

State Level Environment Impact Assessment Authority, Jharkhand.

Nursery Complex, Near Dhurwa Bus Stand, Dhurwa, Ranchi. Jharkhand-834 004.

E-mail: msseiaa.jhk@gmail.com/chr-seiaajhr@gov.in website: www.jseiaa.org

Letter No.-EC/SEIAA/2022-23/2755/2023/

Ranchi, Date:

To: M/s Shree Cement Limited,

Dr. Anil Kumar Trivedi.

Asst. Vice President & Head Environment,

Bangur Nagar, Post Box No. 33,

Beawar, Rajasthan: 305901.,

Sub.: Environmental Clearance for the project "Expansion of Standalone Clinker Grinding Unit for manufacturing of Cement (OPC, PPC, PSC & Composite Cement) from 2.5 Million TPA to 3.0 Million TPA by Internal Modification of VRM main Gear Box and Process optimization of M/s Shree Jharkhand Cement Plant (A unit of Shree Cement Limited) at Village: Hansda, P.O.: Burudih, Block: Kharsawan, Distt.: Saraikela-Kharsawan, Jharkhand" (Proposal No.: SIA/JH/IND1/413630/2023) regarding.

Your application no. SCL/EC/Jharkhand-GU/2022-23/3837 dated 18.02.2023.

Sir,

Ref:

It is in reference to the project "Expansion of Standalone Clinker Grinding Unit for manufacturing of Cement (OPC, PPC, PSC & Composite Cement) from 2.5 Million TPA to 3.0 Million TPA by Internal Modification of VRM main Gear Box and Process optimization of M/s Shree Jharkhand Cement Plant (A unit of Shree Cement Limited) at Village: Hansda, P.O.: Burudih, Block: Kharsawan, Distt.: Saraikela-Kharsawan, Jharkhand", Jharkhand submitted by you for seeking prior Environmental Clearances (EC).

This is a new project which has been taken for appraisal on 23.02.2023.

Shree Cement Limited has made an online application vide proposal no. SIA/JH/IND1/413630 /2023, on 07th January, 2023 along with copy of EIA/EMP Report and Forms (Part A, B and C) seeking Environment Clearance (EC) under Clause 7(ii) of EIA Notification 2006, (as amended thereof) and provision of Office Memorandum (OM) issued by MoEF&CC on 11.04.2022 for the project mentioned above. The proposed project activity is listed at schedule no. 3(b) under Category "B" of the schedule of the EIA Notification, 2006 is therefore, appraised at State Level.

The project of Shree Jharkhand Cement Plant (A Unit of Shree Cement Ltd.) located at Village: Hansda & Burudih, PO: Burudih, Block: Kharsawan, District: Saraikela - Kharsawan (Jharkhand) is Expansion of Standalone Clinker Grinding Unit (under section 7(ii) EIA Notification, 2006, as amended thereof and subsequent office memorandum issued on

NO

11.04.2022) for manufacturing of Cement (OPC, PPC, PSC & Composite Cement) from 2.5 Million TPA to 3.0 Million TPA by Modernization & Process optimization and DG Sets of 1250 KVA along with Railway siding.

Environmental Site Settings:

SI. No	Particulars			Details			Remark	KS
i.	Total land	Total plant	are	a is 44.52	2 ha	(110 acre)	Land	use:
		including 1.	ncluding 1.62 ha (4 Acre) area of SCL road					
		outside plan	outside plant boundary.					
	Land acquisition details as per	Total land	Total land is under the possession of the					
ii.	MoEF&CC O.M. dated 7/10/2014.	company.	ompany.					
	Existence of habitation &	Plant Site:	No	habitation	exists	within the	_	
iii.	involvement of R&R, if any.	plant site ar	id Ra	&R is not app	plicab	le.		
		Study Area	1:					
		Habitatio	n	Distance (km)	Direction		
		Hansda		~0.30		NW		
		Gajudih		~1.0		North		
		Burudin		~1.0		SE		
		Shimla		~1.5		West		
		Mahali Mai	rup	~2.0		East		
		Kendudipa		~1.5		SE		
		Nayadih		~2.5		West		
		There are ap	pro	k. 144 other	villag	es in 10 km		
		radius study	area	ı.				
	Latitude and Longitude of all	Pillar]	Latitude	Lo	ongitude	_	
iv.	corners of the project site	No.						
		A	22	°45'29.36" N	85°.	51'21.98"E		
		В	22	°45'29.55"	850	51'22.65"E		
				N		31 22.03 L		
		С	22	°45'29.18"	85°.	51'23.70"E		
				N				
		D	22	°45'28.44"	85°	51'24.75"E		
		Е	22	N °45'26.86"	0.50	51126 45115		
		E	22	43 20.80 N	83.	51'26.45"E		
		F	22	°45'25.15"	85°.	51'27.31"E		
				N				
		G	22	°45'23.66"	85°:	51'29.07"E		
		1.1	22	N 245122 9911	0.70	51120 4205		
		Н	22	°45'22.88" N	85%	51'30.43"E		
		I	22		85°	51'31.47"E		
				N	05.			

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Sl. No	Particulars		Det	tails			Remarks
		J	22°45'20	0.87"	85°	51'36.83"E	
		17	N	2 0 1 11	0.50	51144 0 5 115	
		K	22°45'20 N	0.01"	85°	51'44.87"E	
		L	22°45'14	4 65"	85°	51'50.64"E	
			N	1.05	03	2120.01 E	
		М	22°45'13	3.79"	85°	51'52.74"E	
			N				
		N	22°45'13	3.42"	85°	51'52.82"E	
		0	N 22°45'10	77"	Q 5 °	51'44.08"E	
			22 43 TO	9.77	0.5	31 44.00 L	
		Р	22°45'8.	89"N	85°	51'37.75"E	
		Q	22°45'5.	70"N	85°	51'27.64"E	
		R	22°45'5.	09"N	85°	51'23.55"E	
		S	22°45'4.	27"N	85°	51'19.34"E	
		Т	22°45'4.	27"N	85°	51'17.65"E	
		U	22°45'7.	43"N	85°	51'13.88"E	
		V	22°45'7.	30"N	85°	51'13.23"E	
		W	22°45'7.	53"N	85°	51'12.93"E	
		X	22°45'11.	.63"	85°	51'14.42"E	
			N				
		Y	22°45'14	1.35"	85°	51'14.69"E	
			N				
		Z	22°45'19	9.76"	85°	51'14.89"E	
			N				
		AA	22°45'22	2.28"	85°	51'14.80"E	
			N				
		BB	22°45'25	5.12"	85°	51'16.45"E	
			N				
V.	Elevation of the project site	175 m to 18					-
vi.	Involvement of Forest land if	No Forest L	and is invo	olved in	the	plant site.	-
	any.	DI	N. I.				
,,	Water body (Rivers, Lakes,	Plant site:		•		within the	-
vii.	Pond, Nala, Natural Drainage,	plant site ex				1 1 2 2	
	Canal etc.) exists within the	Study are		ving w	ater	body fall	
	project site as well as study	within 10 ki		D' /		D	
	area	Water Bo		Distan		Direction	
		Siyaljor		2.0 kr		SSW	
		Sanjay		2.5 kr		SSE	
		Sona		3.5 kr		NNE	
		Kuchai		5.0 kr		SW	
		Suru	Nala	5.5 kr	n	NNW	







Sl. No	Particulars		De	Remarks		
			Sonhua Nala	8.0 km	WSW	
			Kharkhai River	8.5 km	SSE	
			Ragra Nala	8.5 km	NE	
			Kantajuriya Nala	9.5 km	NNE	
viii.	Existence of ESZ/ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area.	0		nere Reserve, lant site. ed Elephant wever, mov orted approxin	Corridor in vement of mately ~2.4	_

Earlier, Environmental Clearance was obtained by M/s. Jupiter Cement Industries (Unit of SKJ Coke Industries Ltd.) for Integrated Cement Plant at Village: Hansda, PO. Burudih, District: Saraikela - Kharsawan (Jharkhand) from MoEF&CC, New Delhi vide letter no. J-11011/692/2008-IA. II (I) dated 30th Aug., 2010. Shree Cement Ltd. (SCL) has taken over the plant of SKJ Coke Industries Ltd. on 24th June, 2016. EC was transferred from M/s. Jupiter Cement Industries (Unit of SKJ Coke Industries Ltd.) to Shree Cement Ltd. vide MoEF&CC letter no. J.11011/692/2008-IA.II (I) dated 31st July, 2017. Further, the validity of EC dated 30th Aug., 2010 was extended up to 29th Aug., 2020 vide MoEF&CC letter no. J-11011/692/2008-IA.II (1) dated 18th Oct., 2017. Thereafter, SCL did not intend to install the clinker manufacturing unit in the project. Hence, Environmental Clearance was amended w.r.t. Standalone Clinker Grinding Unit in the name of Shree Jharkhand Cement Plant (A Unit of Shree Cement Ltd.) with cement production capacity of 4.0 Million TPA (Phase - 1: 2.5 Million TPA; Phase - 2: 1.5 Million TPA) along with Captive Power Plant (20 MW), D.G Sets (1250 KVA) and Captive Railway Siding at Village: Hansda, PO.: Burudih, District: Saraikela- Kharsawan, (Jharkhand) vide letter no. J-11011/692/2008-IA.II(1) dated 21st Feb., 2018. Out of the total granted capacity of 4.0 Million TPA cement production capacity, the company have installed only 2.5 Million TPA cement production capacity and D.G. Sets of 1250 KVA along with Captive Railway Siding i.e., Phase - 1 of the project has been commissioned and under operation. Phase - 2 of 1.5 Million TPA capacity along with CPP of 20 MW capacity has not been installed within the stipulated EC validity period; as the same got expired on 29th Aug., 2020. Consent to Operate for the existing Grinding Unit (2.5 Million TPA) has been obtained from JSPCB vide their letter no. JSPCB/HO/RNC/CTO-6972715/2020/210 dated 22nd Jan., 2020 which is valid up to 31st March, 2024.

Khata no. & Plot no. of the project:

Khata No.	Plot No.
36	206
36	207
36	209







Khata No.	Plot No.
36	211
36	327
36	328
36	329
36	560
36	561
87	369
93	341
93	341
74	330
90	318
90	319
90	430
90	434
74	330
87	432
93	395
93	393
11	101
73	312
48	435
73	312
73	312
93	342
75	373
75	380
75	382
75	384
75	392
75	396
75	349
75	336
76	354
76	358
76	359
76	371
76	388
76	390
76	406
76	410
76	418
76	420
76	422
76	423
76	429
76	357
81	337

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Khata No.	Plot No.
81	338
89	204
89	231
90	321
90	322
90	323
90	438
11	213
90	437
90	439
11	213
61	212
2	450
36	211
36	328
39	310
76	371
76	422
93	393
83	394
17	248
18	250
18	252
28	217
39	310
29	445
39	442
39	443
74	208
74	330
74	331
74	331 333
77	332
90	430
90	439
90	439
48	313
48	315
48	324
57	376
57	378
93	340
93	341
93	345
93	342
93	347
93	393

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Khata No.	Plot No.
93	395
21	447
24	448
81	337
81	338
81	350
81	356
81	374
81	375
81	379
81	397
36	211
73	312
73	441
36	211
1	210
90	430
7	201
93	341
93	347
73	312
73	312
13	314
13	· 316
13	317
13	320
13	325
13	436
13	440
91	411
91	389
6	203
6	220
6	221
6	223
7	218
7	219
7	199
7	200
7	202
59	446
60	215
60	449
87	334
87	335
87	351
87	348

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Khata No.	Plot No.
87	368
87	377
87	381
87	332
73	312
90	437
73	312
90	430
90	439
76	388
85	427
85	362
85	364
85	366
85	408
85	415
85	416
85	417
85	421
93	345
93	393
93	345
93	393
. 93	394
93	395
93	393
87	398
86	222
5	385
5	414
81	379
81	374
81	383
48	85
49	86
49	88
68	459
68	458
73	312
39	310
73	312
93	342
83	339
83	343
83	344
83	346
83	394

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Khata No.	Plot No.
83	399
83	400
83	384/559
93	342
93	341
93	341
73	312
68	459
68	459
68	458
68	245
81	433
44	352
44	355
44	360
44	361
44	363
44	365
44	370
44	372
44	386
44	387
44	391
44	407
44	409
44	412
44	413
44	419
44	424
44	431
96	428
109	90
109	91
109	92
109	94
109	95
109	96
109	97
109	102
109	103
109	110
109	111
34	98
73	311
73	441
55	205
74	333

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Khata No.	Plot No.
14	214
15	216
11	226
16	246
11	229
11	444.
17	247
11	249
18	251
6	198
39	310
39	310
29	228
29	243
39	442
51	3 5
52	5
50	2 7
50	
50	15
50	16
50	14
50	15
50	2
50	7
12	87
50	4
50	8
50	11
50	10
50	9
27	460
20	462
71	227
68	245
88	326
88	326
43	367
76	371
101	244 233
101	233
101	235
102	238
102	238
54	237
54	<u> </u>

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Implementation status of the existing EC

S. No.	Facilities	Units	Granted Capacity as per EC dated 21 st Feb., 2018	Implementation Status as on date	Production As per CTO
1.	Cement (OPC, PPC, PSC, Composite Cement)	Million TPA	4.0* (Phase - 1: 2.5 & Phase - 2: 1.5)	Full capacity yet not implemented, only Phase-I: 2.5 Million TPA implemented	2.5 MTPA
2.	CPP	MW	20	Not implemented Yet	-
3.	D.G. Sets	KVA	1250	implemented	1250

The unit configuration and capacity of existing and proposed project is given as below:

S.	Plant			Existing Facili	ties as per	· EC dated 21st	Feb., 201	8	
No.	Equipment / Facility	Total (A -	Total (A + B)		nted	Un - implen (B)	nented	As per C	то
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
1.	Cement	VRM/ Ball	4.0	VRM:	2.5	VRM/ Ball	1.5	VRM:	2.5
		mill with	Million	1 x 7000 TPD	Million	mill with	Million	1 x 7000 TPD	Million
		Roller Press:	TPA		TPA	Roller Press:	TPA		TPA
		1 x 11000 TPD				1 x 4000 TPD			
2.	CPP	CPP Boiler	20 MW	-	-	CPP Boiler	20 MW	-	-

Proposed Uni	Proposed Unit*			
Configuration	Capacity	Configuration	Capacity	
VRM: 1 x 1000 TPD (Modification in existing system)	0.5 Million TPA	VRM: 1 x 8000 TPD	3.0 Million TPA	
-	-	-	-	

The details of the raw material requirement for the expansion project along with its source and mode of transportation is given as below:

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Raw material requirement - OPC/PPC/PSC/Composite Cement

S.	Raw	Requirement (Million TPA)										
No.	Material		Existing (2.5 Mil	•	-		After Expansion total Capacity (3.0 Million TPA)			Source & Mode of Transportation		
		OPC	PPC	PSC	Composite Cement	OPC	PPC	PSC	Composite Cement			
1.	Clinker	2.38	1.5	1.0	1.0	2.85	1.8	1.2	1.2	SCL's Plant in Chhattisgarh - 550 km, Karnataka - 1500 km and Rajasthan - 1550 km By Road & Rail		
2.	Gypsum	0.12	0.12	0.12	0.12	0.15	0.15	0.15	0.15	Rajasthan/ Chemical/ Synthetic/ Imported Gypsum etc. By Rod & Rail 1700 km, Dhamra Port 325 kms		
3.	Fly ash	-	0.88	-	0.88	-	1.05	-	1.05	Adhunik Power & Natural Resources Ltd; Kandra, Jamshedpur, Tata Power Ltd.; Jojobera, Hindalco Industries Limited; Muri and other nearby Power plants. By Road 50-165 Km		
4.	Slag	-	-	1.38	0.5	-	-	1.65	0.6	Tata Steel Long Product Ltd: Ghamaria, Tata Steel Ltd.; Jamshedpur, Narsingh Ispat Ltd: Chowka and Nearby Steel Plant & MBF's located in Jharkhand/ Odisha By Road 50- 100 Km		
	Total	2.5	2.5	2.5	2.5	3.0	3.0	3.0	3.0			

Cement production will be done 3.0 Million TPA only from various options as OPC, PPC, PSC & Composite Cement or Product Mix.

The total water requirement of Grinding Unit after proposed expansion will be 316 KLD; out of which, the existing water requirement is 280 KLD. Additional water requirement for proposed expansion will be 36 KLD; which is being/ will be sourced from Ground & Surface Water.

CGWA NOC for withdrawal of 490 KLD Ground Water has been obtained *vide* letter no. 21-4/245/JH/IND/ORIG/2018/3523 dated 14th May, 2018 (valid up to 26th April, 2020). Renewal of ground water NOC was issued by CGWA, New Delhi vide letter no. CGWA/NOC/IND/REN/1/2021/5911 dated 26.03.2021 (Valid upto 26.04.2023). Permission for withdrawal of 250 KLD surface water from Sona River has been granted *vide* letter no. 2/PMC/WS-25/2010 dated 24th July, 2019.

The existing power requirement is 12.25 MW. Total requirement after expansion will be 14 MW which will be sourced from Jharkhand State Electricity Grid / Solar Power Plant (12 MW) and D.G. Sets (2 x 1250 KVA) for back up.

Baseline Environmental Studies

Period	Post Monsoon Season (Oct. to Dec., 2022)	Additional study (if any)
AAQ	$PM_{2.5} = 28.7 \text{ to } 46.6 \mu\text{g/m}^3$	
parameters	$PM_{10} - 55.5$ to 79.4 $\mu g/m^3$	
at 8	SO_2 - 5.8 to 16.6 μ g/m ³	
locations	NO_2 - 10.87 to 27.8 μ g/m ³	
	$CO - 0.54 \text{ to } 0.78 \text{ mg/m}^3$	
Incremental	$PM = 0.615 \mu g/m^3$ (Level within plant site in East direction)	
GLC level	$SO_2 = 0.70 \mu\text{g/m}^3$ vel within plant site in East direction)	
	$NO_x = 1.10 \mu g/m^3$ vel within plant site in East direction)	
Ground	pH - 7.53 to 7.91	
water	Total Hardness – 146.98 to 278.56 mg/l	
quality at	Chlorides –40.98 to 108.56 mg/l	
08	Fluoride - 0.67 to 0.92 mg/l	
locations	Heavy Metals - Iron as Fe: 0.18 to 0.31 mg/l	
Surface	pH - 7.12 to 7.93	
water	DO - 6.2 to 7.2 mg/l	
quality at	BOD – 2.2 to 6.2 mg/l	
09	COD – 12.6 to 26.9 mg/l	4
locations		
Noise	Noise Level During Day Time –52.4 to 64.5 Leq dB (A)	
levels at 08	Noise Level During Night Time –41.7 to 57.3 Leq dB (A)	
locations		
Traffic	Traffic study has been conducted at SH - 5 which is approximately 8.5 km	
assessment	in SSE direction.	
study	Transportation of raw material & finished product will be done as per	
findings	details given below:	
J	Clinker - approx. 50% by road & 50% by rail	

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-	Fly	ash -	100%	by	road
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- Gypsum (Mineral/ Chemical / Synthetic / Imported) approx. 50% by road & 50% by rail
- Slag 100% by road
- Coal 100% by road
- HSD 100% by road
- Cement approx. 50% by road & 50% by rail
- Biomass 100% by road
- Dolochar approx. 50% by road & 50% by rail

PCU load after proposed project will be 158.875 (Existing) + 73.75 (Additional) PCU/hr. level of service (LOS) will be:

Road	V (Volume in PCU/hr.)			C (Capacity in PCU/hr.)	Existing V/C Ratio	LOS	
SH-	158.875	(Existing)	+	73.75	625	0.37	В
5	(Addition	(a1) = 232.6					

^{*} Capacity as per IRC- 64-1990 & 106-1990 Guidelines.

Conclusion: The level of service will be "B" i.e., Good for SH - 5. It can be concluded that the present road network is good enough to bear the increased traffic load

Flora and fauna

One Schedule - I species i.e., Elephant (*Elephas maximus indicus*) has been found within 10 km radius of the study area during field survey; which are categorized as Schedule - I according to (IWPA) Indian Wildlife Protection Act' 1972. Wildlife Conservation / Protection Plan for Elephant is prepared and submitted to DFO for authentication.

The details of solid and hazardous waste generation along with its mode of treatment/ disposal is furnished as below:

S.	Type of	Waste	Source	Quantity	Mode of Treatment / Disposal
No.	Waste			Generated	
	Ann			(Approx.)	
1.	SW	Dust	Grinding	0.375 TPA	Dust collected from various APCEs will be
			Unit		totally recycled back into the process.
2.	SW	STP Sludge	STP	1 Kg/day	Will be used as manure in horticulture and
					greenbelt development.
3.	HW	Used / Spent	Plant	20 KL /	Will be generated as per Schedule- I of
		Oil (5.1) and	maintenance	Annum	Hazardous and Other Wastes (Management





Waste		and Transboundary Movement) Rules. 2016;
		which will be sold to CPCB/ SPCB
		authorized recycler. Used Oil/ Spent oil will
		be filled in Empty barrels and further sold to
		CPCB/ SPCB authorized recycler.
E-Waste	0.05	Will be sold to registered vendors as per E-
	Tonnes/Ann	Waste Management Rules, 2016.
	um	
Used Lead	50	Will be stored in the designated storage area
acid	Nos./Annum	and will be disposed-off/ sold to registered
batteries		vendors as per Battery Waste Management
		Rules 2020.

Public Consultation:

Details of advertisement	Public Hearing Notice published in Newspapers Dainik Jagran &					
given	Hindustan Times on 5 th Sept., 2009					
Date of Public Consultation	6 th October, 2009 at 11:00 am					
Venue	Project Site at Village – Hansda, Post – Burudih, Dist Saraikela- Kharsawan					
Presiding Officer	 Sri Chandrashekhar Prasad, Director, DRDA, Saraikela - Kharsawan Sri R. N. Chaudhary, Regional Officer, Jamshedpur, JSPCB Sri Manikant Prasad, AEE, H.O, JSPCB 					
Major issues raised	Issues related to Employment, Environment & Pollution. Plantation, Socio-economic development related, Health etc.					

IMPLEMENTATION STATUS:

Expenditure done on various heads and activities are as under:

Sr.	Activity Heads	Year Wise Amount (in Lakh)						
No.		2018-19	2019-20	2020-21	2021-22	2022-23	Total	
1.	Educational Program	8.36	8.08	0.43	15.1	3.95	35.9	
2.	Health & Family Welfare	7.5	3.57	2.39	40.2	0.55	54.2	
3.	Infrastructure Development	3.94	3.84	24.1	14.4	16.8	63.1	
4.	Sustainable Livelihood & women empowerment	5.49	5.49	1.75	0.18	0.078	13.0	
5.	Social Development & Welfare	29.4	28.4	16	2.11	11.87	87.8	
	GRAND TOTAL	54.69	49.38	44.67	71.99	33.25	254.0	

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CSR Expenditure Plan for next 3 years under various heads and activities are as under:

S.	Major Projects	1st	2nd	3rd	Total
No	-	Year	Year	Year	Amt.
			***************************************		(Rs in
					Lacs)
HE	ALTH & FAMILY WELFARE PROGRAMMES	r			
1	Health check-up camp in local villages	20.00	25.00	25.00	70.00
2	Contribution of medicine in existing Heath centers	60.00	75.00	90.00	225.00
3	Improvement by providing medical equipment and	50.00	70.00	100.0	220.00
	infrastructures in existing medical and health centers of local			0	
	area			015	
Tota	al	130.0	170.0	215.0	515.00
		0	0	0	
EDU	UCATION PROMOTION PROGRAMMES	20.00	0.5.00	[a = a a]	
1	Scholarship, books, uniform to merit holder children etc.	20.00	25.00	25.00	70.00
2	National/International day celebration (15 th Aug, 26th Jan, World Environment Day, World Earth Day)	12.00	15.00	17.00	44.00
Tota	al	32.0	40.0	42.0	114.00
CO	NTRIBUTION IN RELIGIOUS & SOCIAL PROGRAMM	ES	g		
1	Contribution in religious festivals, Mela's e.g., Local fares and sports activities	15.00	16.00	19.00	50.00
2	Contribution for various programmes which organized by other social groups & Samiti's such as Mass Marriages etc.	40.00	40.00	49.90	129.90
	Total	55.00	56.00	68.90	179.90
CO	MMUNITY INFRASTRUCTURE DEVELOPMENT PROJ	ECTS	***************************************	***************************************	
1	Construction of community center, roads in nearby villages	250.0	400.0	500.0	1150.00
	·	0	0	0	
2	Drinking Water Treatment plant and supply	20.00	25.00	30.00	75.00
3	Greenbelt development	25.00	40.00	60.00	125.00
4	Rebate on cement for local works	70.00	90.00	150.0	310.00
ļ		1265	L	0	1///
	Total	365.0	555.0	740.0	1660.00
		1 0	U	U	2460.00
	Grand Total				2468.90

Cost for expansion will be 2.4 Crores only, whereas the existing capital cost of the project was Rs. 537.80 Crores. The total Capital cost for the after expansion will be Rs. 540.20 Crores. Capital cost for environmental protection measures for expansion will be 0.30 Cr and the annual recurring cost for expansion will be 0.07 Cr/ annual. The existing cost for environmental protection measures is Rs. 11.70 Crores and the annual recurring cost towards the environmental protection measures after expansion will be as Rs. 12 Crores and the annual recurring cost towards the environmental protection measures after expansion will be Rs. 2.0 Crores/ annum.

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The employment generation from the expansion project is 821 people. The details of cost for environment protection measures are as follows:

		Existing	Cost of EMP		al Cost of MP	Total after Expansion		
Sr. No.	Particulars	Capital Cost (Rs. in Lacs)	Recurring Cost /Annum (Rs. in Lacs)	Capital Cost (Rs. in Lacs)	Recurring Cost /Annum (Rs. in Lacs)	Capital Cost (Rs. in Lacs)	Recurring Cost /Annum (Rs. in Lacs)	
1	Air Pollution Control	852.0	135.0	-	-	852.0	135.0	
2	Environmental Monitoring	201.0	19.0	-	-	201.0	19.0	
3	Water Pollution Control	35.0	8.0	-	-	35.0	8.0	
4	Noise pollution control	2.0	1.0	-	-	2.0	1.0	
5	Occupational health & Safety and Env. Awareness Programme & Wildlife	20.0	10.0	6.0	1.5	26.0	11.5	
6	Waste Management	10.0	5.0	4.5	1.0	14.5	6.0	
7	Greenbelt and plantation & Monitoring	25.0	10.0	8.5	2.5	33.5	12.5	
8	Water Sprinkling	5.0	2.0	7.5	1.0	12.5	3.0	
9	RWH and Storm Water Management	15.0	2.0	_	-	15.0	2.0	
10	Hazardous Waste handling Management	5.0	1.0	3.5	1.0	8.5	2.0	
	Total	1170.0	193.0	30.0	7.0	1200.0	200.0	

Existing Greenbelt has been developed in 37.2 acres (15.05 ha), which is about ~33.8 % of the total plant area with 20368 numbers of tree saplings. Density of the plantation will be further improved by planting 17332 numbers of tree saplings.

It has been reported that following will be resource consumption after the proposed change:

Particulars	As per EC dated 21 st Feb., 2018	After proposed change under para 7(ii)	% increase (Approx.)	Remarks
Land (in ha.)	44.52 ha.	44.52 ha.	-	No Change
Greenbelt (in ha.)	15.05 ha.	15.05 ha.	-	No Change
Water (in KLD)	280 KLD	316 KLD	13%	-







Raw Materials (in Million	Clinker: 2.38	Clinker: 2.85	20%	Cement production will
TPA)	Gypsum:0.12	Gypsum: 0.15	25%	be done 3.0 Million TPA
	Fly Ash: 0.88	Fly Ash: 1.05	19%	only either from various
	Slag: 1.38	Slag: 1.65	20%	options as OPC, PPC,
				PSC & Composite
				Cement.
Products (in Million TPA)	4.0 Million	3.0 Million TPA	20%	As per the granted EC,
	TPA			only 2.5 Million TPA of
				Cement production
				capacity has been
				implemented, for which
				CTO has been obtained
				with capacity of 2.5
				Million TPA on
				22.01.2020 & valid upto
				31.03.2024

Pollution Load assessment

Particulars	As per EC dated	After	%	Remarks
	21 st Feb., 2018	proposed	increase	
	(Implemented	change		
	Plant Capacity is	under para		
	2.5 Million TPA)	7(ii)		
Air	2.8 gm/sec	2.8 gm/sec	-	No increase in Stack emission load, same
				VRM is for 0.5 Million TPA Expansion
Water	280	316	12.8%	CGWA NOC for withdrawal of 490 KLD
				Ground Water has been obtained vide
				letter no. 21-
				4/245/JH/IND/ORIG/2018/3523 dated
				14th May, 2018 (valid up to 26th April,
				2020). Renewal of ground water NOC
				was issued by CGWA, New Delhi vide
				letter no.
				GWA/NOC/IND/REN/1/2021/5911
				dated 26.03.2021 (Valid upto
				26.04.2023).
Solid &	SW in form of	SW in form	-	No Change
Hazardous	STP Sludge: 1.0	of STP		
Waste	kg/day.	Sludge: 1.0		
		kg/day.		







	HW in form of	HW in form	-	No Change
	Used / Spent Oil (5.1) and Waste Residue containing oil (5.2): 20 KL/Annum	Used / Spent Oil (5.1) and Waste		
Traffic	Level of Service-	Level of	5.7%	Slightly increase by increase the number
Load	B (0.35 is Volume of PCU/hr. & Capacity in PCU/hr.)	Service— B (0.37 is Volume of PCU/hr. & Capacity in PCU/hr.)		of trucks, as company is being/ will be taken proper mitigation measures.

Name of the EIA consultant: M/s. J.M. EnviroNet Pvt. Ltd. [S. No. 111, List of ACOs with their Certificate/ Extension Letter no. NABET/EIA/2023/SA 0172 valid up to 07th August, 2023].

STATUTORY CLEARANCES:

1.	СО	: The CO, Kharsawan vide letter no. 943, dated 29.06.2021 & letter no. 721, dated 28.01.2023 has mentioned the plot no. of the project is not recorded as "Jangle Jhari" in R.S. Khatiyan & Register II.
2	DFO Wild Life	: DFO. Dalma Elephant Project vide letter no. 289. dated 17.02.2023 certified that the proposed project site is outside Eco Sensitive Zone of Dalma Wildlife Sanctuary.
3	DFO Forest Distance	: DFO. Seraikela Forest Division vide letter no. 1138. dated 29.06.2021 certified that the distance of notified Forest from the project site is more than 250 m.
4	Previous Environmental Clearance (EC)	: Earlier, Environmental Clearance was obtained by M/s. Jupiter Cement Industries (Unit of SKJ Coke Industries Ltd.) for Integrated Cement Plant at Village: Hansda, PO. Burudih, District: Saraikela - Kharsawan (Jharkhand) from MoEF&CC, New Delhi <i>vide</i> letter no. J-11011/692/2008-IA. II (I) dated 30 th Aug., 2010. Shree Cement Ltd. (SCL) has taken over the plant of SKJ Coke Industries Ltd. on 24 th June, 2016. EC was transferred from M/s. Jupiter Cement Industries (Unit of SKJ Coke Industries Ltd.) to Shree Cement Ltd. <i>vide</i> MoEF&CC letter no. J.11011/692/2008-IA.II (I) dated 31 st July, 2017. Further, the







		validity of EC dated 30 th Aug., 2010 was extended up to 29 th Aug., 2020 <i>vide</i> MoEF&CC letter no. J-11011/692/2008-IA.II (I) dated 18 th Oct., 2017. Thereafter, SCL did not intend to install the clinker manufacturing unit in the project. Hence, Environmental Clearance was amended w.r.t. Standalone Clinker Grinding Unit in the name of Shree Jharkhand Cement Plant (A Unit of Shree Cement Ltd.) with cement production capacity of 4.0 Million TPA (Phase - 1: 2.5 Million TPA; Phase - 2: 1.5 Million TPA) along with Captive Power Plant (20 MW), D.G Sets (1250 KVA) and Captive Railway Siding at Village: Hansda, PO.: Burudih, District: Saraikela- Kharsawan, (Jharkhand) <i>vide</i> letter no. J-11011/692/2008-IA.II(I) dated 21 st Feb., 2018.
5	Consent to Operate (CTO)	: Consent to Operate for the existing Grinding Unit (2.5 Million TPA) has been obtained from JSPCB vide their letter no. JSPCB/HO/RNC /CTO-6972715/2020/210 dated 22 nd Jan., 2020 which is valid up to 31 st March, 2024.
6	CGWA	: CGWA NOC for withdrawal of 490 KLD Ground Water has been obtained vide letter no. CGWA/NOC/IND/ORIG/2018/3523 dated 14 th May, 2018 (valid up to 26 th April, 2020). Renewal of ground water NOC was issued by CGWA, New Delhi vide letter no. CGWA/NOC/IND/REN/1/2021/5911 dated 27.04.2020 (Valid upto 26.04.2023). Permission for withdrawal of 250 KLD surface water from Sona River has been granted vide letter no. 2/PMC/WS-25/2010 - 958 dated 24 th July, 2019.
7	EC compliance report and Action taken report of Public Hearing	: Ministry of Environment, Forest and Climate Change, Govt. of India Integrated Regional Office, Ranchi, Jharkhand has certified/monitored the compliance report vide File No. 103-539/ROR-2018/924, dated – 21.02.2023 of previous Environmental Clearance issued vide letter no J-11011/692/2008-IA-II(I), dated 21.02.2018 of MoEF & CC alongwith action taken report for the observation raised in certified/monitored compliance report by IRO, MoEF & CC, Ranchi.

The proposal was appraised by State Level Expert Appraisal Committee (SEAC) and recommended for grant of Environmental Clearance in its 101st meeting held on 20th, 21st, 22nd, 23rd and 24th February, 2023.

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State Level Environment Impact Assessment Authority (SEIAA), Jharkhand in its 102nd meeting held on 17th & 18th March, 2023 discussed the project proposal along with recommendations made by SEAC and decided to grant EC to the project.

Following the decision of SEIAA, as mentioned above, Environmental Clearance is hereby issued to the "Expansion of Standalone Clinker Grinding Unit for manufacturing of Cement (OPC, PPC, PSC & Composite Cement) from 2.5 Million TPA to 3.0 Million TPA by Internal Modification of VRM main Gear Box and Process optimization of M/s Shree Jharkhand Cement Plant (A unit of Shree Cement Limited) at Village: Hansda, P.O.: Burudih, Block: Kharsawan, Distt.: Saraikela-Kharsawan, Jharkhand" alongwith the following specific conditions as recommended by SEAC.

I. Specific Conditions:

- 1. This Environmental Clearance is valid subject to the following condition below That this project has
 - a. Obtained all legal rights to operate at concerned place.
 - b. Complied with all existing concerned laws of the land and
 - c. Complied with the decisions of SEIAA on the issue of Environmental Clearance till date.

II. Statutory Compliance:

- 1. 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.
- 2. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- 3. 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)
- 4. In the writ petition (Civil) no. 202/1995, T.N. Godaverman Thirumulpad vs union of India and ors. the Hon'ble Supreme Court passed an order dated 03.06.2022 "National Park or Wildlife Sanctuary must have an ESZ of minimum 01 km in which the activities prescribed and prescribed in the guidelines of 09th February. 2011 shall be strictly adhered to".
- 5. 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.
- 6. 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.

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- 7. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules. 2016 as amended from time to time.
- 8. No mining/activity shall be undertake in the forest land or deemed forest without obtaining requisite prior forestry clearance.
- 9. This Environmental Clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT, MoEF & CC and any other Court of Law, if any, as may be applicable to this project.
- 10. Environmental clearance is subject to obtaining prior clearance from forestry and Wildlife angle including clearance from standing committee of NBWL, as may be applicable to this project (in case any fauna occurs / is found in the Project area or if the area involves forest land or Wildlife habitat i.e. core zone of elephant/tiger reserve etc. and or located with in 10 km. of protected area).
- 11. The project proponent may apply simultaneously for forest and NBWL clearance, in order to complete the formalities without undue delay, which till process on their respective merits, no rights will vest in or accrue to them unless all clearance are obtained.

III. Air quality monitoring and preservation:

- 1. 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.
- 2. 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.
- 3. 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)
- 4. 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.

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- 5. 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.
- 6. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- 7. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.
- 8. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- 9. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation: Use closed bulkers for carrying fly ash.
- 10. Provide wind shelter fence and chemical spraying on the raw material stock piles: and
- 11. Have separate truck parking area and monitor vehicular emissions at regular interval.
- 12. 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
- 13. Ventilation system shall be designed for adequate air changes as per ACGIH Document for all tunnels, motor houses, cement bagging plants

IV. Water quality monitoring and preservation:

- 1. 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).
- 2. 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.
- 3. 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.
- 4. Adhere to 'Zero Liquid Discharge'.
- 5. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- 6. 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.
- 7. The project proponent shall practice rainwater harvesting to maximum possible extent.
- 8. Water meters shall be provided at the inlet to all unit processes in the cement plant.





9. 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

V. Noise monitoring and prevention:

- 1. 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 sixmonthly compliance report.
- 2. 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.

VI. Energy Conservations measures:

- 1. 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.
- 2. Provide the project proponent for LED lights in their offices and residential areas.
- 3. Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS Standards.

VII. Waste Management:

- 1. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & other waste (Management & Trans boundary Movement) Rules, 2016.
- 2. 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).

VIII. Green Belt:

- 1. 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.
- 2. 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.

IX. Public Hearing and Human Health issues:

- 1. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- 2. The PP shall provide Personal Protection Equipment (PPE) as per the norms of factory Act.
- 3. 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.
- 4. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

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X. Corporate Environment Responsibility:

- 1. 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.
- 2. 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.
- 3. 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.
- 4. 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.
- 5. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- 6. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented.

XI. Miscellaneous:

- 1. 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 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.
- 2. 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.
- 3. 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.
- 4. The project proponent shall monitor the criteria pollutants level namely: PM_{IO} , $S0_2$, 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.

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- 5. 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.
- 6. 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.
- 7. 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.
- 8. 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 SEIAA. Regional Office of MoEF & CC at Ranchi, Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi, and Central Pollution Control Board (CPCB).
- 9. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- 10. The SEIAA, Jharkhand or any other competent Authority may alter modify the above conditions or stipulate any further condition in the interest of Environment Protection.
- 11. 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).
- 12. 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.
- 13. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- 14. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- 15. 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.
- 16. 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.
- 17. 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
- 18. The Prescribed EC is valid as per Notification no. S.O. 1807(E) dated 12.04.2022 of MoEF&CC, Govt. of India.

Sd/-

Dated: 21/03/2023

Member Secretary State Level Environment Impact Assessment Authority, Jharkhand.

Memo No.-EC/SEIAA/2022-23/2755/2023/ 433

Copy to:

- 1. Additional Chief Secretary, Department of Forests, Environment & Climate Change, Govt. of Jharkhand.
- 2. Deputy Commissioner, District- Saraikela-Kharsawan, Jharkhand.
- 3. Divisional Forest Officer, Saraikela Forest Division, Saraikela Jharkhand.
- 4. Deputy Conservator of Forest & Field Director Elephant Project. Jamshedpur. Larkhand.
- 5. Director IA Division. Monitoring Cell. MoEF and Climate Change. Indira Paryavaran Bhavan. Jorbag Road, Aliganj. New Delhi 110003.
- 6. Integrated Regional Office, Ranchi, Ministry of Environment, Forest and Climate Change, 2nd Floor, Jharkhand State Housing Board (HQ), Harmu Chowk, Ranchi, Jharkhand 834002.
- 7. Member Secretary, Jharkhand State Pollution Control Board, Ranchi.
- 8. Secretary, Jharkhand State Expert Appraisal Committee, Ranchi.
- 9. Website.

10. Guard file.

State Level Environment Impact Assessment Authority, Jharkhand

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