

NORTHERN COALFIELDS LIMITED

(A Mini Ratna Company)

OFFICE OF THE GENERAL MANAGER

JAYANT PROJECT P.O. Jayant Colliery Distt. Singrauli (MP) PIN 486890 Phone/Fax 07805-222228



No JNT/GM/Env/CMPDI/16/ /292

Date: 1.12.2016

To,

The Regional Director

RI-6, CMPDI.

Jayant

Sub; Certified Copy of Compliance in respect of EC conditions for 15.50 MTPA for Jayant Project

Ref: (i) Letter no CMPDI/RI-VI/Env/32/1996 dtd. 09.03.2016

(ii) Our letter no. Jnt/GM/Env/CMPDI/16/338 dtd. 25.03.2016

Dear Sir,

With reference to the above cited subject matter, the certified copy of compliance of existing EC (15.50 MTPA) of Jayant Project has been received from MOEF & CC office, Bhopal which is enclosed herewith for the purpose of submission/uploading Form-I to MOEF, for Jayant Expansion Project for 20 MTPA (peak 25 MTPA). The same is also submitted through mail.

This is for your kind information and further needful action please.

Yours faithfully,

(A.K.Choudhan)

General Manager

Jayant

Copy to:

(1) The GM(Envt), NCL, Singrauli

(2) The GM (CP), NCL, Singrauli

SPEED POST



भारत सरकार GOVERNMENT OF INDIA पर्यावरण, वन एवं जलवाय परिवर्तन मंत्रालय

MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

क्षेत्रीय कार्यालय, पश्चिम अंत्र Regional Office, Western Region. केन्द्रीय पर्याक्षरण भवन "Kendriya Paryayaran Bhayan" लिन्क राह न0-3/Link Road No. 3 E-5 रविश्वय नगर Ravi Shankar Nagar. мичты (чочо) Bhopal-162016 (М f*) फान: 0755 1465054, फेक्स: 07558 2463102 अगुडाक /E-mail reefbhopal a gmail.com

विनांक : 24,11.2016

寒中雨: 3-31/92(ENV)

डॉ0 एस.के. श्रीवास्तव वैज्ञानिक पर्यावरण/ वन एवं जलवाय परिवर्तन मंत्रालय, पर्यावरण भवनः

जुर्र याग गांड, अलोगंज, नइ दिख्ली 10003

विषय: जयंत ओपन कॉस्ट कोल माईन (10 एम.टी.वाय. और ई.सी. कॉन्सेंट ऑफ 15.50 एम.टी.पी.ए.) मंत्रालय का पत्र कमांक J-11015/382/2008-IA.II(M) दिनांक 10.12.2008 एवं तत्पश्चात जारो किया गया शुद्धिपत्र कमांक J-11015 382/2008-IA.II (M) दिनांक 15.04.2009

महादय.

मंत्रालय के उपरोक्त संदर्शित प्रजांकों के संदर्श में उकत परियाजना को प्रयावरणीय दुष्टिकाण मे अनुमात देते समय अनुबद्ध शर्तों के अनुपालन की अनुबोक्षण प्रतिवेदन (मानिटरिंग रिपोर्ट) एतद द्वारा संलक्ष्त कर प्रेपित है। अनुवीक्षण प्रतिबेदन मंत्रालय की वेबसाइट पर भी अपलोह की जा रही है।

्रवगञ्जानुसार

भवदाय

्ट्रं एव वा मी, चर्म गुल्यूप्रस्था।

वजानिक 'हा'

ऑसिंत रोता खन्ता निदेशक, (अनुवीक्षण सेल), प्रयोवरण, वन एवं जलवायु परिवर्तन मंत्रालय इंदिस पर्यावरण भवन, जोर बाग रोड, अलीगंज,नई दिल्ली-110003 की ओर सचनार्थ एवं भ्रावश्यक कार्यवाहा हत्।

महाप्रबंधक, नॉर्थन कोलफिल्डस लिमिटेड, जर्यत प्रोजेक्ट पी.ओ. जयंत कोलियरी जिला सिंगरीली (म.प्र.) - 486890

(डॉ. एच.बॉ.सो. चारी गृन्दुपल्ला।

वैज्ञानिक 'ही'

Monitoring the Implementation of Environmental Safe Guards Ministry of Environment & Forest Western Region, Regional Office, Bhopal MONITORING REPORT

PART-I DATA SHEET

		DATA SHEET
	PROJECT TYPE (River/Valley/Mining/Industry/ Thermal/Nuclear/Other)	Mining (Coal)
2	Name of the project	JayantOpen Cast Coal Mine (10 MTY with EC consent of 15.50 MTPA)
3	Clearance letter (s)/OM number and Date	No. J-11015/382/2008-IA.II(M) dated 10 th Dec.2008 And Corrigendum issued vide No. J-11015/382/2008-IA.II(M) dated 15 th April 2009
4	Location	Dist -Singrauli State - Madhya Pradesh Latitude -24" 08' 45" N to 24" 11' 25" N Longitude- 82" 38' 21" E to 82" 40' 45" E
5	Address for correspondence: Address of concerned Project Chief Manager (with PIN code & telephone/Telex/Fax no. etc.)	The General Manager. Northern Coalfields Ltd, Jayant Project. P.O: Jayant Colliery. Distt: Singrauli (M.P.) Pin- 486890 Phone no 07805-222228 Fax No. 07805-222228 Head at company level: The GM(Envt). NCL. Singrauli. At project level: St. Manager(Envt). Jayant, NCL.
6	Salient features of Project. Environmental management Plan	 Jayant Project is a 10 MTY opencast coal mine with EC consent of 15.50 MTPA. It has capital investment of 375.04 Cr.as on year 1988. Total mine lease area is 2704 Ha. It has work force of 2296 no.as on 30.09 2016. It is worked with dragline and shovel dumper combination as well. It has three coal seams the average thickness is as below: Turra -20-22 m Purewa top seam -7-8 m Purewa bottom seam -12-15 m Average gradient of coal seam- 2" to 5" The total capital cost of the project is 945.86 Cr.as on dtd. 31.03.2016.
		 There is regular plantation—done in the mine area (external and internal dump) and plain area as well within its leasehold area. Till date 30.40lakh plants has been planted in dumps and plain area.

7	- Break-up of the Project Area.	Submergence area (Forest & Non Forest): Nil. Others: Tenancy: 1075 Ha. Govt. Land: 467 Ha. Forest Land:: 1162 Ha. Total: 2704 Ha.
8	Break-up of Project affected population with enumeration of those loosing houses/dwelling units only, agricultural land only, both dwelling units & agricultural land landless	Total Nos. of PAPs = 1545 SC= 60. ST=356. Others=1129 1. Loosing house & land= 668 (plot given to 530 nos.,
	labourers/artisans. SC/ST Adivasis, Others. Please indicate whether those figures are based on any scientific & systematic survey	rest 138 nos. not claimed for plot.) 2. Loosing only land—877 (given compensation and other facilities to 877 nos. as per R&R policy.)
	carried out or only Provisional figures. If a survey is carried out, give details & year of survey others.	
9	Financial details: (a) Project cost as originally planned & subsequently revised estimate and the years of price reference. (b) Allocations made for Linvironmental management plans, with item wise and year wise break -up.	(a)Original Cost: Rs. 313.61 Cr. in year 1983 Revised Cost:Rs. 375.04 Cr. as on year 1988. Total capital expenditure incurred till 31:03:2016 of the project for 10 MTPA capacityis Rs. 945.86Crores. (including 389.55 Crores as replacement capital.) (b) The allocation made for EMP are as follows: Rs. 3.90 Cr for anti-pollution control measures Rs. 7.07 Cr. For technical reclamation and 0.10 cr. for scientific research and technical studies aswell. Total budgeted allocation: Rs. 11.07 Cr as per EMP for 15.50 MTPA
	(c) Benefit cost ratio/return on investment/internal rate of return and year	© Return on Investment (ROI)431.28% as on 31/03/2016.
	(d) Whether (c) includes the cost of environmental management as shown in (b) above.	(d) Yes
_	(e) Actual expenditure incurred on the Project so far:	(e) Fotal capital expenditure incurred till 31.03.2016 of the project for 10 MTPA capacity is Rs. 556.31Crore. (excluding replacement capital of Rs. 389.55 Crores).
	(f) Actual expenditure incurred on environmental	(f) Actual Expenditure incurred for EMP for last 3 years 2015-16: Rs. 10.43 Cr. 2014-15: Rs. 9.25 Cr.

-4		
7	management plans in	2013-14 : Rs. 6.21 Cr
- V-	the year 2015-16	Revenue cost :
100		There is provision of Rs. 5.50 Rs/te (every year) for
1		plantation, environment monitoring /wuditing, Socio
- J		Economic /peripheral development , Misc. pollution control
7		measures Compliance of statutory obligations like consent
A		to operate fee, water Cess payment and authorization etc.
1.0	Forest land Requirement:	
	(a)The status of approval of	(a)1162.171 Ha. of forest land has been approved. Out of
	diversion of forest for non	these 943,146 Ha has been acquired before FC Act 1980 and
	forestry use:	219.171Ha after FC Act.
	(b) The status of compensatory	(b)An amount of Rs. 38.00 Lakhs have been deposited to
سننا	afforestation.	M.P. Forest deptt. against compensatory afforestation of
		220.278 Ha. AtGopadhanas&Majhauli Tehsil area.
		The same of the sa
	(e) The status of clear felling.	(c)168.290 Ha, area has been completed with all activities
	No.	related to felling.
		Telling.
	(d) Comments on viability and	(d) The compensatory afforestation programme is done by
	sustainability of compensatory	MP Forest Department and the amount of expense is paid to
	afforestation programme in the	them by NCL.
	light of actual field experience so	them by INC12
	far:	
11		NIL
11	The status of clear felling in non- forest areas (such as	INIL
	submergence area of reservoir.	
	approach roads) if any with quantitative information.	
+0		
12	Status of construction:	17.2.1075
	Date of commencement (Actual	17-2-1975
	and/or planned)	10.12.2008 (for enhance production 12.50 to 15.50 MTY)
	Date of completion (Actual	Planned for up to 2019-20 (@ rate of 15.5 MTY)
	and/or planned)	S0 : 10 (1)
13	Reasons for the delay if the	Not applicable.
	Project is yet to start.	
14	Dates of site visit	
	a) Date on which the project	The state of the s
	was monitored by the RO	
	on previous occasion (if	
	any)	DINS SOLD
	 b) Date of the site visit for the 	04.10.2016
	monitoring report	
15	Point wise report regarding	All the points covered under the sl. No. 3 regarding
	implementation of	environmental safeguards stipulated in the EC consent letter
	environmental safeguards as	is deliberated in detail on pg no- 4-12 of this letter.
	stipulated in clearance letter	,
	mentioned at Sl.No.3	
16	Status of environmental control	Environmental control measures are being adopted as
31.75	measures as specified in EMPs.	specified in EMPs. Monitoring is being done by CMPDI, RI-
	Air pollution Noise Pollution &	VI, Jayant and State Pollution Control Board.
	Water Pollution.	AND THE BUILDING CONTRACT CONTRACT OF THE STATE OF THE ST

17	Details of	correspondence		
	Date	Letter from RO	Date PA	Reply fro
			06/07/2016 Letter no. JNT/	/GM/Env/16/745
			10/03/2016 Letter no. JN I/	/GM/Env/Form-1/16/285
			03/11/2016 Letter no. JNT/	/GM/Env/16/1197

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PART - II & III

ESCRIPTIVE REPORT ON STATUS OF COMPLIANCE FOR THE PERIOD OF APRIL 2016 - SEPTEMBER, 2016 TO CONDITIONS OF ENVIRONMENTAL. L MANAGEMENT

1) dated 04.12.1992

1	(a) O.M. No.: J/11015/4/82-Env- Conditions	3/1/4-11(.)
I	 The level of SPM concentration should not exceed 500 μ/cum at any station within the mine lease hold. Emission of SO2,No2 and CO should be maintained below the levels prescribed by the competent authority. 	Re CM SC SUI > Th
		- Mo
		SPM RSPM SO ₂ NO _x
		r The con is Ho
	The measures suggested in EMP in this regards should be strictly implemented.	sho onl lt h only refl
	The quality of effluent finally discharged in the	Cond
	main water course should confirm to the standard prescribe under CSR 195 (E) dated 12- 9-88	At trea wat
		HE > The
	MIT A CONTRACT CONTRA	from

Compliance status

- egular monitoring is being carried out by MPDI, RI-VI, Jayantfor SPM, RSPM, O2 and (NO), and report is regularly bmitted.
- ne environment lab at CMPDI,RI-VI, yant is well equipped and facilitated by ell qualified chemists also.
- onitoring report for QE June 2016 is pended below:

Particulars	Actual Result (μg/m³)	Permissible limits(µg/m³)
SPM	327	600
RSPM	198	300
SO ₂	23	120
NO _x	28	120

- results revea that the ncentration and emission of SO2 and NOx well within the permissible limit. wever, the lab is not accredited. Test ould be done through accredited lab ly henceforth
- has been reported that EMP was prepared y in 2008 which is being complied and lected in the compliance Report of 2008.

lition complied

- Jayant mine, the cfillient of ETP is ated and recycled for industrial use like ter spraying on haul roads and even in IP. It is also used for washing purpose in EMM workshop.
- ere is no discharge of elfluent reported m Javant mine in to main water course as the same is recycled.
- The details of test parameters of treated water are as follows which is well within the permissible limits.
- Test results are not certified by accredited lab.

		Parameters	Norms	Test Result (after treatment)	
		TSS(mg/l)	100	78	
		pH	5.5-9.0	8.18	
		Oil &	10	3	
	The Property of the Land of th	grease(mg/l)			
	Protest and broken design of the	COD(mg/l)	250	29	
		Condition comp	olied.		
(II)	No change in the method of working (including calendar plan of excavation) made without prior consultation of the ministry.	the meth	od of working	at there is no change in of Jayant OCP, excavation is reported	
		Conditio	on complied	Armeda	
IV	The external Dump area and internal dump should be biologically reclaimed. The external dumps area should not exceed 166 Ha.	mp - The external dump area of 118.65			
		Conditio	n complied		
V	The reclamation plan and land use plan as envisaged in the EMP should be strictly implemented. Also green belt should be provided in other areas like mine colony interface, CHP area etc. to attenuate noise level and also to arrest fugitive dust.	reported area of dump are fine gree colony to the air be 30.40 la planted t	to being im reclamation is a and plain are on belts are a b attenuate the orn dust. akhs plants l	f EMP of 2008 is applemented. The total 699.88 Ha including tea as well, also provided in CHP noise levels and arrest have been reportedly 30.09.2016).	
VĬ	Environment management cell has to be established to carry out function relating to environmental management action plan. The head of the cell should be directly report to the	establish one Sr. 1	ed at JayantF	perment Cell has been Project, consisting of , One MT (Env), one	
	Chief executive.	Jayant v		neral Manager (Civil) freedly to the General	
				guidance is being done at corporate level who	

1		is directly reporting to CMD through Director (T/P&P). But none of the personnel are of Environmental background. They armining and civil engineers, NCL has been asked to recruit some personnel with correnvironmental background. Partly complied.
		rartly complica:
VII	Adequate fund provision (capital and recurring expenditure) should be made for implementation of all safe guard measures and the fund should not be diverted for other purposes.	 As reported, the capital fund is provided it EMP (10 MTY with EC consent of 15.5 MTPA) which is Rs. 11.07 Crore for environment control measures. For recurring expenditure on environment.
		management, no separate fund is provide though actual expenditure on different activities is sanctioned. The total expenditure on environment control measures during last three years are a follows:
		2015-16 Rs. 10.43 Cr 2014-15 Rs. 9.24 Cr 2013-14 Rs. 6.21 Cr.
		 The escrow account is also operating the detail of which are as below: AC no. 391703800000527 Bank Name: Union Bank of India, Morwa
		Condition complied.
VIII	The ministry or any other competent authority may stipulate any other condition at any stage. The ministry reserves the right to modify the conditions to revoke the approval if necessitated either due to change in scope and consequent environmental scenario or the feedback from monitoring the impacts of the project.	It is reported that any condition stipulated be ministry or any other competent authority is complied strictly at project level. A separate Eddated 2008 was later issued with a sets of new conditions for which compliance reports submitted separately. Condition complied.
IX.	Environmental compliance status report vis-a vis project progress should be submitted for the scrutiny of this ministry once in six months regularly.	Environmental compliance status report is bein reportedly submitted regularly on every six months. Condition complied.
X	Regular monitoring of air and water quality should be made in and around the core zone. The sampling points and frequency should be decided in consultation with state pollution control board.	Ambient Air Quality (AAQ) Monitoring stations ar reported to have been established at followin places; Core Zone: 1) CETP
	The quarterly data should be furnished to ministry regularly.	2) Coal sub station 3) CWS GM office 4) Rose Garden
		Buffer Zone: 1) Madhauli Sub Station

	2) Nigahî STP
	3) CMPDI Camp, Singrauli
	4) Surya Kiran Bhawan
	Locations of sampling sites for water quality
	monitoring are as follows:
	Inlet of Mine Effluent Treatment Plant
	Outlet of Mine Effluent Treatment Plant
	Inlet of combined Effluent Treatment Plant
	Outlet of combined Effluent Treatment Plant
	5) Discharge of Sewage Treatment Plant
full to the same and a second of	Overflow of Mudwani dam
THE RESERVE OF THE PARTY OF THE	
	7) Downstream of MudwaniNalla near gole
	Market
	 Downstream of Ballianalla near Shakti nagar road crossing
The state of the s	Main reservoir of Jayant colony.
the contract of the contract of the contract of	Regular Monitoring of Air and water is being done
	by CMPDI and reportedly being submitted
	regularly. However, consultation with state PCB
	does not seem to have taken place in selecting the
	stations, as was mandated in the condition.
A STATE OF THE STA	
	Partly complied.

(b) vide No. J-11015/382/2008 -IA.II (M) dated 10.12.2008 (expansion in production from 12.5 MTPA to 15.5 MTPA)

Sr,N Conditions		Compliance as on 30.09.2016
Α	Specific Conditions	
1	No mining shall be carried out in the forestland for which forestry clearance has not been obtained.	It is reported that as per the condition of EC consent letter, mining at Jayant OCP was neither carried out earlier in the forestland nor it is being carried out at present. (for which forestry clearance has not been obtained).
	- simple particular	Condition complied.
II	Mining shall be carried out as per statute at a safe distance from the BalliaNallah. No modification of the natural drainage shall be done in the expansion project.	Jayant OCP is reported to be situated at a distance of 4.2 km, which is at a safe distance from the Ballia Nallah. (it is reported that the safe distance is not specified in the EMP). Modification of the natural drainage has not been carried out in the expansion project.
		Condition complied.
Ш	Topsoil to be stacked properly with proper slope at ear marked site (s) and shall not be kept active and shall be used for reclamation and development of green belt.	Complied. Topsoil (soil & sandy soil) is reportedly available in patches which are generally 1.0 to 1.50 m thick. Top soil removed is stated to be stored properly at earmarked place. These dumps (of top soil) is not kept active, as informed. It is used for reclamation of

dumpsand development of green belt.

The detail of top soil stacked is as follows:

SI.	Month	Stacking (m ³)	Utilization (m ³)
ì	Apr 16	2250	Utilized during
2	May'16	2355	plantation
3	June'16	615	
4	July'16	975	
5	Aug 16	Nil	
6	Sept 16	Nil	

TV

- No new external OB dumps shall be created. OB stored in two external OB dumps of a max, height of 90m, consisting of 3 benches of 30m each, has been stabilized with plantation and no new OB generated in the balance life of the mine shall be dumped on the existing OB dumps and the height of the existing dump shall not be increased from the present 90m.
- OB generated in the balance life of the mine shall be back filled into the decoaled void only by concurrent backfilling and by re-handling at the time of mine closure into the de-coaled void. Slope stability study shall be undertaken to determine if the backfilled void height can be raised to a max, heightof 90-100m with an overall angle not exceeding 28°.
- Copy of the report on slope stability shall be furnished to this Ministry and to RO. MOEF. Bhopal and only with prior approval based on slope stability the dump height on de-coaled void shall be raised to 100m.
- The backfilled area/dump shall be stabilized with plantation (existing external OB dump of a balance area of 630 ha and 996 ha of backfilled Internal dump). Geo-textile material shall be used to stabilize critical areas of the dump. Monitoring and management of reclaimed existing dump sites and the reclaimed internal dump shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located

PP submitted the following

- No new external dump has been created. The earlier two hos, of external OB dumps, in western side with final R1, 425m and on eastern side with final R1, 413m have been completed as per mine closure plan.
 - These two external OB dumps havebeen technically and biologically reclaimed with plantation in 118.65 Ha area out of total area of 166 Ha.
- As of now, all OB is being backfilled in to decoaled area.
- Backfilled void has been raised up to a maximum height 90-100 m.
- Overall slope angle of the backfilled dump has been kept at less than 28th as specified in the condition.
- Slope stability study at Jayant Project has been conducted by BIT, Mesra and CMPDI, Ranchi. The report of this study has been submitted to RO, MOFF, Bhopal, (copy enclosed for ready reference)
- The back tilled area /dump has been technical and biological reclaimed.
- Its compliance status is sent to MOEF and its Regional offices as well.

Complete reply missing about geo-textile material to stabilize critical areas etc. Complete statsus also does not seem to have been submitted.

at	Bho	nal a	on:	a v	earl	V.	basis.
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Partly complied.

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Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil. OB and mineral dumps.

Turkithi imministra

 The water so collected shall be utilized for watering the mine area, roads, green belt development etc.

 The drains shall be regularly desilted and maintained properly.

- Garland drains (size gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site.
- Sump capacity shall also be provided adequate retention period to allow proper settling of silt material.

VI

Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run off and situation shall be based on the rainfall data.

VII

- CHP would be fully enclosed.
- Crushers at the CHP shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing

PP submitted the following:

- Considering the water & silt quantity, Catel drains & Siltation ponds have been properly designed & constructed which are covering the present dump's flow of any loose soil.
- Catch drains of size (width at top- 2 m, width at bottom- 1 m & depth- 1 m) has been constructed around the periphery of the OB dump to arrest silt and sediment flows from the respective dump flows.
- Siltation pond is constructed to contain mine water at the coal face of mine.
- Collected water is used for sprinkling on haul roads. HEMM washing, & in CHP for dust suppression(after treatment at ETP)
- De-silting of drains is done every year.
- Carland drains (Its gradient varies from 3 to 10 and its total Length= 2.7 Km) has been constructed. Sumps are properly designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area or adjoining the mine site.
- Mine Sump has adequate capacity to allow adequate retention period of collected water and allow proper settling of silt material.
- In addition to the above gabion wall (length- 6 km) has been constructed to at the toe of the dump for its stabilization and also arrest the flow of silt as well and other vulnerable places also.

Condition complied.

- Retaining Wall (total Length= 11.5 Km) is stated to be designed & constructed after due consideration of rainfall data and angle of repose.
- Height of the retaining Wall above the ground level ranges from 2m to 3.5m based on the site specific conditions.

Condition complied

PP submitted the following:

- Jayant CHP is fully enclosed.
- In CHP Crusher dust extractor and mist spray system for dust suppression is being used.
- The fixed water spraying is done all along the CHP conveyor System and transfer points.

	operations, conveyor system, haulage	
VIII	Drills shall be wet operated only.	 As far installation of bag filter is concerned, the purpose is already satisfied with the installed water spraying system. Regular monitoring of dust suppression at CHF is done and if needed bag filters shall be installed. The total length of belt conveyor is 16.0 Km. Condition complied. Following have been submitted by PP High capacity drills with latest dust extraction advanced system are being used. The dust extractor so installed in drills fulfills the very purpose of dust suppression at source and when accumulated its disposed off at far places in dumping. This device of dust extraction is far more reliable in comparison to wet drilling.
		Condition complied,
IX	 Controlled blasting shall be practiced between IPM to 2 PM only with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented. 	change hours i.e. 2PM to 2.30 PM in day time only. (Earlier the shift change over time was 1.0 Pm to 2.0 PM) so as to minimize the impact of dust and noise pollution. It is reported that Charging of holes and total charge per blast is maintained to control ground vibration within permissible limit for which the same is monitored frequently. Plectronic detonators are used in Jayant project for minimization of ground vibration and even fly rocks too. condition complied.
X	The entire coal of 43000 TPD shall be transported by MGR with Silo loading facility only. There shall be no mineral transportation by road.	The entire coal is reported to be loaded through CHP &Silo to the Merry Go Round (MGR) system and transported by rail only. The transportation of coal is limited to 43000 TPD. Condition complied
XI	A progressive afforestation plan shall be implemented covering a total area of not less than 1450.77 ha which included reclaimed external OB dump (630 ha) backfilled area (996 ha) along ML boundary along roads and infrastructure (19.30 ha) green belt (74 ha), along vacant land (242.82 ha) and in colony by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.	Partly complied. No detailed plan for completing the target given. The details of afforestation at present and as submitted is as follows: Total area of afforestation shall be complied only after closure of mine. However, it's under expansion programme for 20 MTPA (peak 25 MTPA) and mine will be exhausted by 2035-36. Type of Land Total Plantation Area (in Ha)

		External OB Dump	118.65	
		Internal OB Dump	391.22	
		Greenbelt in colony area	21.30	
		Greenbelt on vacant land	74.00	
		Other Plantations	94.71	
		Total	699.88	
		The expenditure (in Rs. Lak years are a		
		2011-12	58.84	
		2012-13	45.35	
		2013-14	52.64	
		2014-15	38.69	
		2015-16	37.80	
			NI NAME	
XII	 Of the excavated area, an area of 996 has shall be backfilled and reclaimed with plantation and the balance 114 has of the de-coaled void shall be converted into a water reservoir, the higher benches of which shall be gently sloped and stabilized by plantation/afforestation by planting native plant species in consultation with local DFO/Agriculture department Biological reclamation of backfilled areas shall commence immediately and the balance as a time bound manner. The density of the trees shall be around 2500 plants per ha. 	Major part of the de-coaled void is be backfilled and reclaimed with plantation at achieving the planned height of Dump. Balance 114 ha of the de-coaled void shall converted into a water reservoir which will gently sloped along the higher benches a stabilized by plantation/ afforestation at the time of closure of mine.		
XIII	 The company shall obtain approval of CGWA/CGWB Regional Office for use of ground water. If any, for mining operations, sanction of the competent authority shall be obtained for use of water from the integrated Water Supply Scheme of the G.B. Pant Sager. 	operations. Sanction of competen from G.B.PantSagar (by NCL, the then Competent of the com	sently not used for mining t authority for use of water Rihand) has been obtained entral Coalfields Ltd. vide GWA/2007/626 dtd 20 th	
XIV	 Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to 	 Monitoring of ground reportedly being carriestablishing a network monitoring of ground started from last five. Nine Piezometers has Project. One no of a machine is already borewell. 	we been installed at Jayan utomatic depth monitoring installed at one deep itoring level with the help	

2.7	monitoring.			column(mWC)
4		1.05.2016	-12.37	+0,25
		1.06.2016	-12.36	-0.26
		1.07.2016	-12.89	-0.26
		1.08.2016	-12.54	-0.35
		1.09.2016	-8.15	+4.39
XV	Check dams, water channels and other water recharge structures shall be constructed in consultation with the local communities.	Ground CMPDI Ground regular! Environ Conditi Two nos mine Ar flow in surround	water more on regular be water More y submitted ment & Fore on complice of check date at a treat of the natural ling area.	nitoring is being done by basis in all piezometer. nitoring report is reportedly bed to the Ministry of ests and CPCB as well.
		Jaitpur commur Howeve more su Partly c	village in outles. cr, it is not the structure omplied.	reported or established if e is required.
XVI	The company shall put up artificial ground water recharge measures for			the following:
	augmentation of ground water resource. The project authorities shall meet water requirement of nearby village(s) in case constructed at CGM Office complex. Execution by Execution Execution Complex and CGM Office complex and CGM Office complex are constructed at CGM Office complex. Execution Constructed at CGM Office complex are constructed at CGM Office complex. Execution Constructed at CGM Office complex are constructed at CGM Office complex. Execution Constructed at CGM Office complex are constructed at CGM Office complex. Execution Constructed at CGM Office complex are constructed at CGM Office complex. Execution Constructed at CGM Office complex are constructed at CGM Office complex. Execution Constructed at CGM Office complex are constructed at CGM Office complex are constructed at CGM Office complex. Execution Constructed at CGM Office complex are constructed at CGM Office constructed at CGM Office constructed at CGM Office constructed at CGM Office constructe			Office complex. Executive buse, Officers club etc. rovided RO plants at nearby
	the village wells go dry due to dewatering of mine.	 Water Medhau mobile v 	tanks have li village an water tankers	e also been provided to nd its regularly filled up by s as per requirement.
7571			on complied	
I I	The capacity of sewage treatment plant to treat the entire domestic sewage of 4000 cum/d generated from the project shall be installed in the existing colony. ETP shall also be provided for	and mu		STP has been constructed operation for treatment of m colonies.
	workshop and CHP wastewater to ensure that the total wastewater of 40,000 m ³ /d being discharges form the mine conforms to prescribed standards for discharge.	treatmer & CHP	and mine o	capacity are in operation for it generated from workshop discharge. The treated water and standards.
	 Water from both STP and ETP shall be recycled and used for project activities to the extent possible. 	reused for dust sup	or sprinkling pression. ails of test	water except rainy season is g on haul roads & in CHP for parameters of treated water
		are as to	MONE	

Date

Water

level(mWC)

Increase(+)/

column(mWC)

decrease(-) in water

the Ministry of Environment & Forests and to the Central Pollution Control

Board quarterly within one month of

monitoring.

	BOD 30 12	
	Condition complied	
XVI The project authorities shall carry out a study for zero discharge from NCL mines by considering various options for using excess effluents including artificial recharge and the report on the same shall be submitted to this Ministry within six months of issue of this clearance letter.	Jayant Project has not been done. NCL informed that it will be taken up very soon. Same study has been done at nearby project. NCL i.e. Nigahi Project according to which to mine water is mostly used for industrial purpose.	
	(ii) The impact of mining on ground water system is negligible. (iii) The mine water is free from pollutant. (iv) To reduce the TSS, the mine water is	
	discharged after passing through the sedimentation tanks. (v) After cessation of mining, part of quarry area will be reclaimed with highly permeable OB material.	
	(vi) In post mining scenario, the recharge and source potential in cure zone will be much higher than the existing. At Jayant mine also ZERO DISCHARGE concept has been implemented since Dec'14. The mine water is used for industrial purpose.	
Annual of Backgroup, Inc.	like spraying purposes. CHP cleaning and HHMM washing etc. Treated effluent of ETP is recycled for use in CHP for dust suppression and in HEMM.	
	workshop for washing purposes. Condition complied	
XIX Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from work force engaged in active mining operations shall be subject to health check up for occupational diseases and hearing impairment if any, through an agency such as NIOH. Ahemdabad with a period of two years and the results reported to this Ministry and to DGMS.	NCL submitted the following: Regular periodic health check up of all employees in the form of Periodic Medical Examination (PME) is carried out. Periodic healthchecks up were conducted for 779	
	F0	

Parameters

TSS

PH

Oil &

grease

COD

BOD

Norms

5.5-9.0

100

10.

250

30

Test Result (after

treatment

78

29

12

8,18 3

5		
		 NIOH. Ahmadabad has completed the health study and submitted the draft report(copy enclosed). The duration of PME at 5 years intervals is mandatory as per rule and it is strictly complied. The persons working at vulnerable places (high pollution zone) is allowed to undergo the yearly health check up or even earlier whenever needed. Condition complied
XX	For monitoring land use pattern and for post mining land use, a time series of land use maps based on satellite imagery (on a scale of 1:5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series) and the report submitted to MOEF and its Regional Office at Bhopal.	 Land use maps based on satellite imagery is prepared once in a year through CMPDI. Remote sensing map of Singrauli Coalfields prepared by CMPDI for the Year 2015has been uploaded on the website of the company (A copy enclosed for ready reference). Compliance is not as per mandated condition which needs to be ensured Partly complied
XXI	A final mine closure plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests five years before closure of the project.	It has been reported that Revised Mine Closure Plan have been submitted to MoEFCC and MPPCB, vide letter No CGM/JNT/ENV/13/29 dated 20.12.2013. Condition Complied
I	 R&R for the remaining 511 PAPs of the total 1239 PAPs R&R shall be completed within 2011. Monitoring of impact of implementation of various activities and measures outlined in R&R and CSR over the life of the project shall be based on key indices of 'UNDP Human Development Report using pre-project status of socio-economic and human development as the baseline. 	 Under the UNDP Human development programme with respect to socio economic purpose as well, different activities are undertaken which includes various skill development and alternate livelihood programme. Corporate social responsibility (CSR) activities are covered under UNDP human development index and socio-economic status of local communities living in villages near the project area is taken care of during the project life. Rehabilitation & Resettlement (R&R) is being done as per CH. Rehabilitation & Resettlement (R&R) policy and employment is being provided to Project affected people (PAPs) as per approved norms of CHL. For the remaining 511 PAPs of the total 1239. R&R has been finalized. As per R&R policy compensation has been given to 877 Nos with other facilities and Plot has been given to 530 PAPs. A detailed list of work and expenditure for CSR Work for last three years of Jayant Project are as follows:

	Year	Activities	Total Co. implied (Rs. Laich)
	2013-14	Construction of community hall in Dheki village	28.67
		Construction of 200 m PCC road	12.28
		Black topping of approach road	69.28
		Deepening and cleaning of pond	15.70
		Total	126,47
and the same statements of the same statements	2014-15	room in Govt High	22.90
		Installation of RO	76.40
Little or any age time or accombinate of the		Portable water supply by	5.81
The same of the sa		Construction of tailets	20.0
		Total	125.11
	2015-16	Construction and development of bus stand at Jayant more	150.0
many of the by the		Total	150.0

General conditions B Compliance status 1 No change in mining technology and scope of It is stated that No change in mining technology and working shall be made without prior approval scope of working will be made without prior approval of of the Ministry of Environment and Forests. the Ministry of Environment and Forests. complied As reported, the activities of mine excavation, H No change in the calendar plan including excavation, quantum of mineral coal and waste production of coal and OB removal is being made as per shall be made. calendar plan only. complied 111 Four ambient air quality-monitoring stations AAQ Monitoring stations have been established at shall be established in the core zone as well as following places: in the buffer zone for monitoring SPM, RSPM, Core Zune:

5) CEIP

Coal sub station

SO- and NO, and heavy metal such as Hg, Pb.

Cr. As, etc. Location of the stations shall be

decided based on the meteorological data,

topographical features and environmentally and

ecologically sensitive targets in consultation

with the State Pollution Control Board.

7) CWS GM office
8) Rose Garden
Buffer Zone:
5) Madhauli Sub Station
6) Nigahi STP
7) CMPDI Camp. Singrauli
8) Surya Kiran Bhawan
But, basis for selection and whether consultation

total 1239 PAPs R&R as was mandated to be

completed within 2011, has not been done.

Partly completed.

- Fugitive dust emissions (SPM and RSPM and heavy metal such as Hg, Pb, Cr, As etc.) from all the sources shall be controlled regularly monitored and data recorded properly.
- Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.

with SPCB has been held is not mentioned.

Partly complied.

PP submitted the following:

The monitoring of fugitive dust emission is conducted by PDS (personal dust sampler). The actual vis-à-vis norms are as follows:

Date of sampling for fugitive dust	Actual Result (mg/m ³)	Permissible limits (mg/m³)
05.07.2016	1.09	3.0
25.04.2016	1.66	
08.03.2016	1.50	

- The test of heavy metals in ambient air is done by CMPDI. The details are given in pt. no. V.
- Fugitive dust emissions from all the sources are being controlled by providing 16 Nos. Mobile sprinklers on haul road, automatic Water spraying arrangement at crusher, wagon loading and CHP and maintained in operative condition.

complied

Data on ambient air quality (SPM, RSPM, SO₂ and NO₃ and heavy metal such as Hg, Pb, Cr. As, etc.) Shall be regularly submitted to the Ministry including its Regional Office at Bhopal and to the State Pollution Control Board and the Central Pollution Control Board once in six months.

It is reported that Monitoring is being done by CMPDI for SPM, RSPM, SO₂ and (NO), and report is regularly submitted. Monitoring report for QE June 2016 is appended below:

- 1100 - 11 - 11 - 11 - 11 - 11 - 11 -	X		
Particul ars	Actual Result (mg/m³)	Permissible limits(mg/m³) based on weighted average for 24 hrs. 600 300	
SPM	327	600	
RSPM	198	300	
SO ₂	23	[20]	
NO.	28	120	

Heavy metal in air is being tested six monthly by CMPDL

The test result are as follows:

Particular s	Actual Result (µg/m³)	Permissible limits (μg/m³)
Flg Cr	0.009 BD1.	Not available on NAAQS*
As	0.003	0.06
Pb	0.079	1.0
Ni	0.025	0.02

*NAAQS-National Ambient Air Quality standard issued by CPCB

BDL- Below detectable limit.

However, it does not seem that reports are submitted regularly. This is to be ensured.

		Partly complied
VI	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of 'HEMM' etc. shall be provided with ear plugs/muffs.	Additionally ear plugs/ earmuffs are also being provid- to employees wherever found necessary. But no measured data furnished to compare value
		Partly complied
VII	Industrial waste water (workshop and waste water from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	operation for treatment of wastewater from workshop CHP & mine. Quality of treated water of ETP i monitored fortnightly by CMPDI and weekly by SPCE MOEF recognized laboratory and all parameter reportedly conform to the standards prescribed unde
VIII	Vehicular emissions shall be kept under control	
	and regularly monitored. Vehicles used for transporting the mineral within the mine shall be optimally loaded.	that vehicular emissions are to be kept under control
		But no action atken to monitor emission and value:
		reported.
		Not complied
IX	Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	which is having all requisite facilities. It eaters to the need of all projects of NCL including Jayant.
X	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractors due to exposure to dust and to take corrective measures, if needed.	It is reported that Dust masks are provided to employees working in dusty areas and adequate training on safety and health is imparted. Occupational health surveillance program has already been implemented and Periodic Medical Examination after every 05 years for all the employees is done at our central hospital/ Project dispensary. Status of PME:- 1. Last year (2015) PME for Employees= 779. 2. This year (1-1-2016 to 31-08-2016) PME for Employees = 604 complied
ΧI	A separate environmental management cell with suitable qualified personnel shall be set up	Environmental Management Cell has already been established and currently consisting of one Sr. Manager

	7				
1	under the control of Senior Executive, who will report directly to the head of the company.	(Env) with specialization in Environment Management, One MT (Env), one Forest officer and headed by Dy General Manager (Civil), Jayant who reports directly to the General Manager of the Project. Day to day technical guidance is being done by GM (Environment) at corporate level who is directly reporting to CMD through DT (P&P). Partly complied			
XII	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the Ministry and its Regional Office at Bhopal.	Bank Name: Union Bank of India. Morwa			
XIII	The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities shall extend full co-operation to the office(s) of the Regional office by furnishing the requisite data/information/monitoring reports.	compliance is being submitted to MPPCB and MOEF six monthly. Last Environmental compliance report for the period of Sept 15 to Mar 16 had submitted on 29.05.2016 vide letter no. GM/JNT/ENV/16/618. It is also reported that from time to time officials of MPPCB and MoEF&CC are visiting the project for monitoring the physical status of the compliances.			
XIV	A copy of the environmental clearance letter shall be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	concerned, however, no documentary evidence submitted.			
XV	State pollution control board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's office/Tehsildar's office for 30 days.	Not Appleable			
XVI	The Project authorities shall advertise at least in two local news papers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen	d within 7 days. As per the PP, the EC of Jayant Project was published in two news papers. The details are as follows:			
	at the website of the ministry of Environment & Forests at http://envfor.nic.in . The compliance status shall also be up loaded by the project authorities in their website so as to	Name of News paper Amar Ujjala	Place of advertisement Varanasi, UP	Date of advertisement 5,1,2009	
	bring the same in the public domain.	DainikBhaskar	Satna, MP	6.1.2009	

Summary and conclusion:

There are 10 stipulated conditions in the EC issued in 1992 and 38 conditions in the EC issued in 2008. Of these total 48 conditions, 31 are found fully complied, 13 are found partly complied, 3 are non-complied and 1 is not applicable. The deficiencies and shortcoming against each of the partly and non-complied conditions have been explained in the respective compliance status column. The PP needs to take corrective steps for full compliance and submit report in respect of these conditionality. It merits mention that the test conducted for analyzing air quality and water quality parameters are not through an accredited laboratory. CMPDI has got accredited lab in Ranchi only and the Lab at Singrauli which has conducted various tests is not accredited. Therefore, a view may be taken by MoEF&CC HQRS on this. We have mentioned that henceforth tests should be conducted through accredited Labs only.

Court cases / NGT issues and show cause/closure notices.

The PP has reported that there is no court case or NGT issues or notice on non-compliance against the project in the last five years by SPCB/CPCB.

Selentiet " E