SASTI EXPANSION OPENCAST COAL MINE MOEF CLEARANCE LETTER No. J-11015/435/2006.IA,II (M) DATED 17.05.2007 FOR SASTI EXPANSION OCM FOR A PRODUCTION OF 2.50 MTY.

SN	MOEF ENVIRONMENTAL CLEARANCE CONDITIONS	COMPLIANCE
A	Specific Conditions	
(i)	Mining shall be carried out as per statuette at a safe distance from the Gouri nallah / Wardha River flowing close to the lease boundary.	Mining activities are restricted within lease hold boundary at a distance of 1.85 km from Gouri Nallah & 2.50 km from Wardha River.
(ii)	The embankment to be constructed along the seasonal nallah shall be of suitable dimensions and stablised with plantation so as to withstand the peak water flow and prevent mine inundation.	Suitable embankment of proper dimension has been constructed to protect the area/ Mine from flood water as per DGMS norms. Dimensions of embankment is given as below. Length - 3570 mtr. Top width & RL - 20 mtr., 181.5 to 218.5 Bottom width & RL - 56 to 124 mtr., 172.5 to 180.00 Height - 9.00mtr to 38.00mtr. Erstwhile embankment as mentioned above has been realigned since a portion of embankment of about 1000 m has come under excavation area.
(iii)	Topsoil shall be stacked properly with proper slope at earmarked site (s) and should not e kept active and shall be used for reclamation and development of green belt.	Details of dumps are as follows: Dump no:5 Height = 34m Area = 21.251 Ha Slope = 28 degrees Part of the above dump is reclaimed with plantation Dump no: 1 Height = 22 m Area = 15.754 Ha Slope = 28 degrees It is an active dump created in 2018-19.
(iv)	OB should be stacked at the earmarked five external OB dump site within ML area which shall be a maximum height of 60m only and consist of four benches of	All 5 external O.B. Dumps were stacked at ear marked Dump sites only and 4 out of 5 dumps are afforested. The overall slope of the Dumps is 28 degree. However the afforestation has become so dense that side slope is not at all visible. The plantation has attained the height of approx 9 to 10 mtrs and the vegetation has become self sustaining.

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	15m each. The ultimate	
	slope of the dump shall	
	not exceed 28 degree,	
	Monitoring and	
	management of reclaimed	
	dumpsite should continue	
	until the vegetation	
	becomes self-sustaining.	
	Compliance status should	
	be submitted to the	
	Ministry of Environment	
	& Forest and its Regional	
	office located at Bhopal	
	on an yearly basis.	
(v)	Catch drains and siltation	Settling / sedimentation pond of appropriate size has been
	ponds of appropriate size	constructed to treat the industrial (Mine activity area) effluent
	should be constructed to	including water pumped out from mine considering peak
	arrest silt and sediment	discharge. The water so treated is being used within the mine
	flows from soil, OB and	premises for dust suppression, watering of HEMM & FOR
	mineral dumps. The water	PLANTATION, Industrial use, fire fighting
	so collected should be	Garland drains of appropriate different sizes of 3.00x2.00,
	utilized for watering the	2.00x1.5, & 1.5.x1.00mtr. for a total length of 12235.00mtr.
	mine area, roads, green	have been provided along the periphery of excavated area as
	belt development etc. The	well as OBD. Desilting is being done every year before
	drains should be regularly	onset of monsoon.
	desilted and maintained	
	properly. Garland drains	
	(size gradient and length)	
	and sump capacity should	
	be designed keeping 50%	
	safety margin over and	
	above the peak sudden	
	rainfall and maximum	
	discharge in the area	
	adjoining the mine site.	
	Sump capacity should also	
	provided adequate	
	retention period to allow	
	_	
	proper settling of silt	
(7/2)	material. Dimension of the	Detaining wall of proper dimension have been constructed at
(vi)		Retaining wall of proper dimension have been constructed at
	retaining wall at the toe of	the toe of OB Dumps which are adjacent to coal transport
	the dumps and OB benches within the mine	roads. The Dumps are also thickly planted on top as well as
	to check run-off and	on slope. The afforestation have become so dense and self
		sustaining that the side slope is not at all visible. The plants
	siltation should be based	have attained the height of approx, 9 to 10 mtrs. In the

(vii) (viii)	On the rainfall data. Drills should be wet operated only. Controlled blasting should be practiced with use of	present operating portion of mine specially benches, such retaining wall is not required. More over cross drainage in OB benches have been provided which carry all the silts & sediments ultimately to mine sump provided at the floor of seam. The sump capacity is sufficient enough to allow settlement of suspended matter significantly and only supernatant water is pumped out on surface. Drills are fitted with wet drilling arrangement. Controlled blasting is being done as per scientific investigations for design of controlled blasting pattern with
	delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.	SME explosives at Sasti Expansion Opencast mine done by CSIR- Central Institute of Mining and Fuel Research. Copy of Study attached as ANNEXURE A.
(ix)	High efficiency bag filters / water sprinkling system to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc. shall be installed and operated effectively at al times of operation.	Adequate Fixed type water sprinklers are provided in & around C.H.P. Weigh Bridges, coal transport roads, transfer points etc. as per direction of M.P.C.B., Chandrapur. They are being properly maintained & operated. Details of Air pollution Control measures are given as below: 1. Fixed sprinklers are provided at 100 MT weighbridge - 08 Nos. 2. Fixed sprinklers are provided at Main CHP - 06 Nos. 3. Along Coal transportation road – 04 nos 4. Crusher unloading Area of both mini CHP & Main CHP are enclosed with CGI sheet and sprinklers are provided at crusher. 5. Concrete pavement provided at coal unloading Area and loading point at mini CHP. 6. Concrete pavement is provided at coal unloading Area and loading point at Main CHP. 7. Conveyor belt of mini CHP and main CHP are enclosed with CGI sheets along with sprinklers. 8. Brooming and maintenance of coal transport road and weigh bridge road is done regularly. 9. Spraying of water by 5 Nos. of Mobile Water Tankers (Hired-1 nos. Of 4 KL, Departmental – 2nos. of 28 KL each and HOE contractor – 2 nos. Of 28 KL each) 10. Concrete pavement is provided in w/s complex. 11. Coal carrying Trucks are covered with Tarpaulin. 12. Tarring of 06.00 km length of internal roads used by Coal Transportation trucks
(x)	An area not less than	Noted and will be complied. Total Plantation of 5.15 lakhs

451.65 ha shall be brought under afforestation which includes reclaimed external OB dump (235.30 ha), backfilled area (166.35 ha), along ML boundary, along roads & infrastructure, green belt (50 ha) and area in township located outside the lease by planting native species in consultation with the local DFO/ Agriculture Department. The density of the trees should be around 2500 plants per ha.

done in Sasti OCM in 169.15 Ha. 20.75 Ha of backfilled area has been bioogically reclaimed.

Sr	Year		Area (Ha)	Species
no.		(nos.)		
1	1993-94	47425	9.48	Neem, Sissoo,
2	1994-95	60000	12.0	Gulmohar, Mango, Amla, Jamun,
3	1995-96	40000	8.0	Soniya, Bija,
4	1995-96	25000	5.0	Maruk, Kavath,
5	1996-97	35000	14	Khair, Karanj, Kadamba, Siras,
6	1997-98	22000	8.0	Bamboo, Arjun,
7	1997-98	37000	14.4	Ber, etc.
8	1997-98	2000	0.4	
9	1998-99	66575	26.17	
10	1998-99	34000	13.50	
11	1998-99	2000	0.70	
12	1999-00	34000	13.30	
13	2000-01	30000	12.0	
14	2002-03	18750	7.50	
15	2002-03	22250	8.90	
16	2007-08	25000	10.0	
17	2009-10	2000	0.80	
18	2013-14	12500	5.00	
	TOTAL	515000	169.15	

(xi) A Progressive Mine
Closure Plan shall be
implemented by
reclamation of quarry area
of which 166.35 Ha shall
be backfilled and
afforested by planting
native plant species in
consultation with the local
DFO / Agriculture
Department. The density
of the trees should be
around 2500 plants per ha.
The balance 63 ha of

It is being done. Total Plantation of 5.15 lakhs done in Sasti OCM in 169.15 Ha. 20.75 Ha of backfilled area has been bioogically reclaimed.

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5	1996-97	35000	14	Khair, Karanj,

decoaled void which is being converted into a water reservoir, shall be gently sloped along the upper benches, terraced	6 7 8	1997-98 1997-98	22000	8.0	Kadamba, Siras,
water reservoir, shall be gently sloped along the upper benches, terraced		11997/-98	25000	1 4 4	Bamboo, Arjun,
upper benches, terraced	8		37000	14.4	Ber, etc.
**		1997-98	2000	0.4	
and reclaimed with	9	1998-99	66575	26.17	
plantation. The outer	10	1998-99	34000	13.50	
periphery of the water	11	1998-99	2000	0.70	
body snall be fenced.	12	1999-00	34000	13.30	
	13	2000-01	30000	12.0	
	14	2002-03	18750	7.50	
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	16	2007-08	25000	10.0	
	17	2009-10	2000	0.80	
	18	2013-14	12500	5.00	
		TOTAL	515000	169.15	
operations. Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of two years and the results reported to this	Periodical medical Examinations (P.M.E.) are carried out on compulsorily on each employee once in five years with the purpose of detecting and keeping records of diseases with specific importance to Coal Worker's Pneumoconiosis. This is covered under Statute. During P.M.E., the candidates are subjected to a complete clinical examination, (including acuity of vision and hearing), radiological examination of chest and routine examination of blood and urine. In case some abnormality is detected during the course of the above examination, further investigations are carried out, as required. When a person is diagnosed as having a certain disease, he is referred to the concerned specialist for confirmation and initiation of treatment. IME/PME details for the last 5 years is as follows:				
Ministry and to DGMS.	TIVIE/	i wie ucta	ns for the l	asi 5 years is	as tollows.
	The company shall obtain prior approval of CGWA/CGWB Regional Officer for use of groundwater if any, for mining operations. Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of two years and the results reported to this	body shall be fenced. 12 13 14 15 16 17 18 The company shall obtain prior approval of CGWA/ CGWB Regional Officer for use of groundwater if any, for mining operations. Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of two years and the results reported to this IME.	body shall be fenced. 12	body shall be fenced. 12	body shall be fenced. 12

		Sr	Year	IME (nos	.)	PME (nos.)	
		no.		Departm ental	Contract ual	Departme ntal	Contract ual
		1	2017-18	-	165	292	-
		2	2018-19	-	172	314	-
		3	2019-20	-	160	287	-
		4	2020-21	-	93	252	-
		5	2021-22	-	51	236	-
(xiv)	A Final mine Closure Plan along with details of Corpus Fund should be submitted immediately upon receipt of EC to the Ministry of Environment & Forests RO, Bhopal for approval.	Mine closure guidelines came into force from 27/08/2009, wherein detailed framework for Mine Closure Plan was described. Thereafter MCP for Sasti OC was prepared. As per ammended guidelines the competant authority to approve MCP of mines of Govt. Companies will be concerned board of Company. Following the directives of MoC, MCP of Sasti OC was prepared and the same was approved by WCL Board on 25/08/2012					
(xv)	For monitoring land use pattern and for post mining land use, a time series of landuse maps, based on satellite imagery (on a scale of 1:1500) of the core zone and buffer zone from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series) and the report submitted to MOEF and its Regional Officer at Bhopal.	Complied. Attached as ANNEXURE C.					
(xvi	Consent to operate shall be obtained before expanding mining operations in the additional lease area and for the enhanced rated capacity after fulfilling the	Consent to operate has been obtained for validity upto 31/03/2023 for production capacity 2.0 MTPA .Attached as ANNEXURE D . Application has been made for Consent to Operate for production capacity of 2.50 MTPA vide UAN MPCB-CONSENT-0000152899 dated 12.11.2022.					

	conditions imposed in the NOC.	
В	General Conditions	
(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Noted. No change has been made.
(ii)	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Noted.
(iii)	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO2 and NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	Four ambient air quality monitoring stations are established as below: 1. BSOA-1 – Filter plant at Gouri colony. 2. BSOA-2 - Sasti village. 3. BSOA-3 – SAM Office. 4. BSOA-4 – Area Store. Monitoring of SPM, RPM, SO2 and NOx is being done fortnightly. Monitoring reports for the month of August 2022 and September 2022 attached as Annexure E.
(iv)	Fugitive dust emissions (SPM and RPM) from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.	Adequate Fixed type water sprinklers are provided in & around C.H.P. Weigh Bridges, coal transport roads, transfer points etc. as per direction of M.P.C.B., Chandrapur. They are being properly maintained & operated. Details of Air pollution Control measures are given as below: 1. Fixed sprinklers are provided at 100 MT weighbridge - 08 Nos. 2. Fixed sprinklers are provided at Main CHP - 06 Nos. 3. Along Coal transportation road – 04 nos 4. Crusher unloading Area of both mini CHP & Main CHP are enclosed with CGI sheet and sprinklers are provided at crusher. 5. Concrete pavement provided at coal unloading Area and loading point at mini CHP. 6. Concrete pavement is provided at coal unloading Area and loading point at Main CHP.

		 Conveyor belt of mini CHP and main CHP are enclosed with CGI sheets along with sprinklers. Brooming and maintenance of coal transport road and weigh bridge road is done regularly. Spraying of water by 5 Nos. of Mobile Water Tankers (Hired-1 nos. Of 4 KL, Departmental – 2nos. of 28KL each and HOE contractor – 2 nos. Of 28 KL each) Concrete pavement is provided in w/s complex. Coal carrying Trucks are covered with Tarpaulin. Tarring of 06.00 km length of internal roads used by Coal Transportation trucks Fugitive dust concentration report enclosed as ANNEXURE – E
(v)	Data on ambient air quality (SPM,RPM,SO2 and NOx) should be regularly submitted to the ministry including its Regional office at Bhopal and to the State Pollution Control Board and the Central Pollution Control board once in six months.	Ambient Air quality monitoring is being carried out as per GSR 742(E). The monitoring reports on quarterly basis are submitted to MOFF, and MPCB Chandrapur as per directives. Monitoring reports for the period 01.08.2022 to 30.09.2022 enclosed as ANNEXURE – E.
(vi)	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, of HEMM etc. should be provided with ear plugs / muffs.	Regular monitoring through CMPDIL is being done on fortnightly basis and the results are within limits, Workers exposed to high noise level are provided with ear plugs/muffs. HEMM are properly maintained and kept in good condition. Noise proof cabins of HEMM are also provided. Sound level meter is used for measuring noise levels at work place and records are maintained.
(vii)	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop	Sedimentation/Settling tank is provided in the mine . Mine water is pumped out after proper treatment. The results of mine water are within permissible limit. ETP along with oil skimmer is provided at workshop along with recycling system ETP sludge is properly stacked in the sludge yard as per the directives of MPCB. ETP – 150 KL / day. The effluent discharge are monitored as per GSR 742(E). Monitoring reports for the period 01.08.2022 to 30.09.2022 enclosed as ANNEXURE – E

	effluents.							
(viii) (iv)	Vehicular emissions should be kept under control and regularly monitored. Vehicles used used for transport-ing the mineral should be covered with tarpaulins and optimally loaded. Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consulta-tion with the State Pollution Control Board.	Vehicular emissions are being monitored regularly and it is kept under control. Trucks used for transporting of coal are being covered with tarpaulins. CMPDI Laboratory exists at Nagpur, which monitors all the mines of WCL. Protective respiratory devices are provided to workmen						
(x)	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and	exposed to dust area. Workers are also regularly given training on safety and health aspects at VTC. (This is the statutory requirements under Mines Safety Act). Details of VTC traing is as follows: Sr Year VTV (nos.)					y given This is the	
	information on safety and	no.		Departmental			Contractual	
	heath aspects. Occupational health	1	2017-18	122		149		
	surveillance programme	2	2018-19	131		138		
	of the workers should be undertaken periodically to	3	2019-20	124		101		
	observe any contractions	4	2020-21	117		94		
	due to exposure to dust and to take corrective	5	2021-22	117		71		
	measures, if needed.	done in disease PME o five year	every five so that app f every per ars at area	e years in propriate son emp hospital.	n our Area e action can oloyed in n	Hospital to n be taken nine is don ows:	ker is being o detect any up. e in interval of	
		Sr no	PPE Equ	ipment		2021-22		
		1	Helmet		300	292		
		2	Mask		296	287		
		3	Goggles		181	176		

		4	Earplugs	156	147	
		5	Jacket	457	452	
		6	Shoes	492	497	
		7	Gumboots	357	397	
		8	Bottles	567	576	
(xi)	A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.	At HQ, WCL- The cell is headed by GM (Env) reporting to Director (Technical). The team comprises of multidisciplinary trained executive. At Area level – Area General Manager heads the Environment Department assisted by GM (oprn), ANO(Envt), & 1 Assistant Managers of Environment discipline. At Unit Level- Environment Management Cell is headed by Sub-Area Manager and assisted by Mine Manager, Project Nodal Officer (Env) at unit level.				
(xii)	The funds earmarked for environmental protection measures should e kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhopal.	The funds earmarked for Environmental protection measures are kept in separate account and it is not used for any other purpose. Expenditure statements are shown in every six monthly compliance report which is being sent to MOEFCC. Revenue expenditure till March 2022 = 521.508 lakhs. Capital expenditure till March 2022 = 671.73 lakhs				
(xiii	The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office (s) of the Regional office by furnishing the requisite data/ information/ monitoring reports.	Noted				
(xiv	A copy of E.C. will be marked to concerned panchayat / local VGP, if any, from whom any suggestion/ representation has been received while processing the proposal.	vide le	nce letter has been etter No. WCL/BA/ 26.06.2007.		ncerned Gr	ram Panchayat

(xv)	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office / Tehsildar's Office for 30 days.	Noted.
(xvi)	The Project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in .	Complied. Attached as ANNEXURE F.
3	The Ministry or any other competent authority may stipulate any further condition for environment protection.	Agreed.
4	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of Environment (Protection) Act. 1986.	Agreed.
5	The above conditions will be enforced inter-alia, under the provisions of the Water (prevention &	Agreed.

& control of pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

Sub Area Manager,
Sasti Sub Sasti Sub Area Sub Area Mariager Sasti Sub Area

W.C.L. Ballarpur Area