

ମହାନଦୀ କୋଲ୍ ଫିଲ୍ଡ୍ସ୍ ଲିମିଟେଡ୍
महानदी कोलफील्ड्स लिमिटेड
Mahanadi Coalfields Limited
(A subsidiary of Coal India Limited)

OFFICE OF THE PROJECT OFFICER (T&H/D)
TALCHER COLLIERY
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No.PO(T&H)/Mandapal/Half-yrly/EC Compliance/2022-23/61

Date: 30/04/2022

To
The Additional Director,
Ministry of Environment Forest & Climate Change,
Eastern Zonal Office,
A-3, Chandrashekharpur,
Bhubaneswar-751023

Sub:-Submission of Half Yearly Compliance Report of Environmental Clearance condition in Respect of Mandapal sand mine.

Dear Sir,

Enclosed please find herewith Half Yearly Compliance Report along with Form-I, II & III and abstract of the monitoring report of Noise level & Water Effluent quality in respect of Mandapal Sand Mine for the period from October'2021 to March'2022.

This is for your kind information & necessary action.

Encl: As above.

Yours' faithfully,


**PROJECT OFFICER (T&H/D)
DEULBERA COLLIERY/MANDAPAL SAND MINE**

Copy for Kind information to:

1. The Director, E.I.A Monitoring Cell, Ministry of Environment & Forest, Paryavaran Bhawan, C.G.O.Complex, New Delhi-100003 (With Encl.)
2. The Member Secretary, State Pollution Control Board (Odisha), A/118, Nilakanthanagar, Unit-VIII, BBSR-751012. (With Encl.)
3. The Regional Officer, SPCB (Odisha), Regional Office, Industrial Estate, Angul. (With Encl.)
4. The General Manager, MCL, Talcher Area.
5. The General Manager (Environment) MCL HQ, Burla, Sambalpur.

Copy to:

1. The Colliery Manager, Deulbera Colliery/Mandapal sand mine.
2. The Area Environment Officer, Talcher Area (with Encl.)
3. The Nodal Officer (Envt.), Talcher Colliery/Mandapal sand mine.


30.4.2022

**PROJECT OFFICER (T&H/D)
DEULBERA COLLIERY/MANDAPAL SAND MINE**



HALF YEARLY PROGRESS REPORT OF COMPLIANCE
WITH ENVIROMENTAL CLEARANCE CONDITIONS

(OCTOBER'2021 TO MARCH'2022)

GOPINATHPUR / NIZIGARHZAMI
(MANDAPAL) SAND MINE (0.25 m³/Annum)

TALCHER AREA



MCL

MAHANADI COALFIELDS LIMITED

TALCHER AREA
AT/PO: DERA, TALCHER, ODISHA
PIN-759103.

**COMPLIANCE OF EC CONDITIONS OF
MANDAPAL SAND MINE**

A) SPECIFIC CONDITIONS:

S.No	Specific Conditions	Compliance Status
i)	Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Odisha and any other Court of Law, if any, as may be applicable to this project.	Accepted
ii)	Environmental clearance is subject to obtaining clearance, if any, under the wildlife (Protection) Act, 1972 from the Competent Authority, as may be applicable to this project.	It is not applicable.
iii)	No mining activities will be allowed in forest area, if any, for which the Forest clearance is not available.	There is no forest land involved in mine leasehold area; sand is being winning inside the river only.
iv)	The project proponent shall obtain Consent to Operate from the State Pollution Control Board, Odisha and effectively implement all the conditions stipulated therein.	Consent to Operate (CTO) has been obtained from SPCB, Odisha (Current validity is up to 31.03.2023) and the conditions stipulated over there are being effectively implemented.
v)	Project Proponent shall implement the Disaster Management Plan as the mine lease area is located in Seismic Zone-II. Project Proponent shall appoint a Committee to have a check over any disaster to warn workers well before for the safety of the workers. Emergency helpline number will be displayed at all levels.	Disaster Management Plan is not required as the mine lease area is not located in Seismic Zone-II.
vi)	Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted; All the old age people of the surrounding villages may be provided medical facilities.	Occupational Health Specialists have been appointed and the periodical examination of the workers is being monitored and registered. And also Coal company has much number of healthcare centers including a well-equipped Central Hospital and a specialized 'referral' hospital in the coalfield area. Healthcare facilities have been provided in the neighboring projects. The above facilities will cater to the need of employees of this project. The local people can also avail these healthcare facilities.
vii)	Project Proponent shall appoint Monitoring Committee to Monitor the replenishment study, traffic management, levels of production, River bank erosion and maintenance of Road etc.	Monitoring Committee has been framed to Monitor the replenishment study, traffic management, levels of production, River bank erosion and maintenance of Road etc.
viii)	Transport of mineral will not be done through any of the villages.	Sand transportation is taking place from the sand mine to the end-use plant/coal mine sites by tipping trucks through coal mining areas of MCL by avoiding the residential areas/villages.

ix)	Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.	Proper maintenance of road is being carrying out to remove ruts and potholes in order to avoid any damage to the road. Loading and transportation of sand is being done as per IRC guidelines with respect to complying with traffic congestion and density.
x)	Implementation of Action Plan on the issues raised during the Public Hearing. The Proponent shall complete all the tasks as per the Action Plan submitted with the budgetary provisions during the Public Hearing.	Action plan for all the issues raised during Pubic Hearing has already been implemented viz. Public road maintenance, air / water / noise pollution control measures, water supply, Healthcare facilities, Plantation & distribution, CSR fund utilization etc.
xi)	Excavation will be carried out up to a maximum depth of 3 meters from surface of mineral deposit and not less than one meter from the water level of the River Channel whichever is reached earlier.	Excavation is being carried out to a maximum depth of 1.81m from surface of mineral deposit.
xii)	The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centre.	A water tanker with sprinkler arrangement having capacity of 9 KL has been deployed to effectively arrest air borne dust particles from transportation road. And also Manual sweeping is being done to completely wipe off dust particles from the transportation road. The sand is being properly loaded, transported in trucks by covering the sand with Tarpaulin sheets. PUC certificate has been obtained for all the vehicles which are engaged in sand transportation.
xiii)	Washing of all transport vehicles should be done inside the mining lease.	Washing/cleaning of transport vehicles is carried out at workshop only.
xiv)	Permanent pillars has to be constructed to demarcate width of extraction of ROM leaving 25% of River width from the bank with depth 1.5 m below the ground and 1.2m above the ground to observe its stability.	Construction of permanent pillars for demarcation of mine leasehold area is under progress, whereas the Temporary pillars are posted along the river bank.
xv)	An independent study shall be organized during peak activity, to understand how the actual compare with the carrying capacities and further decisions taken to maintain sustainability of the essential sand extraction and supply activity. Project Proponent shall ensure that the road may not be damaged due to transportation of the sand; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.	Proper maintenance of road is being carrying out to remove ruts and potholes in order to avoid any damage to the road. Loading and transportation of sand is takes place as per IRC guidelines with respect to complying with traffic congestion and density.
xvi)	The pollution due to transportation load on the environment shall be effectively controlled & water Sprinkling be done regularly. Vehicles with PUC only shall be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying on the mineral shall not ne overloaded. Project should obtain 'PUC'	A water tanker with sprinkler arrangement having capacity of 9 KL has been deployed to effectively arrest air borne dust particles from transportation road. And also Manual sweeping is being done to completely wipe off dust particles from the transportation road. The sand is being properly loaded, transported in trucks

	certificate for all the vehicles from authorized pollution testing centre.	by covering the sand with Tarpaulin sheets. PUC certificate has been obtained for all the vehicles which are engaged in sand transportation.									
xvii)	There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis in consultation in conservation with Central Ground water Board.	Rainwater harvesting structures has been developed at office buildings of the mine to collect roof top rain water and recharge into ground.									
xviii)	Implementation of Environment Management Policy of the Company w.r.t. judicious use of Mineral resources for growth & development synchronizing mining & environment with prosperity.	Environment Management Policy of the Company with respect to judicious use of Mineral resources for growth & development synchronizing mining & environment with prosperity is being implemented.									
xix)	The project proponent shall also taken all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted in the study area.	The mine site is confined to sand deposit land of 17.815 Ha which is located inside the Brahmani river. Hence no flora/fauna activities will be affected by the sand mining process.									
xx)	The illumination and sound at night at project site, disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. Project Proponent must ensure that the biological clock of the villages is not disturbed; by orienting the flood nights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.	<p>There is no mining activity at night hour i.e. between 7 p.m to 6 a.m, so there is no disturbance to the surrounding people by means of illumination.</p> <p>The noise level (both day and night measurement) is being monitored on fortnight basis and the results are found well within the prescribed limits.</p> <table border="1" data-bbox="932 1144 1485 1328"> <thead> <tr> <th colspan="3">Noise Measurement in dBA</th> </tr> <tr> <th>Location</th> <th>DAY</th> <th>NIGHT</th> </tr> </thead> <tbody> <tr> <td>Near Gopinathpur village</td> <td>49.81</td> <td>47.63</td> </tr> </tbody> </table> <p>The detailed monitoring report is given in Annexure-III.</p>	Noise Measurement in dBA			Location	DAY	NIGHT	Near Gopinathpur village	49.81	47.63
Noise Measurement in dBA											
Location	DAY	NIGHT									
Near Gopinathpur village	49.81	47.63									
xxi)	Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers.	Sand available in the river is always in wet condition, so there is no generation of dust particles while winning of sand. Haulage/approach road and transportation road are regularly wetted by sprinkling/spraying water through water tankers.									
xxii)	Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at-least 200 meters) for the purposes of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The project Proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be sued for the project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.	The public road from Madanmohan cinema hall of Talcher town to Gopinathpur/ Nizigarzhami village about 3.1 Km distance has been widened, strengthened & constructed in RCC standards by MCL and about only 1 Km of 3.1 Km road is being utilized for sand transportation as there is no possibility of construction of 'bypass' road. Remaining part of road was constructed only for Public road network purposes.									

xxiii)	Likewise, Alteration or re-routing of foot paths, pagdandies, cart roads and village infrastructure / public utilities or roads (for purposes of land acquisition for mining) shall be avoided to the extent possible and in case such acquisition is inevitable, alternative arrangements shall be made first and then only the area acquired. In these types of cases, Inspection Reports by site visit by experts may be insisted upon which should be done through reputed Institutes.	The mine leasehold area is located in the river (Brahmani) only. Hence Acquisition of land from villagers / surrounding people, Rehabilitation and Resettlement are not applicable. However a lump-sum amount (in Rs.Lakhs) will be kept annually for peripheral development activities like education, roads, water supply, health etc.
xxiv)	CSR activities by Companies including the Mining Establishments has become mandatory up to 2% of their financial Turn-over, Socio Economic Development of the neighborhood habitats could be planned and executed by the Project Proponent more systemically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment & Forest and its Regional Office located at Dehradun on six monthly basis.	Proposals pertaining to CSR works are received through Gram Panchayat / Panchayat Samiti / Municipality directly or through BDO / Sub-collector / Collector at different levels i.e. either at Project level Area level or HQ level. All such proposals are put in front of CSR Committee for co-ordination & Scrutiny. After no objection from CSR Committee, only agreed works are taken for CSR activities for estimation and tendering process. It is guided by CSR Policy of MCL. Fund is generated @Rs.5/- per ton of the coal produced in the previous financial year.
xxv)	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.	There is no construction activities involved in the sand winning process. Hence there is no construction labours deployed in this project. Semi-skilled and unskilled workers are engaged for this project is local people. The skilled manpower has been accommodated in the established colony of the sister concern of the project. However, soak pit and septic tank combination will be provided for rest shelter at project site.
xxvi)	A final mine closure plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forest & Climate Change 5 years in advance of final mine closure for approval.	As per the proposal, the life of the mine is about 20 years. i.e upto 2036. Mine closure plan will be prepared accordingly and it will be submitted to MoEF&CC in advance of final mine closure for approval.

B: Special Conditions:

Impact Category	S.N	Environmental Conditions	Compliance Status
Stakeholder Engagement	1	In the case of private land not owned by the lease holder an affidavit should be obtained regarding consent of the concerned land owner(s) for carrying out the mining operation.	Mine is located inside the Brahmani river and also we have obtained mining lease & all other permits from State Govt. of Odisha.
	2	Stakeholder awareness and ability to raise concerns and getting it to be addressed	Meetings are being conducted with all stakeholders to express their views and the same are being addressed.
	3	Implementation of Action plan on the issues raised during the Public Hearing. The Proponent shall complete all the tasks as per the Action Plan submitted with the budgetary provisions during the Public Hearing	Action plan for all the issues raised during Pubic Hearing is being implemented viz. Public road maintenance, air / water / noise pollution control measures, water supply, Healthcare facilities, Plantation & distribution, CSR fund utilization etc.
	4	Having valid lease and all the permits is very much needed.	Mining lease granted by State Govt. on Dt: 15.05.2020 (valid up to 23.10.2042) and Mining Lease Deed executed on 12.08.2020. And all other permits/Transit pass have been obtained from State Govt. of Odisha on regular basis.
	5	To establish a Monitoring Committee including Local Panchayat, to check on traffic due to transportation and submit an annual report on the same.	Monitoring Committee including Local Panchayat will be established to check on traffic due to transportation and submit an annual report on the same.
	6	The directions given by the Hon'ble Supreme Court of India vide order dated 27.02.2012 in Deepak Kumar case [SLP(C) Nos. 19628-19629 of 2009] and order dated 05.08.2013 of the Hon'ble National Green Tribunal in application No.171/2013 may be strictly followed	The directions given by the Hon'ble Supreme Court of India vide order dated 27.02.2012 in Deepak Kumar case [SLP(C) Nos. 19628-19629 of 2009] and order dated 05.08.2013 of the Hon'ble National Green Tribunal in application No.171/2013 is being strictly followed
	7	All the provisions made and restrictions imposed as covered in the Minor Mineral Rule, shall be complied with, particularly regarding Environment Management practices and its fund management and Payment of compensation to the land owners.	All the provisions made and restrictions imposed as covered in the Minor Mineral Rule, is being complied with, particularly regarding Environment Management practices and its fund management. And there is no payment of compensation required as the mine leasehold area is located inside the Brahmani river.
Sustainable Mining Practices	8	District level Survey Report should be prepared and area suitable for mining and area prohibited for mining be identified	District level Survey Report has been prepared for Minor Minerals – River Sand for Angul District by Collectorate, Angul during Dec'2019. Area suitable for mining and area prohibited for mining has also been identified.

9	The depth of mining in Riverbed shall not exceed one meter or water level whichever is less, provided that where the Joint Inspection Committee certifies about excessive deposit or over accumulation of mineral in certain reaches requiring channelization, it can go up to 3 meters on defined reaches of the River	Sand is winning at the average depth of 1.81 m and maximum depth of 2.01 m as the sand deposit is excessive.
10	No river sand mining be allowed in rainy season	Sand is mined out during dry season only on exposed sand banks and sand bars. i.e. November to May (7 months)
11	To submit annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity/production levels shall be decreased/stopped accordingly till the replenishment is completed	As per annual rainfall report collected from Central Water Commission, Water Resources Department, Govt. of India, Bhubaneswar, the Sand sediment yield is 24 Lakh tonne/year whereas the sand mined out will be 4.25 lac tone/year (at maximum). Hence the rate of annual replenishment is 5 times higher than sand excavation.
12	Ultimate working depth shall be up to 3m from Riverbed level and not less than one meter from the water level of the River channel whichever is reached earlier. In hilly terrain this depth be preferably restricted to one meter	Sand is mined out in layer of average depth of 1.81 m and it is allowed for replenishment of sand during monsoon i.e. 5 months (June-October)
13	In river flood plain mining buffer of 3 meter to be left from the River bank for mining	Sand barrier of 50 m width is left un-mined at the western side bank of Brahmani river.
14	In mining from agricultural field a buffer of 3 meter to be left from the adjacent field	There is no agricultural field available near mine leasehold area.
15	Mining shall be done in layers of 1 meter depth to avoid ponding effect and after first layer is excavated, the process will be repeated for the next years	Sand is mined out in layer of average depth of 1.81 m and it is allowed for replenishment of sand during monsoon. Hence the level of sand is maintained and there will not be any ponding effect.
16	To maintain safety and stability of Riverbanks i.e 3 meter or 10% of the width of the River whichever is more will be left intact as no mining zone	Sand barrier of 50 m width is left un-mined for protection of the bank
17	No stream should be diverted for the purpose of sand mining. No natural water course and / or water resources are obstructed due to mining operations	Sand is mined in strips. The strip cutting sequence is so designed that the mining operation will not block the normal course of water flow in Brahmani river.
18	No blasting shall be resorted to in River mining and without permission at any other place	No blasting & drilling required as it is a sand mining project.
19	Depending upon the location, thickness of sand, deposition, agricultural land/Riverbed, the method of mining may be manual, semi-mechanized or mechanized; however, manual method of mining shall be preferred	The most techno-financially viable option to meet our sand requirement is mechanized winning/loading of sand (by excavators onto tipping trucks for transportation). This was approved by CCDA committee as per site

		over any other method	specific and depends on the quantity of sand requirement.
Identification and preparation of Mining site	20	Mining should be done only in area / stretch identified in the District Level Survey Report suitable for mining and so certified by the Sub-Divisional Level Committee after site visit	Mining is being done only in area / stretch identified in the District Level Survey Report suitable for mining and also certified by the Sub-Divisional Level Committee after site visit.
	21	Mining should begin only after pucca pillar marking the boundary of lease area is erected at the cost of the lease holder after certification by the mining official and its geo-coordinated are made available to the District Level Committee	Construction of permanent pillars for demarcation of mine leasehold area is under progress.
	22	The top soil in case of Surface land mining shall be stored temporarily in an earmarked site and concurrently used for land reclamation	Not applicable as there is no top soil generation from sand mine.
Monitoring the Mining of Mineral and its Transportation	23	The EC holder shall keep a correct account of quantity of mineral mined out, dispatched from the mine, mode of transport, registration number of vehicle, person in-charge of vehicle and mine plan. This should be produced before officers of Central Government and State for inspection	Proper register is being maintained to keep a correct account of quantity of sand mined out, dispatched from the mine, mode of transport, registration number of vehicle, person in-charge of vehicle and mine plan. This will be produced before officers of Central Government and State for inspection, if required.
	24	For each mining lease site the access should be controlled in a way that vehicles carrying mineral from that area are tracked and accounted for.	GPS based vehicle tracking system (VTS) is in operation for tracking and accounting vehicle movement.
	25	The State / District Level Environment Committee should use Technology like Bar coding, Information and Communication Technology (ICT), Web based and ICT enabled services, mobile SMS App etc. to account for weight of mineral being taken out of the lease area and the number of trucks moving out with the mineral	Each transporting trucks are being monitored through Mineral Transparency Portal i.e. Integrated Mines & Minerals Management System. Hence all the trucks are accounted for weight of sand being taken & moving out of the lease area.
	26	There should be regular monitoring of the mining activities in the State to ensure effective compliance of stipulated EC conditions and of the provisions under the Minor Mineral Concession Rules framed by the State Government	It is being monitored in regular basis.
Noise Management	27	Noise arising out of mining and processing shall be abated and controlled at source to keep within permissible limit	There is no blasting and drilling process involved and there is no other source of noise pollution except intermittent operation of HEMMs. Whereas all HEMMs are equipped with sound proof cabins, hence the noise level kept within permissible limit.
	28	Restricted working hours. Sand mining operation has to be carried out between 6 am	Sand mining operation is being carried out between 6 am to 7 pm only.

		to 7 pm.	
Air Pollution and Dust Management	29	The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly	A 9 KL capacity water tanker with sprinkler arrangement is deployed for dust suppression on transportation road. In addition to the above manual sweeping is also being done as a dust suppression measures.
	30	Air pollution due to dust, exhaust emission or fumes during mining and processing phase should be controlled and kept in permissible limits specifies under environmental laws.	Sand which is excavated from the river bed is partially wet in nature. Hence there is dust generation during excavation and loading. However 1 no. of 9 KL mobile water tanker with sprinkler is deployed to arrest dust emission during transportation on road.
	31	The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Wheel washing facility should be installed and used	The sand is properly loaded & transported through covered trucks and Wheel washing facility is also installed and used.
Management of Visual Impact	32	The mining operations are to be done on a systematic manner so that the operations shall create a major visual impact on the site	Sand is mined in strips. The strip cutting sequence is so designed that the mining operation creates a major visual impact on the site.
Biodiversity Protection	33	Restoration of flora affected by mining should be done immediately. Twice the number of trees destroyed by mining to be planted preferably of indigenous species. Each EC holder should plant and maintain for lease period at least 5 trees per hectare in area near lease.	There is no flora and fauna is getting affected due to mining activities. And also there is no trees destroyed as it is a sand mine which located inside the river. However plantations along the river bank and plant distribution to nearby villagers are being done, preferably indigenous fruit bearing plants.
	34	No mining lease shall be granted in the forest area without forest clearance in accordance with the provisions of the Forest Conservation Act, 1980 and the rules made there under.	Not applicable, as there is no forest land involved.
	35	Protection of turtle and bird habitats shall be ensured	Protection of turtle and bird habitats will be ensured.
	36	No felling of trees near quarry is allowed. For mining lease within 10 km of the National Park / Sanctuary or in Eco-Sensitive Zone of the Protected Area, recommendation of Standing Committee of National Board of Wild Life (NBWL) have to be obtained as per the Hon'ble Supreme Court order in I.A. No.460 of 2004	There will not be any felling of trees near quarry takes place. And there is no National Park / Sanctuary or Eco-Sensitive Zone of the Protected Area is available within 10 km radius from the mine leasehold area.
	37	Spring sources should not be affected due to mining activities. Necessary protection	There is no spring source available inside the mine lease area. However the

		measures are to be incorporated	gravitational ground water flow or base flow if any during mining will be allowed to join to the main flow through check bunds in the downstream side of the mining area.
Management of Instability and Erosion	38	Removal, stacking and utilization of top soil in mining are should be ensured. Where top soil cannot be used concurrently, it shall be stored separately for further use keeping in view that the bacterial organism should not die and should be spread nearby area.	Not applicable, as there is no top soil generation from sand mine.
	39	The EC should stipulate conditions for adequate steps to check soil erosion and control debris flow etc. by constructing engineering structures	It is observed from the cross section, the width of the flow is confined to eastern side of the river bank during non-monsoon period as the river crossing metamorphic rock and various kind of sedimentary rocks. It indicates there is no change in river course or no check on the river flow during and after mining operation.
	40	Use of oversize material to control erosion and movement of sediments	Though there is no change/check on the river flow due to mining operation, Sand barrier / breach made across the river in the downstream of the mine lease area to avoid any movement of sediments.
	41	No overhangs shall be allowed to be formed due to mining and mining shall not be allowed in area where subsidence of rocks is likely to occur due to steep angle of slope	There is no rock/boulder available in the Brahmani river. And also sand is excavated 50m away from the western river bank for keeping it as a barrier between mining zone and river bank.
	42	No extraction of stone / boulder / sand in landslide prone areas	No extraction of sand is takes place in landslide prone areas.
	43	Controlled clearance of riparian vegetation to be undertaken	Riparian vegetation cleared at about 12m wide for making approach road to the mine lease area.
Waste Management	44	Site clearance and tidiness is very much needed to have less visual impact of mining	The strip cutting sequence is so designed that the tidiness and site clearance will be maintained.
	45	Dumping of waste shall be done in earmarked places as approved in Mining plan	Dumping of waste will be done in earmarked places as approved in Mining plan.
	46	Rubbish burial shall not be done in the Rivers	Rubbish burial will not be done in the Rivers
Pollution prevention	47	The EC holder shall take all possible precautions for the protection of environment and control of pollution	All possible precautions are being taken for the protection of environment and control of pollution.
	48	Effluent discharge should be kept to the minimum and it should meet the standards prescribed	There is no waste water generation in sand excavation process. However samples are taken / monitored fortnightly from upstream

			and downstream to measure the impacts of mining activity, if any. Action plan will be taken to meet the standards, if there is any impact.
Protection of Infrastructure	49	Mining shall not be undertaken in a mining lease located in 200-500 meter of bridge, 200 meter upstream and downstream of water supply / irrigation scheme, 100 meters from the edge of National Highway and railway line, 50 meters from a reservoir, canal or building, 25 meter from the edge of State highway and 10 meters from the edge of other roads except on special exemption by the Sub-Divisional level Joint Inspection Committee	There is no infrastructure available at the specified distance from the mine leasehold area. For example, NH is located at a distance of 2 Km, ECR line is at a distance of 4.25 Km, Road to Paschimeshwar Temple at a distance of 250m in the west. Jatiya bridge is located at a distance of 2 km in downstream.
	50	For carrying out mining in proximity to any bridge or embankment, appropriate safety zone (not less than 200 meters) should be worked out on case basis, taking into account the structural parameters, location aspects and flow rate, and no mining should be carried out in the safety zone so worked out	Safety zone is not required as there is no bridge is available nearer to mine leasehold area (Jatiya Bridge - 2 Km away). And also 50m sand barrier is left un-mined for protection of the river bank.
	51	Mining activities shall not be done for mine lease where mining can cause danger to site of flood protection works, places of cultural, religious, historical, and archeological importance.	Mining activities will not cause danger to site of flood protection works, places of cultural, religious, historical, and archeological importance.
Enhancement of Road Safety	52	Vehicles used for transportation of sand are to be permitted only with fitness and PUC certificates	Vehicles used for transportation of sand are permitted with fitness and PUC certificates.
	53	Junction at takeoff point of approach road with main road be properly developed with proper width and geometry required for safe movement of traffic by concession holder at his own cost	Junction point of approach road with main road is properly developed with required width and geometry for safe movement of traffic.
	54	Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.	Proper maintenance of road is being carrying out to remove ruts and potholes in order to avoid any damage to the road. Loading and transportation of sand is takes place as per IRC guidelines with respect to complying with traffic congestion and density.
	55	No stacking allowed on road side along National Highways	Sand stacking takes place at the end-use coal mine sites only.
Closure and Reclamation of Mined out Area	56	The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine	As it is sand mine project, Sand is getting replenished naturally every year, during monsoon (June to October), so the mine closure activity is progressive in nature and it will be properly completed before abandonment of mine.

	57	Restoration, reclamation and rehabilitation in cluster should be done systematically and jointly by each EC holder in that cluster. This should be appropriately reflected as EC condition in each EC in cluster	Environmental Clearance (EC) obtained for the leasehold area of 17.805 Ha only and there is no cluster system involved. Restoration, reclamation and rehabilitation will be systematically.
	58	Site Specific plan with eco-restoration should be in place and implemented	The area is devoid of vegetation and wild life. The mine site is confined to 17.514 Ha of sand deposit land. No flora-fauna activities will be affected by the sand mining process. No wildlife corridor is existed in the core zone area. However Environmental Management plan at site specific made and eco-restoration will be implemented.
Health and Safety	59	Health and safety of workers should be taken care of	Health and safety of workers are taken care of as per DGMS rule.
	60	Transport of mineral will not be done through villages / habitations	Sand transportation is done through the coal mining areas of MCL by avoiding the residential areas/villages / habitations.
	61	The Project Proponent shall make arrangement for drinking water, first aid facility (along with species specific anti-venom provisioning) in case of emergency for the workers	Arrangement made for drinking water, first aid facility (species specific anti-venom provisioning) in case of emergency for the workers.
	62	Project Proponent shall implement the Disaster Management Plan if the mine lease area is located in Seismic Zone-II. Project Proponent shall appoint a Committee to have a check over any disaster to warn workers well before for the safety of the workers. Emergency helpline number will be displayed at all levels	The sand mining project is not located in Seismic zone-II.
	63	Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc .shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted	Occupational Health Specialist has been appointed and the periodical examination of the workers is being monitored and registered. And also Coal company has many numbers of healthcare centers including a well-equipped Central Hospital and a specialized 'referral' hospital in the coalfield area. Healthcare facilities have been provided in the neighboring projects. The above facilities will cater to the need of employees of this project. The local people can also avail these healthcare facilities.
Monitoring the impact of Mining	64	The Project Proponent shall report monitoring data on replenishment, traffic management, levels of production, River bank erosion and maintenance of Road etc.	Reports will be submitted on replenishment, traffic management, levels of production, maintenance of road to the concerned authority in the prescribed time frame.
Mineral Conservation	65	Use of alternate material such as M-sand in place of natural River sand shall be encouraged in order to reduce stress on	As per DGMS advice natural river sand should be used for stowing purposes. Manufactured sand can be of a coarser and

	natural eco-system	angular texture in nature than natural sand. That requires more water and also enhances faster setting that leads to choking pipes.
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C) GENERAL CONDITIONS:

S.No	General Conditions	Compliance Status																					
i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest & Climate Change	No change in mining technology and scope of working will be made without prior approval of the Ministry of Environment, Forest & Climate Change																					
ii)	No change in the calendar plan including excavation, quantum of mineral and waste should be made	No Change in the calendar plan including excavation, quantum of mineral and waste will be made.																					
iii)	The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and ground water for the project	There is no requirement of water for mining purposes except water sprinkling to avoid dust suppression. The required amount of water is being collected in tankers from Deulbera underground (MCL), for which necessary clearances already obtained.																					
iv)	There shall be planning, developing and implementing facility of rainwater harvesting measures on long terms basis in consultation with Regional Director, Central Groundwater Board and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board	Planning, developing and implementing facility of rainwater harvesting measures on long terms basis will be done in consultation with Regional Director, Central Groundwater Board and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board																					
v)	Regular monitoring of ground water table to be carried out at the upstream and depth of water available in the dug well is to be measured. Monitoring to be done by establishing a network of existing wells and constructing new peizometers	As it is a sand mining project, the average depth of mining is 1.81 m only. So there will be no impact on ground water. However ground water level will be monitored 4 times in a year (i.e April/May, August, November & January)																					
vi)	Monitoring of Ambient Air Quality to be carried out based on the Notification, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions	Monitoring of Ambient Air Quality is being carried out on fortnight basis, based on the Notification, as amended from time to time by the Central Pollution Control Board. And the values will be kept within the permissible limits and are given in Annexure-I . <table border="1" data-bbox="794 1637 1509 1832"> <thead> <tr> <th>Location</th> <th>Parameters</th> <th>SPM</th> <th>PM₁₀</th> <th>PM_{2.5}</th> <th>SO₂</th> <th>NO_x</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Avg. (µg/m³)</td> <td>219.6</td> <td>142</td> <td>48.25</td> <td>15.7</td> <td>27.18</td> </tr> <tr> <td>2</td> <td>Avg. (µg/m³)</td> <td>177.1</td> <td>118.8</td> <td>42.75</td> <td>17.4</td> <td>28.65</td> </tr> </tbody> </table>	Location	Parameters	SPM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	1	Avg. (µg/m ³)	219.6	142	48.25	15.7	27.18	2	Avg. (µg/m ³)	177.1	118.8	42.75	17.4	28.65
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2	Avg. (µg/m ³)	177.1	118.8	42.75	17.4	28.65																	
vii)	The upliftment of scheduled caste/scheduled tribe population, specific programme have been taken in to consideration specially with respect to education, healthcare, livelihood generation, infrastructure development & promotion of sports & culture for SC/ST population and that these will	Peripheral development activities like education, roads, bridge, water supply, health, pond construction/repairing etc. are being provided. A lump sum amount (in Rs.Lakhs) is being kept annually for infrastructure development & promotion of sports & culture programs for local																					


	be intensified in future	community and SC/ST population and that these will be intensified in future.
viii)	<p>The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The top soil shall be used for land reclamation and plantation. The overburden (OB) generated during it should not be kept active for a long period at time. The maximum height of the dumps shall not exceed 8 m and width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest & Climate Change and its Regional Office located at Bhubaneswar on six monthly basis.</p>	<p>There is no excavation/generation of top soil involved as the sand is winning from the river bed of Brahmani river. Hence there is overburden storage and land reclamation required. And the external sand dump at the end-use coal mine sites will be of temporary nature and the dump area naturally reclaimed as soon as sand winning operation is suspended.</p>
ix)	<p>Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. the drains shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.</p>	<p>Catch drains and siltation ponds of appropriate size are not required. However Gravitational ground water flow or base flow if any during mining will be allowed to join to the main flow through check bunds in the downstream of the mining area.</p>
x)	<p>Plantation shall be raised in a 20 m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be</p>	<p>Plantation (Indigenous species) has done all along the western bank of the Brahmani river at spacing of 2m between each plant (i.e. 2500 plants/Ha). In addition to this, fruit bearing plants are being distributed every year to the surrounding villagers during Van Mahostav.</p>

	around 2500 plants per Ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first 5 days.	
xi)	Dimension of the retaining wall at the toe of over burden dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.	Not applicable, as there is no OB dumps and OB benches available.
xii)	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM ₁₀ and PM _{2.5} such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	Water sprinkling is being done effectively on approach roads and transportation roads to suppress air-borne dust particles. The Ambient Air Quality is being monitored on fortnight basis and the values (Given in Annexure-I) will be kept well within the limit prescribed by Central Pollution Control Board.
xiii)	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained. Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment, Forest & Climate Change, its Regional Office, Bhubaneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.	Regular monitoring of water quality (Surface Water Quality Standards) at upstream and downstream of Brahmani river is being carried out and records of monitoring data also maintained & submitted to MoEF&CC and its regional offices, SPCB, CPCB and CGWB. The detailed report is given in Annexure-II .
xiv)	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new peizometers during the mining operation. The monitoring shall be carried out four times in a year: Pre-monsoon (April-May), Monsoon(August), Post-monsoon(November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment, Forest & Climate Change and its Regional Office, Bhubaneswar, Central Ground Water Authority and Regional Director, Central Ground Water Board.	Ground water level will not be affected, as the sand is winning from the river bed only. And sand excavation is done at maximum depth of 2.01m and average depth of 1.81m only. And the sand excavated will be replenished every year as the mining operation is suspended during monsoon for natural replenishment. Thus, there will be shallow excavation of the area and impact on land use will be reversible. Hence there is no impact on the ground water table.
xv)	The critical parameters such as PM ₁₀ (Size less than 10 micro meter), PM _{2.5} (Size less than 2.5 micro meter), NO _x in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [TDS, DO, pH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in Public domain.	Air quality & water quality comprises all critical parameters (Air Parameters - PM ₁₀ , PM _{2.5} , NO _x , Sox, SPM and Water – TSS, COD, pH, O&G) are being monitored on fortnight basis and the values are kept well within the limits as per the standards prescribed by SPCB/CPCB / MoEF&CC. The monitored data submitted to MoEF&CC, SPCB offices. Actions will be taken to display monitored data on a display board at a project site. Air Quality and Water Quality monitoring data are given in Annexure-I & Annexure-II respectively.

	The circular No.J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change, which is available on the website of the Ministry shall also be referred in this regard for its compliance.	
xvi)	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for PM ₁₀ , PM _{2.5} , SO ₂ & NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board. Data on ambient air quality should be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.	Four ambient air quality-monitoring stations have been established in the core zone as well as in the buffer zone for PM ₁₀ , PM _{2.5} , SO ₂ & NO _x monitoring. Location of the stations has been decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets. Monitoring is being carried out on fortnight basis at only two stations as of now, after had consultation with SPCB. Data on ambient air quality is regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months in terms of EC compliance report and Environment Statement.
xvii)	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Fugitive dust emissions from all the sources are being controlled regularly. Water spraying is being done on transportation, loading and unloading and at transfer points.
xviii)	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.	Noise level is being monitored on fortnight basis and the values are kept well within the permissible limits. The monitored data are given in Annexure-III .
xix)	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 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	There is no industrial wastewater generation as there is no workshop available for the sand mine.
xx)	Personnel working in duty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.	Persons working in dusty areas are provided with dust masks. Adequate training are provided and educated on safety & health aspects. Periodical occupational health checkup done for all workers engaged in mining operations is being conducted at NSC Hospital, at 5 years & 3 years interval for the contractual & departmental employees who are above 45 years & below 45 years of age respectively.
xxi)	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.	Occupational health surveillance program of the workers has been conducted periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

xxii)	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 Organization.	A separate environment management cell with suitably qualified personal has been established under the control of Senior technical person who directly reports to General Manager of the area/HQ. Environmental monitoring works is being done through CMPDIL having adequate laboratory facilities as required by SPCB.
xxiii)	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 Ministry and is Regional Office located at Bhubaneswar.	The funds earmarked for environmental control measures are being utilized and it is not used for any other purpose. Expenditure for Air, Effluent and Noise quality monitoring during 2021-22 was Rs. 12.06 Lakhs.
xxiv)	The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	The project authorities will inform to the Regional Office, Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities.
xxv)	The Regional Office of the Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities should extend full cooperation of the officer (s) of the Regional Office by furnishing the requisition data / information / monitoring reports.	The Project authorities will extend full cooperation of the officer(s) of the Regional Office, Bhubaneswar by furnishing the requisition data / information / monitoring reports.
xxvi)	The Project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest & Climate Change, its Regional Office, Bhubaneswar, Central Pollution Control Board and State Pollution Control Board.	Environmental clearance compliance conditions status is being submitted on half-yearly basis to MoEF&CC, Bhubaneswar, its Regional Office, CPCB and SPCB
xxvii)	A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	A copy of clearance letter has been already submitted to local Municipality Chairman as it is coming under Talcher Municipality and suggestion or representation / recommendations will be received and processed.
xxviii)	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Center and Collector's Office / Tehsildar's Office for 30 days.	State Pollution Control Board had displayed a copy of the clearance letter at the Regional Office, District Industry Center and Collector's Office / Tehsildar's Office for 30 days
xxix)	The project authorities should advertise atleast in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 dates of the issue 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 also at Website of the Ministry of Environment, Forest & Climate Change at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneswar.	It was advertised in two local newspapers namely., 1) New Indian Express (in English), 2) Prameya (in Odia language-vernacular language) after obtaining 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 also at Website of the Ministry of Environment, Forest & Climate Change at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneswar.

xxx)	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	It will be complied, if the Ministry or any other competent authority alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
xxxii)	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 the Environment (Protection) Act, 1986.	Only actual data are being submitted against each conditions mentioned above and the clearance may be withdrawn as per E(P) Act, 1986, if the data are found false.
xxxiii)	The above conditions will 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 and the Public Liability Insurance Act'1991 along with their Hon'ble Supreme Court of India/High Court of Odisha and any other Court of Law relating to the subject matter.	Yes, the above conditions can 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 and the Public Liability Insurance Act'1991 along with their Hon'ble Supreme Court of India/High Court of Odisha and any other Court of Law relating to the subject matter.
xxxiiii)	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.	Yes, it is accepted.


 30-4-2022

PROJECT OFFICER (T&H/D)
DEULBERA COLLIERY/MANDAPAL SAND MINE



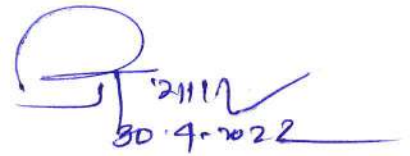
FORM-I

MINISTRY OF ENVIRONMENT & FOREST REGIONAL OFFICE

MONITORING PROFORMA PART – I (DATA SHEET)

1	Project type: River – Valley/Mining/Industry/Thermal/ Nuclear/Other (Specify)	Mining (Sand)
2	Name of the Project	Gopinathpur/Nizigarhzami (Manadapal) sand mine
3	Clearance letter(s) OM No. & dt	F.No.J-11015/421/2015-IA- II(M) & dt:28.01.2016
4	Location: a) District(s), State(s)	Near Gopinathpur village, Talcher, Dt: Angul Odisha.
5	a) Address of concerned project Chief Engineer (with pin code & Telephone/Telex/Fax Nos.) b) Address of Executive Project Engineer Manager with Pin code and Telephone/Telex/Fax Nos.)	Sri D.Sahoo, Project Officer, (T&H/D) Deulbera Colliery, Dist-Angul (Odisha), Ph.06760- 269955 (Odisha)
6	Salient Features: a) Of the Project b) Of the Environment Manager plans	Sand mine (Capacity: 0.25 Mm ³ / annum) over an area of 17.805 Ha in the Brahmani River.
7	Breakup of the Project Area a) Submergence area (forest & non-forest) b) Others	a) Nil b) Nil
8	Breakup of the Project affected population with enumeration of those losing houses\dwelling units only agricultural lands only, both dwelling units and agricultural land and less laborers/artisans. a) SC/ST Advises b) Others	Nil, There is no human settlement in the proposed sand mining site. Therefore there is no requirement of resettlement and rehabilitation
9	<i>Financial Details</i> a) Project costs as originally planned and subsequent revised estimates and the years of price reference. b) Allocation made for environment management Plans, with item-wise and year wise breakup. c) Benefit cost ratio/interest rate of return and year assessment d) Whether © includes the cost of environment Management as shown in (B) above. e) Actual expenditure incurred on the Project so far f) Actual expenditure incurred on the environment management plans	*On PR'2011 – 73.50 Lakhs *On P&M'2015 – 359.50 Lakhs *On Vehicles – 15.00 Lakhs *Water Supply & sewerage management – 2.00 Lakhs *Scientific studies – 1.50 Lakhs - No 461.00 Lakhs *Infrastructure provided through CSR: 51.95 Lakhs *Environment Monitoring programme : 5.70 Lakhs *Environment Management Plan: 12.06 Lakhs (2021-2022) *Rev. Expenditure: 2.5 Lakhs/yr

10	<p>Forest and requirements</p> <p>a) A status of approval of diversion of forest and non- forestry use.</p> <p>b) A status of clean filling in forest and non-forest lands</p> <p>c) Comments on availability and sustainability compensatory afforestation program in the light of actual fell experience so far</p>	<p>NA</p> <p>NA</p> <p>NA, as there is no felling of trees / forest land involved</p>
11	<p>Status of Construction.</p> <p>a) Date of commencement (actual and/or planned)</p> <p>b) Date of completion (actual and/or planned)</p>	<p>(Existing mine)</p> <p>1992</p> <p>1992</p>
12.	Reason for the delay if the project is yet to start.	NA
13.	<p>Date of site visit</p> <p>a) The dated on which the project was monitored by the Regional Officer on the previous occasions if.</p> <p>b) Date of site for the monitoring report.</p>	02.02.2022
14	Details of correspondence with Project Authorities for obtaining action plans information and status of compliance to safeguards.	-


30.4.2022

PROJECT OFFICER (T&H/D)
DEULBERA COLLIERY/MANDAPAL SAND MINE



FORM-II

PROFORMA FOR PROVIDING INFORMATION ON REHABILITATION

1	No. of Villages Affected	Nil, as the mine lease area is located inside the Brahmani river
2	Families Affected	Nil
3	Compensation package offered per family	Nil
4	Budget Estimate for rehabilitation a) Total Outlay b) Amount Paid/used	Nil, as there is no requirement of resettlement and rehabilitation
5	Employment Details a) Total Employment to be provided b) Employment given So far	NA, as there is no human settlement
6	Rehabilitation /Resettlement details a) No. of Families rehabilitated i) Name of the site ii) Families Rehabilitated b) Families yet to be rehabilitated i) Name of the site ii) No. of families	a) Nil b) Nil
7	Any other Information	-


30/4/2022

PROJECT OFFICER (T&H/D)
DEULBERA COLLIERY/MANDAPAL SAND MINE




FORM-III
FORMATE FOR PROVIDING PARTICULARS ON GREEN
BELT/PLANTATION UNDER F©ACT 1980 AND E (P) ACT 1986

1	a. Name of Organization b. Environment clearance order No.	Mahanadi Coalfields Limited F.No.J-11015/421/2015-IA-II(M)
2	Location, Block/Sub Division/ District./State.	Near Gopinathpur village, Talcher, Dt: Angul Odisha.
3	Address for communication	Sri D.Sahoo, Project Officer, (T&H/D) Deulbera Colliery, Dist-Angul (Odisha), Ph.06760-269955 (Odisha)
4	Existing vegetation in the area/region a. Species (Trees/shrub/Grasses/climbers.) b. Major prevalent species of each type	a) Indigenous species (Trees) b) Neem, Eucalyptus, Pipal, Banyan
5	Land coverage by the project a. Total Area under the project b. Area covered for basic infrastructure (road, building / factory etc.)	a) 17.805 Ha b) 0.005 Ha (Road)
6	Details about natural vegetation a. Name and number of tree/species felled b. Name and number of plants species still available in the area c. By protecting the area will indigenous d. Extent of green belt developed.	a) Nil b) Tree enumeration to be done for existing plants (Planted 20 years back) c) Indigenous plants planted d) Along the western bank of river, further green belt will be developed in the upcoming years
7	Plantation required to be carried out as per. a. Condition of Environment (Clearance in Ha/No. of plants/Ha) b. Condition of forest © Act Forest clearance in Ha/No. c. Voluntarily in Ha. /Nos.	a) 2500 plants/Ha b) NA, no forest land involved c) 2500 plants/Ha
8	Details about plantation: Total area available for plantation in 2018-19 in each category. a) Plantation details (Category wise & methodology used) b) Survival % of plantation	a) There is no land available for plantation. b) NA, as there is no plantation done recently.
9	Agency carrying out plantation and maintenance:	NA
10	Financial Details. (Year wise and item wise)	Rs.1.5 Lakhs spent for dust suppression measures (Manual Sweeping & Mobile Water Sprinklers) Rs.0.1 Lakhs has been spent during the year 2021-22 for 100 nos. of plants distribution & 70 nos. plantation at stockyard area.
11	Inspection of plantation by fields Experts and their comments and follow up action.	-
12	Remarks /any other information	-

PROJECT OFFICER (T&H/D)

DEULBERA COLLIERY/MANDAPAL SAND MINE




30.9.2022

ANNEXURE - I

AMBIENT AIR QUALITY REPORT (OCTOBER'2021 TO MARCH'2022) MANDAPAL SAND MINE

1) Monitoring Station: Near Mandapal Chowk

Date	SPM	PM ₁₀	PM _{2.5}	SO ₂	NOx	Remarks
13.10.2021	231	139	47	17.35	29.53	
27.10.2021	274	169	52	10.48	17.77	
11.11.2021	273	159	49	12.05	29.66	
25.11.2021	296	177	56	12.52	22.00	
11.12.2021	193	109	42	13.26	27.75	
25.12.2021	289	190	53	17.51	26.45	
08.01.2022	165	107	44	19.27	37.83	
22.01.2022	200	145	50	20.97	34.26	
05.02.2022	190	156	52	14.64	26.08	
19.02.2022	168	115	48	13.41	28.28	
05.03.2022	179	109	43	23.13	24.25	
18.03.2022	178	129	43	14.23	22.31	
Max (µg/m³)	296	190	56	23.13	37.83	
Min (µg/m³)	165	107	42	10.48	17.77	
Avg. (µg/m³)	219.67	142.00	48.25	15.74	27.18	

2) Monitoring Station: Near Pachimeshwar Temple

Date	SPM	PM ₁₀	PM _{2.5}	SO ₂	NOx	Remarks
13.10.2021	161	93	38	13.87	25.78	
27.10.2021	209	133	45	11.28	20.66	
11.11.2021	209	117	43	21.84	35.13	
25.11.2021	227	143	49	15.42	37.05	
11.12.2021	154	100	53	17.51	26.45	
25.12.2021	178	146	59	14.35	28.75	
08.01.2022	176	111	36	22.97	34.75	
22.01.2022	156	98	30	21.38	34.29	
05.02.2022	166	145	42	19.92	18.36	
19.02.2022	174	128	46	19.52	35.22	
05.03.2022	170	103	36	22.77	29.06	
18.03.2022	145	109	36	9.07	18.30	
Max (µg/m³)	227	146	59	22.97	37.05	
Min (µg/m³)	145	93	30	9.07	18.3	
Avg. (µg/m³)	177.08	118.83	42.75	17.49	28.65	



ANNEXURE - II

WATER QUALITY REPORT (OCTOBER'2021 TO MARCH'2022) MANDAPAL SAND MINE

Sl.No	Parameters (Unit in mg/L except pH, Color & MPN)	01.11.2021		31.01.2022		IS standards
		Upstream	Downstream	Upstream	Downstream	
1	pH	7.51	7.43	7.44	7.39	6.5-8.5
2	DO	6.6	6.8	6.50	6.3	4
3	BOD	<2.0	<2.0	2.4	2.2	3
4	Color (Hazen Unit)	3	2	3	2.0	300
5	TDS	88	86	84	88	1500
6	TSS	40	44	28	24	-
7	Total Hardness	52	48	56	60	-
8	Cu	<0.03	<0.03	<0.04	<0.04	1.5
9	Fe	0.38	0.48	<0.1	<0.1	50
10	Cl	4	6	6	8	600
11	Sulphate	11.42	8.58	10.14	10.71	400
12	Nitrate	<0.5	<0.5	0.98	0.77	50
13	F	0.42	0.3	<0.3	<0.3	1.5
14	Cd	<0.001	<0.001	<0.001	<0.001	0.01
15	As	<0.005	<0.005	<0.005	<0.005	0.2
16	Pb	<0.005	<0.005	<0.005	<0.005	0.1
17	Zn	<0.04	<0.04	<0.04	<0.04	15
18	Cr	<0.01	<0.01	<0.05	<0.05	0.05
19	O&G	<4.0	<4.0	<4.0	<4.0	01
20	MPN (Index/100ml)	3.6	4	7.8	7.8	-
21	Residual Free Chlorine	<0.2	<0.2	<0.005	<0.005	-

ANNEXURE - III

**NOISE LEVEL REPORT (OCTOBER'2021 TO MARCH'2022)
MANDAPAL SAND MINE**

Location : Near Gopinathpur Village:

DATE	NOISE LEVEL MEASUREMENT IN dB(A)	
	DAY	NIGHT
12.10.2021	53.7	50.3
29.10.2021	53.6	51.5
13.11.2021	55.61	53.8
29.11.2021	55.7	54.8
13.12.2021	50.3	49.4
28.12.2021	51.8	50.0
08.01.2022	46.8	44.8
22.01.2022	45.4	43.2
09.02.2022	43.6	40.2
23.02.2022	48.8	46.1
09.03.2022	48.4	44.5
23.03.2022	44.0	42.9
Max (dBA)	55.7	54.8
Min (dBA)	43.6	40.2
Avg. (dBA)	49.81	47.63

