ENVIRONMENTAL AUDIT REPORT OF MAHUAAMA SAND GHAT OF GAYA DISTRICT ON MORHAR RIVER



FOR

Bihar State Mining Corporation Limited (Govt. Of Bihar Undertaking) Date of Audit - 10.02.2022

Prepared By:



COGNIZANCE RESEARCH INDIA PRIVATE LTD.

(Accredited by QCI/NABET, Govt. of India)

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Report Code	CRIPL/BSG/2022/02
Project	Mahuuama Sand Ghat at Morhar River
	Mauza- Mahuuama ghat, At- Mahuuama,
	P.O- Naurangi, Dist Gaya, Thana No
	452,Khata No06, Khasra No 84, 85, Area-
	6.0 Ha.
Client	Bihar State Mining Corporation Ltd.
	(Govt. of Bihar Undertaking)
	Address– Room No. 164, Vikas Bhawan
	(New Secretariat), Bailey Rd. Patna-800015.
Consultant	Cognizance Research India Pvt. Ltd.
	G-20, Sector – 117, Noida – 201301.
Audit Date	10 Feb 2022
Final Report	23.02.2022

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DECLARATION OF THE AUDITOR:

- We Cognizance Research India Pvt. Ltd. has been prepared the report independently.
- We have expertise in conducting environmental audits, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity.
- We have prepared this report as per the Work Order Scope issued vide letter no.03/vivid-53/21-611.
- Based on information provided to us by the project proponent, and in addition to the site visit conducted by us we have presented the results and conclusion.

AUDIT OBJECTIVES

- 1. Implementation of Sustainable Sand Mining Management Guidelines 2020.
- 2. Use of Latest technology/Drone to Monitor the Mining activities.
- 3. Evaluation of the EC/CTE/CTO Compliances
- 4. Ensure conservation of the river equilibrium and its natural environment by protection and restoration of the ecological system. Mining companies maintain adequate control system to minimize environment damage impacts.
- 5. Ensure that the rivers are protected from bank and bed erosion beyond its stable profile.
- 6. Promotion of environmental awareness through participatory auditing process.

Scope of Work asPer the Work Order of BSMCL

S.no	Scope	Compliance
1.	Ensure prevention of illegal mining with the use of drone and any other latest technology	Drone Survey Carried Out. Site Photos attached on Page no.23- 25
2.	Submission of drone generated report in readable format including with statutory obligations	Drone Survey Carried Out. Site Photos attached on Page no. 23-25
3.	Evaluate compliances being done by the contractors with statutory obligations pertaining to Environmental Laws/CTE/CTO/EC	Complied in the Report
4.	Make recommendations to improve the environmental compliance of the contractors from time to time	Complied in the Report
5.	Ensure implementation of recommendation of the auditor by the contractors during the contract period	Will be complied after approval of the EA report.
6.	To identify emerging environmental concerns and evaluate environmental and safety conditions in sand mining	Complied in the report
7.	Assessment of the progress achieved in implementing the enforcement and monitoring guidelines for sand Mining 2020	Report is prepared following the guidelines for sand Mining 2020
8.	The auditor have to submit structed audit report inclusive of evaluation reports	Complied.
9.	An evidence report including all the evidences collected during the course of audit such as site visit reports, photos, drone images in readable format	Complied. Attached as Annexure-CD Submitted for the Same
10.	A sperate Executive Summary of the main audit conclusions and recommendations on each aspect of the audit	Complied
11.	The auditor will submit soft copy of audit report including images, sound, videos etc in readable/Legible form	Complied CD Submitted for the Same

Project Details

The Mahuuama Sand Ghat at Morhar River Mauza- Mahuuama ghat, At- Mahuuama, P.O-Naurangi, Dist.- Gaya. Area- 6.0 Halease is allotted to M/S Westlink Trading Pvt.Ltd. and EC has been Granted on 07.04.2016 By SEIAA Bihar. Later EC has been transferred to BSMCL By Letter No. 152 dated 30/09/2021 by SEIAA Bihar. BSMCL appointed M/s Harsh Construction, (Prop-Sarita Kumari, D/o Naresh Pd. yadav, Vill- Lohani bigha, Po- Gonawan, Ps- Nawada, Dist- Nawada) as a contractor for execution of work and comply all the conditions mentioned in EC letter and CTO. Hence M/s Harsh Construction (contractor) is fully responsible for complying all these conditions mention in EC letter and CTO.

Geographical location

Pillars	Latitude(N)	Longitude(E)
A	24°34'37.70"N	84°48'0.60"E
В	24°34'40.60"N	84°48'9.40"E
С	24°34'49.40"N	84°48'9.50"E
D	24°34'48.20"N	84°48'1.10"E

Nearest Railway	Guraru Railway Station approx 25.80km towards North-West direction
Station	
Nearest Airport	Gaya International Airport approx 23.90 km towards North-East direction
Nearest Highway	SH 69- 1.34km towards South-West Direction
	NH 19- 1.05km towards North-East Direction
Nearest Habitation	Hamzapur village approx 0.50 km towards South-West direction
	MahuawanVillage approx 0.58km towards North-East direction





Fig 2- 500m map



Audit Checklistas per the Scope of work for The Project

S. No.	Conditions	Observation	Compliance/ Non- Compliance	Action to be taken	Remarks
Enviro	onment Clearance Spe	cific and General co	nditions audit		
1.	It shall be ensured that there shall be no mining beyond 03 m or up to water Level whichever is less further meaning thereby that no mining activity in ruining stagnant water in the river in the issue of Sand Mining. The Distance from the bank of the river shall be as per the Bihar Minor Mineral and concession Rule (2014) and amendment thereof	Mining depth is limited up to 03 meter only. Safety distance has been left from the both the banks of the river as per BMMCR (2014) & as per MOEFCC guidelines.	Complied	Nil	
2.	The Project proponent shall ensure that wherever deployment of labour attracts the Mines Act, the provision thereof shall be strictly followed.	The provision of mines act is being followed strictly.	Complied	Nil	
3.	The project proponent shall prepare the plan of mining in conformity with the mine lease conditions and the Rules prescribed in this regard clearly showing the no work zone in the mine	Mining work is being performed as per the approved mine plan. Safety distances from both the river bank as well as from the main channel has been left as no mining zone.	Complied	Nil	

		T	I	1	,
4.	lease i.e., the distance from the bank or river to be left un-worked (Non mining area) The project proponent shall. undertake adequate safeguard measures during, extraction of river bed material and ensure that due to this activity the hydrogeological regime of the	Condition is being complied.	Complied	Nil	
	surrounding shall not be affected. The project				
5.	proponent will provide protective respiratory devices to workers working industy area and they shall also be provided with adequate training and information on safety and health aspects. 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.	Protective respiratory devices such as nasal masks are being provided among working peoples. Other protective measures like hand gloves and boots are being provided to the workers. Safety trainings is being organized regularly. Periodic health check-up will be carried out and record of the same will be maintained as per conditions.	Complied	Nil	
6.	Solid waste material viz, plastic bags. glasses etc. to be generated during, project activity will be separately stored in bins and managed	1	Complied	Nil	

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	as per Solid Waste Management rules.	are being generated. Separate bins have been provided near the mining site to collect above mentioned wastes.			
7.	Natural /customary paths used by villagers should not be obstructed at any time by the activities proposed under the project.	Condition is being followed strictly.	Complied	Nil	
8.	PP shall maintain minimum distance from Reserved <i>I</i> Protected Forests as stipulated in applicable guidelines.	No RF & PF is present nearby the site	Complied	Nil	
9.	The project proponent should implement suitable conservation measures to augment ground water resources in the area in consultation with the Ground Water Directorate, Government of BiharCentral Ground Water Board.	Condition is being followed	Complied	Nil	-
10.	Effective safeguard measures should be taken to control fugitive emissions so	Regular water sprinkling is being done to control fugitive emissions.	Complied	Nil	
11.	Pre-placement medical examination and periodical	Condition is not being followed	Not complied	It was suggested by the audit	

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	medical examination of the workers engaged in the project shall be carried out and records maintained.			team to conduct the periodical medical examination of the workers and keep it in record.	
12.	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna as prescribed the Wildlife (protection)Act.1972.	No any endangered fauna has been recorded in the nearby site. If found precautionary measures will be taken care as per wildlife (protection) act 1972.	NA	NA	
13.	The project proponent shall obtain Consent to establish and Consent to Operate from the Bihar State	Condition has been complied	Complied	Nil	
14.	No river sand mining be allowed in rainy season (July, August, and September).	Condition is being complied	Complied	Nil	
15.	To submit annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity /Production levels	Condition is being complied	Complied	Nil	

	1 11 1 1 1				1
	shall be decreased /stopped accordingly till the replenishment is completed.				
16.	In river flood plain mining, a buffer of 3 meter be left from the river bank for mining.	Buffer of more than 3 meters have been left from the river banks.	Complied	Nil	
17.	In mining from agricultural field, a buffer of 3 meter be left from the adjacent field.	Condition is being complied	Complied	Nil	
18.	Mining shall be done in layers of 1 m depth to avoid ponding effect and after first layer is excavated, the process will be repeated for the next layers.	Condition is being complied	Complied	Nil	
19.	No stream should be diverted for the purpose of sand mining. No natural Water courses And/ or water resources are obstructed due to mining operations.	Condition is being complied	Complied	Nil	
20.	No labour camp be allowed in riverbed.	Condition is being complied	Complied	Nil	
21.	Mining should begin only after pucca pillar marking the boundary of lease area is erected at the cost of the lease holder after certification by the mining official and its geo coordinates are made available to the SEIAA, Bihar.	Condition has been complied, photographs are attached as Annexure.	Complied	Nil	
22.	Lease shall keep a	Condition is being	Complied	Nil	

Tia.		1. 1		I	1
	correct account of	complied			
	quantity of mineral mined out,				
	,				
	dispatched from the				
	mine. mode of				
	transport,				
	registration number				
	of vehicle, person in				
	Cargo of\ vehicle				
	and mine plan. This				
	should be produced				
	before officers of				
	Central Government				
	and State for				
	inspection.				
	Noise arising out of				
	mining and				
	processing shall be	~			
23.	abated and	Condition is being	Complied	Nil	
	controlled at source	complied	2 F		
	to				
	keep within				
	permissible Unit.				
		Regular water			
		sprinkling is being			
	The pollution due to	done on the			
	transportation load	transportation			
2.4	on the environment	route and mined			
24.	2	material is being	Complied	Nil	
	controlled & water	covered during			
	sprinkling will also	transportation to			
	be done regularly.	control dust			
		emission.			
	A ! D - 11	Site			
	Air Pollution due to				
	dust, exhaust				
	emission or fumes				
	during mining and	Candition is less.			
25.	processing phase	Condition is being	Complied	Nil	
	should be controlled	complied	_		
	and kept in				
	permissible limits				
	specified under				
	environmental laws. The mineral	Condition is being			
		Condition is being			
26.	transportation shall	complied,	Complied	Nil	
	be carried out	photographs	_		
	through covered	regarding this is			

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	trucks only and the Vehicles carrying the mineral shall not be overloaded. Wheel washing facility should be installed and used,	attached as Annexures.			
27.	Restoration of Flora affected by mining should be done immediately. Twice the number of trees destroyed by mining be planted preferably of indigenous species.	No any trees has been destroyed due to mining activity. No any flora are also affected due to mining because the mining activity is being done on dry part of river bed.	Complied	Nil	
28.	No mining lease shall be granted in the forest area without forest clearance in accordance with the provisions of the Forest Conservation Act, 1980 and the rules made there under.	not falling in forest area as per forest conservation act 1980 and rules	Complied	Nil	
29.	minimum surface soil disturbance.	No surface soil will be affected because the mining area is river bed and proper safety distances has been maintained from the surface soil area.	Complied	Nil	
30.	Adequate steps to cheek soil erosion and control debris flow etc. by constructing engineering structures should be	Safety distances has been maintained from the both the river banks to avoid soil erosion.	Complied	Nil	

ma.					
	ensured.				
31.	Site clearance and tidiness shall be maintained.	Condition is being complied.	Complied	Nil	
32.	The proponent shall take all possible precautions for the protection of environment and control of pollution	Condition is being complied.	Complied	Nil	
33.	Junction at take-off point of approach road with main road be property developed with proper width and geometry required for safe movement of traffic by lease holder at his own cost.	Condition is being followed.	Complied	Nil	
34.	Health and safety of workers should be taken care of.	Condition is being complied.	Complied	Nil	
35.	Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in SLX months and necessary remedial/preventive measure taken accordingly. Recommendations	Condition is not being complied	Non complied	It was suggested to the proponent to appoint occupational Health Specialist as soon as possible	

				T	
	of National Institute				
	for Labour for				
	ensuring good				
	occupational environment for				
	mine workers shall				
	be adopted. The Distance from				
	N.H. Railway Line,				
	Reservoir, Bridge				
	shall be adopted as				
36	per Bihar	Condition is being	Complied	Nil	
30.	Minor Mineral and	complied.	Complica	1111	
	concession Rule	complica.			
	(2014) and				
	amendment thereof.				
	The proponent shall				
	not conduct sand				
	mining where				
	mining, can cause				
	danger to site of				
37.	_	Condition is being	Complied	Nil	
	works, places of	complied.	1		
	cultural religious,	1			
	historical, and				
	archeological				
	importance.				
	Vehicles only with				
38.	fitness and PUC	Condition is being	Complied	Nil	
36.	Certificates should	complied.	Compuea	1,111	
	be used.				
	Project Proponent				
	shall ensure that the				
	road may not be			It was	
	damaged due to	Condition is not		suggested to	
39.	transportation of the	being complied	Non	proponent to	
] 37.	mineralwill be as per	properly	complied	work on this	
	IRC Guidelines with	Proporty		condition	
	respect to complying			strictly	
	with traffic				
	congestion density.				
40.	No stacking of sand				
	is allowed on road	Condition is being	Complied	Nil	
	side along national	complied.	ī		
	highways				
4.4	The PP shall make	Carallet 1 1	C 1' 1	NT:1	
41.	C	Condition is being	Complied	Nil	
	drinking Water, first	complied.			

	aid facility.					
42.	Adequate steps should be taken to check soil erosion and control debris flow etc. by constructing engineering structures.	Condition is being complied.	Complied	Nil		
43.	Proponent will provide adequate sanitary facility in the form of <i>mobile</i> toilets to the labours engaged for <i>the</i> project work.	Condition is being complied.	Complied	Nil		
44.	Use of effective sprinkler system to Suppress fugitive dust on haul roads and other transport roads shall be ensured; and washing of all transport vehicles should be clone inside the mining lease.	Condition is being complied.	Complied	Nil		
45.	The Proposed route for transportation should not pass- through private land	Condition is being complied.	Complied	Nil		
Consent To Establish conditions audit						
1.	to commissioning of the plant from Bihar State Pollution Control Board.	Condition has been complied.	Complied	Nil		
2.	The unit shall install	No DG set has	NA	NA		

па.	D.C. C. C.	4 . 44 4			1
	D.G. Set(s) with	been installed			
	integral acoustic	within the lease			
	enclosure as per the	area			
	norms of the Board,				
	so that, it shall				
	conform Ambient				
	Noise Level as				
	prescribed by the				
	Board. Accordingly				
	submit ANL report				
	to the Board just				
	after commissioning				
	of the plant.				
	Maximum depth of				
	sand quarrying in				
	the river bed shall				
	not exceed 3 meters	G 11.1 1 1 1	G 1: 1	3.711	
3.	measured from the	Condition is being	Complied	Nil	
	un-mined bed level	complied.			
	at any point of time				
	or the water table				
	whichever is less.				
	Mining shall not be				
	undertaken in a				
	mining lease area	Condition is being			
	located within 300	complied.			
	meters on both sides	complica.			
	,				
	bridge, or any bridge		G 1: 1	NT'1	
4.	,		Complied	Nil	
	National Highways				
	or State Highways				
	and shall be				
	prohibited within				
	100 meters of both				
	sides of any other				
	bridge(s).				
	No sand quarrying				
	shall be permitted				
	within 50 meters				
5.	from any public	Condition in Late	Complied	Nil	
	places, i.e.,	Condition is being	_		
	cremation ghat, or	complied.			
	any religious place				
	etc.				
	No quarrying shall				
6.	1		Complied	Nil	
	5 meters from both			1	

на.					
	banks of the river.	Condition is being complied.			
7.	Quarrying of sand shall be prohibited within 100 meters up-stream and down-stream from any dam/weir or any such similar structures.	Condition is being complied.	Complied	Nil	
8.	No quarrying shall be permitted within 46 meters distance from flood control embankments. The quarrying shall be restricted up to a depth of 1.8 meters within 46 meters to 61 meters distance from the said embankment and shall further restricted up to a depth of 2.4 meters within 61 meters to 91 meters distance from the above said embankment.	Condition is being complied.	Complied	Nil	
9.	from Irrigation channels are out flowing. Washing of vehicles shall be done only inside the mining area.	Condition is being complied.	Complied	Nil	
	Mining shall be carried out between 6:00AM to 7:00PM.	Condition is being complied.	Complied	Nil	
11	Mining shall not be		Complied	Nil	

Πα.	corried out during	Condition is bain =			ĺ
	carried out during	Condition is being			
	rainy season (i.e.,	complied.			
	June to September).				
	Carrying of minerals				
	shall be done in				
10	completely covered	Condition is being	C 1: 1	NT'1	
12.	vehicles both	complied.	Complied	Nil	
	underneath and over	r			
	the heap.				
	Water spraying				
	mechanism to				
		C 1141 1 - 1 - 1 - 1 - 1			
13.	pollution have to be	Condition is being	Complied	Nil	
	purchased and (a)	complied.	1		
	proof of purchase				
	&(b) Photographs				
	have to be attached.				
	Carrying of minerals				
	shall be done				
14.	through a fixed route		Complied	NI:1	
14.	and the same shall	Condition is being	Complied	Nil	
	be attached with the	complied.			
	application.	1			
	**				
	Proof of plantation				
	at least 500 trees of				
	a least 4 feet height				
	on river-side / road-	Condition has			
15.	side with proper	been complied by	NA	NA	
	protection shall be	1			
	submitted along with	previous client,			
	the application for	care of plantation			
	СТО	is being done by			
		present proponent			
	Details of				
	JCB/Poclain				
	excavator fitted with				
	GPS instrument			It was	
	shall be submitted	Condition is not	Non	suggested to	
16.	along with its	Condition is not	Non	proponent to	
	registration number	being complied	complied	comply this	
	[(a) Proof of			condition	
	Purchase & (b)			, , , , , , , , , , , , , , , , , , , ,	
	Photographs have to				
	be attached.]				
	Details of water tank			It was	
		Condition is not	Non		
17.	with sprayer shall be			suggested to	
	provided with GPS	being complied	complied	proponent to	
	along with its			comply this	

11a.	registration number.			condition	
	[(a) Proof of			Condition	
	L \ /				
	Purchase & (b)				
	Photographs have to				
	be submitted.]				
	Proof of purchase of				
	Earmuff/protective				
	gear 50 in numbers	Earmuff/protective			
18.	has to be submitted	gear have been	Complied	Nil	
	with its [(a) [(a)	purchased.			
	Proof of Purchase &				
	(b)].				
	Proof of Android-				
	based phone/CCTV				
	(Closed Circuit				
	Television) / PC				
	(personal Computer)			T4	
	/ internet connection			It was	
1.0	/power backup/	Condition is not	Non	suggested to	
19.		being complied	complied	proponent to	
	reader, scanner,	8 1 1	r	comply this	
	check point/post has			condition	
	been				
	procured/installed				
	like [(a) Proof of				
	Purchase & (b)				
	Photographs.				
	The unit shall have a				
	display board near				
	the site stating name				
	of unit/Industry with	Condition has			
	/Name of proprietor	been complied,			
20	with address and ref	photographs is	Complied	Nil	
	memo no and date of	attached as		_ '	
	consent with its	annexure.			
	validity period	amichaic.			
	granted by the				
	•				
	Board.				

Drone Survey Report:

As per the scope of work we have carried out Drone surveillance of entire sand ghat and it has been found that

- > Pillar demarcation has been found proper.
- Pollution controlling activity such as dust suppression and plantation is being carried out.
- No mining is being done in river active channel.
- > Safety distance has been left from the bank of the river.
- Mining is being done under allowable depth.
- Transportation of excavated material is being done in covered trucks/tractors.
- > Transportation of sand is being done with all the safety procedures.
- No illegal sand mining has been found throughout the sand ghat.

CONCLUSION

This audit involved extensive consultation with all the persons working with or directly or indirectly associated with the mining activity, interactions with key personnel on wide range of issues related to Environmental aspects. The audit has identified several environmental friendly observations. The recommendations are also mentioned with some observations such as training conduction, occupational health officer appointment, repairing of haul roads activities. The audit team certify that the overall site is maintained well from environmental perspective. The proponent has assured to follow the compliance suggested by the audit team.

(Drone Surveillance Photographs)

Mahuaama Sand Ghat, Dist-Gaya

Created on February 15, 2022

Captured on February 10, 2022

DroneDeploy

Site Photos









Transportation with covered vehicles



Water sprinkling facilities For Dust Suppression



Boundary Pillar









Haul Road



Solid waste managment



Green Belt

