

# INDRANI PATNAIK

(Mines Owner)

A/6, COMMERCIAL ESTATE, CIVIL TOWNSHIP, ROURKELA-769 004

Phone : 0661-2400139, 2400014, FAX : 0661-2402226

REF NO: IP/MM/DEC2024/ [Signature]

DATE: 04.12.2024

To

**The Director (S)**

Eastern Regional Office,  
Ministry of Environment & Forest,  
Government of India,  
A-3 Chandrasekharapur,  
Bhubaneswar – 751 023

**Subject** : Submission of Environmental Clearance compliances stipulated in approved EC for iron ore production of 4.00 MTPA in respect of Unchabali Iron & Mn. Mines of Smt. Indrani Patnaik.

**Reference:** 1. Ministry's Clearance letter no. J-110515/214/2008-IA.II (M), dated 23.07.2009 for 4.00 MTPA Iron ore Production.  
2. MoEF &CC notification no. 4624 (Published in Gazette of India) Dt. 26.11.2018.

Dear Sir,

With reference to the above cited subject and gazette notification, we are submitting herewith the six monthly compliance report **by uploading in the Parivesh portal** and also uploading the same in our company website for 4.00 MTPA Iron ore production with comprehensive data analysis reports (supporting photographs and monitoring reports) for the period **APRIL 2024 to SEPTEMBER 2024** in respect of Unchabali Iron & Mn. Mines of Smt. Indrani Patnaik.

Thanking you.

Yours faithfully,

For Unchabali Iron Ore Mines

*[Signature]*  
4/12/24

Mine Manager  
Mines Manager  
Unchabali Iron & Mn. Mines  
Indrani Patnaik

Encl: As above & Compliance Copy with detailed analysis report and supporting photographs and monitoring data.

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

<b>SP. Cond. NO.</b>	<b>SPECIFIC CONDITION</b>	<b>PRESENT STATUS</b>
I.	<b>The project proponent shall obtain Consent to Establish and Consent to Operate from the State Pollution Control Board, Orissa, and effectively implement all the conditions stipulated therein.</b>	As per requirement, the project has been obtained Consent to establish & Consent to Operate from SPCB, Orissa for 4.00 MTPA Iron ore production. The obtained Consent to Operate includes two numbers of 200 TPH mobile crusher plant, two numbers of 150 TPH mobile crusher plant, three numbers of 250 TPH mobile screen plant. The compliance to the conditions stipulated in the approved consent to establish & consent to operate has been implemented effectively. The latest consent to operate compliance report has been submitted to SPCB, Orissa for the year 2023-24, and the same is enclosed as <b>ANNEXURE-1</b> .
II.	<b>Necessary forestry clearance under the Forest (Conservation) Act, 1980 for an area of 103.432ha forest land involved in the project shall be obtained before starting mining operation in that area. Till such time mining activities shall be restricted to an area of 67.16ha of forestland for which approval under section-2 of the forest (Conservation) Act, 1980 was granted by the Ministry of Environment and Forests on 03.05.2007. Environmental Clearance is subject to grant of forestry clearance. No mining shall be undertaken in the forest area without obtaining requisite prior forestry clearance. No activity relating to the project shall be undertaken in the forestland for which forestry clearance under the forest</b>	As per condition, the forest clearance has been obtained from MoEF for an area of 103.432 Ha in two phases under the Forest (Conservation) Act, 1980. First phase forest clearance was obtained on 03.05.2007 for an area of 35.275 Ha., vide MoEF letter no: 8 (21)40/2004-FCE dated 03.05.2007, and second phases forest clearance has been obtained on 11.09.2015 over an area of 68.157 Ha., vide MoEF&CC letter no F.NO.8-67/2014-FC dated on 11.09.2015. The copy of the forest clearances obtained from MoEF&CC is attached as <b>ANNEXURE - 2</b> (First phase for 35.275 Ha) & <b>ANNEXURE – 3</b> (Second phase for 68.157 Ha)

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

	<b>(conservation) Act, 1980 has not been obtained. The environmental clearance is subject to grant of forestry clearance.</b>	
III.	<b>The environmental clearance is subject to the approval of the State Land use Department, Government of Orissa for the diversion of agricultural land for Non-agricultural use.</b>	There is no agricultural land within the mine lease area. Therefore, the said diversion from the state land use department is not applicable.
IV.	<b>The mining operations shall be restricted to the above groundwater table and it should not intersect the groundwater table. In case of working below the groundwater table, prior approval of the Ministry of Environment &amp; Forests and Central Ground Water Authority shall be obtained, for which a detailed hydrological study shall be carried out.</b>	The present mining operation is restricted to above the groundwater table and there is no proposal to intersect the groundwater table as per the approved Scheme of Mining. The Project has carried out detailed hydrology and hydrogeological study through and as per the hydrology study report the groundwater table exists at 478 AMSL and the present mine working operation is above 530 AMSL. In case of groundwater table intersection in the future, the project will abide by the said condition and will get prior approval from CGWA.
V.	<b>The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. Adequate measures shall be taken for conservation and protection of the seasonal streams if any emanating from the mine lease area during the course of mining operation. Appropriate mitigation measures should be taken to prevent pollution of the Baitarani river, in consultation with the State Pollution Control Board.</b>	No watercourse and/or water resources are being obstructed due to our mining operation. To ensure the same project has been undertaken runoff management study and prepared site-specific runoff management plan through KRG Rain Water Foundation, Chennai. Under the site-specific runoff management plan, the project has undertaken various mitigating measures in and around the mine lease area.  <b>Mines runoff management during monsoon period:</b> The mines' runoff water is not allowed for direct discharge from the mine lease area. Hence, the entire generation of mines runoff water (during monsoon period) is collected to the bottom of the pit, checks dams and check weirs and after treatment through silt

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
 “Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
 village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

		<p>cum Sedimentation by giving adequate retention period, the final water is allowed to discharge. However, the entire mine area and check dams/check weirs connectivity is properly made by proper drainage pattern.</p> <p>All the implementations have been carried out with consideration of maximum rainfall and technical design followed as per KRG rainwater harvesting recommendation. The detailed implementation of check dams and check weirs is given in <b>Table -1</b>.</p> <p><b>Nallah Protections measures:</b></p> <p>In addition to the site-specific mitigation measures, the project has been carried out various Nallah protection measures around the mine's premises. The implementations are as follows.</p> <ul style="list-style-type: none"> <li>✓ Nallah banks are protected by a Guard wall with proper filtration arrangements to avoid entry of any silt carried over to the water bodies during the rainy season from other sources.</li> <li>✓ Check weirs/check dams are conferred along the Nallah passing area to persuade silt sedimentations.</li> <li>✓ Nallah de-siltation is undertaken during the pre-monsoon period to maintain its bio cycle.</li> <li>✓ Nallah both side slopes are pitched with loose boulders to avoid barrier erosion during the monsoon period.</li> </ul> <p>Plantation and Vettiver plantation was carried out all along the Nallah boundaries and a few areas is converted as green</p>
--	--	---

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

		<p>barriers. The detailed implementation is given in <b>table -2</b> and photo evidence for the same is given below.</p> <p><b>Water Harvesting:</b></p> <p>The project has constructed/ developed four numbers water harvesting ponds in surrounding villages to encourage the water table. The ponds are regularly de-silted and well maintained on regular basis. The detailed implementation is given in <b>table -3.</b></p> <p><b>Dump Management:</b></p> <p><b>Dump Preparation:</b> Proper terracing, slope level, and sub benches are maintained in all mines waste/subgrade dump.</p> <p><b>Retention wall:</b> Bottom of the OB dump and subgrade dump provided/constructed with adequate size of retention wall to avoid the dump failure during the monsoon period. <b>Drainage Pattern:</b> Proper drainage pattern is provided at bottom of the waste/subgrade dumps and other required areas to collect &amp; treat the mine's runoff water.</p> <p><b>Coir-mat and plantation:</b> The surface area of the waste /subgrade dump is covered with plantation/coir geotextile application along with local grass seeds to avoid dump erosion during the monsoon period. The detailed implementation is given in <b>Table - 4.</b></p> <p><b>Photo evidence is given below as PHOTOS-1.</b></p>
--	--	---

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

VI.	<p><b>The topsoil, if shall temporarily be stored at the earmarked site(s) only and should not be kept unutilized for long, topsoil should be used for land reclamation and plantation.</b></p>	<p>No topsoil was generated during this reporting period because the current mining operation is restricted within the already diverted forest area and there is no new development in the reporting period. In case top soil generation takes place in the future, it will be stored in an earmarked area and necessary safeguard measures will be undertaken to preserve its nutrient values so that it will be used for future land reclamation and raising of plantations.</p>
VII.	<p><b>The project proponent shall not undertake beneficiating of the mineral as part of this project. For understanding beneficiation, necessary prior approval under the provisions of EIA Notification, 2006 shall be obtained.</b></p>	<p>In this regard project has been obtained Environment clearance from the Ministry of Environment &amp; Forest, Government of India vide letter no. J-11015/273/2009-IA.II (M) dated 31.05.2011 for setting up an iron ore beneficiation plant for a capacity of 2.0 MTPA (2 x 185 TPH). A copy of the same has been given as <b>Annexure – 4</b>. The same got established inside the mines and was in operation till Jan 2016. In the meantime, the detailed mineral exploration indicated that there is no such requirement of beneficiation of iron ore. Accordingly, the mining plan got approved by the Indian Bureau of Mines, Govt. of India vide No. MS/FM/25-ORI/BHU/2017-18 dated 10.11.2017 by mentioning that there is no more requirement for beneficiation of iron ore as <i>“the total ROM will be handled by the dry method of size separation with the help of crusher and screen plants, so there will no requirement of wet beneficiation plant due to the following reasons: <b>After detailed exploration, the resource has been estimated under G1 category. No additional resource has been established by drilling. The average grade of iron ore is coming around 62% Fe. Based on the estimation of the resource, it can be observed that only 10% of the total quantity is coming under sub-grade ore. That sub-grade ore can easily be bendable with high-grade ore. Hence, it is not worth using the wet beneficiation plant as far as cost-benefit analysis is concerned.</b></i></p> <p>In view of the above, we would like to inform</p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

		<p>you that; since there is no such requirement for beneficiation of ore, so we have dismantled the 2.0 MTPA iron beneficiation plant located within our mines premises and the same got informed to your good office through our letter no. IP/MM/OCTOBER 19/004 dated 03.10.2019. The copy of the submission of the letter at your good office is enclosed as <b>ANNEXURE – 4 &amp; 4A</b> &amp; the copy of the approved mining plan is enclosed as <b>Annexure – 4B</b>.</p>
VIII.	<p><b>The overburden (OB) generated during the mining operation shall be temporarily stacked at the earmarked dump site(s) only for backfilling. Backfilling shall commence from the year 2011-2012 onwards. The accumulated waste shall be liquidated by the year 2016 and there shall be no external dump thereafter. The back-filled area shall be reclaimed by the plantation. Monitoring and management of rehabilitated areas shall continue until vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment &amp; Forests and its Regional office, Bhubaneswar on a six-monthly basis.</b></p>	<p>The generated overburden and / waste is stacked at earmarked dump site As per the approved review of mining plan duly approved by Indian Bureau of Mines, Govt. of India vide No. MRMP/A/04-ORI/BHU/2021-22/904 dated 10.09.2021, 2670480 CUM quantity of overburden/waste has to be backfilled for the period of 2021-23. Accordingly, the project has backfilled 2991775 Tons quantity of waste inside the mines at the earmarked area till For this reporting year of 2022-23. As <i>the concurrent backfilling</i> is going on and it will continue once it reaches its ultimate level. However, the existing O.B/ waste dump is properly stabilized at an earmarked area with proper terracing, dozing, sloping, etc. with the construction of a retaining wall followed by garland drains at the toe of the dump.</p>
IX.	<p><b>Catch drains and siltation ponds of appropriate size should be constructed around the mine working the soil, mineral and temporary OB dumps to prevent runoff water and flow of sediments directly into the Baitarani river, the Jalpanadi, the Kasinallah, the Dolkonallah, Dalkinallah, the Ghaghara nallah, the Jagdharanadi, the Gahirjalanallah,</b></p>	<p>The project has undertaken various Mitigate measures on the above. The detailed implementation is as follows.</p> <p><b><u>Dump Management:</u></b></p> <p><b>Dump Preparation:</b> Proper terracing, slope level, and sub benches are maintained in all mines waste/subgrade dump.</p> <p><b>Retention wall:</b> Bottom of the OB dump and subgrade dump provided/constructed</p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

<p><b>the Mithida spring, 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 de-silted particularly after the monsoon and maintained properly. Garland drains, settling tanks, and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and the temporary OB dumps to prevent runoff water and flow of sediments directly into the Baitarani river, the Jalpanadi, the Kasinallah, the Dolkonallah, Dalkinallah, the Ghagaranallah, the Jagdharanadi, the Gahirjalanallah, the Mithida spring and other water bodies and dump 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. Dump capacity should also provide an adequate retention period to allow the proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and de-silted at regular intervals.</b></p>	<p>with adequate size of retention wall to avoid the dump failure during the monsoon period.</p> <p><b>Drainage Pattern:</b> Proper drainage pattern is provided at bottom of the waste/subgrade dumps and other required areas to collect &amp; treat the mine's runoff water.</p> <p><b>Coir-mat and plantation:</b> The surface area of the waste /subgrade dump is covered with plantation/coir geotextile application along with local grass seeds to avoid dump erosion during the monsoon period.</p> <p><b><u>Mines runoff management during monsoon period:</u></b></p> <p>The mine's runoff water is not allowed to be directly discharged from the mine lease area. Hence, the entire generation mines runoff water (during monsoon period) is collected to the bottom of the mines pit, checks dams and check weirs and after treatment (Silt Sedimentation by giving adequate retention period) process the final water is allowed to discharge. However, the entire mine area and check dams/check weirs connectivity is properly made by a preplanned drainage pattern.</p> <p>All the implementations have been carried out with consideration of maximum rainfall and technical design is followed as per KRG rainwater harvesting recommendation.</p> <p><b><u>Nallah Protections measures:</u></b></p> <p>In addition to the site-specific mitigation measures, the project has been carried out various Nallah protection measures around the premises of the mine. The implementations are as follows.</p> <ul style="list-style-type: none"> <li>✓ Nallah banks are protected by a Guard wall with proper filtration</li> </ul>
---	---



**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

		<p>arrangements to avoid entry of any silt carried over to the water bodies during the rainy season from other sources.</p> <ul style="list-style-type: none"> <li>✓ Check weirs/check dams are conferred along the Nallah passing area to persuade silt sedimentations.</li> <li>✓ Nallah de-siltation is undertaken during the pre-monsoon period to maintain its bio cycle.</li> <li>✓ Nallah both side slopes are pitched with loose boulders to avoid barrier erosion during the monsoon period.</li> <li>✓ Plantation and Vettiver plantation was carried out all along the Nallah boundaries and a few areas is converted as green barriers.</li> </ul> <p><b><u>Water Harvesting:</u></b></p> <p>The project has been constructed/ developed four numbers of water harvesting ponds in surrounding villages to encourage the water table. The ponds are regularly de-silted and well maintained regularly.</p>
X.	<p><b>Dimension of the retaining wall at the toe of the temporary overburden dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.</b></p>	<p>Based on rainfall data, the retaining wall has been constructed at various locations like the bottom of the OB dump, subgrade dump &amp; other required areas to check the runoff. Photos Are Attached Below As <b>PHOTO-2</b></p>
XI.	<p><b>Plantation shall be raised in an area of 98.8627ha including a 7.5 m green belt in the safety zone around the mining lease, backfilled and reclaimed area, mine benches, along the roads, etc. by planting the native species</b></p>	<p>As per condition, the plantation will be raised for an area of 98.8627 Ha after completion of the mines life/end of the mine operation in mine lease, backfilled area, and reclaimed area, mine benches, along with the roads, etc. However, during running mine operation project has carried</p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

	<p><b>in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per hectare. A green belt of adequate width shall be developed all around the plant by planting the native species in consultation with the local DFO/Agriculture department within the first five years.</b></p>	<p>Plantation at various locations like a safety zone, waste dump, mines plant area, mines haul road, village roads, villages schools, and railway sidings in consultation with the local DFO.</p> <p>Till reporting period a total number of 140649 numbers of saplings has been planted which comprises of gap-filling planation over the years on the damaged area/replacement of the dead plants and the survival rate is 85%, on an average of 119552 species survived up to this reporting period. In this reporting period we have planted 8100No. in the mines OB dump area and work out benches. The comprised year-wise plantation details are enclosed as <b>TABLE-5A</b> and the type of plants planted in the year was given in <b>TABLE- 5B</b>. Photo evidence for the plantation inside and out lease area is given below.</p> <p>Photos Are Given Below As <b>PHOTOS-3</b></p>
XII.	<p><b>Effective safeguard measures such as regular water sprinkling should be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM 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.</b></p> <p><b>The Project Proponent shall carry out the conditioning of the ore with water to mitigate fugitive dust emission.</b></p> <p><b>Necessary safeguard measures shall be taken for effective control of particulate levels (PM10) in the area. The safeguard measures shall</b></p>	<p>The project has implemented a different type of dust suppression system to arrest the air pollution from the source level in and around the mine's premises.</p> <p>The detailed implementations are as follows.</p> <ul style="list-style-type: none"> <li>✓ Fixed type water sprinklers of the length of 2500 meters implemented in mines permanent haul roads and dispatch roads.</li> <li>✓ Mines benches, temporary haul roads, and other processing areas dust generation are suppressed by the use of mobile water tankers. In this regard, the project has engaged three no. of 25 KL mobile water tanker, which is inbuilt with a high-pressure hydraulic sprinkling system.</li> <li>✓ Three numbers of 8 KL capacity mobile water tankers are being used for dust suppression in the Public</li> </ul>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

	<p><b>be implemented within the first three months and their effectiveness shown with supporting data of actual air quality monitoring.</b></p>	<p>roads, railway sidings approaching roads &amp; railway yards.</p> <p>Haulage roads are being maintained with grader and water sprinkling to avoid any sort of ruts and potholes. Detailed implementation is given in <b>table – 6.</b></p> <p><b>DUST SUPPRESSION IN CRUSHER &amp; SCREEN PLANT:</b></p> <p>An effective dry fog system is implemented in all the crusher and screen plants. To avoid the flow of air-born dust from conveying belt movement the conveyor belts of crusher and screen Plants are covered with hoods.</p> <p><b>MONITORING</b></p> <p>The monitoring of AAQ is being done in the core as well as the buffer zone of the ML area, there are 4 no. of monitoring stations in the core zone i.e. Mines Entry and exit area, employees camp, New store area, and near office area and there are 3 no. of monitoring stations in the buffer zone such as Unchabali Village, Balda Village, Nayagarh Village, Monitoring of AAQ is carried out every month. The monitoring report reveals that parameters like PM10, PM2.5, SO2, and NOx are well within the norms as per NAAQs notifications made by the CPCB.</p> <p>A comprised AAQ monitoring report for the reporting period is enclosed as <b>TABLE.-7.</b> Photos Are Given Below As <b>PHOTOS-4</b></p>
XIII.	<p><b>Regular monitoring of the flow rate of the springs and perennial Nallah shall be carried out and records maintained.</b></p>	<p>Regular monitoring of the flow rate of different water bodies is being carried out seasonally by covering the Nallah/rivers i.e. Baitarani River, Unchabali Nallah, Kashi Nallah, Jalpa Nallah, Gahirajala Nallah, Dolko Nallah &amp; Dalki Nallah. The latest flow rate monitoring reports are enclosed as <b>TABLE-8.</b></p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

XIV.	<p><b>Regular monitoring of water quality upstream and downstream of the Kasinallah, the Dolkonallah, the Dalkinallah, the Ghagranallah, the Gahirajalanallah, and the Mithida spring shall be carried out and record of monitored data should be maintained and submitted to the Ministry of Environment and Forest, its Regional Office, Bhubaneswar, the Central Ground Water Authority, the Regional Director, the Central Ground Water Board, the State Pollution Control Board and Central Pollution Control Board.</b></p>	<p>Monitoring of water quality of Baitarini River, Unchabali Nallah, Kasi Nallah, Jalpa Nallah, Gahirjala Nallah, Mithida Spring, and Dalco Nallah is being carried out seasonally. The monitoring data results are very well within the norms. The data is being maintained and submitted to authorities regularly. The latest surface water quality report analyzed during the last monsoon is enclosed as <b>Annexure - 5</b>.</p>
XV.	<p><b>The project authority should implement suitable conservation measures to augment ground resources in the area in consultation with the Regional Director, Central Ground Water Board.</b></p>	<p>In this regard, the project has been engaged KRG RAINWATER FOUNDATION, CHENNAI in consultation with Regional Director, CGWB, and Bhubaneswar for technical guidelines and implemented various conservation measures to augment the groundwater resources in and around the mine lease area. The detail for the same is as follows;</p> <p><b>ROOFTOP RAINWATER HARVESTING:</b></p> <p>Rooftop rainwater harvesting system has been implemented at mines employee camp and Unchabali Medical Center towards water augment. The technical design and other parameters are followed as recommended by KRG rainwater harvesting with the consultation of the regional director, CGWB, Bhubaneswar. From this establishment 4200, CUM/ANNUAL water is recharged to the ground.</p> <p>The project has developed/ constructed four numbers of water harvesting ponds in mines surrounding villages to encourage water to augment. The ponds are regularly de-silted and well maintained. Total harvesting pond water holding capacity is 1.5 Lakh</p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

		<p>CUM/ANNUM. The details are given in <b>TABLE.-3.</b></p> <p><b>SETTLING CUM PERCOLATION POND &amp; CHECK DAMS:</b></p> <p>Based on the hydrology study the project has implemented five check dams where the soil is having a high percolation rate and one percolation pond is provided at the south side ML area by considering the water flow. The same details are given in <b>TABLE.NO.-1.</b> <b>The photo evidence is attached as PHOTOS-5</b></p>
XVI.	<p><b>Regular monitoring of groundwater level and quality should be carried out around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year Pre-monsoon (April-May), Monsoon (August), Post monsoon (November) and Winter (January); once in each season)] shall be carried out in consultation with the state Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to Ministry of Environment and Forests and its Regional Office, Bhubaneswar, Central Ground Water Authority and Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.</b></p>	<p>- <b>GROUNDWATER QUALITY:</b></p> <p>Groundwater quality is being monitored regularly by seasonally at 6 locations including core and buffer zone. The monitoring locations are namely 1) Inside Mining lease area, 2) Unchabali village, 3) Balda Village, 4) Nayagarh Village, 5) Belda Village, 6) Employee’s camp. The latest groundwater quality report is enclosed as <b>Annexure - 6.</b></p> <p>- <b>GROUNDWATER LEVEL:</b> The groundwater level is being monitored seasonally i.e. pre-monsoon, monsoon, post-monsoon, and winter. The latest groundwater level report is given in <b>Table-09.</b></p> <p>-</p> <p>- <b>INSTALLING OF PIEZOMETER:</b></p> <p>The project has installed Piezometers at mines observation bore wells. The groundwater fluctuations are being observed in the bore well &amp; results are recorded at regular intervals. The latest month piezometer observation data is given as <b>ANNEXURE -7.</b></p>
XVII.	<p><b>Appropriate mitigation measures should be taken to prevent</b></p>	<p>Site-specific mitigation measures to prevent silt carried into nearby natural water bodies</p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

	<p><b>pollution of the Baitarani river, the Jalpanadi, and Jagdharanadi in consultation with the State Pollution Control Board.</b></p>	<p>got implemented like; surface run-off management structures, retaining wall followed garland drains, check dam, settling cum percolation ponds, etc. Apart from that, guard walls have been constructed across the bank of the natural water bodies. The above structures got developed in consultation with SPCB, Orissa. The detailed Site implementation details are given in <b>TABLE.NO.-1, 2, 3 &amp; 4.</b></p>
XVIII.	<p><b>The project proponent shall obtain the prior permission of the competent Authorities for the drawl of the requisite quantity of water (surface water and groundwater) required for the project.</b></p>	<p>The project has obtained the groundwater NOC from Central Ground Water Authority vide letter No.21-4 (88)SER/GGWA/2008-1903 for withdrawal quantity of 1175 CUM/Day of groundwater. Further, we have applied for the renewal of the same for the withdrawal quantity of 379 CUM/Day of ground water vide letter no. No.21-4 (88)OR/MIN/2008. The annexure was attached herewith as <b>Annexure – 8 &amp; 8A.</b> The renewal application for the same is submitted online, it is under progress.</p>
XIX.	<p><b>Suitable rainwater harvesting measures on a long-term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.</b></p>	<p>- <b>ROOFTOP RAINWATER HARVESTING:</b></p> <p>The project has implemented a rooftop rainwater harvesting system at the project employee’s camp and Unchabali Medical Center towards groundwater re-charges. The technical design and other parameters are followed as recommended by KRG rainwater harvesting with the consultation of the regional director, CGWB, Bhubaneswar. From this establishment 4200, CUM quantity of groundwater is recharged to the groundwater table every year.</p> <p>- <b>WATER HARVESTING PONDS AT VILLAGES:</b></p> <p>The project has developed four numbers of water harvesting ponds to encourage water percolation and water harvesting in surrounding villages. The ponds are regularly de-silted and well maintained.</p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

		<p>Total harvesting pond water holding capacity is 1.5 lakh CUM/ANNUM. Details of harvesting ponds developed in surrounding villages are given in <b>TABLE NO.-3</b>.</p> <p>- <b>PERCOLATION POND &amp; CHECK DAMS:</b></p> <p>Based on the hydrology study the project has implemented five check dams, settling cum percolation pits where the soil is having a highly percolating rate and one number of percolation ponds is provided at the south side of the broken up area. Details of check dams and check weirs are following as <b>TABLE NO.-1</b>.</p>
XX.	<p><b>Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for the maintenance of vehicles used in mining operations and transportation of minerals. The mineral transportation shall be carried out through the covered trucks only and vehicles carrying the mineral shall not be overloaded. No transportation of ore outside the mine lease area shall be carried out after the sunset.</b></p>	<p>The project is ensuring vehicle emission monitoring for all mining and other supporting vehicles/equipment. The monitoring of vehicle emission is carried out through Diesel Smoke Meter by Pollution Testing Centre. A sample HEMM emission test result is attached as <b>ANNEXURE-09</b>.</p> <p>Apart from testing of transporting vehicles emission on a random basis, the project has been introduced a software technology RF-ID system in entry gate of the mines, this system is having automatic functions to read the status of the vehicle pollution certificate validity and other relevant parameters.</p> <p>The mineral transportation is being carried out through the covered trucks only and vehicles carrying the mineral shall not be overloaded. Photo of the same is attached as <b>Photo-11</b></p>
XXI.	<p><b>No blasting shall be carried out after the sunset. Blasting operation shall be carried out only during daytime. Controlled blasting shall be practiced. The mitigation measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.</b></p>	<p>No blasting is carried out after the sunset and blasting are carried out only in the daytime. The control blasting is practiced using a larger top stemming column, the Nonel technology, and proper blast design&amp; firing pattern with effective supervision of total blasting operations as per the recommendation of the CIMFR, DHANBAD.</p> <p>As of date, no records reveals beyond the permissible limit during the reporting period.</p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

XXII.	<b>Drills shall either be operated with dust extractors or equipped with a water injection system.</b>	The drilling operation is being carried out with both a dust extractor and a water injection system. Presently the project is using an excavator-mounted drill machine for drilling operation. The said drilling machine is inbuilt with both a water injection system and dust extraction systems. The photo evidence for the same is given below. PHOTO evidence is given below as <b>PHOTOS-6</b>
XXIII.	<b>A mineral handling plant should be provided with an adequate number of high-efficiency dust extraction systems. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.</b>	1) Effective dry fog system is implemented in all the crusher and screen plants. 2) The conveyor belts of the crusher and screen Plants are covered with hoods. 3) Regular water sprinkling is carried out in the loading and unloading area.
XXIV.	<b>A sewage treatment plant should be installed for the colony. ETP should also be provided for workshops and wastewater generated during the mining operation.</b>	STP is provided/implemented along with the skimmer mechanism at the mines employee’s camp for treatment and reuse of the waste domestic water from the Kitchen, toilet, etc. The treated water is used for plantation and dust suppression activities. ETP is provided at mines workshop for the treatment of wastewater from water service of equipment. The existing ETP is having a physical separation of oil and grease by oil trapping system and silt sedimentation pit. Both STP and ETP final discharge water is being monitored fortnightly once to ensure the final discharge water is in line with the approved CTO and record maintained for the same. The latest monitoring data is enclosed here as <b>Table. No – 10 and Table. No 11.</b> Photo evidence is given below as <b>PHOTOS-7.</b>
XXV.	<b>Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records</b>	Initial Medical Examination & Periodical Medical Examination is being carried out to all company & contractors employees on regular basis. The IME & MPE is being carried as per in compliance to Mines Act



**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

	<b>maintained. For this purpose, a schedule of health examinations of the workers should be drawn and followed accordingly.</b>	1952 & rules 1956 and amendments thereto. The IME & PME tests include PFT, X-Ray, and lung spirometer, etc.
XXVI.	<b>The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely elephant, sloth bear, etc. spotted in the study area. An action plan for the conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. All the safeguard measures brought out in the wildlife conservation plan prepared specifically for this project site shall be effectively implemented. Necessary allocation of the funds for implementation of the conservation plan shall be made and funds so allocated shall be included in the project cost. A copy of the action plan may be submitted to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar.</b>	The Site-Specific Wildlife Conservation Plan got prepared by Sri. S. K. Patnaik, Retd. IFS & Shri S.K.Mohanty, Retd. OFS with an estimated cost of Rs. 104 lakh and approved by PCCF-Wild Life and Chief Wild Life Warden. In which Rs. 34 lakh has been earmarked for implementation of Site-Specific Wild Life Conservation Plan within the Mining Lease area and Rs. 70 Lakh has been earmarked for implementation for the purpose in the buffer zone i.e. within the zone of influence. An amount of Rs. 15, 91, 691/- rupees has been made towards Regional Wild Life Management Plan and Rs. 21, 75, 000/- rupees towards the site-specific Wild Life Management Plan. Various activities have been undertaken towards the protection of wild animals by the implementation of solar electric fencing in mines operation boundary area to avoid the fall down of any wild animals to mines operation, awareness program among local and staffs members, etc. The approved budgetary forecast for the site-specific wildlife conservation plan is enclosed as <b>ANNEXURE – 10 &amp; Photo-10.</b>
XXVII.	<b>Provision shall be made for the housing of the construction labor 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.</b>	Not Applicable. As there is no such construction activity
XXVIII	<b>The critical parameters such as SPM, RSPM, NOx in the ambient</b>	All these critical parameters are being monitored periodically & uploaded on the

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

	<p><b>air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, the quality of discharge 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 the public domain. The circular no. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry <a href="http://www.envfor.nic.in">www.envfor.nic.in</a> shall also be referred in this regard for its compliance.</b></p>	<p>company website i.e. <a href="http://www.Uimmip.com">www.Uimmip.com</a>. The said monitored parameters i.e. for AAQ; PM10, PM2.5, SO2, NOx, STP, ETP discharge, for surface runoff discharge from the mine (treated), etc. is being displayed through an Electronic display board installed at the main gate of the project site of the company for the public domain. photo of the display board are given below AS <b>PHOTO-9</b>.</p>
XXIX.	<p><b>A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment &amp; Forests 5 years in advance of final mine closure for approval.</b></p>	<p>The Project has submitted a bank guarantee of Rs. 17,43,693/-for reclamation and rehabilitation of 69.7477 Ha mined out and other allied activities area @ 25, 000/- Ha as a part of the management of the closure of the mines of the Project.</p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

<b>Sl. No</b>	<b>General condition</b>	<b>Present Status</b>																
I.	<b>No change in mining technology and scope of work should be made without prior approval of the Ministry of Environment &amp; Forest.</b>	The Mining method of the project is fully mechanized having shovels, dumper combinations, and sorting and sizing of Iron Ore and it's being followed as per the approved Scheme of Mining/ Plan.																
II.	<b>No change in the calendar plan including excavation, the quantum of mineral iron ore, and waste should be made.</b>	There is no change in the calendar plan, the excavation, quantum of mineral iron ore, and waste are being produced as per the approved mining plan/scheme. The details of the iron ore and waste are as follows; <table border="1" data-bbox="808 808 1490 1035"> <thead> <tr> <th><b>Year</b></th> <th><b>Approved Quantity (In Mt.)</b></th> <th><b>ROM (In Mt.)</b></th> <th><b>OB Removed (In Mt.)</b></th> </tr> </thead> <tbody> <tr> <td>2021-22</td> <td>3989312</td> <td>1621310</td> <td>4240920</td> </tr> <tr> <td>2022-23</td> <td>3999752</td> <td>1054740</td> <td>2991775</td> </tr> <tr> <td>2023-24</td> <td>4000000</td> <td>532080</td> <td>426476</td> </tr> </tbody> </table>	<b>Year</b>	<b>Approved Quantity (In Mt.)</b>	<b>ROM (In Mt.)</b>	<b>OB Removed (In Mt.)</b>	2021-22	3989312	1621310	4240920	2022-23	3999752	1054740	2991775	2023-24	4000000	532080	426476
<b>Year</b>	<b>Approved Quantity (In Mt.)</b>	<b>ROM (In Mt.)</b>	<b>OB Removed (In Mt.)</b>															
2021-22	3989312	1621310	4240920															
2022-23	3999752	1054740	2991775															
2023-24	4000000	532080	426476															
III.	<b>At least Four Ambient Air Quality – Monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO<sub>2</sub>&amp; NO<sub>x</sub> monitoring. The 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.</b>	The monitoring of AAQ is being done in the core as well as the buffer zone of the ML area, There are 4 no. of monitoring stations in the core zone i.e. and there are 3 no. of monitoring stations in the buffer zone such as Unchabali Village, Balda Village, Nayagarh Village, Monitoring of AAQ is carried out every month. The monitoring report for the period of October to March 2023 reveals that parameters like PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , and NO <sub>x</sub> are as per NAAQs notifications made by the CPCB, are very well within the norms. The detailed monitoring location is enclosed as <b>ANNEXURE-11</b> .																
IV.	<b>Data on ambient air quality (RPM, SPM SO<sub>2</sub>&amp;NO<sub>x</sub>) 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.</b>	Data on ambient air quality (PM <sub>10</sub> , PM <sub>2.5</sub> , and SO <sub>2</sub> & NO <sub>x</sub> ) is being submitted once in yearly is to State Pollution Control Board.																

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

V.	<p><b>Fugitive dust emissions from all the sources should be controlled regularly water spraying arrangement on haul roads, loading and unloading and transfer points should be provided and properly maintained.</b></p>	<p>The project has implemented a different type of dust suppression system to arrest the fugitive dust emission from the source level in and around the mine's premises.</p> <p>The detailed implementations are as follows.</p> <ul style="list-style-type: none"> <li>✓ Fixed type water sprinklers are implemented in mines permanent haul roads and dispatch roads.</li> <li>✓ Mines benches, temporary haul roads, and other processing areas dust generation are suppressed by the use of mobile water tankers. In this regard, the project has engaged three no. of 25 KL mobile water tanker, which is inbuilt with a high-pressure hydraulic sprinkling system.</li> <li>✓ Three numbers of 8 KL capacity mobile water tankers are being used for dust suppression in the Public roads, railway sidings approaching roads &amp; railway yards.</li> <li>✓ A portable type trolley mounted sprinkler has been placed in loading &amp; unloading points to avoid dust generations.</li> <li>✓ Haulage roads are being maintained with grader and water sprinkling to avoid any sort of ruts and potholes.</li> </ul> <p>The latest monitoring report is enclosed here as <b>Table. No - 12.</b></p>
VI.	<p><b>Measures should be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in operations of HEMM, etc. should be provided with earplugs/muffs.</b></p>	<p>Regular maintenance of HEMM &amp; Processing plants is being carried out to minimize the noise level from the source. Apart from that, proper PPEs like an earplug, muffles are also provided to employees. Further, to ensure the noise limit, regular noise monitoring is carried out on fortnightly basis for work zones like crusher plant premises, screen plant premises, ROM loading point &amp; workshop. The noise levels are well within prescribed norms, the monitoring reports are given in <b>Table -13.</b></p>
VII.	<p><b>Industrial wastewater (workshop)</b></p>	<p>STP is provided/implemented at mines</p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

	<p><b>and wastewater 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. Oil and grease traps should be installed before the discharge of workshop effluents.</b></p>	<p>employee’s camp for treatment and reuse of the waste domestic water from the Kitchen, toilet, etc. The treated water is used for plantation and dust suppression activities.</p> <p>ETP is provided at mines workshop for the treatment of wastewater from water service of equipment. The existing ETP is having a physical separation of oil and grease by oil trapping system and silt sedimentation pit.</p> <p>Both STP and ETP final discharge water are being monitored fortnightly once to ensure the final discharge water is in line with the approved CTO and record maintained for the same. The test results are very well within the norms. The latest monitoring report is enclosed here as <b>Table. No – 10 and Table. No 11.</b></p>
VIII.	<p><b>Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures if needed</b></p>	<p>Initial Medical Examination &amp; Periodical Medical Examination is being carried out to all company &amp; contractors employees on regular basis. The IME &amp; PME is being carried as per in compliance to Mines Act 1952 &amp; rules 1956 and amendments thereto..The IME &amp; PME tests include PFT, X-Ray, and lung spirometer, etc..</p>
IX.	<p><b>A separate environmental management cell with suitably qualified personnel should be set up under the control of a senior executive, who will report directly to the head of the organization.</b></p>	<p>We have established an Environmental Cell headed by the General Manager to look after the implementation of the various pollution control measures and other Environment Management System requirements. The detail of the Environment Cell structure is enclosed as <b>ANNEXURE- 12.</b></p>
X.	<p><b>The funds earmarked for environmental protection measures should be kept in a separate account and should not be diverted or other proposes. Year-wise expenditure should be reported to the Ministry and Regional Office located at</b></p>	<p>The funds earmarked for environmental Protection are being utilized for the same only. The same expenses details are mentioned in <b>Table no.-14</b></p>

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

	<b>Bhubaneswar.</b>	
XI.	<b>The project authorities should inform the Regional Office located at Bhubaneswar regarding the date of financial closures and final approval of the project by the concerned authorized and the date of start of land development work.</b>	We will abide by the said condition.
XII.	<b>The Regional Office of the Ministry located at Bhubaneswar shall monitor complaints of the stipulated conditions. The project authorities should extend full co-operations to the officer (S) of the regional office by furnishing the requisite data/information/monitoring reports.</b>	We are extending all our cooperation during inspections by the Authority.
XIII.	<b>The project proponent shall submit six-monthly reports under the status of the implementation of the stipulated EC conditions including results of monitored data ( both in hard copies as well as by e-mail) to the Ministry of Environmental and Forests, its regional Office, Bhubaneswar, the respective zonal offices of CPCB and the SPCB. The proponent shall upload the status of the EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar, the respective Zonal Officer of CPCB, and the SPCB.</b>	The Project is uploading the last six-monthly EC Compliance reports on the website bearing address <a href="http://www.Uimmip.com">www.Uimmip.com</a> on regular basis. The details of submission of the six-monthly compliance reports on the status of the implementation of the stipulated conditions are enclosed as <b>TABLE NO.-15.</b>
XIV.	<b>A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zillah Parishad /Municipal Corporation,</b>	It has been complied with intimating the letters to local Gram Panchayat, Municipality, DDM Office, Zillah Parishad, Divisional Forest Officer, etc. and a copy of environmental clearance

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

	<b>Urban local body, and local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.</b>	letter also made available in the company's website i.e. <a href="http://www.Uimmip.com">www.Uimmip.com</a> .
XV.	<b>The 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.</b>	It has complied.
XVI.	<b>The environment statement for each financial year ending 31st March in form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent the Regional Office of the Ministry of Environment and forests, at Bhubaneswar by e-mail.</b>	The Environmental statement in Form – V is being submitted regularly to the state pollution control board for the financial year. We are also uploading the annual environment statement along with the six-monthly environmental compliance reports on the company website i.e. <a href="http://www.Uimmip.com">www.Uimmip.com</a> .
XVII.	<b>The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days 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 the web site of the Ministry of</b>	The Project has already advertised for iron ore mining and projects in two newspapers about the issuance of the environment clearance of the Project, one is advertised in the vernacular language of the locality concerned.

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

	<b>Environment and Forests at HTTP: / / envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.</b>	
XVIII.	<b>The mining leaseholder shall, after ceasing mining operations, undertake re-grassing the mining area, and any other areas which may have been disturbed due to their mining activities and restore the land to a condition that is fit for the growth of fodder, flora, fauna, etc.</b>	At present project is in operational status and as per the mining plan approved by IBM, 2991775 Tons quantity of waste inside the mines at the earmarked area till in this Fy 2022-2023. As per approved Scheme of Mining. Whenever the reclamation started leaseholder was ready to make activities to restore the land to a condition that is fit for the growth of fodder, flora, fauna, etc.

**PHOTOS-1:**



**Photo showing check dams & Check weirs implementation within ML**





**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**



**Photo Showing varies Nallah protection measures undertaken outside ML**



**Photos showing village harvesting pond developed in surrounding villages**

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

**PHOTOS -2:**



**Retaining wall and Garland drain provided at the toe end of the dump**

**PHOTOS -3:**



**Photos showing Dump area plantations and worked out bench coirmat work**

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

**PHOTOS -4:**



**Photos showing mobile water tankers engaged for dust suppression**



**Photos showing automatic fixed sprinkler installed at mines permanent Haul road**



**Photo showing motor grader under use for road maintenance**

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**



**Photos showing dry fog implementations of various screens and crusher plant.**

**PHOTOS -5:**



**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**



**PHOTO SHOWING ROOF RAINWATER HARVESTING SYSTEMS EMPLOYEE’S CAMP**



**PHOTO SHOWING ROOFTOP RAINWATER HARVESTING SYSTEMS UNCHABALI  
DISPENSARY**

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**



**Photos showing village harvesting pond developed in surrounding villages**

**PHOTOS – 6:**



**Photo Showing Excavated Mounted Drilling Machine equipped with dust extractor &  
wet drilling mechanism**

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

**PHOTOS -7:**



**PHOTO SHOWING ETP PLANT PROVIDED IN WORK SHOP SERVICE CENTER**



**PHOTOS SHOWING STP EXISTING PLANT**

**REPORTING PERIOD: APRIL 2024 TO SEPTEMBER 2024**

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

**PHOTOS – 8:**



**PHOTOS – 9**



**Photo Showing Electronic Display board placed in the mines entrance gate to display  
the Environmental parameters**

**REPORTING PERIOD: APRIL 2024 TO SEPTEMBER 2024**



**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

**Photo 10 : Solar fence for wildlife Protection**



**Photo 11 : Tarpauline covered trucks**



**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

**TABLE – 1**

<b>SL.NO</b>	<b>Description</b>	<b>Dimensions/Capacity</b>
1	Check Dam cum Settling pond -1	9800 CUM
2	Check Dam - 4	689 CUM
3	Check Dam - 5	2000 CUM

**# TABLE – 1 SHOWING CHECK DAM AND CHECK WEIR DETAILS IMPLEMENTED WITHIN THE ML AREA**

**TABLE-2**

<b>SL.NO</b>	<b>Description</b>	<b>Location</b>	<b>Dimensions/Capacity</b>
1	Check Dam - 13	21° 52' 41.96" N 85° 25' 41.97" E	15 M X 2 M X 1.5 M
2	Check Dam - 14	21° 52' 42.88" N 85° 25' 50.81" E	15 M X 1.5 M X 1.5 M
3	Check Dam - 15	21° 52' 36.75" N 85° 25' 58.75" E	10 M X 1.5 M X 1.5 M
4	Check Dam - 16	21° 52' 35.55" N 85° 25' 59.51" E	12 M X 1.5M X 1.5 M
5	Guard Wall	21° 52' 41.14" N 85° 25' 54.05" E	300 M
6	Nallah Slope pitching	21° 52' 45.66" N 85° 25' 2.67" E	200 M
7	Plantation	21° 52' 41.59" N 85° 25' 53.87" E	150

**# TABLE – 2 SHOWING CHECK DAMS IMPLEMENTATION OUT SIDE THE ML**

**TABLE-3**

<b>SL.NO</b>	<b>DESCRIPTION</b>	<b>CAPACITY IN CUM</b>
1	NAMIRA POND -1	8100
2	NAMIRA POND -2	92400
3	BELDA POND -1	13200
4	BELDA POND -2	43160

**# TABLE – 3 SHOWING IMPLEMENTED VILLAGE HARVESTING PONDS DETAILS**

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

**TABLE-4**

<b>Sl. No</b>	<b>Description of the dump/bench</b>	<b>Location of the dump/bench</b>	<b>Protections Measures</b>
1	Worked out Pit bench	Near ML Pillar B	1.06 Ha of Worked out Pit bench surface area covered with Geotextile applications. And 500-meter garland drain with stone pitching with cement work has been constructed followed by a siltation pond; drainage water is connected to bottom check dams.

**# TABLE-4 SHOWS VARIOUS DUMP PROTECTIONS MEASURES IMPLEMENTATION**

**TABLE-5A**

<b>Plantation Details</b>				
<b>Sl. No</b>	<b>Year</b>	<b>Number of Saplings</b>	<b>Survival Rate</b>	<b>Remarks</b>
1	2024-2025	8100	90%	Dump & Worked out benches
2	2023-2024	26746	90%	Dump and Nallah Gap plantation and safety zone gap plantation
3	2022-2023	6500	90%	Nallah Gap Plantation
4	2021-2022	4200	90%	Dump and Safety zone
5	2020-2021	1250	70%	Dump and gap plantation

**# TABLE-5A SHOWING YEAR-WISE PLANTATION DETAILS**

**TABLE-5B**

<b>SL. NO</b>	<b>LOCATION</b>	<b>Description</b>	<b>2024-25</b>	<b>Area in Ha.</b>	<b>PLANTS TYPE</b>	<b>Remarks</b>
1	IN Side ML	Dump & Worked out bench Plantation	8100	1.6	Neem, Mango, Gambhari, Jamu, krishna chuda, Asana, Tamarind, sishu tree, Arjuna.	OB dump(Top, No-04) and worked out benches no. 02,03,04,560,561,562
2						

**# TABLE-5B SHOWING PLANTATION DETAILS**

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

**TABLE-6**

SL. No.	Description	Unit	Quantity	Remarks
1	Automatic Fixed Sprinkler	R.M	2500	Dispatch Road and Permanente Haul Road
2	High-Frequency mobile water Tanker	25 KL	3	Mines Benches, Stockyard, plant area, and other mines premises including Village Roads & Railway Sidings
3	Mobile water tanker	8 KL	3	

**# TABLE-6 SHOWING PRACTICE OF DUST SUPPRESSING ACTIVITIES**

**TABLE-7**

<b>SUMMARIZED AMBIENT AIR QUALITY MONITORING REPORT: UNCHABALI IRON &amp; MN ORE MINING PROJECT OF SMT. INDRANI PATNAIK, DISTRICT; KEONJHAR, ORISSA.</b>							
<b>Period: April 2024 To September 2024</b>							
	Month	Quality Parameter, Results, micro.gm/CUM					
		Range	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	CO
AAQ-C1 – Mines main gate (Core zone)	Apr-24	AVG	65.6	34.6	8.6	24.0	0.226
	May-24		65.34	34.90	8.66	24.21	0.324
	June-24		64.63	29.18	7.24	20.23	0.27
	July-24		54.89	27.18	6.09	11.98	0.28
	Aug-24		50.40	24.77	5.27	10.74	0.23
	Sep-24		52.69	23.16	5.20	10.52	0.17
AAQ-C2 – Employees Camp (Core Zone)	Apr-24	AVG	52.6	24.6	5.9	16.5	0.22
	May-24		60.5	28.3	6.8	19.0	0.22
	June-24		65.94	30.90	7.38	20.68	0.23
	July-24		49.71	24.47	5.65	13.85	0.22
	Aug-24		47.49	23.21	<4.0	<9.0	0.18
	Sep-24		47.68	20.34	4.60	9.80	0.17
AAQ-C3-New Store (Core Zone)	Apr-24	AVG	53.9	24.1	6.0	16.9	0.228
	May-24		80.73	36.16	9.04	25.31	0.341
	June-24		67.51	30.26	7.54	21.16	0.27
	July-24		52.12	25.87	6.37	14.64	0.28
	Aug-24		49.33	24.16	4.91	10.29	0.22
	Sep-24		50.24	21.90	5.15	10.50	0.24
AAQ-B2 Village Balda (Buffer Zone)	Apr-24	AVG	67.9	30.7	7.6	21.3	0.287
	May-24		66.4	29.99	7.44	20.81	0.281
	June-24		61.30	27.68	6.88	19.20	0.26
	July-24		46.88	23.18	<4.0	<9.0	0.19
	Aug-24		40.66	19.53	<4.0	<9.0	0.16
	Sep-24		39.56	17.85	<4.0	<9.0	0.15

**Six Monthly Compliance Status of Environmental Clearance Conditions –  
“Unchabali Iron and Manganese Ore Mines of Smt. Indrani Patnaik” located in  
village(s) Unchabali & Balda, Sub-division Champua, District Keonjhar, Orissa.**

AAQ-B3 Village Nayagarh (Buffer Zone)	Apr-24	AVG	69.3	31.3	7.8	21.7	0.293
	May-24		67.73	30.60	7.59	21.23	0.286
	June-24		62.53	28.26	7.00	19.60	0.26
	July-24		47.37	23.40	<4.0	<9.0	0.20
	Aug-24		41.64	20.10	<4.0	<9.0	0.17
	Sep-24		39.31	16.63	<4.0	<9.0	0.15
AAQ-B1 Village Unchabali (Buffer Zone)	Apr-24	AVG	66.5	30.1	7.5	20.9	0.281
	May-24		65.08	29.41	7.28	20.40	0.292
	June-24		60.08	27.14	6.74	18.83	0.25
	July-24		42.27	23.24	<4.0	<9.0	0.23
	Aug-24		42.11	20.59	<4.0	<9.0	0.16
	Sep-24		42.04	18.39	<4.0	<9.0	0.16

**# TABLE-7 SHOWING AAQ MONITORING REPORT FOR THE REPORTING PERIOD.**

**TABLE-8**

Surface Water Flow Rate in CUM/SEC				
SL. No	Monitoring Station	April-24	Aug-24	Sep-24
1	Baitarani river	25.10	26.120	30.140
2	Dalko Nallah	12.8	19.40	22.48
3	Jalpa Nallah	13.2	17.30	20.32
4	Kashi Nallah	11.6	14.38	18.42
5	Unchabali Nallah	10.8	18.42	24.28
6	Dalki Nallah	9.6	12.32	13.42
7	Ghairajal Nallah	10.7	13.28	12.20

**# TABLE-8 SHOWS THE SURFACE WATER FLOW RATE FOR THE REPORTING PERIOD**

**Combined Six Monthly Compliance Status of Environmental Clearance  
Conditions – “Unchabali Iron and Manganese Ore Mines & Iron ore  
Beneficiation Plant of M/s Indrani Patnaik” located in village(s) Unchabali  
& Balda, Sub-division Champua, District Keonjhar, Orissa.**

**Table-09**

Monitoring Station	ALL	Description	GWL (BGL in M)			
			Apr-24	May-24	June-24	August-24
Inside ML area	510	Bore Well	5.9	4.2	2.6	4.0
Unchabali	504	Open Well	5.4	4.8	2.1	1.2
Kalimatti	550	Open Well	4.8	6.0	2.9	0.9
Balda	568	Open Well	6.2	5.8	2.3	1.0
Malda	507	Bore Well	5.2	6.8	1.8	4.0
Nayagarh	504	Open Well	4.6	4.4	1.9	0.9

**#TABLE NO. 09 SHOWING GROUND WATER LEVEL MONITORING DATA**

**TABLE - 10**

SL. NO	DESCRIPTION	Unit	Norms	Apr-24	May-24	June-24	Jul-24	Aug-24	Sep-24
1	pH	-	6.5-9.0	7.01	7.29	6.65	6.91	7.03	7.08
2	Total Suspended Solids (TSS)	Mg / l	100	37	27	24	18	20	10
3	(BOD)	Mg / l	30	8.8	9.6	8.8	2.0	2.4	<2.0
4	Fecal Coliform	MPN / 100 ml	<1000	118	98	105	182	164	<1.8

Note – The monitoring and testing are carried by M/s GreenForce Associates Pvt. Ltd. Laboratory which is a NABL accredited Laboratory.

**#TABLE NO.10 SHOWING SEWAGE WATER TREATMENT PLANT WATER  
DISCHARGE REPORT**

**REPORTING PERIOD: APRIL 2024 TO SEPTEMBER 2024**

**Combined Six Monthly Compliance Status of Environmental Clearance  
Conditions – “Unchabali Iron and Manganese Ore Mines & Iron ore  
Beneficiation Plant of M/s Indrani Patnaik” located in village(s) Unchabali  
& Balda, Sub-division Champua, District Keonjhar, Orissa.**

**TABLE – 11**

SL .NO	DESCRIP TION	Unit	Norms	Apr-24	May-24	June-24	Jul-24	Aug-24	Sep-24
1	pH	-	6.5-8.5	6.56	7.14	6.66	6.99	6.93	7.24
2	Total Suspended Solids (TSS)	Mg/l	50	74.0	88.0	87.0	12.0	16.0	8.0
3	Oil & Grease	Mg/l	10	0.10	1.1	1.62	2.0	2.0	<2.0
4	COD	Mg/l	150	54.0	36	42	60	48	12
Note – The monitoring and testing are carried by M/s GreenForce Associates Pvt. Ltd. Laboratory which is a NABL accredited Laboratory.									

**#TABLE NO.11 SHOWING EFFLUENT WATER TREATMENT PLANT WATER DISCHARGE REPORT**

**TABLE – 12**

**FUGITIVE EMISSION DUST MONITORING REPORT**

Periods		MONITORING LOCATIONS					
		CRUSHER PLANT	Ore Storage and loading	HAUL ROAD	SCREEN PLANT	MINES FACE	DUMP AREA
		Results, micro.gm/CUM					
Apr-24	<b>AVG</b>	485	432	431	383	395	376
May-24	<b>AVG</b>	457	407	416	361	372	354
Jun-24	<b>AVG</b>	325.6	289.8	296.2	257.2	265.3	252.1
Jul-24	<b>AVG</b>	290.32	270.75	281.40	300.85	278.21	289.57
Aug-24	<b>AVG</b>	288.35	268.95	282.9	302.3	279.15	291.15
Sep-24	<b>AVG</b>	412.70	373.90	397.99	435.50	373.70	399.85
Note – The monitoring and testing are carried by Green Force Associates Pvt. Ltd. which is a NABL accredited laboratory.							

**# TABLE NO.-12 SHOWING FUGITIVE EMISSION MONITORING REPORT**

**REPORTING PERIOD: APRIL 2024 TO SEPTEMBER 2024**

**Combined Six Monthly Compliance Status of Environmental Clearance  
Conditions – “Unchabali Iron and Manganese Ore Mines & Iron ore  
Beneficiation Plant of M/s Indrani Patnaik” located in village(s) Unchabali  
& Balda, Sub-division Champua, District Keonjhar, Orissa.**

**TABLE – 13**

Sl. No	Locations	NOISE LEVEL, Leq. In dB (A) from the data log of the monitor.					
		Apr-24	May-24	June-24	Jul-24	Aug-24	Sep-24
<b>Work Zone Noise Report</b>							
1	MINES PIT	61.4	54.0	52.2	56.2	57.2	59.2
2	LOADING POINT	75.8	64.0	58.2	48.8	62.4	60.8
3	OPERATOR CABIN	64.6	56.9	59.0	43.2	51.2	54.2
4	WORK SHOP	62.5	56.7	53.7	51.6	63.8	65.8
5	SCREEN PLANT	77.8	60.9	59.0	49.6	61.6	64.2
<b>Ambient Noise Report</b>							
1	BALDA	52.1	45.6	41.9	48.4	47.8	48.3
2	MALDA	47.2	43.0	39.9	48.8	48.1	48.6
3	NAYAGARH	54.8	53.4	50.7	49.5	48.8	48.9
4	UNCHABALI	52.1	45.6	45.1	48.6	48.1	48.3
5	OFFICE AREA	47.3	41.0	42.4	50.2	50.5	42.2
6	CAMP AREA	55.2	51.9	47.4	50.4	51.2	52.1
<b>Norms</b>		Residential. Leq: Day Time : 55 dB (A), Night Time : 45 dB (A)					
		Industrial, Leq: Day Time : 75 dB (A), Night Time : 70 dB (A)					
		Work-zone during 8 Hr exposure: 85 dB (A) – Leq.					

**# TABLE NO.-13 SHOWING NOISE MONITORING REPORT**

**REPORTING PERIOD: APRIL 2024 TO SEPTEMBER 2024**



**Combined Six Monthly Compliance Status of Environmental Clearance  
Conditions – “Unchabali Iron and Manganese Ore Mines & Iron ore  
Beneficiation Plant of M/s Indrani Patnaik” located in village(s) Unchabali  
& Balda, Sub-division Champua, District Keonjhar, Orissa.**

**TABLE – 14**

Sl. No	DESCRIPTION	2022-2023	2023-2024	2024-25 (APR 24 TO SEP 24)
<b>Environmental Monitoring Parameter Testing charges</b>				
1	AAQ, Ground Water, Surface Water, STP, ETP, Soil Test, Fugitive Test, etc.	41.20	42.5	13.0
<b>Dump Stabilization &amp; Plantation</b>				
2	Retaining wall, garland drain & its maintenance	10.50	5.0	2.0
3	Plantation, dump stabilization by coir matting	8.00	7.80	1.55
<b>Dust Suppression</b>				
4	Mobile Sprinkler	36.00	45.0	15.0
5	Fixed Sprinkler	1.50	2.0	0.90
6	Dry fog	1.0	1.5	0.75
<b>Environmental Instruments and its maintenance &amp; calibration</b>				
7	RDS, Noise Meter, PPV Instruments, etc.	1.50	1.75	7.68
8	ETP and its maintenance	1.50	1.55	0.75
9	STP and its maintenance	1.20	1.35	0.90
<b>Miscellaneous Expenses</b>				
10	Rainwater harvesting and its maintenance	0.70	1.2	0.60
11	Occupational Health & Hygiene monitoring	4.20	5.3	1.5
12	Others (Including Statutory clearance Expenses, website ugradation)	1.90	2.50	11.76
<b>Total</b>		<b>109.20</b>	<b>117.45</b>	<b>56.39</b>

**REPORTING PERIOD: APRIL 2024 TO SEPTEMBER 2024**

**Combined Six Monthly Compliance Status of Environmental Clearance  
Conditions – “Unchabali Iron and Manganese Ore Mines & Iron ore  
Beneficiation Plant of M/s Indrani Patnaik” located in village(s) Unchabali  
& Balda, Sub-division Champua, District Keonjhar, Orissa.**

**TABLE - 15**

<b>Sl. No.</b>	<b>PERIOD</b>	<b>DATE OF SUBMISSION</b>
<b>1.</b>	October -2023 to March-2024	06.06.2024
<b>2.</b>	April -2023 to September-2023	30.11.2023
<b>3.</b>	October -2022 to March-2023	01.06.2023
<b>4.</b>	April-2022 to September-2022	30.11.2022
<b>5.</b>	October -2021 to March-2022	31.05.2022
<b>6.</b>	April-2021 to September-2021	25.11.2021
<b>7.</b>	October -2020 to March-2021	29.05.2021
<b>8.</b>	April-2020 to September-2020	18.11.2020
<b>9.</b>	October -2019 to March-2020	29.05.2020
<b>10.</b>	April-2019 to September-2019	28.11.2019
<b>11.</b>	October – 2019 to March – 2019	27.05.2019
<b>12.</b>	April – 2018 to Sept – 2018	01.12.2018
<b>13.</b>	October -2017 to March-2018	28.06.2018
<b>14.</b>	April-2017 to September-2017	04.12.2017
<b>15.</b>	October -2016 to March-2017	09.06.2017
<b>16.</b>	April-2016 to September-2016	25.11.2016

**#TABLE NO.-15 SHOWING EC COMPLIANCE SUBMISSION DETAILS**