

KLCM/ENV/159/2024

Dated: 28.05.2024

To,  
The Joint Director(s)  
Ministry of Environment, Forest & Climate Change,  
Eastern Regional Office,  
Bhubaneswar, ODISHA

Sub.: Submission of Six-monthly EC compliance report to the conditions stipulated in the grant order of Environmental Clearance (EC) pertaining to Kalarangiatta Chromite Mines of M/S FACOR LTD.

Ref.: MoEF EC Letter No.: J-11015/183/2007-IA II(M) dtd.13.05.2009

Respected Sir,


With reference to the captioned subject & cited reference, we are herewith submitting six monthly compliance reports pertaining to Kalarangiatta Chromite Mines of M/s FACOR Ltd for the period from October 2023 to March 2024 for your kind perusal.

This is for your Kind Perusal.

Thanking You

Yours faithfully,

For Ferro Alloys Corporation Ltd

  
Authorized Signatory  
Kalarangiatta Chromite Mine

Encl: A/a

- CC: 1. The Member Secretary , SEIAA, ODISHA  
2. The Member Secretary, State Pollution Control Board , ODISHA  
3. The Member Secretary, Central Pollution Control Board , ODISHA

**M/s. Ferro Alloys Corporation Ltd. (A subsidiary of Vedanta Ltd.)**

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**Name of the Project** : Kalarangiatta Chromite Mines, M/s. FACOR Ltd.  
**Project Code** : Mining (Non-Coal)  
**Clearance Letter No. with date** : J-11015/183/2007-IA-II (M) dated.13-05-2009  
**Period of Compliance Report** : October 2023 to March 2024

**Specific Condition**

Sl. No.	Condition	Compliance Status
1.	All the conditions stipulated by the State Pollution control Board, Odisha in their consent to establish shall be effectively implemented.	All stipulated conditions are being effectively implemented.  The Mine operation is under suspension with effect from Dated 09.03.2023.
2.	The environmental clearance is granted for opencast mining only. For the underground mining, the project proponent shall obtain separate clearance after getting the mine plan approval from the Indian Bureau of Mines.	The mine is under opencast operation only. . Before starting underground mining the FACOR will obtain separate clearance after getting mining plan approval from the Indian Bureau of Mines.
3.	The environmental clearance is subject to approval of the State Land purposes Dept. Govt. of Odisha for diversion of agricultural land for non-agricultural use.	Till date Agricultural land has not been used for non-agricultural use. Diversion of Agricultural land for non-agricultural use will be done after getting approval from the State Land use Dept., Govt. of Odisha.
4.	The Project proponent shall ensure that no natural watercourse and/or water resources are obstructed due to any mining operations.  Adequate measures shall be taken for protection of Damsala Nallah and other seasonal channels, if any emanating from the mine lease, during the course of mining operation.	There is no natural water course or water resource obstructed due to the mining operation.  The Mine operation is under suspension with effect from Dated 09.03.2023.
5.	The topsoil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.	The Mine operation is under suspension with effect from Dated 09.03.2023.
6.	The overburden (OB) generated during the mining operation shall be stacked at earmarked dump site (s) only and it should not be kept active for a long period of time and their phase-wise stabilization shall be carried out. There shall be one external over burden dump having maximum projected height of 30m. Proper terracing of the OB dump maintained to 27°.	The Mine operation is under suspension with effect from Dated 09.03.2023.

	The OB dump shall 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. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis	
7.	Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, soil, OB and mineral dumps to arrest flow of silt and sediment directly into the Damsala Nallah and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should 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 overburden dump to prevent run off of water and flow of sediments directly into the Damsala Nallah and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years of 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. Storm water return system should be provided. Storm water should not be allowed to go to the effluent treatment plant during high rainfall/super cyclone period. A separate storm water sump for this purpose should be created.	The Mine operation is under suspension with effect from Dated 09.03.2023.
8.	Dimension of retaining wall at the toe of the overburden dump and the OB benches within the mine to check run-off and siltation should be based on the rainfall data.	The Mine operation is under suspension with effect from Dated 09.03.2023.
9	Effluents containing $Cr^{+6}$ shall be treated to meet the prescribed standards before reuse/discharge. Effluent treatment plant should be provided for treatment of mine water discharge and wastewater generated from the workshop and mineral separation plant.  Run off from the OB dump and other surface run off should be analyzed for $Cr^{+6}$ and in case its concentration is found higher than the permissible limit the water should be treated before reuse/discharge.	The Mine operation is under suspension with effect from Dated 09.03.2023
10	Separate impervious concrete pits for disposal of sludge shall be provided for the safe disposal of sludge generated from the mining operations.	The Mine operation is under suspension with effect from Dated 09.03.2023
11	The project proponent shall ensure that the treated effluents conforming to the prescribed standards shall only be discharged.	The Mine operation is under suspension with effect from Dated 09.03.2023
12	Plantation shall be raised in an area of 12.715 ha. Including 7.5m wide green belt in the safety zone around the mining lease, overburden dump, roads etc. by planting the native species in consultation with the local DFO/Agriculture Dept. The density of the trees should be around 2500 plants per hect.	The Mine operation is under suspension with effect from Dated 09.03.2023. Plantation have been carried out in the safety zone around the mining lease, overburden dump, roads etc. by planting the native species till FY 2023-24. Due to Mine is under suspension there is no activities being carried out.

13	The void left unfilled in an area of 5.21 hectares shall be converted into the water body. The higher benches of the excavated void/mine pit shall be terraced and plantation done to stabilize the slopes. The slopes of higher benches shall be made gentler for easy accessibility by the local people to use the water body. Peripheral fencing shall be carried out all along the excavated area.	The same will be implemented at the end of mining.
14	Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM & RSPM such as around crushing and screening plant, loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	The Mine operation is under suspension with effect from Dated 09.03.2023
15	The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	There are nos. of rain water harvesting structures have already been made in Mining premises like Check Dam, Garland drain & Settling pond/tank & roof top rain water harvesting to augment the ground water resources. 
16	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers in and around the mining lease during the mining operation. The periodical 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 the MoEF and its Regional Office, Bhubaneswar, the Central Ground Water Authority and the Regional Director, CGWB. If at any stage, it is observed that the ground water table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.	The Mine operation is under suspension with effect from Dated 09.03.2023.
17	Regular monitoring of water quality upstream and downstream of the Damsala nallah shall be carried out of monitored data should be maintained and submitted to the Ministry of Environment & Forests, its Regional Office, Bhubaneswar, the Central Ground water Authority, the Regional Director, Central Ground water Board, the State Pollution control Board and the Central Pollution Control Board.	The Mine operation is under suspension with effect from Dated 09.03.2023.
18	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project and effectively implement all the conditions stipulated therein.	NOC is obtained vide ref. no. : CGWA/NOC/MIN/REN/2/2023/8147 The stipulated conditions are being effectively implemented.

19	Suitable rainwater harvesting measure on long term basis shall be planned and implemented in consultation with the Regional Director, CGWB.	<p>Rainwater is being collected in pits and pond for suitable rainwater harvesting measures. Also roof top rainwater harvesting measure is implemented within the lease area.</p>  <p><b>Roof Top Rain-Water Harvesting</b></p>
20.	<p>Vehicular emissions shall be kept under control and regularly monitored.</p> <p>Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral.</p> <p>The mineral transportation shall be carried out through the covered trucks only and vehicles carrying the mineral shall not be overloaded.</p>	The Mine operation is under suspension with effect from Dated 09.03.2023.
21	<p>Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced.</p> <p>The Fitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.</p>	The Mine operation is under suspension with effect from Dated 09.03.2023.
22	Drills shall either be operated with dust extractors or equipped with water injection system.	<p>The Mine operation is under suspension with effect from Dated 09.03.2023.</p> <p>Drilling has not been done so far. In future, if drilling is required, then wet drilling practice will be adopted.</p>
23	Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	The Mine operation is under suspension with effect from Dated 09.03.2023.
24	Sewage treatment plant shall be installed for the colony, ETP shall also be provided for the workshop and waste water generated during the mining operation.	<p>Complied.</p> <p>One 20 KLD STP has been installed to treat the domestic wastewater &amp; to reuse it for gardening purpose.</p> 

		The Mine operation is under suspension with effect from Dated 09.03. 2023. So, no generation of waste water from Mine operation. Where as one ETP has already been constructed having capacity 400 Cub. Mt/Hr.
25.	Consent to operate shall be obtained from the State Pollution Control Board, Odisha before starting production from the mine.	The Mine operation is under suspension with effect from Dated 09.03. 2023
26.	The project authorities should undertake sample survey to generate data on pre-project community health status within a radius of 1 km from proposed mine.	Sample survey for community health status within 1 Km radius from Project area has already been done.  The Mine operation is under suspension with effect from Dated 09.03. 2023
27.	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Pre-placement medical examination has already been carried out of the workers engaged in the project and the records are being maintained and periodical medical examination is being carried out once in three years & five years depending on the age factor.  The Mine operation is under suspension with effect from Dated 09.03. 2023
28.	Provision shall be made for the housing of 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.	Housing for construction labor is not required since the laborers are coming from nearby villages.
29	The critical parameters such as SPM, RSPM, NOx, In the ambient air within the impact zone, peak particle velocity at 300 m distance or within the nearest habitation, whichever is closure shall be monitored periodically (at least once a month). Further, quality of discharged water shall also be monitored (TDS, DO, pH, suspended particulate matter and Cr <sup>+6</sup> ). The monitored data shall be uploaded on the website as well as displayed on a display board at a suitable location in public domain.	The Mine operation is under suspension with effect from Dated 09.03. 2023
30	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely elephant etc.	Wildlife management plan has been prepared by accredited consultant "M/s Chandanam". It is approved from the competent Authority vide Ref

	spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Dept. All the safeguard measures brought out in the Wildlife Conservation Plan so prepared specific to this project site shall be effectively implemented. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. A copy of action plan shall be submitted to the MoEF and its Regional Office, Bhubaneswar.	no.:10180/CWLW-W-FDWC-FD-0032-2022/11-Nov-2022.  After getting the approval, all the stipulated conditions will be implemented strictly. Further, Biodiversity study has been carried out by a domain expert.  Action taken report is also submitted.  The Mine operation is under suspension with effect from Dated 09.03. 2023
31	A final Mine Closure Plan along with details of Corpus Fund shall be submitted to the MoEF 5 years in advance of final mine closure for approval.	The same will be submitted in due time to MOEF for approval

### **GENERAL CONDITIONS**

<b>Sl. No.</b>	<b>Condition</b>	<b>Compliance Status</b>
1	No change in mining technology and scope of working should be made without prior approval of the MoEF.	The Mining technology & scope of working will not change without approval of Ministry of Environment & Forest. The Mine operation is under suspension with effect from Dated 09.03. 2023
2	No change in the calendar plan including excavation, quantum of mineral chromite ore and the waste shall be made.	The Mine operation is under suspension with effect from Dated 09.03. 2023.
3	At least four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for RSPM, SPM, SO <sub>2</sub> , & NO <sub>x</sub> 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.	Ambient Air quality monitoring stations has already been established in consultation with SPCB.
4	Data on ambient air quality (RSPM, SPM, SO <sub>2</sub> & NO <sub>x</sub> ) should be regularly submitted to the MoEF including its Regional. Office located at Bhubaneswar and the state Pollution Control Board / Central Pollution Control Board once in six months.	The Mine operation is under suspension with effect from Dated 09.03. 2023  So, there is no activities being carried out. So, there is no Monitoring has been carried out.
5	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.	The Mine operation is under suspension with effect from Dated 09.03. 2023.

6	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 ear plugs/muffs.	The Mine operation is under suspension with effect from Dated 09.03. 2023
7	Industrial wastewater (Workshop & Waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) Dtd. 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	The Mine operation is under suspension with effect from Dated 09.03. 2023. So, there is no generation of any industrial waste water.
8	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 of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	The Mine operation is under suspension with effect from Dated 09.03. 2023
9	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 qualified personnel has been set up under the control of a Senior Executive who is directly reporting to the Head of the Organization.
10	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 MoEF and its Regional Office located at Bhubaneswar.	The Mine operation is under suspension with effect from Dated 09.03. 2023
11	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 date of final approval of the Project is 04.10.2010 by DMS and 23-01-2012 by SPCB.
12	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the Officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	As & when required and during the inspection, full co-operation is being extended by the project authorities.



13	<p>The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the MoEF, its Regional Office, Bhubaneswar, CPCB, and SPCB, The project proponent shall upload the status of compliance of the environment clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, MoEF, Bhubaneswar.</p>	<p>All the stipulated conditions have been implemented. The Six-monthly report on Status of compliance of the Environmental Clearance conditions have been submitted to the concerned authorities and the same is being uploaded in our website <a href="http://www.facorgroup.in">www.facorgroup.in</a></p>
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