

Letter no: JSL/KLPN/2023/103

Date: 30/05/2023

To,
The Director (s)
Ministry of Environment, Forest & Climate Change
Eastern Regional Office
A/3, Chandrasekharapur
Bhubaneswar – 751023

Sub: Submission of half yearly compliance report of the Environmental Clearance Conditions in respect of Kaliapani Chromite Mines, M/s. Jindal Stainless Limited for the period from October - 2022 to March-2023.

Ref: 1. MOEF Letter No. J-11015/12/2000-IA.II (M), dated 13.02.2001
2. MOEF Letter No. J-11015/369/2009-IA.II (M), dated 24.02.2016
3. EC22B001OR115726, dated: 04.04.2022

Respected Sir,

We are enclosing herewith the half yearly compliance report on the status of the implementation of the conditions stipulated in environmental clearance in respect to Kaliapani Chromite Mines, Village- Kaliapani, District-Jajpur (Odisha) of M/s. Jindal Stainless Limited.

This is for your kind perusal and information & necessary records please.

Thanking you

Yours faithfully,
For Jindal Stainless Limited


Badri Narayan Das
Mines Manager

Encl: Half Yearly Compliance Report for Oct'2022 to Mar'2023.

CC : 1. MoEF & CC , New Delhi

2. SEIAA, SRF-2/1, Unit-IX, Bhubaneswar, Odisha - 751022

Jindal Stainless Limited
Jindal Chromite Mines

At / PO : Kaliapani - 755 047, Dist. : Jajpur, Odisha, India
T : +91 6726 268545, F : +91 6726 268315, E : jindal_mines@yahoo.com

Ministry of Environment & Forests : Regional Office			
BHUBANESWAR			
Monitoring Report			
Part-I			
<u>DATA - SHEET</u>			
1	Project type: River-valley / Mining / industry / Thermal / Nuclear / Other (Specify)	:	Mining Industry
2	Name of the Project	:	Kaliapani Chromite Mines
3	Clearance letter (s) / OM No. & date (Mines)	:	No.-J-11015/12/2000-IA II(M) dated 13.02.2001 No.-EC22B001OR115726 , dated: 04.04.2022
	Environment Clearance (COBP)		No.-J-11015/369/2009.IA.II(M) dated 24.02.2016
4	Locations:		
	a) Districts(s)	:	Jajpur
	b) State(s)	:	Odisha
	c) Latitudes/Longitudes	:	Survey of India Topo sheet No F45N16.Latitude - N 21° 01' 04.39824 " to N 21° 02' 03.53184 " & Longitude - E 85° 45' 18.17352" to 86° 46' 31.69704" E
5	<u>Address of correspondence:</u>		
	a. Address of concerned project Chief Engineer(with pin code & telephone/telex/faxnumbers)	:	Badri Narayan Das, Mines Manager Kaliapani Chromite Mines M/s Jindal Stainless Limited. At/Po: Kaliapani, Dist: Jajpur (Orissa),Pin: 755047, Ph:9777588639
	b. Address of Executive Project Engineer / Manager (with pincode & telephone/telex/faxnumbers)	:	Badri Narayan Das, Mines Manager Kaliapani Chromite Mines M/s Jindal Stainless Limited. At/Po: Kaliapani, Dist: Jajpur (Orissa)Pin: 755047, Ph: 9777588639
6	<u>Salient Features:</u>		
	a. of the project	:	Fully Mechanized Mining of 0.215 MTPA.
	b. of the environmental management plan	:	It is as per EIA/EMP management plans and Environmental clearance conditions.
7	<u>Break up of the Project areas:</u>		
	a. Submergence area (forest & non-forest)	:	Nil
	b. Others	:	Forest- 89.00 ha.
8	Breakup of the Project affected population, with enumeration of those losing houses / dwelling units only, agricultural land and landless laborers / artisans.	:	NA
	a. SC, ST / Adivasis	:	Nil
	b. Others	:	Nil

9	Financial Details:	:	
	a. Project cost as originally planned and Subsequent revised estimated and the yearsof price reference.	:	Rs.19.00 Crores
	b. Allocations made for environmental Management Plans, with item-wise and years-wise break up.	:	Rs.13 Lakh
	c. Benefit cost ratio/internal rate of return and the year of assessment.	:	
	d. Whether© includes the cost of environmental management as show in (b) above.	:	Yes
	e. Actual expenditure incurred on the project so far	:	
	f. Actual expenditure incurred on the environmental management plans sofar.(From 01.10.2022 to 31.03.2023)	:	Rs.11,30,293(Eleven Lakh Thirty Thousand Two hundred & Ninety Three Rupees Only)
10	<u>Forest land requirement :</u>		
	a. The status of approval for a diversion offorest land for non-forestry use.	:	(i) Forest Clearance for 22.80 ha.(Hal Kisam Forest)obtained vide letter no. 8-68/2000-FC/2327(F) dated 05.07.2001 (ii)Forest Clearance for 66.20 ha.(Hal + Sabik Kisam Forest)obtained vide letter no. 8-68/2000-FC(Pt.) dated 20.04.2023.
	b. The status of compensatory afforestation.	:	Approved financial outlay as per Compensatory afforestation scheme for 22.80 & 65.645 ha has been already deposited with CAMPA .
	c. the status of clear felling	:	
	d. comments on the viability & sustainability of compensatory afforestation programme in the light of actual field experience so far.	:	
11	The status of clear felling in non-forest areas(such as sub-mergence area of reservoir, approach road), if any with quantitative information.	:	NA
12	Status of construction:	:	NA
	a. Date of commencement (actual and/	:	NA
	b. Date of completion (actual and/	:	NA
13	Reasons so far the delay if the project is yet to start.	:	NA

**FORMAT FOR PROVIDING PARTICULARS ON GREEN BELT / PLANTATION
UNDER F(C) ACT 1980 AND E (P) ACT 1986**

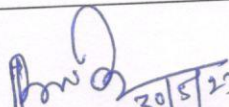
1	a) Name of the Organisation	:	Kaliapani Chromite Mines			
	b) Env't/Forest clearance order No(Mines)	:	No.-J-11015/12/2000-IA II(M) dated 13.02.2001 No.-EC22B001OR115726 , dated: 04.04.2022			
	c)Environment Clearance (COBP)	:	No.-J-11015/369/2009.IA.II(M) dated 24.02.2016			
2	Location, Block / Sub.Divn./Dist./State	:	Tahasil : Sukinda, Dist – Jajpur, State-Odisha.			
3	Address for communication	:	Jindal Chromite Mines, M/s. Jindal Stainless Limited, Kaliapani,Jajpur (Odisha)			
4	Existing vegetation in the area/region.	:				
	a) Species (trees/shrubs/grasses/ climbers)	:	Species like - Akasia, Chakunda, Bela,Chhatiana,krushna chuda ,Radha Chuda etc. are present in this valley.			
	b) Major prevalent species of each type	:				
5	Land Coverage by the Project	:	89 Hect.			
	a) Total area under the project	:	89 Hect.			
	b) Area covered for basic infrastructure (roads/building/Factory etc.)	:	4.91 Hect.			
6	Details about natural vegetation	:				
	a)Name and number of tree/ Species felled.	:				
	a) Name and number of tree /	:	No normal growth of trees within the lease area except some bushes & creepers. 192 nos of trees of species like Sal, Dhaura, Kurum, Jamu etc were felled during the year 2003 after the clearance of forest diversion.			
	b) Name and number of plant species still available in the area.	:	Species like - Kurum, Dhura, Kasi, Jamu, Asan, Bahada, Simili,Moi, Kusum, Char and Shrubs etc. are present in this valley.			
	c) By protecting the area willindigenous stock come up ?	:	Yes.			
	d) Extent of green belt developed.	:	Green belt developed over 3.12 ha.			
7	Plantations required to be carried our as per	:				

	a) Conditions of Environmental clearance in ha./nos.	:	Per ha. 2000 nos. per annum.	
	b) Conditions or Forest (C) Act clearance in ha./nos.	:	- do -	
	c) Voluntarily in ha./nos.	:	6511 per annum.	

8	Details of plantation	:				
	a) Total area available for plantation in each category.					
	i) Green belt	ii) Dumps	iii) Back filled areas	iv) Road sides	v) Block plantation	
	3.12	12.08	3	Nil	Nil	
	Year of plantation	Species planted	Spacing	Height attained	Total area covered	Area still available
	2002-03	10,200	1.5 mtr x 1.5 mtr	1 to 2 mtr	5.6 ha	
	2003-04	5400	1.5 mtr x 1.5 mtr	1 to 2 mtr	5.6 ha	
	2004-05	9300	1.5 mtr x 1.5 mtr	1 to 2 mtr	3.5 ha	
	2005-06	8000	1.5 mtr x 1.5 mtr	1 to 2 mtr	3.5 ha	
	2006-07	10800	1.5 mtr x 1.5 mtr	1 to 2 mtr	4.05 ha*	
	2007-08	3500	1.5 mtr x 1.5 mtr	1 to 2 mtr	1.8 ha*	
	2008-09	5500	1.5 mtr x 1.5 mtr	1 to 2 mtr	2.2 ha*	
	2009-10	3500	1.5 mtr x 1.5 mtr	1 to 2 mtr	1.6 ha*	
	2010-11	5000	1.5 mtr x 1.5 mtr	1 to 2 mtr	2.0 ha*	
	2011-12	3000	1.5 mtr x 1.5 mtr	1 to 2 mtr	1.1 ha*	
	2012-13	3500	1.5 mtr x 1.5 mtr	1 to 2 mtr	1.1 ha*	
	2013-14	8000	1.5 mtr x 1.5 mtr	1 to 2 mtr	5 ha*	
	2014-15	8000	1.5 mtr x 1.5 mtr	1 to 2 mtr	5 ha*	
	2015-16	3800	1.5 mtr x 1.5 mtr	1 to 2 mtr	3.5 ha*	
	2016-17	21000	1.5 mtr x 1.5 mtr	1.5 to 2 mtr	11.0 ha*	
	2017-18	5000	1.5 mtr x 1.5 mtr	1 to 2 mtr	2.0 ha*	
	2018-19	5000	1.5 mtr x 1.5 mtr	1 to 1.5 mtr	2.5 ha*	
	2019-20	5000	1.5 mtr x 1.5 mtr	1 to 1.5 mtr	2.0 ha*	
	2020-21	3500	1.5 mtr x 1.5 mtr	1 to 1.5 mtr	1.0 ha*	
	2021-22	3500	1.5 mtr x 1.5 mtr	1 to 1.5 mtr	1.5 ha*	
	2022-23	6250	1.5 mtr x 1.5 mtr	1 to 1.5 mtr	2.5 ha*	
	* Planted in the previous plantation area.					
	c) Survival % of plantation					

		:				
	Total plantations (No)		Total No. of plantation	1,36,750		
	Survival (No.)	:		91,620		
	Survival %	:	67%			
9	Agency carrying out plantation and maintenance	:	In house / contractor			
	Financial details (year wise) Plantation wise and item wise					
	Sl.No.	Year	Funds allocated	Expenditure made	Average cost of each Surviving Plant	
	01	2002-03	12,00,000.00	10,00,000.00		
	02	2003-04	12,00,000.00	10,00,000.00		
	03	2004-05	12,00,000.00	10,00,000.00		
	04	2005-06	12,00,000.00	10,00,000.00		
	05	2006-07	15,00,000.00	15,00,000.00		
	06	2007-08	20,00,000.00	16,00,000.00		
	07	2008-09	38,50,000.00	38,45,000.00		
	08	2009-10	40,00,000.00	38,50,000.00		
	09	2010-11	28,25,000.00	25,25,000.00		
	10	2011-12	51,30,000.00	45,10,000.00		
	11	2012-13	52,00,000.00	47,70,000.00		
	12	2013-14	42,60,000.00	40,50,000.00		
	13	2014-15	38,40,000.00	36,26,000.00		
	14	2015-16	55,60,000.00	55,14,000.00		
	15	2016-17	11,80,000.00	21,94,212.00		
	16	2017-18	2,50,000.00	2,80,000.00		
	17	2018-19	50,000.00	50,000.00		
	18	2019-20	50,000.00	50,000.00		
	19	2020-21	70,000.00	70,000.00		
	20	2021-22	70,000.00	70,000.00		
	21	2022-23	3,00,000.00	2,70,000.00		

10	Inspection of plantation by field experts and their comments and follow up action.	:	Field experts who visited the plantation advised for planting trees by maintaining proper terraces.	
11	Remarks/any other information.			


 30/5/23
 Signature of Office
 In charge

Annexure-III (Details of Expenses for the period October-2022 to March-2023.			
Sl.No	Particulars	Fund allocated (Rs.)	Expenditure made (Rs.)
1	Plant Species & it's plantation	Nil	Nil
2	Water spraying	Nil	Nil
3	Arrangement of water sprinkler in ore plot	Nil	Nil
4	Environmental monitoring	1,91,000	1,91,000
5	Others	6,00,000	9,39,293
	TOTAL	7,91,000	11,30,293

Rem : Nil Fund allocated/ Expenditure made under the category of water spraying & arrangement of water sprinkler in ore plot, because the mine was under temporary discontinuance during this period.

**HALF YEARLY COMPLIANCE REPORT
ON
ENVIRONMENTAL CLEARANCE
CONDITIONS
OF
KALIAPANI CHROMITE MINES
OF
M/S JINDAL STAINLESS LIMITED
FOR THE PERIOD
OCTOBER 2022 – MARCH 2023**

F.NO.J-11015/12/2000-IA.II (M), DT.13.02.2001

F.NO.J-11015/369/2000-IA.II(M),DT.24.02.2016

EC22B001OR115726, DT : 04.04.2022

**STATUS OF COMPLIANCE OF CONDITIONS STIPULATED BY MoEF IN ENVIRONMENTAL
CLEARANCE VIDE J-11015/12/2000-IA.II (M) DATED 13.02.2001 OF
KALIAPANI CHROMITE MINES OF M/S JINDAL STAINLESS LIMITED AS ON 31/03/2023.**

COMPLIANCE PERIOD: 1ST OCTOBER 2022 TO 31ST MARCH 2023

SL NO	SPECIAL CONDITIONS	COMPLIANCE STATUS
01	A comprehensive environmental impact assessment study should be carried out after getting scope of the study vetted by MOEF. Reports should be submitted to the ministry within 2 years.	Study report on comprehensive environmental impact assessment has already been submitted to MOEF, New Delhi vide our letter no. JSL/KLPN/05-06/196 dated 04.01.2006 with a copy to The Chief Conservator of Forests (Central), MOEF, Eastern Regional Office, Chandrasekharpur, Bhubaneswar. Again on 19.06.2019 another EIA-EMP report have been submitted to SEIAA, Bhubaneswar vide our letter no. JSL/KLPN/2019/71 dated 19.06.2019 as per TOR No – 1098/SEAC-180 dt 14.12.2018 issued for enhancement of production of chrome ore from 0.1 MTPA to 0.215 MTPA.
02	Run-off from the OB dumps should be analyzed for cr+6 and in no case it's concentration is found higher than the permissible limit. The water should be treated using appropriate proven technology before discharge. Priority should be given for utilization of this treated water for plantation and dust Suppression.	The total discharge of water is always being treated to keep the presence of hexavalent Chromium within the permissible limit by treating it in E.T.P. Regular testing of the discharge water is being carried out in our laboratory. The treated water is being utilized for plantation and dust suppression.
03	The nature of the deposit is such that finalization of mining of deeper portion cannot be decided immediately. The present reclamation plan is therefore only conceptual. The proponent should submit a detailed reclamation plan within 5 years of the start of mining and get the same approved. In case there is change in scope of mining plan including possible underground mining the proponent should approach MOEF for fresh clearance.	A detailed reclamation plan shall be prepared and submitted for approval within 5 years of the start of mining operation. Any change in scope of mining plan including possible underground mining shall be intimated to MOEF and fresh clearance shall be sought.
04	A detailed greenbelt development plan indicating year wise plantation scheme, area to be covered (peripheral, roads, OB dumps, and township) and type of nature of plant, species should be submitted to MOEF within 3 months.	A detailed green belt development plan indicating year wise plantation scheme has already been submitted to MOEF, New Delhi vide our letter No.JSL/JKRoad/2002/0069 dated 17.05.02, with a copy to MOEF, Eastern Regional Office, Chandrasekharpur, Bhubaneswar.
05	Top soil should be stacked properly with	We have collected 8420 m ³ of top soil. However we

	adequate measures at earmarked site. It should be used for reclamation and rehabilitation of mined out area.	have already used the total top soil for plantation purpose.
06	OB dumps should be stacked at earmarked dumpsite(s) only and should not be kept active for longer period .the overall slope of the dump(s) should not exceed 28°.	The overburden dumps are being stacked in earmarked area according to the mining plan. The overall slope is well within the permissible limit.
07	Drills should be operated with dust extractors or only wet drilling should be adopted.	Wet drilling is being adopted in our mines.
08	Controlled blasting should be carried out.	Controlled blasting is being done by muffling and by using delay detonators.
09	Check dam and siltation ponds of appropriate size should be constructed to arrest silts and sediments flows from OB and internal dumps. The water so collected should be utilized for watering mine area, roads, greenbelt etc. The drains should be regularly desilted and maintained Properly.	Check dams and siltation ponds of appropriate sizes are constructed around the wastes dumps, mineral dumps (sub grade) & stack yards. The drains are being cleared regularly after monsoon season.
10	While mining operation is on, regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new peizometers.Monitoring should be done four times a year pre-monsoon (April/May), Monsoon (August), Post-Monsoon (November) and Winter (January).data thus collected should be sent at regular intervals to MOEF& Central ground water board.	Quarterly motoring of ground water level & quality are being carried by M/s. MITRA S.K Pvt.Ltd. an environmental consultant registered with OrissaState Pollution Control Board as a consultant for doing monitoring and analysis. Reports attached in Annexure-I .
11	A detailed mine plan should be submitted in MOEF 5 years in advance of approval.	The copy of Mining Plan along with Progressive Mining Closure Plan approved by Indian Bureau of Mines is being submitted for your kind reference and approval in Annexure –II .
12	The proponent should obtain permission from other concerned authorities if any.	We have obtained required permission from other statutory authorities for carrying out the mining activities.

COMPLIANCE OF EC GENERAL CONDITIONS

SL NO	GENERAL CONDITIONS	COMPLIANCE STATUS
01	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and forests.	The mining technology and scope of working is not changed.
02	No change in the calendar plan including excavation, quantum of chrome ore, waste/OB dumps should be made.	Production of acceptable / dispatchable grade of ore is within the permissible limit.
03	Four ambient air quality monitoring stations should be established in the core zone as well as buffer zone for SPM, RPM, SO ₂ , NO _x and CO monitoring. Location of the ambient air quality stations should be decided based on meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	Ambient Air monitoring is being done establishing four stations both in core & buffer zone. The results of air quality parameter such as RPM, SPM, So ₂ , NO _x and Co of individual stations are enclosed in Annexure-I .
04	Data on ambient air quality should be regularly submitted to the Ministry including it's Regional office at Bhubaneswar and the State Pollution Control Board/Central Pollution Control Board once in six months.	Data on ambient Air quality is being submitted to the ministry including its regional office at Bhubaneswar and the State Pollution Control Board, Orissa once in six months.
05	Adequate measures for control of fugitive emissions should be taken during drilling and blasting operations, loading transportation of minerals etc.	Adequate precautions have been taken at all dust generating points for suppression of dust by water spraying with the help of two water tankers of 20KL & 12KL capacities, on the haul roads, stack yards ,loading & unloading point's dust.
06	Adequate measures should be taken for control of noise levels below 85 db in work environment.	Noise monitoring is being regularly done and found to be well within the permissible limit. The report of the above said is enclosed in the Annexure-I . To control the noise generation, periodical maintenance of all machineries is ensured. The workers engaged in blasting, Drilling operations and operators of HEMM are being provided with earmuff and earplugs.
07	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 programme of the workers should be undertaken periodically	Nose masks have been provided to all personnel who are working in drills, dumpers and to HEMM operators and spot boys. Adequate training is being imparted to the persons, who are working in dust generating points by the Senior Mine

	to observe any contractions due to exposure to dust and take corrective measures if needed	Officials. Occupational health surveillance programme of the workers along with initial medical examination has been conducted for all departmental & contractor workers
08	The funds earmarked for Environmental Protection measures should be kept in separate account and not diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests.	The funds earmarked for environmental protection measures are not being diverted for any other purposes, the details of which are being sent to the regional office of MOEF, Chandrasekharpur, Bhubaneswar.
09	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated environment safeguards. The project authorities should send one set of EIA/EMP report and mining plan to them and extent full cooperation to the officer(s) of the Regional Office by furnishing the detailed data/information/monitoring reports.	One set of EIA / EMP and Comprehensive EIA/EMP has already been sent to the regional office of the ministry located at Bhubaneswar.
10	The project authority should inform to the Regional Officers located at Bhubaneswar as well as to the Ministry of Environmental & Forests regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	This condition has already been complied with.
11	A copy of clearance letter will be marked to concerned panchayat /local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	This condition has already been complied with.
12	Orissa Pollution Control Board should display a copy of the clearance letter at the Regional Office ,District Industry Centre and Collector's office/Tahasildar's Office for 30 days.	This condition has already been complied with.
13	The project authorities should advertise at least in two local news paper weekly circulated around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the state pollution control board and may also be seen at web site of the Ministry of Environment & Forests at http://envfor.nic.in	This condition has already been complied with.

**Half Yearly Compliance of EC Conditions issued by SEIAA vide EC identification
number-EC22B001OR115726 ,Dated:04.04.2022 as on 31.03.2023.**

Sl. No	A. <u>Specific conditions:</u>	Compliance
1	All leached water from OB dumps shall be taken into settling tanks. More than one such tank may be needed to be constructed to collect all such water. The water after settling has to be pumped to ETP of adequate capacity i.e. 250 KLD; and water allowed to be discharged to surrounding areas (approved drain) shall conform to acceptable standards of BOD, E-Coli, Cr ⁺⁶ Conc. etc. There shall be monitoring station for continuous measurement of discharge water quality at the site.	Being complied: Addl. settling tank 02 No have been proposed to construct in Dump-1 & the existing tank at Dump-2 shall be renovated and the water after settling will be pumped to the existing ETP of capacity 250 KLD. Effluent Quality Monitoring System (EQMS) has been installed at the outlet of ETP for continuous measurement of discharge water.
2	Air quality of mining area shall be maintained at all times, and monitoring station shall be set up for the purpose to keep the SPM _{2.5} and SPM ₁₀ levels in check at acceptable levels.	Being complied: Monitoring stations has been set up, as per EC/CTO Conditions for monitoring of ambient air quality. AAQ monitoring is being conducted by a NABL Accredited Laboratory and the results are found within permissible limit.
3	In a 10KM radius the PP shall promote agro forestry in farmers' own lands to bring back tree resources in the area which might have undergone wanton destruction, as is usual in mining belts. 50,000 trees of suitable evergreen species shall be raised in nursery to 1m height and such saplings shall be given free to beneficiaries of this area for planting. Maintenance and Nursing of the plants shall also be paid for, and managed by the PP till the plants get established. This is part of the remediation plan.	Being complied: In a 10KM radius we have identified 5 locations in nearby villages. Communication has been made with the farmers for plantation in their own land through concerned <i>Sarpanch</i> of the G.P. In-order to supply 50,000 trees of suitable evergreen species of 1 m height to the beneficiaries of this area for plantation at no cost, JSL has started developing the saplings at its own nursery in Kalinga Nagar Unit.
4	Ground water recharge: Adequate provision shall be made for ground water recharge by having adequate no. of rain water harvesting pits having capacity 300 m length x 200 m width x 8 meter	Complied:

	depth.	
5	Storm water and leached water for treatment shall be led in separate pipes.	Being complied: Storm water and leached water of Dump & Quarry shall be collected/channelized separately by means of garland drain and led to the designated Settling tanks/Sump from where it shall be pumped to ETP through Pipeline for treatment.
6	A new membrane based technology evolved by NIT. Rourkela shall be adopted to prevent buildup of hexavalent chromium contamination of surface water and ground water of surrounding areas; and for removal of the said contaminants etc. from tailing pond, etc.	Being complied: To adopt Membrane based technology to prevent buildup of hexavalent chromium contamination of surface water and ground water, we have requested to NIT, Rourkela to take up such study. But they have declined to take up/provide the said technology as they have done it only for laboratory / Pilot scale. However JSL has constructed an ETP of 250 KLD capacity designed by IIT, Kharagpur for the treatment of the surface/ run-off water to prevent contamination of surface water and ground water of surrounding areas. Correspondence letters/mail with NIT, Rourkela is attached as Annexure-X .
7	The PP undertakes that there shall be "Zero-Discharge" of water from the mining operation out-side the lease hold area, and also that all rainwater falling in this area shall be conserved within the area by measures of pondage and harvesting pits. These measures shall be faithfully carried out and shall be regularly monitored by SPCB and the regional office of the MoEF & CC.	Being complied: There shall be "Zero-Discharge" of water to out-side the lease hold area . Rainwater falling inside the lease area shall be conserved as much as possible within the area through ponds and harvesting pits. Apart from that the day to day consumption for industrial purpose shall be catered from the treated water of ETP i.e. haul road dust suppression, COBP Operation & green belt development etc.
8	Where required, retaining wall, settling pond and check dam shall be constructed within the lease hold area for conservation of rain water and prevention of soil loss.	Being complied: We are already having 940 m retaining wall constructed around the

		<p>Dumps, and another 460 m being proposed to be constructed (As per Approved Remedial Plan).</p> <p>In addition to the existing settling ponds near Dump-1, two more settling ponds have been proposed. Further, renovation of existing Settling Pond near Dump-2 is also planned to be taken up.</p>
9	Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt. and to this effect, the proponent shall submit an undertaking in form of a legal affidavit.	<p>Being complied:</p> <p>JSL has submitted an Undertaking in form of a Legal Affidavit towards maintenance of the already constructed haulage road.</p> <p>Copy of the undertaking is attached as Annexure-XI.</p>
10	Slope study by an expert of repute of waste dumps to be done and submitted within six months from the date of issue of EC to SEAC / SEIAA.	<p>Being complied:</p> <p>We have already conducted the Slope Stability Study of Quarry & Dumps through the Department of Mining Engineering, IIT-Kharagpur in the year 2017 and which was further re-validated by the institute.</p> <p>Copy of the same is attached as Annexure-XII.</p>
11	Traffic density study if not done by domain expert, then the expert to be ratified / authenticated by domain expert and submitted within a month time.	<p>Being Complied:</p> <p>Traffic density study has already been conducted during EIA Study which was considered by SEAC, based on which EC has been granted.</p>
12	The site will be visited by the sub-Committee of SEAC after six Months to review the progress of recommendations of SEAC on specific conditions.	Noted & agreed.
13	Waste should be dumped on the earmarked sites within the mining lease area and no waste should be dumped outside the lease area.	<p>Noted & agreed.</p> <p>All the waste/OB generated from mining Operation will be stacked at designated place as per approved Mining Plan and no waste from mining operation will be dumped outside the lease hold area.</p>
14	The Project Proponent shall start the plantation indigenous plant species to cover at least 50% of the proposed area under plantation in the next 5 years. The density of the plantation should not be less	<p>Being Complied:</p> <p>Plantation indigenous plant species is being planted and 1,36,750 Nos. of Saplings has been already planted which covers an area of 18.20 Ha. Record of saplings planted, survival rate and area covered with location are being maintained.</p>

	<p>than 1500 saplings/Ha. The species to be selected for the plantation should be in consultation with local forest department or any other expert agency engaged for the same. The Project Proponent shall keep the record of saplings planted, survival rate, area covered under plantation, location etc. In addition to this gap filling needs to be done to as and when require for maintaining the density of plantation. The PP shall submit the drone images of area before and after the plantation. PP shall carry out pilot study for Phyto-remediation of hexavalent chromium through IMMT, CSIR, Bhubaneswar. The budget earmarked for the plantation shall be kept in separate bank account and audited annually. PP shall submit the detail such as geo-coordinate photographs (before & after with geolocation date & time details of expert agency engaged details of species planted number of species planted, survival rate, density of plantation and outcome of the study etc. to the Regional Office of MoEF& CC, Bhubaneswar and SEAA Odisha before 1st June and 1st December of every year for the activities carried out during previous year.</p>	<p>The drone images of area before and after the plantation will be provided.</p> <p>We have already assigned the work of Pilot study for phyto-remediation of hexavalent chromium through IMMT, CSIR, Bhubaneswar. Work is under progress. Copy of agreement with IMMT & Photographs of site is enclosed as Annexure- XIII.</p> <p>The budget earmarked for the plantation shall be kept in a separate bank account/head and will be audited annually.</p> <p>The geo-coordinate photographs (before & after with geo location date & time along with details of the expert agency will be submitted.</p>
15	<p>Approval/permission of CGWA/SGWA shall be obtained before drawing ground water for the project activities State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.</p>	<p>Being complied:</p> <p>Approval of CGWA for 48 KLD for use of ground water for domestic purpose. Further approval/ Permission of CGWA/SGWA is available for 1030KL. (Copy enclosed as Annexure – XIV).</p>
16	<p>The Project Proponent shall fulfill the Commitment made during PH held on 31.08.2010</p>	<p>Being complied:</p> <p>Most of the Commitment made during pH held on 31.08.2010 have already been complied & necessary steps is being taken to complete the remaining commitments.</p>
17	<p>The amount proposed under Corporate Environment Responsibility (CER) head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of CER activities along with proof of activities viz photographs (before & after with geo location</p>	<p>Being complied:</p> <p>The amount proposed under Corporate Environment Responsibility (CER) head is being kept in a separate head of the JSL bank account and will be audited annually, and the audited statement thereof will be submitted along with the compliance.</p>

	date & time) purchase documents, photographs & Geo-location of the infrastructures/ facilities developed, etc. to the Regional Office of MoEF&CC Bhubaneswar and SEIAA, Odisha before 1 st June and 1 st December of every year for the activities carried out during previous year.	The photographs (before & after with geo location date & time) purchase documents, infrastructures/ facilities developed, etc. will be submitted in due time to the Regional Office of MoEF&CC Bhubaneswar and SEIAA, Odisha.
18	The amount (except occupational health) proposed under Environmental Management Plan (EMP) head should be kept in a separate bank account and should be audited annually The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz photographs before & after with geo-location date & time), purchase documents, sampling reports, photographs& Geo-location of the infrastructures/ facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1 st June and 1 st December of every year for the activities cared out during previous year.	Being complied: The amount (except occupational health) proposed under Environmental Management Plan (EMP) head is being kept in a separate head of the JSL bank account which will be audited annually, and the audited statement thereof will be submitted along with details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha.
19	The Project Proponent shall set up an Environmental Management Cell comprises of persons having qualification and experience in the field of environment along with supporting staff. The details of the Same needs to be submitted to the SELAA Odisha within 3 months of the grand of EC.	Being complied: Kaliapani Chromite Mines of Jindal Stainless Limited has an Environmental Management Cell comprising of persons having requisite qualification, experience in the field of environment along with supporting staff.
20	The project proponent shall give an undertaking inter-alia include commitment of the PP not to repeat any such violation in future.	Complied: Undertaking to this effect is attached as Annexure-XV .
21	In case of violation of above undertaking, the Environmental Clearance shall be liable to be terminated forthwith.	Complied: JSL undertakes not to commit such violation in future.
22	The Project Proponent shall implement the short term and long term measures proposed to be taken in order to get rid from the adversity of Cr (VI) contamination, needs to be implemented and status report of the same along with benefit occurred needs to be submitted to	Being complied: Implementation of short term and long term measures are being carried out for the purpose and the status report of the same along with benefit occurred will be submitted to the

	Regional Office of MoEF&CC. Bhubaneswar and SEIAA. Odisha annually.	Regional Office of MoEF & CC. Bhubaneswar and SEIAA. Odisha annually.
23	The Project Proponent shall keep a record of each blasting viz. location, number of holes, delay assigned of each hole, explosive quantity of each hole, blasting pattern etc.	Being complied: Record is being maintained as per Mines Act & shall be continued.
24	The following two more relevant studies in context of sensitive site with reference to Hexa-valent chromium Contamination shall be conducted and report to be submitted to SEIAA, Odisha within 6 months of the re-opening of the mine. i. Core drilling permeability test through MECL, Nagpur or any other competent bodies. (i) Selection of Core sample study for porosity/ permeability test to ascertain ground water flow & direction through competent organization	Being complied: We have initiated discussion/correspondence with Mineral Exploration Corporation Limited (MECL), Nagpur to select core samples from core drilling for porosity/ Permeability test to ascertain ground water flow & direction
25	Take effective measures for prevention of dust generation by regular water sprinkling at and around all haulage roads, loading /unloading points, mine extraction areas, material yards, and crushing Zones transportation points; and to control PM2.5 and PM10 levels in the air, Water Sprinklers fitted with sensors shall be mounted on all moving transport vehicles like trucks, etc. carrying ore/mineral so that water sprinkling is automatic when the vehicle moves.	Being complied: As per the regular practice, water sprinkling at and around all haulage roads, loading /unloading points, mine extraction areas, material yards, and crushing Zones transportation points is being carried out. Water Sprinkling is being carried out in regular interval, however Sensor/timer based Sprinklers are being explored and will be used, so as to effect automatic sprinkling during the movement of vehicles during mining operation.
26	Mineral handling area like crushers, belt conveyors, etc. shall be provided with adequate high efficiency dust extraction system to provide efficient dust control. Such arrangement shall be made at Loading and unloading areas; all transport points, beneficiation plants. These equipment's like bag filters, vacuum suction hoods, dry	Being complied: Effective dust extraction system shall be provided, properly operated and maintained with down the hole drilling equipment and dry fog system will be installed in mineral handling areas.

	<p>fogging system etc. must be properly operated and maintained. The belt conveyers must be fully covered.</p> <p>a. Transportation of all ores and minerals shall be carried out in covered trucks, and these vehicles shall not be overloaded.</p> <p>b. Haulage roads shall be provided with permanent water sprinkling and wetting arrangement (such as tanker-mounted Water sprinkling system).</p>	<p>The transport trucks are being covered while transportation of Ore and not overloaded.</p> <p>Haulage roads has been provided at places with permanent water sprinkling arrangements for suppression of dust.</p>
27	Use suitable water-soluble dust suppressing chemicals, at critical locations.	<p>Being complied:</p> <p>The Company is having water-soluble dust suppressing chemicals for usage in various location.</p>
28	All particulate matter emission sources shall be regularly monitored by installing the required equipment at pre-decided locations. External monitoring shall be by SPCB/ third party engaged by SEIAA.	<p>Being complied:</p> <p>Regular monitoring is being carried out by NABL accredited agency and will be continued in regular intervals. The ambient air quality monitoring report for the said period is attached as Annexure-I.</p>
STANDARD CONDITION		
1	The Environmental Clearance (EC) subject to orders/ Judgement of Hon'ble Supreme Court of India. Hon'ble High Court Hon'ble NGT and any other Court of Law Common Cause Conditions as may be applicable.	Noted & agreed.
2	Project proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions suitable therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee	<p>Being complied.</p> <p>CTE & CTO has already been issued from SPCB, Odisha for 0.1 MTPA. We are in the process to apply for CTE and CTO for 0.215 MTPA.</p>
3	The Project Proponent shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation). Act, 2015 and rules & regulations made there under PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.	<p>Noted & agreed.</p> <p>JSL is abide by the provision of the Mines Act 1952, Mines and Mineral (Development & Regulation). Act, 2015 and rules & regulations made there under. JSL will adhere to various circulars issued by Directorate General Mines Safety(DGMS) and Indian Bureau of Mines from time to time.</p>

4	The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.	Complied. There is no private land inside the lease hold area .
5	The Project Proponent shall obtain necessary prior permission of the Competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.	Being complied. Permission has already been obtained for competent authority.
6	A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any from whom suggestion / representation has been received while processing the proposal.	Complied. Copy of EC letter has already been Communicated to Kaliapani Gram Panchayat on 09.04.2022. Copy of the Communication letter is attached as Annexure-XVI.
7	State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office District Industries Centre and Collector's office Tehsildar's Office for 30 days	Noted & agreed
8	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the..	Complied. Advertisement regarding grant of EC has been published in two local News Papers Orissa Post & Dharitree published on 08.04.2022 & 09.04.2022 respectively. Copy of the same is attached as Annexure-XVII.
9	State Pollution Control Board Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic in) A copy of the advertisement may be forwarded to the concerned MoEF & CC Regional Office for compliance and record.	Complied. Copy of the advertisement has been forwarded to the MoEF & CC Regional Office for compliance and record.
10	The Project Proponent shall inform the SEIAA, Odisha for any change in ownership of the mining lease in case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.	Noted & agreed. There is no change in ownership of the mining lease.

Air quality monitoring and preservation		
11	<p>The Project Proponent shall install a minimum of 1 (one) online Ambient Air Quality Monitoring Stations to monitor critical parameters, relevant for mining operations of air pollution viz PM 10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.</p>	<p>Being complied.</p> <p>Monitoring is being carried out in regular interval by NABL accredited laboratory for parameters like PM 10, PM2.5, NO2, CO and SO2 and the report is being submitted to the concerned authorities. The monitored data is also displayed in the digital display Board installed at main Gate of the mine site.</p> <p>The provision to install Continuous Ambient Air Quality Monitoring System for parameters like PM 10, PM2.5, NO2, CO and SO2 is under process and will be installed soon.</p>
12	<p>Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points.</p> <p>The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipment /machineries and preventive maintenance.</p> <p>Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system.</p> <p>It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC/ Central Pollution Control Board.</p>	<p>Being complied.</p> <p>Regular water sprinkling is being carried out in haul road and loading-unloading points and transfer points with fixed water sprinkler and water tanker of capacity 20 KL 01 No, 12 KL 01 No.</p> <p>Water Soluble dust suppressing chemicals are being used during water sprinkling.</p>
<u>Water quality monitoring and preservation</u>		

13	<p>In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA.</p> <p>In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF & CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro geological study of the area.</p>	<p>Noted & agreed.</p> <p>Detailed hydro geological study of the area has been conducted by CGWA accredited Consultant by JSL.</p>
14	<p>Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period.</p> <p>In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use.</p> <p>A provision for regular monitoring of water table in open dug well located in village should be incorporated to ascertain the impact of mining over ground water table.</p> <p>The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.</p>	<p>Noted & agreed.</p> <p>There is no spring and perennial nallahs flowing near by the mine lease.</p> <p>Regular monitoring of water table in the open dug-well around the mining lease area is being monitored to ascertain the impact of mining on the ground water table, the report there of is being submitted, on six-monthly basis, to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.</p> <p>Drinking Water is being supplied to the villages when the scarcity of water.</p> <p>The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.</p>
15	<p>The Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department.</p> <p>The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.</p>	<p>Noted & agreed.</p> <p>The ground water level of the existing wells and it's quality is currently being monitored. Wells have been established for monitoring ground water level in addition to other existing wells in near by areas.</p> <p>The Report on Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board at</p>

		desired intervals . The report of the same is attached as Annexure-VI.
16	<p>The Project Proponent shall undertake regular monitoring of natural water course/ Water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records.</p> <p>The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records.</p> <p>Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate.</p> <p>It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April- May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.</p>	<p>Being complied.</p> <p>Regular monitoring including water quality (Up Stream & Down Stream) of natural nallahs (beyond 2km of mining lease) is being carried out by NABL accredited laboratory and record thereof is being submitted to concerned authorities.</p>
17	<p>Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO). pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006-IA II (M) dated</p>	<p>Being complied.</p> <p>Surface and drinking water quality is being monitored on regular interval by NABL accredited laboratory. The monitoring reports are being submitted to concerned authorities in time bound manner. The monitoring data is being displayed at the digital display board installed near main gate of the Mines. ETP of 250 KLD is also installed at mines for treatment</p>

	27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.	
18	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEF&CC annually.	Being complied. Pit adjacent to Quarry-II is used as Rain Water Harvesting Pit and all the Surface run-off water are channelized to the pit for the purpose of ground water recharge.
19	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.	Being complied. There is no industrial waste water generation in the mines. However any water used/generated during process of mining allows to treatment by ETP. The quality of treated water is well within the standard prescribed by SPCB. There is no workshop at mines site and the major maintenance of the machineries/vehicles are being carried out at commercial workshops outside the ML Area.
20	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF & CC and State Pollution Control Board/Committee.	Being complied. The water balance/water auditing will be carried out and adequate measures shall be taken for reducing the consumption of water which will be reported to the Regional Office of the MoEF & CC and State pollution Control Board/Committee.
<u>Noise and vibration monitoring and prevention</u>		
21	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.	Noted & agreed. There are no villages / habitations exist (not belonging to the Lessee) within the Blasting Zone of 500 mtr. However, monitoring as per the applicable guidelines of DGMS are being carried out.
22	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the	Noted & agreed. There are no habitants near by the lease area. However JSL is committed for adequate illumination and noise control in the nearby vicinity.

	villages is not disturbed; by orienting the floodlights/masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.	
23	The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.	<p>Being complied.</p> <p>Adequate Precautionary measures are in practice to isolate the workers on the detrimental effects of Noise and dust engaged in the operation.</p> <p>PPE in the form of ear plugs/muffs, dust respirators, nose masks are provided to the workers exposed to noise and dust during mining.</p> <p>Noise quality monitoring is being carried periodically and the report is being attached in Annexure-I</p>
Mining Plan		
24	The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt., in the form to Short Term Permit (STP), Query license or any other name.	<p>Noted & agreed.</p> <p>JSL is committed to adhere the provisions as per the approved mine plan that has been submitted during the grant of Environmental Clearance.</p>
25	The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.	<p>Noted & agreed.</p> <p>The Final Mine Closure Plan along with FinancialAssurance will be approved from Indian Bureau of Mines/Department and will be submitted in due time to the concerned authorities.</p>

26	The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office.	<p>Noted & agreed.</p> <p>The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The compliance status will be submitted half-yearly to the MoEF & CC, Regional Office.</p>
27	The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.	<p>Noted & agreed.</p> <p>The Overburden generated management shall be monitored as per the approved mine plan and guidelines approved by DGMS/IBM. The top soil shall be used for land reclamation and plantation.</p>
28	The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.	<p>Noted & agreed.</p> <p>The reject/waste generated during the mining operations will be stacked at earmarked waste dump site(s) only as per the approved mine plan and guidelines approved by DGMS.</p>
29	The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.	<p>Noted & agreed.</p> <p>Reclamation of waste dump shall be carried out scientifically.</p>
30	The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.	<p>Noted & agreed.</p> <p>The slope of dumps is being maintained in scientific manner. Coir matting, vegetation etc. of dump slopes at critical areas has also been planned to be carried out in due course.</p>

31	The Project Proponent shall carry out slope stability study in case the dump height. is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF& CC.	Being complied Slope Stability study carried out during 2017 by Department of Mining Engineering, IIT, Kharagpur. However the study will be reviewed by October-2023 for implementation. The copy of the report is attached as Annexure – XII.
32	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OBA/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallahs/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.	Being complied Catch drains, settling tanks and siltation ponds of appropriate size have been constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps. We are already having 940 mtr retaining wall around the dumps, and another 460 mtr will be proposed to be constructed. In addition to the existing settling ponds around Dump-1, two more settling ponds are proposed. Further, renovation of existing Settling Pond at Dump-2 is also planned.
33	Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.	Being complied We are already having 940 mtr retaining wall around the dumps, and another 460 mtr will be proposed to construct. The size, gradient & capacity of the drains and the sump have been designed to accommodate the surface runoff during heavy rainfall.
34	The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. Safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.	Being complied Top Soil generated during early stages of mining has already been gainfully utilized and currently there is no stock available. However, we will preserve the top soil as and when generated during the course of mining in future at the designated top soil yard for further use in land reclamation and plantation purpose. The physical parameters like height, width and angle of slope of this stack will be as per the approved mine plan.
35	The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land	Being complied Re-grassing of the entire lease area shall be done after cessation of Mining Operation

	to a condition which is fit for growth of fodder, flora, fauna etc.	
36	Slope study by an expert of repute of waste dumps to be done and submitted within six months from the date of issue of EC to SEAC/SEIAA	Being complied Slope Stability study carried out during 2017 by Department of Mining Engineering, IIT Kharagpur and the report was submitted to the SEIAA and SEAC. Again the report will be reviewed in this year and the report will be submitted to concern authorities.
37	No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load.	Being complied The current practice of the mineral transportation shall be continued in best possible environment friendly manner.
38	The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.	Being complied The pollution due to transportation load on the environment will be effectively controlled by taking adequate measures such as regular water sprinkling along with monitoring has been carried out periodically.
39	The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc., shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.	Being complied As per the regular practice, water sprinkling at and around all haulage roads, loading /unloading points, mine extraction areas, material yards, and crushing Zones transportation points shall be carried out on commencement of mining operation, with a view to control the PM2.5 and PM10 levels in the air. Sensor/timer based water Sprinklers shall be used, so as to effect automatic sprinkling during the movement of vehicles.
40	Haulage road shall be developed and maintained perennially and perpetually by the proponent in construction with the concerned	Being complied Yes, haulage road shall be developed and maintained perennially and

	authority of the Govt, and to this effect, the proponent shall submit an undertaking in form of a legal affidavit	Perpetually by JSL .
41	Traffic density study if not done by domain expert, then the expert to be ratified/authenticated by domain expert and submitted within a month time.	Complied. Refer Traffic density Compliance in earlier Points.
42	The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.	Being complied The green belt shall be developed and maintained as per the conditions of the EC.
43	The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for Protection and care of trees.	Being complied The plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department and Gram Panchayat are being carried out and shall be continued. Adequate budgetary provision has been made for protection and care of trees.
44	The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.	Not Applicable. There is no grazing land inside the mining lease hence this is not applicable.

45	The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-1 species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt. And implemented in Consultation with the State Forest and Wildlife Department.	<p>Being complied.</p> <p>The approval of Wild life conservation plan has already been obtained vide Letter No: 570 dt.13.01.2023 from office of PCCF (Wildlife) & CWLW, Odisha.</p>
46	A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.	<p>Being complied</p> <p>Wildlife Conservation Plan is attached as Annexure – XVIII and for implementation of the same is under progress.</p>
Public hearing and human health issues		
47	The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF &CC Regional Office and DGMS on half-yearly basis.	<p>Being complied</p> <p>The Occupational Health checks of the workmen engaged in mines are being carried out as per DGMS guidelines. Status report of the same are being sent to MoEF &CC Regional Office and DGMS.</p>
48	The Project Proponent must demonstrate commitment to work towards Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, and Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of Tobacco and alcohol use. The Proponent shall carryout base line HRA for	<p>Being complied</p> <p>Regular Safety training, awareness program are being demonstrated at mine site w.r.t Health Risk Assessment like identification of work place hazards and it's possible mitigation plan.</p>

	all the category of workers and thereafter every five years.	
49	<p>The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment, for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium-Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by: NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one).X-ray must meet ILO criteria (17 x 14 inches and good quality).</p>	<p>Being complied</p> <p>Health Risk Assessment has been conducted to asses work place hazards and their potential risks with appropriate control measures of the person employed in mines.</p> <p>Awareness programs are being carried out in the nearby villages on health issues relating to malaria and tuberculosis is being carried out periodically.</p>
50	<p>The Proponent shall maintain a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5-24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities (c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1) Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) the hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be</p>	<p>Being complied</p> <p>Suitable health record of the workers is being maintained and shall be maintained in future also.</p>

	submitted to the Regional Office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.	
51	The Project Proponent shall ensure that 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	Being complied Adequate Protective measures for the persons working in the dusty areas are being adopted and the same will be continued.
52	Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.	Being complied At present majority of the workers/labors come from the nearby villages and hence we don't have requirement for labor camp.
53	The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.	Complied The issues raised during the public hearing (PH) has been already complied by JSL.
54	The proponent shall implement the mitigative measures as suggested in the Study Report on effect of chromite mines to nearest human habitation.	Being complied The mitigated measures suggested are being taken up and also continue in future.
55	Occupational health check-up shall be done by occupational health expert periodically for employees as well as nearby villagers	Being complied The Occupational health check-up is being done periodically and shall be continued.
56	Issues raised and recorded in proceedings of public hearing w.r.t. environment /pollution/CER shall be complied by the Mining Authority as per OM F. No. 22 65/2017-1A II, dated 30.09.2020 of MoEF & CC Govt. of India.	Complied. The Public hearing for the said project was last conducted on 31.08.2010 and the issues raised have been complied.

Corporate Environment Responsibility (CER).

57	<p>As per the MoEF & CC. Govt. of India Office Memorandum dated 30.09.2020, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. The activities proposed under CER shall be restricted to the affected area around the project. The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area CSR activities shall be undertaken by involving local villages and administration.</p> <p>The activities proposed for CER shall be implemented and to be completed within three years and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF & CC annually along with audited statement and to the District Collector. It should be posted on the website of the project proponent.</p>	<p>Being complied</p> <p>The Public hearing for the said project was conducted on 31.08.2010 and issues raised have been complied.</p> <p>The company is also committed to undertake for improving the socio economic condition of the nearby villagers.</p>
58	<p>Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Regional Office of MoEF& CC, Bhubaneswar, SPCB, Odisha along with the Six Monthly Compliance Report.</p>	<p>Being complied</p> <p>Implementation of EMP and environmental conditions is being carried out and the company is committed to implementing the stipulated conditions of the environmental protection.</p>
59	<p>The mine shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of Environment Impact Assessment (EIA) report.</p>	<p>Being complied</p> <p>The mine has implemented adequate Pollution Control Measures and it's safeguards as proposed in the Environment Management Plan (EMP) of Environment Impact Assessment (EIA) report. The same shall be adopted in expansion phase also.</p>

<u>Miscellaneous</u>		
60	The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC, Bhubaneswar and SEIAA, Odisha.	Complied. The Digital Map is already prepared in the year 2018 and submitted to the Board.
61	The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the Concerned authorities and the date of start of land development work.	Complied The financial closures and final approval of the project is already taken and reported to the concerned authorities.
62	It shall be mandatory for the project management to submit six (06) monthly compliance reports on post environmental monitoring in respect of the stipulated terms and conditions in this Environmental Clearance to the State Environment Impact Assessment Authority (SEIAA), Odisha, SPCB & Regional Office of the Ministry of Environment & Forest, Odisha in hard and soft copies on 1 st June and 1 st December of each calendar year. The proponent shall also upload the compliance report including results of monitored data, as applicable in the website of the Ministry for monitoring of EC Conditions.	Being complied The compliance report Environment Clearance is being submitted (SEIAA), Odisha, SPCB & Regional Office of the Ministry of Environment & Forest, Odisha in due time.
63	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the Odisha 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 to the respective to the MoEF& CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.	Being complied. Form-V is being submitted every year within stipulated time.
64	The project proponent shall install solar panel inside the mine to generate 5KW of power required for Administrative Building as proposed.	Being complied Necessary steps are being taken to install solar panel inside the mine to generate 5KW of power.
65	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental	Being complied JSL is submitting the six monthly compliance reports on the status of

	Safeguards to the MOEF&CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.	the implementation of the stipulated environmental safeguards to the MOEF&CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board, Odisha timely manner
66	A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC, Bhubaneswar and SEIAA, Odisha.	Complied. 'Environmental Management Cell' with suitable qualified manpower is in place.
67	The proponent shall revalidate the explosive license beyond 31.03.2020 without which explosives shall not be stored / used.	Complied Explosive License is valid up to 31.03.2025. Explosive License is attached as Annexure-XIX .
68	The concerned Regional Office of the MoEF& CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data /information / monitoring reports.	Noted & agreed. JSL is committed to extend and abide for full cooperation to the MoEF & CC officer(s) by furnishing the requisite data /information/ monitoring reports.
69	In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.	Noted & agreed. The company is committed to adhere the directives strictly.
70	The SEIAA, Odisha or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	Noted & agreed. Any later/modification to the stipulated conditions of EC in the interest of environment protection by the SEIAA, Odisha or any other competent authority shall be duly complied by JSL.
71	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the Provisions of Environment (Protection) Act, 1986.	Noted & agreed. As mentioned in EC Conditions, all the compliances submitted are based on facts.
72	The SEIAA, Odisha may revoke or suspend this EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha	Noted & agreed. Satisfactory compliance of all the above mentioned EC Conditions or

	reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.	any modification by SEIAA shall be dully complied by JSL.
73	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974. the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.	Noted & agreed. Any additional stipulated condition, if comes in to force due to the amendment of Acts & Rules, shall be adhered properly by JSL.
74	The site will be visited by the sub-Committee of SEAC after six months to review the progress of recommendations of SEAC on specific conditions.	Noted & agreed. JSL shall ensure the compliances are in place before the site visit by the sub-committee of SEAC.
75)	Any appeal against this Environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Noted & agreed.

STATUS OF COMPLIANCE OF ENVIRONMENT CLEARANCE CONDITIONS OF COBP-II
REF F.No. J-11015/369/2009.IA-II (M) DATED 24.02.2016 OF
JINDAL CHROMITE MINES OF M/S JINDAL STAINLESS LIMITED AS ON 31/03/2023
COMPLIANCE PERIOD: 1ST OCTOBER 2022 TO 31ST MARCH 2023

SPECIFIC CONDITIONS:

SL NO	CONDITION	COMPLIANCE STATUS
01	Continuous monitoring of the mine water should be done and reports furnished.	Monitoring of Mine water is regularly being carried out and the report is being submitted to SPCB .Last monitoring report (October 2022 – March 2023) is attached as Annexure-I .
02	Continuous monitoring of all the drinking water Sources for Cr(VI) of mine water should be done & reports furnished.	Monitoring of hexavalent chromium Cr(VI) in drinking water is regularly carried out and the report is being submitted to SPCB.
03	Morbidity pattern which is a sensitive indicator of ill health with regard to Cr related diseases need to be done.	Periodical health check up of all the employees is being carried out regularly & no sensitive indicator of ill health with regard to Cr related diseases found so far.
04	Mine water discharge and/or any waste water shall be properly treated in an ETP/s for the removal of hexavalent chromium and to meet the prescribed standards before reuse/discharge. The run-off from OB dumps and other surface run-off shall be analyzed for hexavalent chromium and in case it's concentration is found higher than the permissible limit, the waste water should be treated before discharge/reuse.	The total run-off generated is pumped back to quarry by the surface run-off management plan. However for treatment of mine discharge the effluent treatment plant of capacity 250m ³ has completed. The monitoring of quarry water is being regularly carried out and the report is being submitted to SPCB on regular basis.
05	The project proponent shall obtain consent to Establish and consent to Operate from the state pollution control board, Odisha and effectively implement all the conditions stipulated there in.	Consent to Establish from the state pollution control board, Odisha have been obtained on dt 30.11.2011 vide letter No.20031/Ind-II-Noc-5299 and consent to Operate from the state pollution control board, Odisha have been obtained on dt 31.03.2023 vide Letter No- 5413/IND-I-CON-2562 .Attached as Annexure-III & IV .
06	Traffic density on the route of mineral transportation shall be regularly monitored and report shall be Submitted along with the compliance report.	Monitoring of traffic density conducted by the project proponent. The report is attached as Annexure- V .
07	As part of ambient air quality monitoring during operational phase of the project, the air samples shall also be analyzed for the mineralogical compositions and records maintained.	The ambient air quality monitoring is regularly carried out and the report is being submitted to SPCB on regular basis. The report is attached in Annexure-I .
08	Mineral handling plant 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	Fixed water sprinklers are provided at loading/unloading points, transfer points and at hoppers for control of fugitive emission.

	and operated.	
09	Effective safeguard measures such as conditioning of ore with water, regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and transfer points. It should be ensured that the ambient air quality parameters conform to the norms prescribed by the central	Fixed water sprinklers are provided at loading/unloading points, transfer points and at hoppers for control of fugitive emission. The ambient air quality monitoring is regularly carried out and the report is being submitted to SPCB on regular basis.
10	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.	We have identified a quarry of dimension 300 m Length x 200 m Width x 70 m Depth for storage of rain water as a conservation measure.
11	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new Piezometers. 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 the Ministry of Environment ,forest & Climate change and it's Regional Office Bhubaneswar, the central Ground water Authority and the Regional Director, Central Ground water Board. If at any stage, it is observed that the ground water table is getting depleted due to the activity; necessary corrective measures shall be carried out.	Regular monitoring of ground water level and quality is being carried out in and around the mine lease on regular basis. Reports are sent to the board in regular intervals. Ground Water level & quality report by NABL accredited lab is attached as Annexure – VI .
12	The project proponent shall regularly monitor the flow rate of natural water streams flowing adjacent to the mine lease and maintain the records.	The flow rate of natural water stream flowing adjacent to the mine lease i.e Damsala Nallah is 2 km away from lease is monitored and the reports are sent to SPCB on regular basis.
13	The reclaimed and rehabilitated area shall be afforested. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, forest & Climate change and it's Regional office located at Bhubaneswar on six monthly basis.	Being complied. Reclamation/Backfilling over an area of 8.24 ha is completed and 5000 nos. of plantation has already made over the area.
14	Dimension of retaining wall at the toe of temporary overburden dumps and OB benches within the mine to check run-off and siltation based on the rain fall data.	A length of 1087 m toe wall (boulder masonry), having dimensions- 1m width x 1m height, has been constructed at the toe of over burden benches. 348 mtr boulder wall has been constructed at the toe of the Over burden dumps.
15	Plantation shall be raised in the specified including a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area ,around	Being complied. Reclamation over an area of 8.24 ha is completed and 5000 nos. of plantation has

	the higher benches of excavated void to be converted in to water body, roads etc. By planting the native species in consultation with the local DFO /Agriculture Department. The density of the trees should be around 2500 plants per Ha.	already made over the area. Over the worked out benches we have planted 6000 Nos.
16	Effect safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM & RPM such as haul road, loading point, and unloading point & 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.	Fixed type water sprinklers are provided at loading/unloading points, transfer points and at hoppers for control of fugitive emission. Mobile water tankers are provided for haul roads for control of fugitive emission. Partly the haul roads are covered with fixed type water sprinkler.
17	Process water discharge and/or any water shall be properly treated to meet the prescribed standards before reuse/discharge. The run-off from temporary OB dumps and other surface runoff shall analyzed for iron and in case it's concentration is found higher than the permissible limit, the waste water should be treated before discharge/reuse.	At present there is no water discharge from the plant operation. Only the process water is recycled/ reused within the plant and tailing pond. The run-off from temporary OB dumps and other surface run-off generated is pumped back to the ETP and the water is being treated for it's higher concentration.
18	The decanted water from the beneficiation plant and slime/tailing pond shall be re-circulated within the mine and there shall be zero discharge from the mine.	Noted & agreed. There is no waste water from beneficiation plant, as total water will be re used/ re-circulated within the plant.
19	Regular monitoring of the flow rate of the springs and perennial nallahs shall be carried out and records maintained.	The flow rate of natural water stream flowing adjacent to the mine lease i.e. Damsala Nallah 2 km away from lease is monitored and the reports are sent to SPCB on quarterly basis.
20	Regular monitoring of water quality ,upstream and downstream of natural water bodies shall be carried out and record of monitoring data should be maintained and submitted to Ministry of Environment ,forest & Climate change, it's Regional Office, Bhubaneswar, Central Ground water Authority, Regional Director, Central Ground water Board, State pollution control board and central pollution control board.	Regular monitoring of water quality, upstream and downstream of natural water bodies are carried out and record of monitoring data is maintained and submitted.
21	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground water Board.	We have constructed 750 m ² roof top for rain water harvesting.
22	Vehicular emissions shall be kept under control and regularly monitored .Measures shall be taken for maintenance of vehicles during transportation of mineral from mine face to the beneficiation plant. The vehicles shall be covered with a tarpaulin and shall not be overloaded.	All the mineral transport vehicles are properly covered with tarpaulin during transportation. The vehicular emissions are found to be within limit.

23	Sewage water treatment plant shall be installed for the colony.ETP shall also be provided for workshop and waste water generated during operation.	05 no's of soak pits of dimension (6m Length x 2m Width x 4m Depth) have constructed for work shop and colony purpose.
24	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for maintaining land use pattern and report submitted to ministry of environment, forest & climate change and it's regional Office, Bhubaneswar.	Digital processing of the entire lease area using remote sensing technique method have conducted in 2020-21 and reports have been annexed as Annexure-VII .
25	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.	Being complied. All the employees are undergone IME and every year 20% of employees are being covered under medical examination as a part of statutory compliance and records are being maintained.
26	The project proponent shall take all precautionary measures during operation for conservation and protection of endangered fauna 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 Department. 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. All the safeguard measures brought out in the Wildlife conservation pan so prepared specific to the project site shall be effectively implemented copy of action plan shall be submitted to the Ministry of environment, forest & climate change and it's regional tOffice Bhubaneswar.	Wild life conservation plan has been prepared & approved from PCCF Wildlife, Government of Odisha detailing action plan for flora and fauna with the fund allocation vide letter No.570, dt. 13.01.2023.
27	A FMCP along with details of corpus fund shall be submitted to the ministry of environment & forests 5 years in advance of final mine closure for approval.	Noted & agreed.
28	The project proponent shall undertake all the commitments made during the public hearing and efficiently address the concerns raised by the locals in the public hearing as well as during consideration of the project, while implementing the project.	Noted & agreed.

GENERAL CONDITIONS

SL NO	CONDITION	COMPLIANCE STATUS
01	No change in chrome Ore processing/Beneficiation technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	Noted and agreed.
02	No change in the calendar plan including Processing/Beneficiation of mineral / Iron ore and waste should be made.	Noted and agreed.
03	At least four ambient air quality – monitoring stations should be established in the core zone as well as in the buffer zone for RSPM(Particulate matter with size less than 10 micron i.e., PM10) and NOx 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. The data so recorded 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.	Being complied. Reports are submitted to the board in every quarter. Last monitoring report (October 2022 – March 2023)is attached as Annexure-I .
04	Measures should be taken for control of noise levels below 85dBA in the work environment. Workers engaged in operations of HEMM, etc. Should be provided with ear plugs/muffs.	Engineering controls and maintenance schedules are followed to keep the noise levels below 85 dBA .All workers are provided with ear muffs those who are working in operations of HEMM.
05	There will be zero waste discharge from the plant.	Noted and agreed.
06	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.	Persons those who are working in dusty areas are provided with nose mask and relevant training is imparted to them.
07	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.	Being complied. Every year 20% of employees are being covered under medical examination as a part of statutory compliance and records are being maintained.
08	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.	Separate environmental management cell is operating for mines and is headed by dully qualified Senior Officials.
09	The Funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the ministry and its Regional Office located at Bhubaneswar.	Funds earmarked for environmental protection measures are spent only for environmental measures. Year wise expenditures are reported to ministry and it's Regional Office.
10	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.	Noted and agreed.
11	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 date/ Information/monitoring reports.	Noted and agreed.
12	The project proponent shall submit six monthly reports on the status of results of monitored data (both in hard copies as well as by email) to the Bhubaneswar, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall upload the status of compliance of the environmental clearance 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, forest & Climate Change, Bhubaneswar, the respective zonal officer of Central Pollution Control Board and the State Pollution Control Board.	Complied. Last EC six monthly Compliance submitted on 30.11.2022 vide letter no: JSL/KLPN/2022/180. Letter attached as Annexure- VIII
13	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParisad / Municipal Corporation, Urban Local Body and the 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.	Complied.
14	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/Tahasildars office for 30 days.	Complied.
15	The Environmental statement for each financial year ending 31 st 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 environmental clearance conditions and shall also be sent to Climate Change, Bhubaneswar by e-mail.	Being Complied. Letter attached as Annexure- IX
16	The project authorities should advertise at least two	Complied.

	<p>local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, Within 7 days of the issue of the clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at website of the Ministry of Environment, Forest & Climate Change at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of tis Ministry located at Bhubaneswar.</p>	
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