordingly, the PP may be allowed a 15 days time period to submit requisite consultant appointment letter for appraisal of the project as per rules.

In view of the above the project has been deferred for next meeting.

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iv. **Proposed Assembly Building (Jharkhand Vidhan Sabha) of M/s Greater Ranchi Development Agency Ltd. (GRDA) at Site 1, HEC area, Vill. : Kute, Dhurwa, Ranchi.**

(Proposal No. : SIA/JH/NCP/23001/2018)

The Project Proponent (Executive Engineer, Building Construction Deptt., Jharkhand, Ranchi) has submitted request letter no. 877, dated 10.07.2019 wherein he has submitted that the Building Construction Deptt. has not formally appointed NABET accredited consultant.

Accordingly, the PP may be allowed a 15 days time period to submit requisite consultant appointment letter for appraisal of the project as per rules.

In view of the above the project has been deferred for next meeting.

v. **New Ranchi High Court Building & Residential Complex of Building Construction Department, Govt. of Jharkhand at Site -1, HEC Campus, Vill. : Tiril, Dhurwa, Ranchi.**

(Proposal No. : SIA/JH/NCP/22998/2018)

The Project Proponent (Executive Engineer, Building Construction Deptt., Jharkhand, Ranchi) has submitted request letter no. 877, dated 10.07.2019 wherein he has submitted that the Building Construction Deptt. has not formally appointed NABET accredited consultant.

Accordingly, the PP may be allowed a 15 days time period to submit requisite consultant appointment letter for appraisal of the project as per rules.

In view of the above the project has been deferred for next meeting.

vi. **Mandramo Stone Mine of M/s Baba Stone, Vill. : Mandramo, P.O : Bagodar, Dist. : Giridih (1.40 ha).**

(Proposal No. : SIA/JH/MIN/38548/2019)

This is a Stone Mining Project with an area of 1.40 Ha [Khata no. 64 & Plot No.-2222 (P)]. The latitude and longitude of the project site is 24° 09' 02.60" N to 24° 08' 56.40" N and 85° 52' 50.40" E to 85° 52' 46.60" E. The nearest railway station is Hazaribagh Road (Sariya) a distance of 3.04 km and the nearest airport is Ranchi at a distance of 107 km. Total water requirement is about 4.04 KLD (~~Drinking & Domestic use : 1.13 KLD, Dust Suppression : 2.47 KLD & Green Belt development / Afforestation : 0.44 KLD~~, will be taken from nearby village like Mandramo, tube well & nearest khero nadi.

The indicated project cost is Rs 487.96 Lakh and a provision of Rs 26 Lakh has been indicated for Environment management.

The details of mine capacity as per Approved Mining Plan are

Proved Mineral Reserve : 4,66,560 cum

Year-wise Production as per Approved Mining Plan Report for five years is as follows

1 st Year	:	86,400 cum
2 nd Year	:	1,33,000 cum
3 rd Year	:	1,15,000 cum
4 th Year	:	Nil
5 th Year	:	Nil

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The daily production as per Form I is 443.33 cum.

DFO, Hazaribagh East vide letter no. 1503, dated - 22.05.2019 certified that the distance of notified forest is 268 m from battery point of proposed project site. DFO, Hazaribagh Wildlife vide letter no. 1112, dated - 10.06.2019 certified that the distance of notified forest is 27,550 m from battery point of proposed project site & not within 10 km from National Park, Bio-Diversity & Wildlife Sanctuary and proposed project is not situated in any Eco Sensitive Zone.

The CO, Saria (Giridih) vide letter no. 254, dated - 26.04.2019 has mentioned that the proposed site is not recorded as Jangal Jhari in Khatiyon.

DMO, Giridih vide memo no. 3522, dated 03.11.2016 certified that all area surrounding is less than 5 ha.

The project is mentioned in District Survey Report (DSR) of Giridih District.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF & CC O.M dated 12.12.18 decided that the proposal for **Mandramo Stone Mine of M/s Baba Stone, Vill. : Mandramo, P.O : Bagodar, Dist. : Giridih (1.40 ha)** be recommended for consideration of SEIAA for grant of EC, ~~in the light of DC, Ramgarh aforesaid letter dated 10.06.19~~ The various conditions for grant of EC is enclosed as **Annexure - I**.

vii. **Chino Stone Mine Project of M/s Dilip Buildcon Ltd., Vill. : Chino, P.O : Dumri, Dist. : Giridih (0.67 ha).**

(Proposal No. : SIA/JH/MIN/38294/2019)

This is a Stone Mining Project with an area of 0.67 Ha [Plot No.-1990, 1987, 2028 (P), 2029, 2030, 2031, 2032, 2033, 2034, 2035 (P), 2036 (P), 2044 (P), 1950, 1953]. The latitude and longitude of the project site is 24° 0' 48.37" N to 24° 0' 44.01" N and 86° 0' 18.69" E to 86° 0' 16.83" E. The expected life of mine is 3.42 years. The nearest railway station is Parasnath a distance of 4.40 km and the nearest airport is Ranchi at a distance of 105 km. Total water requirement is about 1.23 KLD (Drinking & Domestic use : 0.72 KLD, Dust Suppression : 0.29 KLD & Green Belt development / Afforestation : 0.22 KLD, will be taken from nearby village like Chino, tube well & nearest Kulgo Nadi.

The indicated project cost is Rs 301.50 Lakh and a provision of Rs 6 Lakh has been indicated for Environment management.

The details of mine capacity as per Approved Mining Plan are

Proved Mineral Reserve : 85,201 cum

Year-wise Production as per Approved Mining Plan Report for five years is as follows

1 st Year	:	26,640 cum
2 nd Year	:	25,752 cum
3 rd Year	:	22,200 cum
4 th Year	:	Nil
5 th Year	:	Nil

The daily production as per Form I is 82.88 cum.

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DFO, Giridih East vide letter no. 514, dated - 11.02.19 certified that the distance of notified forest is 250.2 m from battery point of proposed project site. DFO, Hazaribagh Wildlife vide letter no. 1113, dated - 10.06.19 certified that the distance of notified forest is 10,080 m from battery point of proposed project site & not within 10 km from National Park, Bio-Diversity & Wildlife Sanctuary and proposed project is not situated in any Eco Sensitive Zone.

The CO, Saria (Giridih) vide letter no. 254, dated - 26.04.19 has mentioned that the proposed site is not recorded as Jangal Jhari in Khatyan.

DMO, Giridih vide memo no. 3522, dated 03.11.2016 has certified that altogether total mining in the area is less than 5 ha in the radius of 500 m.

The DSR of the district available in the SEIAA / SEAC office, is not encompassing the project site.

Thus, the M.S, SEAC will get clarification from the DC, Giridih on this issue. Once the reply is received is satisfactory, may be consider for recommendation of EC.

DFO, Giridih East Division certificate seems to be erroneous since it's ~~trying to~~ ^{figure has} just surpass prescribed minimum distance limit of 250 m. Hence, M.S, SEAC is requested to get clarification from concerned DFO.

viii. **Upgradation of technology at existing standalone Cement Grinding Unit of M/s Dalmia Cement (Bharat) Ltd. at Bokaro Industrial Area, Balidih, Bokaro.**

(Proposal No. : SIA/JH/IND/105812/2019)

M/s Dalmia Cement Bharat Limited was issued EC by SEIAA Jharkhand vide its letter no. EC/SEIAA/2016-17/19972017/295 Ranchi Dated 08/12 2018.

The standalone grinding unit remain engaged in converting solid waste from steel plant and power plant i.e. slag & fly ash to usable product cement. The Existing capacity is 3.0 MTPA PSC/PPC/PCC. About 60 to 65% of the raw material is solid waste of other industries located in nearby such as BF slag from Bokaro Steel Limited, fly ash from nearby power plant etc. The existing grinding unit (VRM) having older electrical motor (5500kW) and has lived its useful life and needs replacement. DCBL management has decided to replace the old motor with new energy efficient electrical motor (6500kW) available in the market. The change in electrical energy efficient motor will allow us to optimize the production of our standalone grinding units upto 3.7 MTPA from existing 3.0 MTPA without changing any structure or facilities as per the earlier EC.

The existing plant site is located at Plot No. IV/A-7 (P), Bokaro Industrial Area, P.O.: Balidih, District Bokaro in Jharkhand. Its geographical co-ordinates are Latitude 23°42'1.24"N and Longitude 86° 3'46.69"E with mean sea level (MSL) of 231.6 m (760 ft). The existing plant, occupying total area of 28.0 ha (69.19 acres). There is no change land area from earlier EC issued by SEIAA dated 08.12.2018. Total project cost for enhancement from 3.0 MTPA to 3.7 MTPA cement grinding unit is Rs. 10 Crores.

M/s Dalmia Cement Bharat limited (DCEL), formerly known as Bokaro Jaypee Cement Ltd., is operating a 3.0 MTPA standalone cement grinding unit. This grinding unit is converting waste material from other industries such as BF slag (from adjoining steel plant) and fly ash from power plants into useful products cement. The unit is in operation and an existing at the location of Balidih Industrial area of Bokaro(Jharkhand).

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The grinding unit mainly comprise of two no of VRM Mills produce 3.0 MTPA cement annually and having matching packaging unit. The existing VRM units driven by old outdated energy consuming electrical motors (5500kW) and lived its useful life and need replacement. Therefore, DCBL management decided to seek permission from SEIAA/SEAC under Environmental clearance(EC) under para 7(ii) of Notification S.O.3518€ dated 23rd November 2016 as this replacement of old electrical motors with new age innovative energy efficient electrical motors(6500kW) will simultaneously help us to produce more cement and will optimize upto 3.70 MTPA through this upgradation in technology. DCBL management is also committed to reduce the existing level of air emission (key Pollutant PM) by about 30% from existing level (28mg/Nm3) to about 21-22mg/Nm3 by using new innovative solutions in bag filter technology attached with VRM Mills. Management is also committed to zero liquid discharge principle along with reduction in water consumption by about 5% of existing consumption (325 KLD) used both in domestic and industrial cooling. The present status of solid waste management practices is 100% recycling as cement dust is the product of grinding unit and hence cannot afford to wastage. Therefore this change certainly will bring net positive impact on over all surrounding and shall humbly request for according permission for replacing motors in existing VRM Mills.

The plant site is located in the industrial area of the Bokaro city under the district of Bokaro. The most important river in the area is River Damodar which is at a distance of around 5.0 in northern side with respect to the project site. Garga Dam is situated at a nearest distance of 7.0 Km towards the south from the project site. Bokaro Steel city is located about 9.0 Km distance in the south-east direction w.r.t. the project site.

Executive Summary of the Proposal

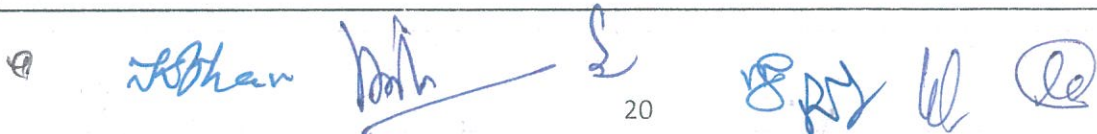
Sl. No.	Unit configuration as per EC Accorded	Proposed changes Requested	Final Status
1.	Existing available land	No change	No change
2.	Existing Plant Location	No Change	No Change
3.	Existing 2 no VRM	No change in structure	No change
	VRM: Equipped with Old electrical motors of 5500kW with existing gear box	The old motors will be replaced by energy efficient electrical motors of 6500kW with slight setting in Bevel pinion setting	The new motors will be new age innovative technology-based energy efficient electrical motors of 6500kW with gearbox internal setting
4.	Existing Cement Silo for storage of cement	No change	No change
5.	Existing raw material handling facilities	No change	No change
6.	Raw material as per existing requirement	Throughput quantity shall change	Throughput quantity shall change
7.	Storage facilities for raw material and product	No change envisaged	No change Envisaged
8.	Air Pollution Control for dust emission (28 mg/Nm3)	Air Pollution Control for dust emission (30% reduction due to	There will be 30% over all reduction in air emission from current level of 28 mg/Nm3 due to increase in NO

		refurbishing of bag filters)	of bags and new generation bag materials
	Water Consumption at @315 KLD at present level	Water consumption shall be reduced to 5% from existing level by stoppage of leakage etc	5% reduction in water consumption expected
	Water Pollution Control in existing plant as unit follow zero Liquid discharge	Water is used in close circuit for indirect cooling and there is no contamination expected. Zero liquid discharge shall continue	Return water get recycled through cooling tower. Zero liquid discharge.
	Solid waste management in existing plant through 100% recycle of dust captured through bag filters	The existing practice shall continue	The existing practice shall continue

PROJECT SCENARIO

Unit	Capacity (in MTPA)	Product
Existing Project :		
Cement Grinding Unit (Vertical Roller Mill)	3.0	PSC / PPC / PCC
Production Optimization due to change in energy efficient electrical motors:		
Capacity optimization/increase in the existing cement grinding unit	0.7	PSC / PPC / PCC
Total Capacity	3.7	PSC / PPC / PCC
<ul style="list-style-type: none"> ➤ There shall be no change in product mix or any other physical infrastructure as was allowed by EC issued earlier Where, ➤ PSC - Portland Slag Cement ➤ PPC - Portland Pozzolana Cement ➤ PCC - Portland Composite Cement 		

RAW MATERIAL REQUIRMENT (For 37,00,000 TPA Portland Slag Cement (PSC))



Sl. No	Raw Material	% of raw material	Raw material requirement for 3.0 MTPA	Raw material requirements for TPA for 3.70 MTPA
i	Clinker	36.5	1095000.00	1350500.00
ii	Slag	60.0	1800000.00	2220000.00
iii	Gypsum	3.5	105000.00	129500.00
iv	Coal	2.2	66000.00	81400.00

RAW MATERIAL REQUIRMENT (For 37,00,000 TPA Portland Pozzolana Cement (PPC))

Sl. No	Raw Material	% of raw material	Raw material requirement TPA for 3.0 MTPA	Raw material requirement TPA for 3.70 MTPA
i	Clinker	62.5	1875000.00	2312500.00
ii	Fly Ash	35.0	1050000.00	1295000.00
iii	Gypsum	2.5	75000.00	92500.00
iv	Coal	2.0	60000.00	74000.00

RAW MATERIAL REQUIRMENT (For 37,00,000 TPA Portland Composite Cement (PCC))

Sl. No	Raw Material	% of raw material	Raw material requirement TPA for 3.0 MTPA	Raw material requirement TPA for 3.70 MTPA
i	Clinker	32.5	975000.00	1202500.0
ii	Fly Ash	25.0	750000.00	925000.0
iii	Slag	40.0	1200000.00	1480000.0
iii	Gypsum	2.5	75000.00	92500.0
iv	Coal	2.2	66000.00	81400.0

Water Pollution Control

The plant management practices zero liquid discharge and also practice water economy in operations. The sewage sludge, which is an excellent fertilizer, is being utilized as fertilizer. The plant management has further committed to reduce water consumption by 5% from existing level of 315 KLD.

Solid Waste Management

- The solid waste, which is generated in the form of dust from all the air pollution control equipment of cement plant will be 100% recycled in the process.
- Used oil & waste oil generating due to maintenance will be sold to authorized dealers of CPCB.

Noise Pollution Control

Noisy equipment has been placed on vibration isolators or housed in a separate enclosure or surrounded by baffles covered with noise absorbing material. As the operator is stationed in the control room, there is minimum chance of exposure to high noise levels. However, personnel working in high noise zones are provided with personal noise protection equipment (e.g. earmuffs, earplugs) and their duty hours are regulated to control noise exposure levels. We have been provided acoustic enclosure to D.G. Set.

Green Belt Development Plan

A well planned/designed green belt has been developed which covers an area of more than 33% of the project site. Best management practices are being followed for maintaining this green belt. Out of the total plant area of 28 hectares (69.19 acres), around 9.24 hectares (22.83 acres) shall be covered under green belt to maintain 33% greenbelt in the project area.

Environmental Monitoring

Routine monitoring of stack emission, ambient air quality, work zone air quality, noise level, wastewater and surface water stream are being carried out. The monitored data are being recorded and are renewed periodically to ensure compliance of Statutory Regulations. The same practice shall continue.

Water Requirement

Daily Water Requirement :

315 cu.m/day (Total) – no change expected. Further Plant management is committed to reduce it by 5% from current level by leakage detection and economy of water shall be perused.

Source:

Garga Dam (Permission from the Concerned Authority is available. Agreement made with BIADA for drawl of maximum 550 Cu.m/day water).

Power Requirement

21 MVA (Existing) no change in power requirement due to energy efficient electrical motors consume less energy for higher input material = 21 MVA (Total).

Source: Damodar Valley Corporation (DVC)

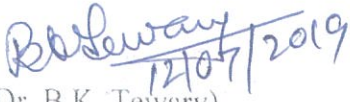
Manpower Requirement

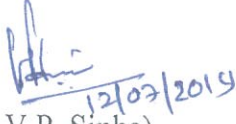



Existing manpower, to the tune of 824 persons including executives & non-executives are utilized during operational phase of project.


Based on the presentation made and information provided, the Committee decided that the proposal for **Upgradation of technology at existing standalone Cement Grinding Unit of M/s Dalmia Cement (Bharat) Ltd. at Bokaro Industrial Area, Balidih, Bokaro** be recommended for consideration of SEIAA for grant of EC. The various conditions for grant of EC is enclosed as Annexure - IV.

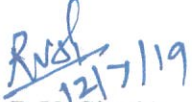
The meeting concluded with thanks to all present.



(Dr. B.K. Tewary)
Member



(Dr. V.P. Sinha)
Member

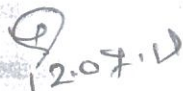

(Y.K. Singh)
Member

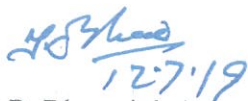

(S.P. Srivastava)
Member


(Dr. R.V. Singh)
Member


(M.S. Bhagwat)
Member


(U.P. Singh)
Member


(Om Prakash)
Member Secretary


(K.P. Bhawsinka)
Chairman

A. Specific Conditions

1. The environmental clearance is subject to period of lease of the mine by the Department of Mines, Government of Jharkhand to PP and all other Statutory Conditions as imposed by various agencies / District Authorities are complied with.
2. No mining shall be undertaken in the forest area without obtaining requisite prior forestry clearance.
3. Environmental clearance is subject to final order of the Hon'ble Supreme Court of India / National Green Tribunal / MOEF Guidelines applicable to Minor Minerals.
4. Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project (in case any endangered fauna occurs / is found in the Project area). No damage is to be done to the fauna in general and endangered species in particular, if found in ML area (as mentioned in various schedules). In such case they should be given protection, capture alive with the help of the subject expert and transfer them or handing over them to the concerned authorities. Conservation Plan, if applicable has to be adhered to.
5. The mining operations shall be restricted to ground above water table and it should not intersect the groundwater table. In case of working below the ground water table, prior approval of the Ground Water Directorate, Government of Jharkhand / Central Ground Water Board shall be obtained. Benches height and slope shall be maintained as per approved Mining Plan. The Mining Plan has to be got approved by concerned authorities as per IBM or equivalent agencies. Safety measures shall be adopted in line with DGMS Guidelines.
6. PP shall maintain minimum distance from Reserved / Protected Forests as stipulated in applicable guidelines.
7. The project proponent shall ensure that no natural watercourse and / or water resources shall be obstructed / diverted due to any mining operations. Adequate measures shall be taken for conservation and protection of the first order and the second order streams, if any emanating / passing through the mine lease area during the course of mining operation.
8. The top soil, if any shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used by spreading on the land reclamation and plantation.
9. There shall be no external dump(s). Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Jharkhand State Pollution Control Board, Ranchi and its nearest Regional Office on six monthly basis.
10. Catch drains and siltation ponds of approved size to contain silt & water and its location shall be constructed around the mine working, sub-grade and mineral dump(s) to prevent run off of water and flow of sediments directly into the nearby agricultural fields, and other water bodies. The water so collected should be utilized for watering the haul roads, green belt development etc. A periodical report shall be sent. The drains shall be regularly desilted particularly after the monsoon and maintained properly.
11. Dimension of the retaining wall at the toe of the OB benches within the mine to check run-off and siltation shall be based on the rain fall data.

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12. Greenbelt of approved width shall be developed all along the length of mine lease area and haul roads. The Project proponent shall do adequate no at least 50 bamboo gabion plantation each year and maintain it for the life of the mine along the transport road and vacant space, preferably along the periphery of mining lease. Fast growing and local species will be planted.
13. Effective safeguard measures such as regular water sprinkling shall be carried out in the identified critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and transfer points. Extensive water sprinkling as per approved plan shall be carried out on haul roads which should be made pucca as per approved specification of Govt. of Jharkhand with suitable water drainage arrangements. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
14. The project proponent shall implement approved conservation measures to augment ground water resources in the area in consultation with the Ground Water Directorate, Government of Jharkhand / Central Ground Water Board.
15. The project proponent shall if required, obtain necessary prior permission/NOC from the competent authorities for drawl of requisite quantity of water required from the source for the project.
16. Suitable rainwater harvesting measures shall be planned and implemented in consultation with the Ground Water Directorate, Government of Jharkhand / Central Ground Water Board.
17. Vehicular emissions shall be kept under control by regular repairing of transport road and regular air quality monitoring. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded. No transportation of stone / sand outside the mine lease area shall be carried out after the sunset.
18. No blasting shall be carried out after sunset. Blasting operation shall be carried out only during daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
19. Drilling shall either be operated with the dust extractors or equipped with water injection system.
20. Effective safeguard measures shall be taken to control fugitive emissions so as to ensure that RPM (PM10 and PM 2.5) levels are within prescribed limits.
21. Pre-placement medical examination and periodical medical examination of the workers engaged in the project conducted by a Registered Medical Officer shall be carried out and records maintained.
22. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna.
23. Provision shall be made for the housing of construction labour at a suitable place away from the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets / septic tanks, safe drinking water, medical health care, etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
24. Proper Safety measures as per statutory requirement shall be implemented around the mined out Pit prior to closure of site.


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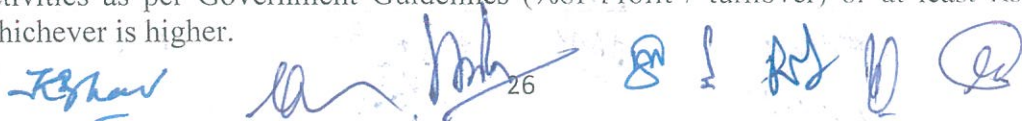
   

25. A final mine closure Plan along with corpus fund duly approved by Competent Authority shall be submitted to the Jharkhand State Pollution Control Board, Ranchi and to concerned DMO in advance of final mine closure for approval.
26. The project proponent shall obtain Consent to establish and Consent to Operate from the Jharkhand State Pollution Control Board, Ranchi and effectively implement all the conditions stipulated therein.
27. The Project Proponent shall submit six monthly report on the expenditure incurred on environmental management plan submitted by them.
28. Since blasting and mining on Hillock / Rock out crop may also be carried out, suitable scheme for access / ramp to the highest elevation with gradient shall be submitted for approval from competent authorities.
29. Approved devices for dust suppression shall be installed.

B. General conditions

1. No change in mining technology and scope of working should be made without prior approval of the Statutory authorities / Department of Mines, Government of Jharkhand / Jharkhand State Pollution Control Board, Ranchi during the EC period.
2. No change in the calendar plan including excavation, quantum of mineral and waste should be made.
3. The Project proponent shall make all internal roads pucca as per approved specification of Govt. of Jharkhand and shall maintain a good housekeeping by regular cleaning and wetting of the haul roads and the premises.
4. The Project proponent shall maintain register for production and dispatch and submit return to the Board.
5. The Project proponent shall not cut trees / carry out tree felling in leased out area without the permission of competent authority.
6. Measures should be taken for control of noise levels below prescribed norms in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
7. Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards Oil and grease trap should be installed before discharge of workshop effluents.
8. Personnel working in dusty areas should be provided with protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed. Detailed report shall be sent to Pollution Control Board periodically.
9. Dispensary facilities for First Aid shall be provided at site.
10. A separate environmental management / monitoring 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 Organization.
11. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Jharkhand State Pollution Control Board, Ranchi. PP shall carry out CSR activities as per Government Guidelines (%of Profit / turnover) or at least Rs 1 per ton whichever is higher.

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12. The Jharkhand State Pollution Control Board, Ranchi directly or through its Regional Office, shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) by furnishing the requisite data / information / monitoring reports.
13. The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the SEIAA / JSPCB and to its concerned Regional Office.
14. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to Jharkhand State Pollution Control Board and its concerned Regional Office. The criteria pollutant levels namely ; SPM ,RSPM,SO₂ ,NO_x (ambient levels) or critical sectoral parameters , indicated for the project shall be monitored and displayed at a convenient location near the project shall be monitored and displayed at a convenient location near the main gate of the company in the company in the public domain.
15. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZilaParisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the project proponent.
16. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the Jharkhand State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986,as amended subsequently ,shall also be put on the website of the company along the status of compliance of EC conditions and shall also to the concerned Regional Office of JSPCB by e-mail.
17. All statutory clearances shall be obtained before start of mining operations.

C. Other points

1. The Authority reserves the right to add any new condition or modify the above conditions or to revoke the clearance if conditions stipulated above are not implemented to the satisfaction of Authority or for that matter for any other Administrative reason.
2. The Environmental Clearance accorded will be valid for the period of lease of the mine, till the PP does not increase production rate and alter lease area during the validity of Environmental Clearance.
3. In case of any deviation or alteration in the project proposed from those submitted to SEIAA, Jharkhand for clearance, a fresh reference should be made to SEIAA to assess the adequacy of the conditions imposed and to incorporate any new conditions if required.
4. The above stipulations would be enforced among others under the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Jharkhand and any other Court of Law relating to the subject matter.
5. Any Appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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A. Statutory Compliance:

1. Emission Standards for Thermal Power Plants as per Ministry's Notification S.O. 3305(E) dated 07.12.2015, G.S.R.593(E) dated 28.06.2018 and as amended from time to time shall be complied.
2. MoEF & CC Notification G.S.R. 02(E) dated 02.01.2014 as amended time to time regarding use of raw or blended or beneficiated/washed coal with ash content not exceeding 34% shall be complied with, as applicable.
3. MoEF & CC Notification on Fly Ash Utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 03.11.2009, S.O. 254(E) dated 25.01.2016 as amended from time to time shall be complied.
4. Thermal Power Plants other than the power plants located on coast and using sea water for cooling purposes, shall achieve specific water consumption of 3.5 m³/MWh and Zero effluent discharge.
5. The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
6. No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance.
7. Groundwater shall not be drawn during construction of the project. In case, groundwater is drawn during construction, necessary permission be obtained from CGWA.

B. Ash content/mode of transportation of Coal:

1. EC is given on the basis of assumption of 35 % of ash content and transportation by rail and road. Any increase of % ash content by more than above percent, and/or any change in transportation mode of increase in the transport distance (except for rail) require application for modifications of EC conditions after conducting the 'incremental impact assessment' and proposal for mitigation measures.

C. Air quality monitoring and Management:

1. Flue Gas Desulphurization System shall be installed based on Lime/Ammonia dosing to capture Sulphur in the flue gases to meet the SO₂ emissions standard of 100 mg/Nm³.
2. Selective Catalytic Reduction (SCR) system or the Selective Non-Catalytic Reduction (SVCR) system or Low NOX Burners with Over Fire Air (OFA) system shall be installed to achieve NO_x emission standard of 100 mg/Mm³.
3. High efficiency Electrostatic Precipitators (ESPs) shall be installed in each unit to ensure that particulate matter (PM) emission to meet the stipulated standards of 30 mg/Nm³.

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4. Stacks of prescribed height min. 90 m shall be provided with continuous online monitoring instruments for SO_x, NO_x and Particulate Matter as per extant rules.
5. Exit velocity of flue gases shall not be less than 15-18 m/s. Mercury emissions from stack shall also be monitored periodically.
6. Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as PM₁₀, PM_{2.5}, SO₂, NO_x within the plant area at least at one location. The monitoring of other locations (at least three locations outside the plant area covering upwind and downwind directions at an angle of 120° each) shall be carried out manually.
7. Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions.
8. Appropriate Air Pollution Control measures (DEs/DSs) be provided at all the dust generating sources including sufficient water sprinkling arrangements at various locations viz., roads, excavation sites, crusher plants, transfer points, loading and unloading areas, etc.

D. Noise pollution and its control measures:

1. The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
2. Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
3. Periodical medical examination on hearing loss shall be carried out for all the workers and maintain audiometric record and for treatment of any hearing loss including rotating to non-noisy/less noisy areas.

E. Human Health Environment:

1. Bi-annual Health check-up of all the workers is to be conducted. The study shall take into account of chronic exposure to noise which may lead to adverse effects like increase in heart rate and blood pressure, hypertension and peripheral vasoconstriction and thus increased peripheral vascular resistance. Similarly, the study shall also assess the health impact due to air polluting agents.
2. Baseline health status within study area shall be assessed and report be prepared. Mitigation measures should be taken to address the endemic diseases.
3. Impact of operation of power plant on agricultural crops, large water bodies (as applicable) once in two years by engaging an institute of repute. The study shall also include impact due to heavy metals associated with emission from power plant.
4. Sewage Treatment Plant shall be provided for domestic wastewater.

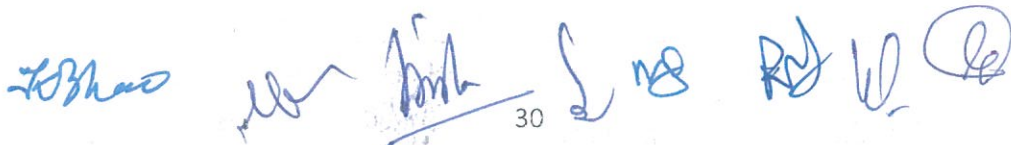
F. Water quality monitoring and Management:

1. Induced/Natural draft closed cycle wet cooling system including cooling towers shall be set up with minimum Cycles of Concentration (COC) of 5.0 or above for power plants using fresh water to achieve specific water consumption of 3.5 m³/MWhr.
2. Records pertaining to measurements of daily water withdrawal and / or intake from source shall be maintained.
3. Rainwater harvesting in and around the plant area be taken up to reduce drawl of fresh water. If possible, recharge of groundwater to be undertaken to improve the ground water table in the area.
4. Regular (at least once in six months) monitoring of groundwater quality in and around the ash pond area including presence of heavy metals (Hg, Cr, As, Pb, etc.) shall be carried out as per CPCB guidelines. Surface water quality monitoring shall be undertaken for major surface water bodies as per the EMP. The data so obtained should be compared with the baseline data so as to ensure that the groundwater and surface water quality is not adversely impacted due to the project & its activities.
5. The treated effluents emanating from the different processes such as DM plant, boiler blow down, sewage, etc. conforming to the prescribed standards shall be re-circulated and reused. Sludge/rejects will be disposed in accordance with the Hazardous Waste Management Rules.
6. As proposed only Air Cooled condenser shall be used to conserve water requirement of the unit.
7. Wastewater generation from various sources (viz. cooling tower blow down, boiler blow down, wastewater from ash handling, etc.) shall be treated to meet the standards of pH:6.5-8.5; Total Suspended Solids: 100mg/l; Oil & Grease: 20mg/l; Copper; 1 mg/l; Iron:1 mg/l; Free Chlorine: 0.5; Zinc: 1.0 mg/l; Total Chromium: 0.2 mg/l; Phosphate: 5.0 mg/l;
8. Sewage generation will be treated by setting up Sewage Treatment plant to maintain the treated sewage characteristics of pH: 6.5-9.0; Bio-Chemical Oxygen Demand (BOD): 30 mg/l; Total Suspended Solids: 100 mg/l; Fecal Coliforms (Most Probable Number): <1000 per 100 ml.

G. Risk Mitigation and Disaster Management:

1. Adequate safety measures and environmental safeguards shall be provided in the plant area to control spontaneous fires in coal yard, especially during dry and humid season.

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2. Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made as per the extant rules in the plant area in accordance with the directives of Petroleum & Explosives Safety Organization (PESO). Sulphur Content in the liquid fuel should not exceed 0.5%.
3. Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
4. Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
5. Regular mock drills for on-site emergency management plan and Integrated Emergency Response System shall be developed for all kind of possible disaster situations.

H. Green belt and Biodiversity conservation:

1. Green belt shall be developed in an area of 33% of the total project with indigenous native tree species in accordance with CPCB guidelines. The green belt shall inter-alia cover an entire periphery of the plant.
2. *In-situ/ex-situ* Conservation Plan for the conservation of flora and fauna should be prepared and implemented.

I. Waste Management:

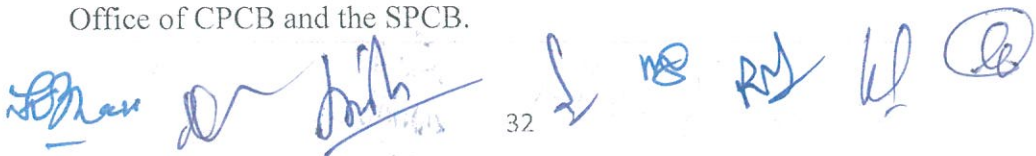
1. Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.
2. Toxicity Characteristic Leachate Procedure (TCLP) test shall be conducted for any substance, potential of leaching heavy metals into the surrounding areas as well as into the groundwater.
3. As proposed all ash (fly ash & Bottom ash) shall be collected in dry form and no Ash Pond shall be constructed.
4. Fly ash shall be collected in dry form and ash generated shall be used 100% in-house for cement manufacturing. Fly ash utilization details shall be submitted to concerned Regional Office along with the six-monthly compliance reports and utilization data shall be published on company's website.

J. Monitoring of compliance:

1. Environmental Audit of the project be taken up by the third party for preparation of Environmental Statement as per Form-V & Conditions stipulated in the EC and report be submitted to the Ministry.
2. Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.

3. Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report. Renewable Energy Purchase Obligation as set by MoP/State Government shall be met either by establishing renewable energy power plant (such as solar, wind, etc.) or by purchasing Renewable Energy Certificates.
4. Monitoring of Carbon Emissions from the proposed power project shall be carried out annually from a reputed institute and report be submitted to the Ministry's Regional Office.
5. Energy and Water Audit shall be conducted at least once in two years and recommendations arising out of the Report should be followed. A report in this regard shall be submitted to Ministry's Regional Office.
6. Environment Cell (EC) shall be constituted by taking members from different divisions, headed by qualified person on the subject, who shall be reporting directly to the Head of the Project.
7. The project proponent shall (Post-EC Monitoring):
 - i. send a copy of environmental clearance letter to the heads of Local Bodies Panchayat, Municipal bodies and relevant offices of the Government:
 - ii. Upload the clearance letter on the web site of the company as a part of information to the general public.
 - iii. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forest and Climate Change (MoEF & CC) at <http://parivesh.nic.in>.
 - iv. Upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically.
 - v. Monitor the criteria pollutants level namely; PM (PM₁₀ & PM_{2.5} in case of ambient AAQ), SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
 - vi. Submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Officer of MoEF & CC, the respective Zonal Office of CPCB and the SPCB.

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- vii. Submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- viii. Inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project and the date of commencement of the land development work.

K. Corporate Environmental Responsibility (CER) activities:

1. CER activities will be carried out as per OM No. 22-65/2017-IA.II dated 01.05.2018 or as proposed by the PP in reference to Public Hearing or as earmarked in the EIA/EMP report along with the detailed scheduled of implementation with appropriate budgeting.

L. Effluent Release:

1. Zero Liquid Discharge (ZLD) shall be strictly followed.

M. Others :

1. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
2. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
3. In view of MoEF & CC O.M. No.- 22-27/2015-IA-III, dated- 12.04.2016 The Environmental Clearance accorded shall be valid for a period of Seven (07) years. The PP shall not increase production rate and make modifications in process during the validity of Environmental Clearance.

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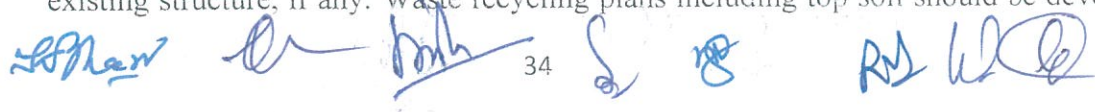
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PART A – GENERAL CONDITIONS

I. Pre- Construction Phase

- i. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel (kerosene/gas) for cooking, safe drinking water, medical health care, etc. The housing may be in the form of temporary structures to be removed after completion of the project.
- ii. Provision of drinking water, waste water disposal, solid wastes management and primary health facilities shall be ensured for labour force. Proper sanitation facilities shall be provided at the construction site to prevent health related problems. Domestic as well as sanitary wastes from construction camps shall be cleared regularly.
- iii. Adequate safety measures shall be adopted for the construction workers.
- iv. All the labourers to be engaged for construction works shall be screened for health and adequately treated before issue of work permits. The contractor shall ensure periodic health check-up of construction workers.
- v. Fencing of the project boundary before start of construction activities.
- vi. Use of energy efficient construction materials shall be ensured to achieve the desired thermal comfort.
- vii. Use of fly ash based bricks/blocks/tiles/products shall be explored to the maximum extent possible.
- viii. Lay out of proposed buildings and roads within premises etc. shall be made in such a way that it shall cause minimum disturbance to existing flora and fauna. Appropriate green belt shall developed to compensate the habitat loss of tree cutting (if any) from competent authority as per prevailing Act/Rules. The exotic species existing within the existing premises, if any, shall be protected. The greening programme shall include plantation of both exotic and indigenous species.
- ix. Dedicated pedestrian paths shall be provided along the proposed Buildings. Appropriate access shall be provided for physically challenged people in the Pedestrian Paths.
- x. The design of service roads and the entry and exit from the buildings shall conform to the norms & standards prescribed by the State Public Works Department.
- xi. The road system shall have the road cross sections for general traffic, exclusive ways for public mass transport (bus) system, pedestrian paths and ways, utility corridors and green strip.
- xii. Topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site. Balance top soil should be disposed at in planned manner for use elsewhere adequate erosion and sediment control measures to be adopted before ensuing construction activities.
- xiii. Prior permission should be obtained from the competent authority for demolition of the existing structure, if any. Waste recycling plans including top soil should be developed

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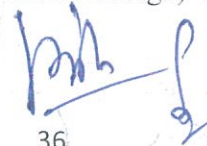


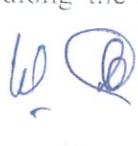
- prior to beginning of demolition and construction activity. The plans should identify wastes to be generated and designate handling, recycling and disposal method to be followed.
- xiv. Disposal of muck including excavated material during construction phase should not create any adverse effects in the neighbourhood and the same shall be disposed of taking the necessary precautions for general safety and health aspects.
 - xv. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which should be in the vernacular language, informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority, Jharkhand and the same matter also be sent to Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Ranchi.
 - xvi. Risk assessment study along with Disaster Management Plan (DMP) shall be prepared. The mitigate measures for disaster prevention and control shall be prepared and get approval from competent authority. All other statutory clearances/licenses/permissions from concerned State Governments Departments, Boards and Corporations shall be obtained for directions issued by Central Government/State Government, Central Pollution Control Board/Jharkhand State Pollution Control Board.
 - xvii. Baseline Environmental Condition of Project area i.e. Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples should be conducted and report should be submitted to State Environment Impact Assessment Authority (SEIAA), Jharkhand and Jharkhand State Pollution Control Board (JSPCB), Ranchi prior to start of construction activities.

II. Construction Phase

- i. It shall be ensured that the construction debris is properly stored on the site prior to disposal. Such requirements shall be made part of the contractor agreement.
- ii. All the top soil excavated during construction activities shall be stored for use in horticulture/landscape development within the project site. Proper erosion control and sediment control measures shall be adopted.
- iii. Earth material generated from excavation shall be reused to the maximum possible extent as filling material during site development. The construction debris and surplus excavated material shall be disposed of by mechanical transport through the Ranchi Municipal Corporation.
- iv. Disposal of muck, including excavated material during construction phase, shall not create any adverse effects on the neighbouring communities and shall be disposed off taking the necessary precautions for general safety and health aspects.
- v. Low Sulphur diesel generator sets should be used during construction phase. Diesel generator sets during construction phase shall have acoustic enclosures and shall conform to Environment (Protection) Rules, 1986 prescribed for noise emission standards.

- vi. All vehicles/equipment deployed during construction phase shall be ensured in good working condition and shall conform to applicable air and noise emission standards. These shall be operated only during non-peaking hours.
- vii. Ambient noise levels shall conform to the standards prescribed by MoEF & CC, Govt. of India.
- viii. The protective equipment such as nose mask, earplugs etc. shall be provided to construction personnel exposed to high noise levels.
- ix. Construction spoils, including bituminous material and other hazardous materials including oil from construction equipment must not be allowed to contaminate soil/ground water. The dumpsites for such material must be secured so that they shall not leach into the ground water.
- x. Proper and prior planning, sequencing and scheduling of all major construction activities shall be done. Construction material shall be stored in covered sheds. Truck carrying soil, sand and other construction materials shall be duly covered to prevent spilling and dust emission. Adequate dust suppression measures shall be undertaken to control fugitive dust emission. Regular water sprinkling for dust suppression shall be ensured.
- xi. Use of Ready-Mix concrete is recommended for the project.
- xii. Accumulation/stagnation of water shall be avoided ensuring vector control.
- xiii. Regular supervision of the above and other measures shall be in place all through the construction phase so as to avoid disturbance to the surroundings.
- xiv. Water during construction phase should be preferred from Municipal supply.
- xv. All directions of the Airport Authority, Director of Explosives and Fire Department etc. shall be complied.
- xvi. Unskilled construction labourers shall be recruited from the local areas.
- xvii. Provisions shall be made for the integration of solar water heating system.
- xviii. Provision of vermin-composting for the biodegradable solid wastes generated from the proposed extension buildings as well as the large amount of biomass that shall be available from the tree plantation shall be made.
- xix. Monitoring of ground water table and quality once in three months shall be carried out. Construction of tube wells, bore wells shall be strictly regulated.
- xx. Permeable (porous) paving in the parking areas, and walkways should be used to control surface runoff by allowing storm water to infiltrate the soil and return to ground water.
- xxi. All intersections shall be designed and developed as roundabouts.
- xxii. All utility lines (electricity, telephone, cable, water supply, sewage, drainage, etc. shall be laid below ground level. Ducts shall be provided along and across the roads to lay the utility lines. Major trunk (water/sewerage) lines are to be laid along the utility corridor.

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- xxiii. The road drainage shall be designed to enable quick runoff of surface water and prevent water logging.
- xxiv. Adequate provision shall be made to cater the parking needs. Parking spaces standards as given in "Manual on Norms and Standards for Environmental Clearance of Large Construction Projects" issued by Ministry of Environment and Forests, Government of India shall be adopted.
- xxv. Rest room facilities shall be provided for service population.
- xxvi. Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, should be conducted and report should be submitted on monthly basis to SEIAA, Jharkhand & Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi.

Water Body Conservation :-

- i. Water body falling within premises (if any) shall not be lined or no embankment shall be cemented. The water bodies, if any, shall be kept in natural conditions without disturbing the ecological habitat.
- ii. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat.

III. Post Construction/Operation Phase

- i. The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit.
- ii. All the conditions, liabilities and legal provisions contained in the Environmental Clearance shall be equally applicable to the successor management of the project in the event of the project proponent transferring the ownership, maintenance of management of the project to any other entity. Ground water shall not be abstracted without prior permission from the competent authority.
- iii. The storm water management plan shall be implemented in such a manner that the storm water is discharged through an existing dedicated Storm Water Outfall only.
- iv. The height of the stack of the DG sets should be as per norms of Central Pollution Control Board (C.P.C.B.), New Delhi.
- v. Medical (First-Aid) facility must be provided for visitors & employees. Para-medical staff should be attached as Medical facility provider.
- vi. Plantation along the side of the buildings & roads and in the open spaces shall be developed to act as sinks of air pollutants. The plantation of trees shall be completed in the construction stage. The plantations shall consist of mixture of available indigenous, fast growing and sturdy species of trees, shrubs and herbs. Preferential plantation of flowering trees with less timber and fruits value shall be carried out.
- vii. Two chambered container or two separate containers (one for recyclable wastes and other for all organic and compostable wastes) shall be placed at appropriate distance on the roadsides and inside the building. Covered dustbins/garbage collector in convenient places to collect the Municipal solid wastes shall be provided.

- viii. Proper composting / vermi-composting of municipal solid wastes shall be carried out. All municipal solid wastes shall be segregated, collected, transported, treated and disposed as per provisions of the Municipal Solid Wastes (Management and Handling) Rules, 2000 (As amended).
- ix. The use of hand gloves, shoes and safety dress for all waste collectors and sorters shall be enforced.

IV. Entire Life of the Project

- i. The project proponent should implement Environmental Monitoring Programme as per details submitted in EMP.
- ii. No expansion/modification activity should be carried out obtaining prior Environmental Clearance as per EIA Notification 2006.
- iii. Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stock Emissions & Testing of emission from DG sets should be conducted and report should be submitted on monthly basis to SEIAA, Jharkhand & JSPCB, Ranchi.

PART B- SPECIFIC CONDITIONS

I. Pre-Construction Phase

- i. Project Proponent should obtain prior consent to establish (NOC) under Section 25 & 26 of the Water (Prevention & Control of Pollution) Act' 1974 and under Section 21 of the Air (Prevention & Control of Pollution) Act' 1981 from State Pollution Control Board before start of construction activities.
- ii. It was also advised that CSR activity of the Project Proponent should be measurable and quantifiable, and it should be visible even after the completion of the project. The Project Proponent was also directed to deposit 10% of the CSR cost (2.5% of the total project cost). The security deposit is imposed to ensure the proper performance/implementation of the committed CSR activities.
- iii. Project Proponent should obtain prior permission for ground water withdrawal from CCWA/CGWB if applicable.
- iv. Construction shall conform to the requirements of local seismic regulations. The project proponent shall obtain permission for the plans and designs including structural design, standards and specifications of all construction work from concerned authority.
- v. Use of energy efficient construction materials to achieve the desired thermal comfort shall be incorporated. The desired level of roof assembling "U" factor and insulation "R" value must be achieved. Roof assembling "U" factor for the top roof shall not exceed 0.4 watt/sq.m./degree centigrade with appropriate modifications of specifications and building technologies. The provisions of National Building Code 2005 shall be strictly followed.

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- vi. Street/Corridor lighting shall be energy efficient. The High Pressure Sodium Vapour (HPSV) Lamps & Compact Fluorescent Lamps (CFL) along Building premises shall be provided. High intensity, high mast lights to be installed at few strategic points. Solar energy may be used for outdoor lighting.
- vii. Reduction of hard paving-onsite (Open area surrounding all buildings) and/or provision of shades on hard paved surfaces to minimize heat island effect and imperviousness of the site should be undertaken.
- viii. All proposed air/conditioned buildings should follow the norms proposed in the ECBC regulations framed by the Bureau of Energy Efficiency.
- ix. Monitoring of AAQ as per NAAQs 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stack Emissions from DG sets should be conducted, and reports should be submitted on monthly basis to State Pollution Control Board (SPCB).
- x. Project proponent shall install Wind Augmentation and Air Purifying Unit (4 Units at one location in Saraikela) on Pilot basis to deal with particulate matter pollution.

II. Construction Phase

- i. All the conditions laid down in NOC issued by SPCB should be strictly complied with during entire construction cycle of the Project.
- ii. The water treatment plant shall be provided for treatment of water. The treatment shall include screening, sedimentation, filtration and disinfections. Appropriate arrangement shall be made for treatment and reuse of backwash water of filtration plant.
- iii. Project proponent shall provide adequate measuring arrangement at the inlet point of water uptake and at the discharge point for the measurement of water utilized in different categories and monitoring daily water consumption.
- iv. Regular water sprinkling shall be done all around the site to minimize fugitive dust emission during construction activities.
- v. Rain water harvesting structures should be provided as per submitted Plan.

III. Post Construction / Operation Phase

- i. Project Proponent should obtain prior consent to operate under Air Act, 1981 & Water Act, 1974 from State Pollution Control Board before commissioning of the project.
- ii. Water saving practices such as usage of water saving devices/fixtures, low flushing systems, sensor based fixtures, auto control walls, pressure reducing devices etc. should be adopted.
- iii. Water budget should be adopted as per the plan submitted in the supplementary Form I A & EMP.
- iv. All the generated domestic effluent should be sent to ETP/STP for treatment & further recycling & reuse.

- v. Treated water recovered from STP would be used for flushing the toilets, gardening purpose, make up water in air conditioning systems, etc. As proposed, Fluidized Bed Reactor (FBR) type sewage treatment plant should be installed. The Sewage Treatment Plant shall be ensured before the completion of Building Complex.
- vi. Rainwater from open spaces shall be collected and reused for landscaping and other purposes. Rooftop rainwater harvesting shall be adopted for the proposed Buildings. Every building of proposed extension project shall have rainwater-harvesting facilities. Before recharging the surface runoff, pre-treatment must be done to remove suspended matter and oil and grease.
- vii. Municipal solid wastes generated in the proposed extension buildings shall be managed and handled in accordance with the compliance criteria and procedure laid down in Schedule- II of the Municipal Wastes (Management and handling) Rules, 2000 (As amended).
- viii. The standard for composting & treated leachates as mentioned in Schedule-IV of the Municipal Wastes (Management and handling) Rules, 2000 (As amended) shall be followed.
- ix. All hazardous wastes shall be segregated, collected, transported, treated and disposed as per provisions of the Hazardous Wastes (Management and Handling) Rules, 1989 (As amended).
- x. Recycling of all recyclable wastes such as newspaper, aluminium cans, glass bottles, iron scrap and plastics etc. shall be encouraged through private participation. Project proponent shall take appropriate action to ensure minimum utilization of plastic carry bags and plastic small containers etc. within the proposed buildings shall be ensured.
- xi. Project proponent shall operate and maintain the sewage collection/conveyance system, sewage pumping system and sewage treatment system regularly to ensure the treated water quality within the standards prescribed by Ministry of Environment and Forests, Government of India.
- xii. Properly treated and disinfected (Ultra Violet Treatment) sewage shall be utilized in flushing the toilets, gardening purpose, make up water in air conditioning systems etc.
- xiii. Non-mixing of faecal matter with the municipal solid wastes shall be strictly ensured.
- xiv. Non-mixing of sewage/sludge with rainwater shall be strictly ensured.
- xv. Noise barriers shall be provided at appropriate locations so as to ensure that the noise levels do not exceed the prescribed standards. D.G. sets shall be provided with necessary acoustic enclosures as per Central Pollution Control Board norms.
- xvi. Back up supply shall be based on natural Gas/cleaner fuel subject to their availability.
- xvii. The project proponent shall resort to solar energy at least for street lighting and water heating for Proposed Building Complex, gardens/park areas.
- xviii. During maintenance, energy efficient electric light fittings & lamps- low power ballasts, low consumption high power luminaries, lux level limiters & timers for street lighting shall be provided.

- xix. A report on the energy conservation measures conforming to energy conservation norms finalized by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, "R" and "U" factors etc.
- xx. Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stack Emissions from DG sets & Testing of Untreated & treated effluent samples of STPs should be conducted and report should be submitted on monthly basis to SPCB.

IV. Entire Life of the Project

- i. All the conditions laid down in NOC & consent to operate issued by SPCB should be strictly complied with during entire life cycle of the project.
- ii. Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stack Emissions from DG Sets & Testing of Untreated & treated effluent samples of STPs should be conducted and reports should be submitted on monthly basis to SPCB.
- iii. The project authorities shall ensure that the treated effluent and stack emissions from the unit are within the norms stipulated under the EPC rules or SPCB whichever is more stringent. In case of process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- iv. The overall noise levels in and around the project area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules 1989 viz. 75 DBA (day time) and 70 DBA (night time).
- v. The project authorities shall provide requisite funds for both recurring and non-recurring expenditure to implement the conditions stipulated by SEIAA, Jharkhand with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.
- vi. Plantation along the side of the buildings & roads and in the open spaces shall be developed to act as sinks of air pollutants. The plantation of trees shall be completed in the construction stage. The plantations shall consist of mixture of available indigenous, fast growing and sturdy species of trees, shrubs. 15% of the total plot area shall be used for plantations.
- vii. Whenever developer will hand over building to the society, the developer must mention in the agreement or sale deed that 15% green belt area of total plot area should mentioned & Environmental Conditions given by SEIAA, Jharkhand has to be complied.
- viii. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

- ix. The funds earmarked for the environmental protection measures shall not be diverted for other purposes.
- x. In case of any changes in the scope of the project, the project shall require a fresh appraisal by the SEAC/SEIAA.
- xi. The SEAC/SEIAA, Jharkhand will have the right to amend the above conditions and add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
- xii. It shall be mandatory for the project management to submit six (06) monthly compliance report in respect of the stipulated prior environmental clearance terms and conditions in hard copies and soft copies to the regulatory authority concerned Regional Office of MoEF & CC at Ranchi and Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi.
- xiii. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal (NGT), if preferred within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.

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Standard EC condition**I. Statutory compliance**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of schedule-I species in the study area)
- iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.
- v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- vi. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

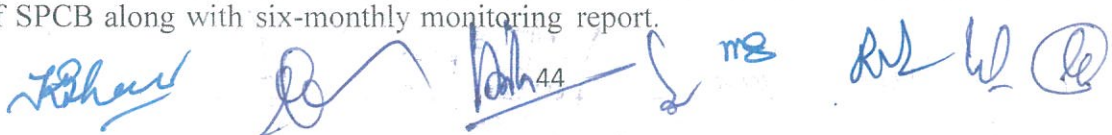
II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. no. 612 (E) dated 25 August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system carryout to Ambient Air Quality monitoring for common / criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions. (case to case basis small plants: Manual; Large plants: Continuous)

- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.
- viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- ix. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.
- x. Provide wind shelter fence and chemical spraying on the raw material stock piles; and
- xi. Have separate truck parking area and monitor vehicular emissions at regular interval.
- xii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport
- xiii. Ventilation system shall be designed for adequate air changes as per ACGIH Document for all tunnels, motor houses, cement bagging plants

III. Water quality monitoring and preservation

- i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. (case to case basis small plants: Manual; Large plants: Continuous)
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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- iv. Adhere to 'Zero Liquid Discharge'.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- vii. The project proponent shall practice rainwater harvesting to maximum possible extent.
- viii. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- ix. The project proponent shall make efforts to minimise water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

V. Energy Conservations measures

- i. Provide solar power generation on rooftops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- ii. Provide the project proponent for LED lights in their offices and residential areas.
- iii. Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS Standards.

VI. Waste management

- ~~i. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & other waste (Management & Trans boundary Movement) Rules, 2016.~~
- ii. Kitchen waste shall be composted or converted to biogas for further use. *(to be decided on case to case basis depending on type and size of plant)*

VII. Green Belt

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues



- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The PP shall provide Personal Protection Equipment (PPE) as per the norms of factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and/or shareholders/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- i. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- iv. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- v. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently

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advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10} , SO_2 , NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form- V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- i. ~~The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.~~
- ii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- viii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- ix. Concealing factual data or submission of false / fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- x. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

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- xi. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
- xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986. Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010
- xv. This environmental clearance is valid for seven years from the date of issue.

① K. K. Srinivasan hsh [Signature] [Signature] [Signature] [Signature]