

ମହାନଦୀ କୋଲଫିଲ୍ଡସ୍ ଲିମିଟେଡ୍
Mahanadi Coalfields Limited
(A subsidiary of Coal India Limited)

OFFICE OF THE PROJECT OFFICER
NANDIRA COLLIERY,
PO:-N.S.NAGAR, BHARATPUR,
DIST:ANGUL (ODISHA), PIN:759148
e-mail: po-ndrc.mcl@nic.in



MCL

Ref.No: PO(N&N)/NDR/EC Compliance/2021-22/ 998

Dt 22.05.2021

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 NANDIRA U/G Mine (0.33 MTY).

Dear Sir,

Please find enclosed herewith Half Yearly Compliance Report along with Form-I, II & III and abstract of the monitoring report of Ambient Air, Noise level & Water Effluent quality in respect of NANDIRA U/G Mine (0.33 MTY) for the period from Oct'2020 to Mar'2021.

This is for your kind information & necessary action.

Encl: As above.

Yours faithfully

PROJECT OFFICER (N&N)
NANDIRA COLLIERY

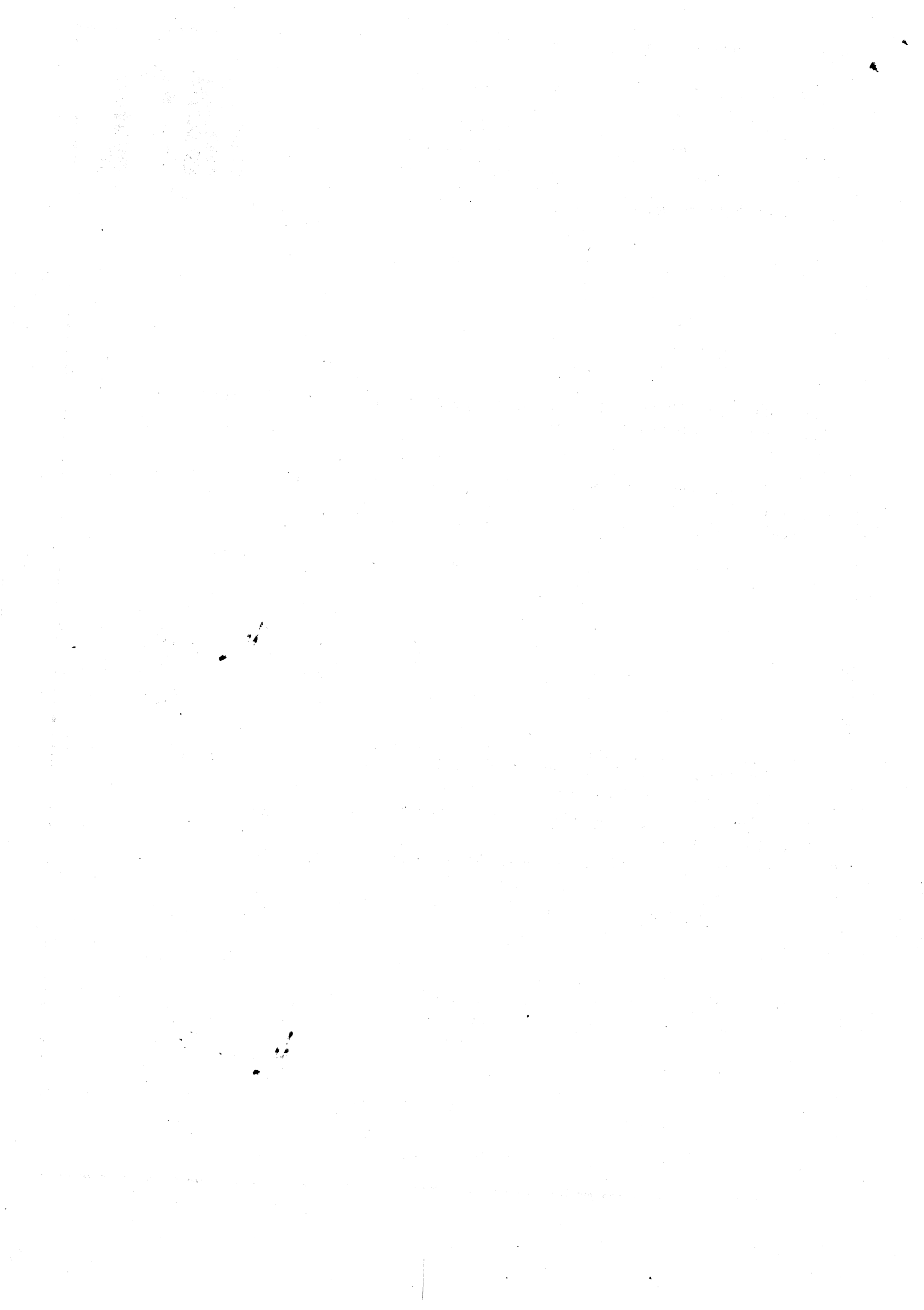
Copy for Kind information to:

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, Nandira Colliery.
2. The Area Environment Officer, Talcher Area (with Encl.)
3. The Nodal Officer (Envt.), Nandira Colliery (with Encl.)

CHIEF MANAGER / PROJECT OFFICER (N&N)
NANDIRA COLLIERY



HALF YEARLY PROGRESS REPORT
OF COMPLIANCE WITH
ENVIROMENTAL CLEARANCE
CONDITIONS

(OCTOBER-2020 TO MARCH-2021)

NANDIRA U/G MINE (0.33 MTY)



MCL

MAHANADI COALFIELDS LIMITED
TALCHER AREA
AT/PO: N.S.NAGAR, BHARATPUR,
ANGUL, ODISHA
PIN-759148.



HALF-YEARLY REPORT OF COMPLIANCE WITH ENVIROMENTAL CLEARANCE CONDITIONS

(HALF-YEARLY FROM OCTOBER'2020 TO MAR'2021

Name of the Project: Nandira Colliery. (0.33 Mty), MCL.

No. & date of MoEF clearance letter No: J-11015/866/2007-IA.II (M), dated 18th June 2007

Revalidated Vide No: J-11015/866/2007-IA.II(M), Dt: 15.11.2020

A)	SPECIFIC CONDITIONS	COMPLIANCE STATUS
(i)	No depillaring operation shall be carried out below village and other surface structures.	No depillaring operation has been carried out below village and other surface structures.
(ii)	Solid barriers shall be left below the roads falling within the blocks to avoid any damage to road.	Solid barriers have been left below the roads falling within the blocks to avoid any damage to the blocks.
(iii)	Regular monitoring of subsidence movement on the surface over and around working area and impact on natural drainage pattern, water bodies, vegetation, structure, road and surrounding should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoided loss life and material. Crack should be effectively plugged with ballast and clayey soil/suitable material.	Regular monitoring of subsidence movement on the surface over and around the depillared area is being done. No subsidence has been observed so far, no cracks have been observed anywhere.
(iv)	Garland /surface drain (size, gradient and length) around the safety area such as mine shaft outside the active subsidence area to divert the surface water from the ML and from low lying areas. Sump capacity should be designed keeping 50% safety margin over an above the pack sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity should also provide adequate retention period to allow proper setting of site material. Sufficient number of pumps of adequate capacity shall be deployed to pump out mine water during peak rainfall.	Garland drains are provided around the mine area. Adequate sump capacity has been established below ground keeping in view maximum rainfall & adequate retention time, sufficient number of pumps of adequate capacity have been installed below ground to pump out mine water during peak rainfall.
(v)	While extracting panels in the lower seam, all water bodies in the subsidence area shall be drained. Dewatering of the old goaves of the upper seam shall be continued as long as the lower seam is worked to prevent accumulation of large water bodies over working area.	No lower seam below a goaved out upper seam is being presently worked.

(vi)	Crusher at the CHP should operate with high efficiency bag filters. Water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage road, transfer point etc.	There is no crusher plant at the mine. Adequate water spraying through fixed water sprinklers and mobile water tanker is being done to prevent fugitive emission from conveyor system, transfer points, coal stockyard and CT road etc.																				
(vii)	Conveyor belt for transportation of coal from coal face to CHP shall be a closed unit.	Blasted coal is loaded from face by SDLs onto pony belts/gate belts and further transported to surface via series of gate and trunk belts. Conveyor belts at surface fully covered. Moreover, all the belt conveyors have arrangement for water sprinkling through mist nozzles over it at regular intervals.																				
(viii)	Drills should be wet operated.	All the drilling machines are equipped and operated with wet drilling system.																				
(ix)	A progressive afforestation plan shall be prepared and implemented for the undisturbed area and shall include area brought under green belt development, area along road, infrastructure ,over surface where mining is being done below, along ML boundary and township outside the lease area, etc. by planting native species in consultation with the local DFO/Agriculture department. The density of the tree should be around 2500 plants per ha.	<p>Total lease area of the project is 370 Ha involving 328 Ha of forest land. Only 9.10 Ha has been disturbed for mine opening & surface infrastructure. Rest of the area is undisturbed. Block plantation of about 3100 plants have already been done over 1.40 Ha of land at Nandira Colliery premises, Near Worker's Institute, Nandira U.P. school, Sisu Mandir Vidhyalaya etc. (wherever, surface rights vested with MCL) for increasing green cover.</p> <p>Green belt has been developed by planting 1480 no. of plants along CT road & colony road for a length of 3.0 RKM & 8.845 RKM respectively.</p> <p>Adequate plantation has been done in the ML Area of the mine as per the advice of forest department. Last 3 years plantation details are given below:-</p> <table border="1" data-bbox="946 1263 1497 1464"> <thead> <tr> <th>Year</th> <th>No of Plants</th> <th>Area (Ha)</th> <th>Expenditure (Rs.)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>550</td> <td>0.20</td> <td>63585</td> </tr> <tr> <td>2018-19</td> <td>50</td> <td>0.02</td> <td>4000</td> </tr> <tr> <td>2019-20</td> <td>20</td> <td>0.01</td> <td>2000</td> </tr> <tr> <td>2020-21</td> <td>50</td> <td>0.02</td> <td>5000</td> </tr> </tbody> </table> <p>In addition to the above plantation works, fruit bearing plants are also being distributed to surrounding villagers as per their demand, during monsoon of every year at free of cost for raising green cover. Detail of such plant distribution to the specified surrounding villages during 2019-20 & 2020-21 is given below:-</p>	Year	No of Plants	Area (Ha)	Expenditure (Rs.)	2017-18	550	0.20	63585	2018-19	50	0.02	4000	2019-20	20	0.01	2000	2020-21	50	0.02	5000
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		Name of the village	No. of plants distributed																									
			2019-20	2020-21																								
		Karnapur	1000	-																								
		Sanjorada	628	1215																								
		Badajorada																										
		Sansingda	1000	-																								
		Badasingda																										
		Natedi	576																									
		Danara	2693	1935																								
		Jambubahali	2394	1521																								
(x)	<p>Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells construction of new piezometers. The monitoring for quantity should be done four times a year in pre-monsoon (may), monsoon (August), post monsoon (November) and winter (January) seasons and for quality in May. Date thus collected should be submitted to the ministry of Environment & forest and to the central pollution control board quarterly within one month of monitoring.</p>	<p>The ground water level and quality is being monitored through a network of existing wells and piezometers established in Talcher Coalfields. The water quantity monitored in a piezometer established under the jurisdiction of Nandira Colliery and a village well is given below:-</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Location</th> <th>Water Depth from Ground Level(in m)</th> </tr> </thead> <tbody> <tr> <td>20.11.2020</td> <td rowspan="2">Natedi village well</td> <td>2.35</td> </tr> <tr> <td>29.01.2021</td> <td>7.42</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Date</th> <th>Location</th> <th>Water Depth from Ground Level (in m)</th> </tr> </thead> <tbody> <tr> <td>30.11.2020</td> <td rowspan="2">Peizometer No. MTP-11</td> <td>7.59</td> </tr> <tr> <td>13.01.2021</td> <td>7.07</td> </tr> </tbody> </table> <p>Data thus collected is being submitted to MoEF&CC & CPCB at regular intervals and also made available at MCL website.</p>			Date	Location	Water Depth from Ground Level(in m)	20.11.2020	Natedi village well	2.35	29.01.2021	7.42	Date	Location	Water Depth from Ground Level (in m)	30.11.2020	Peizometer No. MTP-11	7.59	13.01.2021	7.07								
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(xi)	<p>The company shall put up artificial ground water recharge measures for augmentation of ground water resource if monitoring of water table indicates declining trend. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.</p>	<p>Ground water & surface water level are being monitored at regular intervals. The water table is found to be normal and there is no declining trend observed. Moreover, 02 no. of roof top rainwater harvesting structures have been developed at Nandira Dispensary and Worker's institute during 2020-21. Moreover, water is being supplied through pipeline, water tankers etc. to nearby villages for their domestic purposes as per their demand. The details of water supplied through tankers during last 3/4 year details are as follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>No. of villages</th> <th>Quantity (KL)</th> <th>Expenditure (In Rupees)</th> </tr> </thead> <tbody> <tr> <td>2016-17</td> <td>17</td> <td>60500</td> <td>62,00,000</td> </tr> <tr> <td>2017-18</td> <td>17</td> <td>52000</td> <td>51,00,000</td> </tr> <tr> <td>2018-19</td> <td>13</td> <td>38392</td> <td>50,69,300</td> </tr> <tr> <td>2019-20</td> <td>13</td> <td>38400</td> <td>51,00,000</td> </tr> <tr> <td>2020-21</td> <td>13</td> <td>38400</td> <td>55,00,000</td> </tr> </tbody> </table>			Year	No. of villages	Quantity (KL)	Expenditure (In Rupees)	2016-17	17	60500	62,00,000	2017-18	17	52000	51,00,000	2018-19	13	38392	50,69,300	2019-20	13	38400	51,00,000	2020-21	13	38400	55,00,000
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(xii)	<p>The company shall obtain prior approval of CGWA/CGWB Regional office for use of ground water if any, for mining operation.</p>	<p>NoC has been obtained from Central Ground Water Authority vide No. CGWA/NOC/MIN/ORIG/20020/9385, Dt: 16.12.2020 with validity upto : 15.12.2022</p>																										
(xiii)	<p>Sewage treatment plant should be installed in the existing colony. ETP should also be provided for workshop and CHP waste water.</p>	<p>Septic tank soak pit arrangement is available at each and every quarter. The domestic effluent is being discharged to soak pit through septic tank.</p> <p>However, the proposal for construction of STP for a capacity of 0.5 MLD is under progress. E-Tendering process has been completed and work</p>																										

		order will be issued very shortly and commissioning work will be started thereof. No effluent generated from workshop, as there is no vehicle washing takes place. No CHP involved in the mine, hence ETP is not needed, as there is no waste water generated at the mine.																																																
(xiv)	Besides carrying out regular periodic health checkup of their workers, 10% of the workers identified from workforce engaged active mining operations shall be subjected to health checkup for occupational diseases and nearing impairment, if any through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.	Occupational health surveillance programme of the workers are being made regularly. Moreover, Nandira dispensary, Regional Hospital, Dera and Central Hospital are also available for the purpose of health check up of employees. Health check up of employees engaged in active mining activities has also been carried out by an outside agency. Details of IME & PME status is as follows: <table border="1"> <thead> <tr> <th>Year</th> <th>IME Target</th> <th>IME Done</th> <th>Man Power</th> <th>Target PME</th> <th>PME Done</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>93</td> <td>93</td> <td>1718</td> <td>360</td> <td>251</td> </tr> <tr> <td>2015-16</td> <td>15</td> <td>15</td> <td>1785</td> <td>305</td> <td>316</td> </tr> <tr> <td>2016-17</td> <td>-</td> <td>-</td> <td>1750</td> <td>530</td> <td>365</td> </tr> <tr> <td>2017-18</td> <td>15</td> <td>15</td> <td>1664</td> <td>785</td> <td>500</td> </tr> <tr> <td>2018-19</td> <td>15</td> <td>15</td> <td>1243</td> <td>410</td> <td>259</td> </tr> <tr> <td>2019-20</td> <td>15</td> <td>15</td> <td>1194</td> <td>358</td> <td>187</td> </tr> <tr> <td>2020-21</td> <td>-</td> <td>-</td> <td>1785</td> <td>500</td> <td>483</td> </tr> </tbody> </table>	Year	IME Target	IME Done	Man Power	Target PME	PME Done	2014-15	93	93	1718	360	251	2015-16	15	15	1785	305	316	2016-17	-	-	1750	530	365	2017-18	15	15	1664	785	500	2018-19	15	15	1243	410	259	2019-20	15	15	1194	358	187	2020-21	-	-	1785	500	483
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(xv)	Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 years for monitoring land used pattern and report submitted to a MOEF and its Regional office at Bhopal.	Digital processing of the entire lease area using remote sensing technique is being done regularly once in 3 years for monitoring the land use pattern. It was carried out recently in the year 2019 and prior to that it was done in the year 2016 and reports submitted to MoEF. And the details are given below: Total Leasehold area = 370 Ha Area under agriculture = 28.83 Ha Area under water body = Nil Waste land = Nil Forest land = 325.38 Ha Area under habitation = Nil Other Govt. land = 15.79 Ha																																																
(xvi)	A final Mine closure plan along with details of corpus fund should be submitted to the Ministry of Environment & forest 5 years in advance of final mine closure for approval.	A mine closure plan with details of corpus fund already submitted to MoEF. Accordingly a progressive mine closure report for the period from 2011-12 to 2015-16 has been submitted at CCO and got 50% reimbursement of deposited amount as per the latest guidelines.																																																