

To

Date:

**The Director, (IA-II)
Ministry of Environment, Forests & Climate Change,
Indira Paryavaran Bhawan,
Lodhi Road, Jor Bagh,
New Delhi -110003.**

**Sub: Regarding Environmental Clearance of Kanvara Sand/Moram mining at Village:
Kanvara, Bhuredi & Chilehata, District- Banda, and State-Uttar Pradesh.**

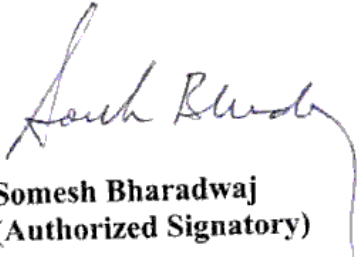
Dear Sir,

I am submitting herewith Final EIA Report along with the necessary documents in the prescribed format of your esteemed Committee for your kind perusal and scrutiny

Please be good enough to issue the Environmental Clearance at the earliest.

Thanking you

Yours sincerely



**Somesh Bharadwaj
(Authorized Signatory)**

Encl.: Final EIA Report

FINAL
ENVIRONMENTAL IMPACT ASSESSMENT
AND
ENVIRONMENTAL MANAGEMENT PLAN
OF
KANVARA SAND/MORAM MINING PROJECT

**Village: Kanvara, Bhuredi & Chilehata, Tehsil: Banda, District: Banda,
State: Uttar Pradesh
Area: 122.81 Ha, Proposed Capacity: 7 Lakh TPA**

APPLICANT

Shri Somesh Bharadwaj
S/o -Shri Omprakash Bharadwaj
Amar Talkies
Tehsil: Banda, District: Banda (UP)

Prepared By

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A unit of GRC India

March, 2016

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ABBREVIATIONS

EIA	Environmental Impact Assessment
EMP	Environment Management Plan
MoEF & CC	Ministry of Environment, Forest & Climate Change
TOR	Term of Reference
EAC	Expert Appraisal Committee
SEAC	State Expert Appraisal Committee
SPCB	State Pollution Control Board
CPCB	Central Pollution Control Board
NOC	No Objection Certificate
bgl	Below Ground Level
GLC	Ground Level Concentration
NH	National Highway
SH	State Highway
dB	Decibel
Leq	Equivalent Noise Level
Ha	Hectare
UNFC	United Nations Framework Classification
HFL	High Flood Level
LFL	Low Flood Level
KLD	Kilo litre Per Day
T/cum	Tons Per Cubic Meter
Km	Kilo Meter
RL	River Level
EPA	The Environment Protection Act
Ham	Hectare Meter
BOD	Biochemical Oxygen Demand
DO	Dissolved Oxygen
COD	Chemical Oxygen Demand
TKN	Total Kjeldahl Nitrogen
PM	Particulate Matter
AAQ	Ambient Air Quality
TPA	Tonnes Per Annum
R & R	Rehabilitation & Resettlement
CSR	Corporate Social Responsibility
VWG	Village Working Group
EMC	Environmental Management Cell
DIC	Department of Industries and Commerce
RBM	River Bed Material
NGO	Non Governmental Organisation
PCU	Passenger Car Unit
LOS	Level of Service
PUC	Pollution Under Control
NABET	National Accreditation Board for Education and Training
QCI	Quality Council of India
OSHA	Occupational Safety and Health Administration

By Speed Post

No. J-11015/245/2012-IA.II (M)
Government of India
Ministry of Environment, Forests & Climate Change
Impact Assessment Division

3rd Floor, Vayu Wing,
Indira Paryavaran Bhawan,
Jorbagh Road, Aliganj,
New Delhi-110 003

Dated: 19th August, 2014

To,

M/s Sri Somesh Bharadwaj
S/o Shri Omprakash Bharadwaj,
R/o Amr Talkies, Tehsil Banda,
District Banda, UP

Subject: Kanvara Sand/Moram Mining Project of M/s Sri Somesh Bharadwaj for renewal of mining lease of Sand/Moram extraction of 7 lacs TPA (122.81 ha) at village Kanvara, Bhuredi & Chilehata, District Banda, Uttar Pradesh -TOR.

The Proposal was received in the Ministry on 17.02.2012. The Proposal is to determine the Terms of Reference for which the proponent had submitted information in the prescribed format (Form-1) along with Pre-feasibility report.

2. The Project is for sand/moram mining on river Ken. Original lease period was 24.12.2009 to 23.12.2012. Proponent applied for renewal of mine lease on 15.5.2012. This is a fresh application for renewal of mine lease period located at Plot/Survey/Khasra No. Khand No.: 13, Zone 1, Village Kanvara, Bhuredi, Chilehata, Tehsil Banda, District Banda, Uttar Pradesh between Latitude: 25° 29'11.48" N to 25° 30'30.90" N and Longitude: 80° 18'40.03" E to 80°17'30.31" E. It is within 10 km radius from the interstate Boundary between Madhya Pradesh-Uttar Pradesh There will be no change in the land use. Mining will be by manual opencast method, along the centre of the river bed keeping both the shores unaffected. There is no vegetation or building. The mining activity will be confined to the river bed mining. Sand/Moram will be loaded directly into trucks, dumper etc. for this purpose local people will be hired, and hence no temporary sites for housing will be required. No waste/effluent will be generated at the mine site. About 5.91 KLD will be required for drinking and dust suppression purpose. This water will be supplied from the nearby village. Very insignificant quantity of domestic waste will be generated by the labours at site. Ganchha, Chatkan and dense babul Reserve Forests are located within 10 km radius.

3. It was noted that it is a violation case as the mine have been in operation without obtaining requisite prior environmental clearance. However, project proponent has informed that this is not a violation case as the mine was closed since 30.6.2011. As per the order of Hon'ble High Court of Allahabad passed in writ Petition No. 9416(MB) of 2010, Md. Kausar Jah

Vs Union of Indian & Others on 29.4.2011, mining of minor minerals was permitted upto 30.6.2011. The project proponent in this regard has submitted a letter dated 15.12.2012 issued by Mining officer Banda mentioning that the mine has been stopped since 01.07.2011.

4. The proposal was placed before Expert Appraisal Committee in its meeting held during November 21st -23rd, 2012, the Committee prescribed the following TORs for undertaking detailed EIA study:

1. Year-wise production details since 2006 after the EIA Notification, 2006 coming into force may be furnished.
2. A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
3. All documents including approved mine plan (eco friendly mine plan), EIA report and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology.
4. The terms and conditions imposed, if any, by the Competent Authority in the State Government while granting mining lease / permit / contract should be built into the mine plan (eco friendly mine plan) as well as the EIA report. It may inter-alia include; area of working (length and breadth of the river stretch), mode of working, working shift, transportation of mineral, restriction, if any imposed for working etc.
5. All corner coordinates of the mine lease area superimposed on High Resolution Imagery/topo sheet should be provided.
6. Involvement of forestland, if any, in the project and status of forestry clearance should be given.
7. The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
8. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
9. Does the Environment Policy prescribe for standard operating process/ procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
10. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions? Details of this system may be given.
11. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
12. A study should also be carried out to decide on the quantum of mineral which can be removed on sustainable basis taking into account the replenishment potential of the area and details furnished.

13. Land use of the study area should be described delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features.
14. Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases.
15. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigation measures required should be worked out with cost implications and depicted in the EIA report.
16. The vegetation in the RF / PF in the study area, if any, should be indicated.
17. A study shall be got done to ascertain the impact of the mining project on wildlife of the area including aquatic life.
18. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed) within 10 km of the mine lease, if any, should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance from the Chief Wildlife Warden for operating the mine within 10 km of the National Park/Sanctuary, if any, should also be obtained and furnished.
19. A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] including the aquatic fauna in the riverine system shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zones should be furnished based on primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
20. Impact of the project on land use including change of river course, if any, should be given.
21. Impact on topography, drainage, agricultural fields, cattle fields grazing grounds, wildlife, water logging leading to water borne diseases, if any. It may also be shown whether it will lead to change of watercourse of the river. Modelling exercise should also be carried out through an expert agency to show the change in river flow dynamics, if any.
22. Collection of one season (non-monsoon) primary Baseline data on ambient air quality (PM₁₀, SO₂ and NO_x), water quality, noise level, soil, flora and fauna. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. Collected baseline AAQ data should be tabulated date wise to form part of EIA and EMP report. The mineralogical composition of PM₁₀ particularly for free

- Silica, should be given. There should be at least one AAQ monitoring station within 500 m of the mine lease in the predominant downwind direction.
23. Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map. The impact of other mines in the study area, as also stone crusher and other industries nearby, if any, should also be taken into account.
 24. The water requirement for the project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
 25. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be obtained where required and copy furnished.
 26. Impact of the project on the water quality should be assessed and necessary safeguard measures, if any required, should be provided.
 27. Information on site elevation, working depth, groundwater table should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
 28. Quantity of solid waste generation, if any, should be estimated and details for its disposal and management should be provided.
 29. Impact on local transport infrastructure due to the project should be evaluated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) and whether it is capable of handling the increased load should be estimated. Arrangement for improving the infrastructure, if contemplated including action to be taken by other agencies such as State Government, if any, should be covered.
 30. Details of the rest shelters and other facilities to be provided for the mine workers should be furnished.
 31. Phase-wise plan of greenbelt development, plantation and compensatory afforestation, clearly indicating the area to be covered under plantation and the species to be planted should be provided.
 32. Occupational health impacts of the project activity should be anticipated and reported and proposed preventive measures indicated. These along with details of pre-placement medical examination and periodical medical examination schedules and medical facilities proposed to be provided should be incorporated in the EMP.
 33. Measures of socio economic influence to the local community, proposed to be provided by project proponent should be spelt out. As far as possible, quantitative dimensions should be given.

34. Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts, with specific safeguard measures to control PM10 as well as pollution due to transportation, should be given. It should also address the impact due to stone crushers nearby, if any.
35. Public Hearing points raised and commitment of the Project Proponent (PP) on the same, along with time bound Action Plan to implement the same, should be provided and also incorporated in the final EIA/EMP Report of the Project.
36. Details of litigation pending against the Project, if any, with direction /order passed by any Court of Law against the project should be given.
37. The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.

5. Besides the above, the below mentioned general points will also to be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index, page numbers and continuous page numbering.
- c) Where data are presented in the report especially in Tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any, made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

6. The EIA report should also include surface plan of the area indicating contours of main topographic features, drainage and mining area.

7. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

8. After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the Public Hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

V.P.
(Dr. V.P. Upadhyay)
Scientist 'F'

Copy to:

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Secretary, Directorate of Geology, Government of Uttar Pradesh, Khanij Bhawan, 27/8, Ram Mohan Rai Marg, Lucknow - 226001.
3. The Secretary, Department of Environment, Government of Uttar Pradesh, Sachivalaya, Bapu Bhawan, Adjacent to Vidhan Sabha, Lucknow - 226001.
4. The Chief Wildlife Warden, Government of Uttar Pradesh, 17, Rana Pratap Marg, Lucknow, U.P.
5. The Additional Principal Chief Conservator of Forests, Central Region, Ministry of Environment and Forests, Kendriya Bhawan, 5th Floor, Sector 'H', Aliganj, Lucknow - 226020.
6. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi 110032.
7. The Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi 110001.
8. The Chairman, PICUP Bhawan, 3rd Floor, B-Block, Vibhuti Khand, Gomti Nagar Lucknow - 226 010.
9. The Controller General, India Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur - 440001.
10. The District Collector, Banda District, Uttar Pradesh.
11. Guard File.

(Dr. V.P. Upadhyay)
Scientist 'F'

**CHAPTER-I
INTRODUCTION
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March, 2016

INTRODUCTION

1.0 PURPOSE OF THE REPORT

Environmental Impact Assessment (EIA) is a decision making tool, in the hands of the Authorities which brings forth the factual position about a project that enables them in arriving at an appropriate conclusion for the proposed projects, to retain them if environmentally sound, and reject if found having deleterious overall impact. EIA identifies the extent of the environmental, social and economic impacts of a project prior to decision-making. EIA systematically examines both beneficial and adverse impacts of the proposed project over and above the prevailing conditions of environmental parameters and ensure that these impacts are taken into account during the project designing stage itself and the values of the combined impacts are never allowed to exceed and remain within the statutory norms. This process has been envisioned and set in motion by the Ministry of Environment and Forests & Climate Change, New Delhi for sustainable development and the final decision is arrived at only, when those who matter are made known of the salient features of the project being envisaged close to them and their opinion has been sought in a widely advertised Public Hearing Event under the chairmanship of the district authorities so that public could also express their opinion freely, without favour and fear.

A **Final Environmental Impact Assessment Report** is prepared to comply with the **Terms of Reference (ToR)** dated, issued by **Ministry of Environment, Forests & Climate Change (MoEF & CC)** under EIA notification of the **MoEF & CC** dated **14th September, 2006** and subsequent amendments, Government of India, for seeking environmental clearance for mining of sand/moram. As per the **EIA notification, 2006** the applied mining lease area measures **122.81 hectares**, and so the project falls under **category "A"**. The lease area lies at **khand-13 zone-1** near **Village: Kanwara, Bhuredi & Chilehata, Tehsil: Banda, District: Banda, Uttar Pradesh**.

1.1 IDENTIFICATION OF PROJECT & PROJECT PROPONENT

The project is being proposed by **Shri Somesh Bharadwaj** as per the lease agreement dated **24.12.2009** and was valid up to **23-12-2012** for a period of **3 years**. The lease deed is attached as **Appendix I**. The proponent applied for renewal of mine lease on **15.05.2012**.

Address of the Applicant:

Shri Somesh Bharadwaj

S/o - Shri Omprakash Bharadwaj,
Amar Talkies,
Tehsil & District - Banda (U.P)

1.2 BRIEF DESCRIPTION OF PROJECT

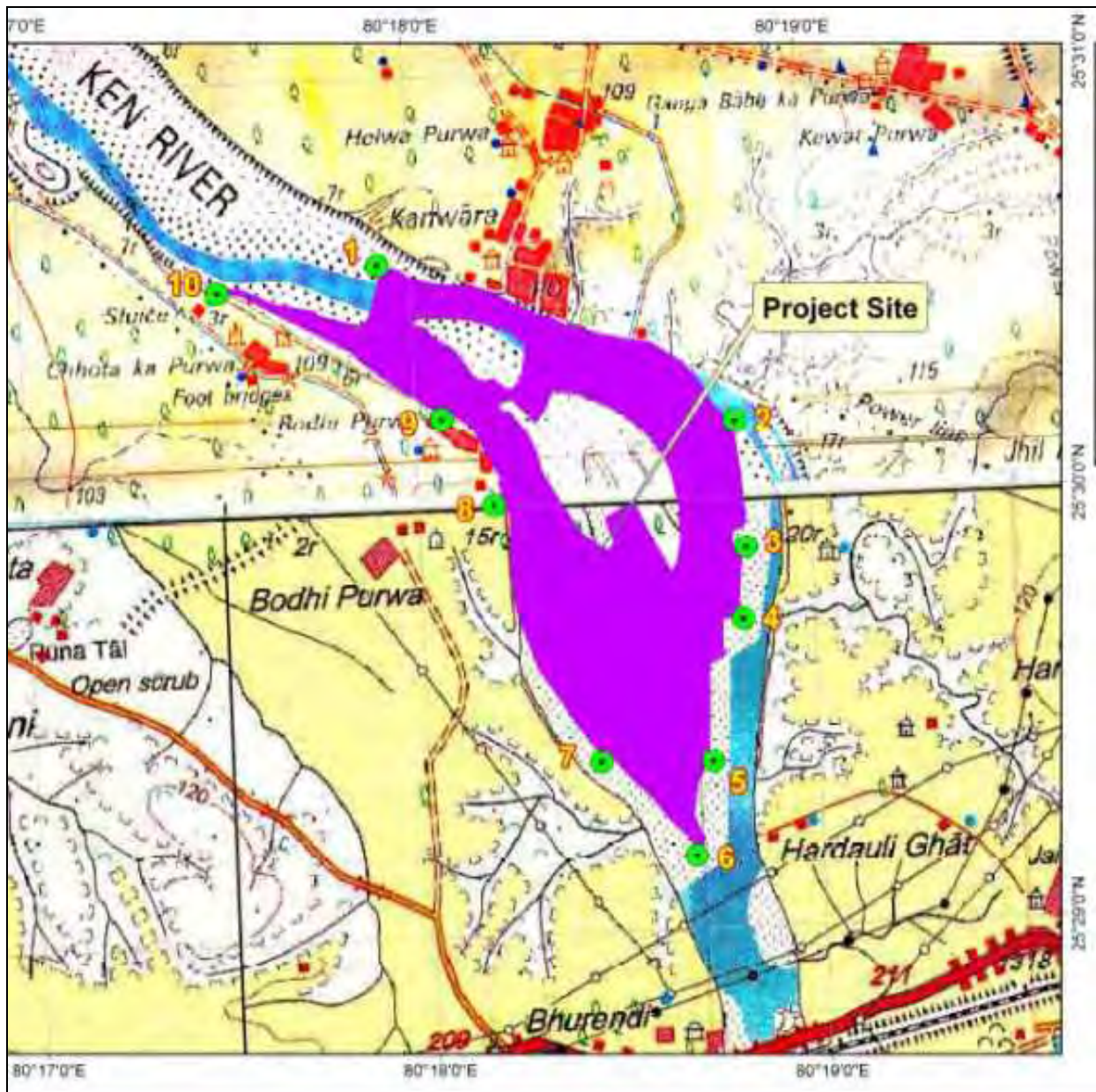
The proposed project is to excavate sand/moram from river bed of Ken over an area of **122.81 Hectare** at **Village: Kanvara, Bhuredi and Chihahata, Tehsil & District: Banda, Uttar Pradesh**. It has been proposed to mine around **7 lacs tonnes per annum** of minerals. The estimated project cost for the proposed project is **Rs. 60 lacs**.

Interstate boundary between **Uttar Pradesh & Madhya Pradesh** lies at a distance of **7.16 km** within 10 km radius of the lease area; however this condition has been waived off as per the **mutual agreement** between **Uttar Pradesh and Madhya Pradesh Government**.

Location

The mining area is located on River bed of Ken at Khand-13 Zone-1 in Gata No. **1123/2,1131,1132,1136,1134,1141/2,1148,1149,476,477,478,479,491,492,515,516,517,518,520,521,522,523,524,525,526,527,528,534,535,543,544,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,619,623,624/553,638,639,540,641,642,643,644,645,646,647 & 648** near Village: Kanvara, Bhuredi & Chihahata, Tehsil: Banda, District: Banda, Uttar Pradesh. The mining lease/proposed project area falls in Survey of India Toposheet No. **63C07**. The mine lease area is located between:

Latitude	25° 29'11.48" N to 25° 30'30.90" N
Longitude	80° 18'40.03" E to 80° 17'30.31" E
Nearest Railway Station	Banda Junction Railway Station (About 2.5 km away in SE direction)
Nearest Airport	Kanpur airport (About 104 km away in N direction)
Nearest Highway	National Highway 76 (About 2 km in SE direction)



Sr. No.	Latitude	Longitude
1	25° 30' 33.63" N	80° 17' 34.67" E
2	25° 30' 10.48" N	80° 18' 48.52" E
3	25° 29' 52.80" N	80° 18' 43.47" E
4	25° 29' 42.92" N	80° 18' 48.64" E
5	25° 29' 24.17" N	80° 18' 42.39" E
6	25° 29' 11.48" N	80° 18' 40.04" E
7	25° 29' 21.68" N	80° 18' 36.11" E
8	25° 29' 59.94" N	80° 18' 31.20" E
9	25° 30' 12.15" N	80° 18' 33.68" E
10	25° 30' 30.90" N	80° 17' 30.71" E

Pillar Coordinates of the lease area

Project's importance to the country and the region

The project involves collection of river bed material. This is very essential to prevent widening of the riverbed due to the deposition of sediments which if not mined out will cause flooding and damage to the adjoining areas. This can only be prevented by maintaining the existing width and course of the river. If riverbed sand is not mined, the widening of river banks will result in excessive erosion; causing further damage to flora, agricultural land and settlements situated in close proximity.

This project operation will generate employment to the people residing in vicinity for about 250 days annually and approximately 350 people will be benefited directly and indirectly by the project.

1.3 SCOPE OF THE STUDY

The **Expert Appraisal Committee (EAC)** for mining projects considered the project during its meeting. Based on the information contained in the documents submitted and the presentation made, the **Expert Appraisal Committee (MoEF & CC)** prescribed the **Terms of Reference (ToR)** vide letter number **J-11015/245/2012-IA.II (M)** dated **19th August, 2014**. The points raised by the **MoEF & CC** in the **ToR** and its compliance are as under:-

Point Wise Compliance of TOR

S.No	ToR	Compliance
1	Year-wise production details since 2006 after the EIA Notification, 2006 coming into force may be furnished.	The lease is granted for a period of 3 year from 24.12.2009 to 23.12. 2012. Proponent applied for renewal of mine lease on 15.05 .2012 attached as Annexure I & II . Details of prior production will be given in Final EIA Report attached as Annexure III .
2	A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.	The lease documents in support of the fact that the proponent is the rightful lessee of the mine is attached as Annexure I .
3	All documents including approved mine plan (eco friendly mine plan), EIA report and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology.	The EIA/EMP report is compatible with the Approved Mine Plan in terms of the mine lease area, production levels, waste generation and its management and mining technology. The mine plan is approved by Directorate of Geology and Mines, UP, dated 22/12/2015.

		The approved Mine Plan is attached as Annexure XII.
4	The terms and conditions imposed, if any, by the Competent Authority in the State Government while granting mining lease / permit / contract should be built into the mine plan (eco friendly mine plan) as well as the EIA report. It may inter-alia include; area of working (length and breadth of the river stretch), mode of working, working shift, transportation of mineral, restriction, if any imposed for working etc.	All terms and conditions imposed have been taken into consideration and incorporated into the EIA report as well as the Mine Plan, which includes area, mode of working, Transportation etc.
5	All corner coordinates of the mine lease area superimposed on High Resolution Imagery/topo sheet should be provided.	Corner coordinates of the mine lease area superimposed on High Resolution toposheet has been incorporated on Chapter I, Page No. 20.
6	Involvement of forestland, if any, in the project and status of forestry clearance should be given.	There is no forestland involved in the mine lease area. A Letter conforming the same is attached as Annexure IX (a).
7	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.	The 10 km area around the periphery of the lease Area has been taken as study area for the purpose of EIA. The data contained in the EIA Report is given for 3 years. The Production details are given in the report. As such no waste will be generated as the entire material will be saleable.
8	Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.	The project is being proposed by a private owner and Uttar Pradesh Minor Mineral Concession Rule will be followed. Environment policy is attached with report as Annexure V.
9	Does the Environment Policy prescribe for standard operating process/ procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms	Yes, the policy is prescribed for all standard operating process/procedure.

	/conditions? If so, it may be detailed in the EIA.																																					
10	What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions? Details of this system may be given.	The hierarchical system of Environmental Management Cell to ensure the compliance of EC conditions is given in Chapter V (page no.90) .																																				
11	Does the company have a system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and /or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.	The Environmental Management Cell has been made in charge for reporting non-compliance/violation to the director.																																				
12	A study should also be carried out to decide on the quantum of mineral which can be removed on sustainable basis taking into account the replenishment potential of the area and details furnished.	The calculation for the estimation of sand/moram reserves is given in the Final EIA Report (Chapter IX, Page no. 124-126).																																				
13	Land use of the study areas should be described delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features.	Land-use of the study area delineating all the features is given in the report along with a map. The land use details are: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Description</th> <th>Area in Ha</th> <th>% share in total area</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Water Bodies</td> <td>8.71</td> <td>0.02</td> </tr> <tr> <td>2</td> <td>Vegetation</td> <td>218.70</td> <td>0.56</td> </tr> <tr> <td>3</td> <td>Settlement</td> <td>1505.63</td> <td>3.85</td> </tr> <tr> <td>4</td> <td>River</td> <td>483.21</td> <td>1.24</td> </tr> <tr> <td>5</td> <td>Open/Barren</td> <td>1878.80</td> <td>4.80</td> </tr> <tr> <td>6</td> <td>Forest</td> <td>187.36</td> <td>0.48</td> </tr> <tr> <td>7</td> <td>Agriculture</td> <td>34838.60</td> <td>89.05</td> </tr> <tr> <td colspan="2">Total</td> <td>39121.01</td> <td>100</td> </tr> </tbody> </table>	S. No.	Description	Area in Ha	% share in total area	1	Water Bodies	8.71	0.02	2	Vegetation	218.70	0.56	3	Settlement	1505.63	3.85	4	River	483.21	1.24	5	Open/Barren	1878.80	4.80	6	Forest	187.36	0.48	7	Agriculture	34838.60	89.05	Total		39121.01	100
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Total		39121.01	100																																			
14	Land use plan of the mine lease areas should be prepared to encompass pre-operational, operational and post operational phases.	Surface plan & Working plan of the lease area are attached with the report as Annexure IV (a) & Annexure IV (b) .																																				

		<p>There will be construction of ramps, temporary rest shelters during operational phase; however these will be removed during post-operational phase i.e. at the time of mine closure.</p> <p>However the land use of the lease area will remain same as the proposed activity is extraction of deposited sand/moram from river bed which will get replenished during succeeding monsoon seasons.</p>
15	Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigation measures required should be worked out with cost implications and depicted in the EIA report.	<p>The details of biological environment are given in Chapter III (Page No. 65 to Page No.73) and its impact and mitigation measures are mentioned in Chapter IV (Page No.81 to Page No.83).</p> <p>There are no protected areas within the 10 km radius of the lease area.</p>
16	The vegetation in the R F / P F in the study area, if any, should be indicated.	<p>There are five reserved forests within the study area.</p> <p>Study for Flora and Fauna has been done, List of vegetation in the R F/PF is incorporated in the report.</p>
17	A study shall be got done to ascertain the impact of the mining project on wildlife of the area including aquatic life.	The impact and mitigation measures of mining project on wildlife of the area including aquatic life have been compiled in the report.
18	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed) within 10 km of the mine lease, if any, should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance from the Chief Wildlife Warden for operating the	<p>There are no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger /Elephant Reserves (existing as well as proposed) within 10 km of the mine lease area.</p> <p>Authentication Map confirming this is attached as Annexure XI (a).</p>

	mine within 10 km of the National Park/Sanctuary, if any, should also be obtained and furnished.	
19	A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] including the aquatic fauna in the riverine systems shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zones should be furnished based on primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.	<p>Detailed Biological study for flora and fauna, separately for core and buffer zone is given in the report.</p> <p>There is no schedule I fauna found in the study area.</p> <p>Details of flora and fauna, duly authenticated by DFO, Banda is attached as Annexure as Annexure IX (b).</p>
20	Impact of the project on land use including change of river course, if any, should be given.	<p>As such there will be no change in river course.</p> <p>The impact of the project and mitigation measures details are mentioned in the report.</p>
21	Impact on topography, drainage, agricultural fields, cattle fields, grazing grounds, wildlife, water logging leading to water borne diseases, if any. It may also be shown whether it will lead to change of watercourse of the river. Modeling exercise should also be carried out through an expert agency to show the change in river flow dynamics, if any.	<p>No adverse impacts are anticipated, due to the following facts:</p> <ul style="list-style-type: none"> Ø No change in topography as the mining is inside river bed which will get replenished to natural topography after each monsoon. Ø No other drainage channel is intercepted being within the river bed. Ø There are no agricultural fields around the lease area, which will get effected. Ø No disturbance to the cattle fields. Ø Due to scientific mining, there will be no ponding effect causing water logging. Hence it

		<p>won't lead to vector borne diseases due to the activity.</p> <p>Ø As mining would be restricted in the channel bed no diversion of river course could result from such small scale of operation on a limited time frame.</p>
22	<p>Collection of one season (non-monsoon) primary Baseline data on ambient air quality (PM10, SO₂ and NO_x), water quality, noise level, soil, flora and fauna. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. Collected baseline AAQ data should be tabulated date wise to form part of EIA and EMP report. The mineralogical composition of PM₁₀ particularly for free silica should be given. There should be at least one AAQ monitoring station within 500 m of the mine lease in the pre-dominant downwind direction.</p>	<p>Baseline study was done for one (non-monsoon) season from October'14 to December' 14 and the details are given in Chapter III (Page No. 47 - Page No.64).</p> <p>Date wise collected baseline AAQ data has been attached as Annexure VI.</p> <p>Site-specific meteorological data has been collected and shown in the Chapter III (Page No. 44).</p> <p>Free silica as a mineralogical composition of PM₁₀ is given in Chapter III (Page No. 49).</p> <p>It has been ensured that at least one monitoring station is within 500 m of the mine lease in the pre-dominant downwind direction.</p>
23	<p>Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-</p>	<p>Air quality modeling for fugitive dust emission due to mineral handling and transportation has been done by using line source modeling. Details in Chapter IV (Page No. 77-79).</p> <p>Wind rose diagram showing the prominent wind direction is given in Chapter III (Page no.45).</p>

	dominant wind direction may also be indicated on the map. The impact of other mines in the study area, as also stone crusher and other industries nearby, if any, should also be taken into account.	
24	The water requirement for the project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.	The water requirement for the project is 3.29 KLD for dust suppression and 2.62 KLD of use by mining staff for domestic purpose at site is given in Chapter II (Page No. 39) .
25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be obtained where required and copy furnished.	NOC from the competent authority of water usage is attached as Annexure in the Final EIA Report (Annexure no. XI)
26	Impact of the project on the water quality should be assessed and necessary safeguard measures, if any required, should be provided.	<p>The mining project is proposed on river bed where mining will be carried out in the dry portion of the area, therefore no chance of contamination of surface water.</p> <p>The proposed mining will not intercept the ground water table, as the mining will be carried out up to a depth of 3m bgl and above ground water table whichever comes first. Hence, there will be no contamination by the foreign materials with the ground water.</p> <p>There is no impact of mining or minor mineral from this project and the water environment.</p>

27	Information on site elevation, working depth, groundwater table should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.	<table border="1"> <tr> <td>Site elevation</td> <td>Highest- 104m AMSL Lowest- 103m AMSL</td> </tr> <tr> <td>Working depth</td> <td>3 m bgl or above groundwater depth, whichever comes first.</td> </tr> <tr> <td colspan="2">Groundwater depth:</td> </tr> <tr> <td>Pre Monsoon</td> <td>5.75 -26.95 m bgl</td> </tr> <tr> <td>Post Monsoon</td> <td>4.4 - 22.5 m bgl</td> </tr> </table> <p><i>Source: CGWB, Banda district, 2007 report.</i></p>	Site elevation	Highest- 104m AMSL Lowest- 103m AMSL	Working depth	3 m bgl or above groundwater depth, whichever comes first.	Groundwater depth:		Pre Monsoon	5.75 -26.95 m bgl	Post Monsoon	4.4 - 22.5 m bgl
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Post Monsoon	4.4 - 22.5 m bgl											
28	Quantity of solid waste generation, if any, should be estimated and details for its disposal and management should be provided.	No solid waste will be generated during mining.										
29	Impact on local transport infrastructure due to the project should be evaluated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) and whether it is capable of handling the increased load should be estimated. Arrangement for improving the infrastructure, if contemplated including action to be taken by other agencies such as State Government, if any, should be covered.	<p>There will be an increase in 140 trucks per day on NH- 76 for transportation for carrying the minerals.</p> <p>The impact due to this has been detailed in the Chapter IV (Page No. 83 to Page No. 85) of the report.</p>										
30	Details of the rest shelters and other facilities to be provided for the mine workers should be furnished.	The details are mentioned in the Chapter II, Page no. 39.										
31	Phase-wise plan of greenbelt development, plantation and compensatory afforestation, clearly indicating the area to be covered under plantation and the species to be planted should be provided.	Plantation will be done along the road sides, river banks and near civic amenities, which will be allotted by Government bodies/ local authority.										
32	Occupational health impacts of the project activity should be anticipated and reported	There are as such no adverse impacts of the proposed activities on human health.										

	<p>and proposed preventive measures indicated. These along with details of pre-placement medical examination and periodical medical examination schedules and medical facilities proposed to be provided should be incorporated in the EMP.</p>	<p>All safety measures prescribed under mining laws will be followed. Each labor will undergo pre-placement medical examination will be done half yearly for which tie up will be done with nearest PHC's.</p> <p>Impact on health is expected to be least for such mining projects.</p>
33	<p>Measures of socio economic influence to the local community, proposed to be provided by project proponent should be spelt out. As far as possible, quantitative dimensions should be given.</p>	<p>Socio-economic influence will be positive as there will be potential availability of employment, improvement of physical and social infrastructures etc.</p>
34	<p>Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts, with specific safeguard measures to control PM₁₀ as well as pollution due to transportation, should be given. It should also address the impact due to stone crushers nearby, if any.</p>	<p>Detailed environmental management plan to mitigate the environmental impacts are discussed in the report in Chapter VIII (Page No. 118 to Page No. 121).</p> <p>The safeguard measures to control PM₁₀ are given in Chapter IV (Page No.76)</p>
35	<p>Public Hearing points raised and commitment of the Project Proponent (PP) on the same, along with time bound Action Plan to implement the same, should be provided and also incorporated in the final EIA/EMP Report of the Project.</p>	<p>Details of Public Hearing points raised and commitment of the Project Proponent (PP) on the same, along with time bound Action Plan is implemented the same, should be provided and incorporated in the final EIA/EMP Report of the Project are attached as Annexure VII-A, VII-B, & VII-C</p>
36	<p>Details of litigation pending against the Project, if any, with direction /order passed by any Court of Law against the project should be given.</p>	<p>There is no litigation pending against the project.</p>

37	The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMPs should be clearly spelt out.	The details of the cost of the project and the cost towards the implementation of EMP are mentioned in the EIA/EMP report (Chapter VIII, Page no. 122)
Besides the above , the below mentioned general points should also be followed :-		
a	A note confirming compliance of the ToR, with cross referencing of the relevant sections/pages of the EIA Report should be provided.	Noted & compiled. In addition an affidavit issued by MoEF & CC on 5 th October 2011 is attached Annexure X-c .
b	All documents may be properly referenced with index, page numbers and continuous page numbering.	Noted & compiled.
c	Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated	Relevant details i.e. the period & sources of data have been mentioned in EIA-EMP Report.
d	Where the documents provided are in a language other than English, an English translation should be provided	Noted & compiled.
e	The Questionnaire for environmental appraisal of mining projects as prescribed by the ministry shall also be filled and submitted	The questionnaire for environmental appraisal of the project is attached in the report are attached as Annexure XIV (Page No.)
f	Approved mine plan along with copy of the approved letter for the proposed capacity should also be submitted	Approved mine plan is attached as Annexure XII (Page No.) in the EIA/EMP Report.
g	While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF & CC vide O.M No. J-11013/41/2006-IA.II(I) dated 4 th August, 2009 should be followed	Instructions for the proponents and consultants issued by MoEF & CC from time to time have taken in consideration while preparing the EIA report.

h	<p>Changes, if made any in the basic scope and project parameters as submitted in Form I and PFR for securing TOR should be brought to the attention with reasons for such changes and permission should be sought out, as TOR may also have to be altered. Post public hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of P.H process) will be entail conducting the PH again with revised documentation.</p>	<p>No changes have been done in the basic scope and project parameters submitted in Form I and PFR.</p>
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80°10'0"E

80°15'0"E

80°20'0"E

80°25'0"E

25°35'0"N

25°35'0"N

25°30'0"N

25°30'0"N

25°25'0"N

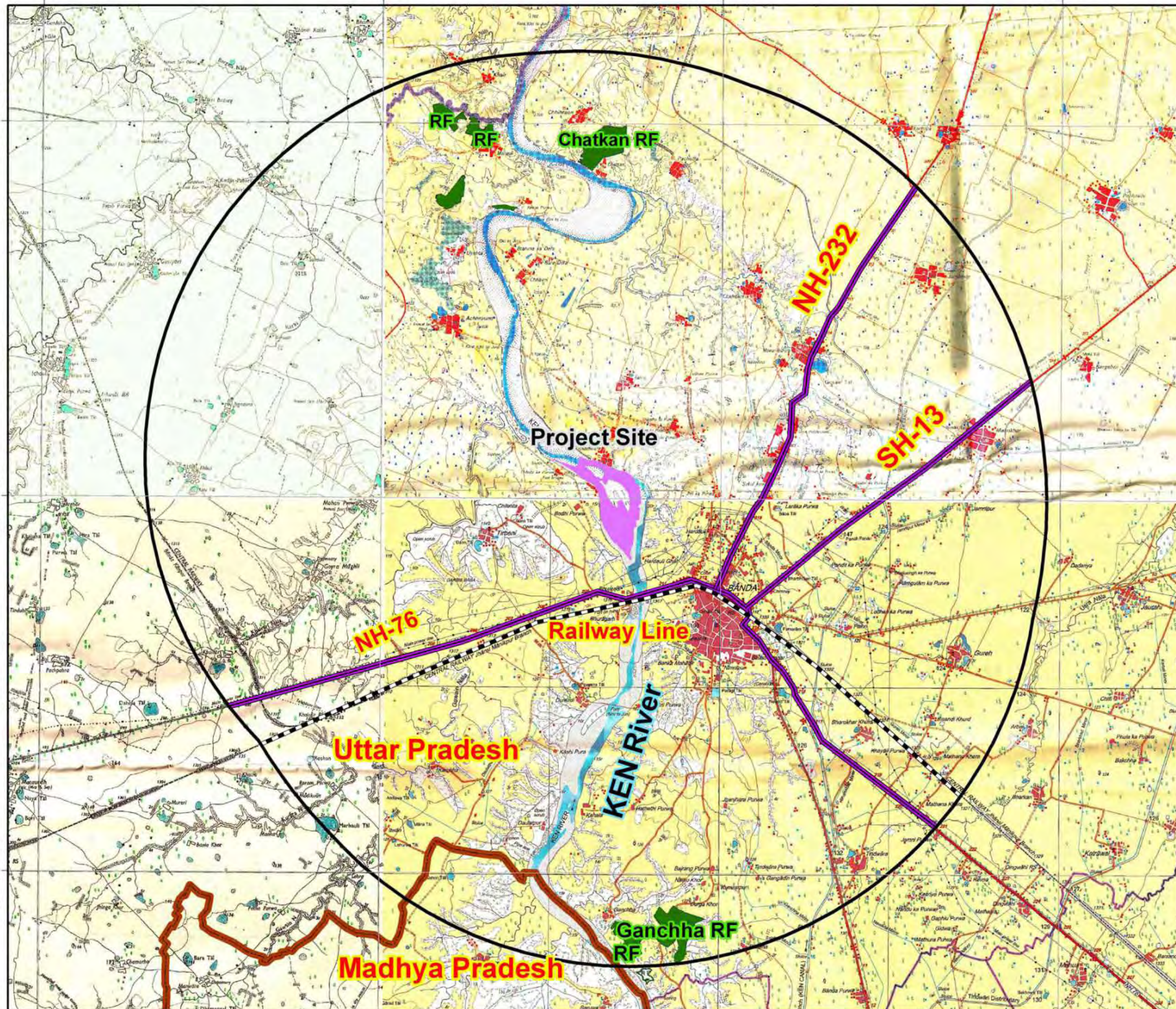
25°25'0"N

80°10'0"E

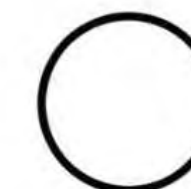
80°15'0"E

80°20'0"E

80°25'0"E



Project Site



Buffer Boundary

Inter State Boundary

TOPOSHEET NO:

63C06,63C07 (Site),
63C02,63C03

Kanvara Sand/Moram
Mining, Dist-Banda

Map No:1
10 Km Buffer Map of Study Area



**CHAPTER-II
PROJECT DESCRIPTION
INDEX**

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2.5	TOPOGRAPHY & GEOLOGY	34-35
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March, 2016

PROJECT DESCRIPTION

2.0 GENERAL

A Final Environmental Impact Assessment report is prepared to comply with the Terms of Reference (TOR) dated, issued by Ministry of Environment, Forests & Climate Change (MoEF&CC) under EIA notification of the MoEF&CC dated 14th September, 2006 and subsequent amendments, Government of India, for seeking environmental clearance for mining of sand/moram. As per the EIA notification, 2006 the applied mining lease area measures 122.81 hectares, and so the project falls under category "A". The lease area lies at khand-13 zone-1 near Village: Kanvara, Bhuredi & Chilehata, Tehsil: Banda, District: Banda, Uttar Pradesh.

2.1 DESCRIPTION OF THE PROJECT

The proposed project is to mine sand/moram from river bed of Ken and the estimated project cost is Rs 60 lakhs. The proponent has applied for mining lease in the name of Kanvara Sand/moram Mine over an area of 122.81 Hectare at Village: Kanvara, Bhuredi & Chilehata, Tehsil: Banda, District: Banda, Uttar Pradesh.

2.2 NEED FOR THE PROJECT

The river carries with it huge quantity of sediment consisting of stones and sand during every monsoon. The sediment in the form of river bed material (RBM) deposited from the time immemorial had changed the shape of the river bed from a mere valley to a raised land. Because of this, every year during the monsoon, heavy and devastating floods damage large tracts of land lying on both the banks of the river. Hence, it is necessary to remove the materials so that the river gets channelized.

2.3 LOCATION DETAILS

The mining area is located in Village: Kanvara, Bhuredi & Chilehata, Taluka: Banda, District: Banda, Uttar Pradesh. The mining lease / proposed project area falls in Survey of India Topo-sheet No. 63C07. The mine lease area is located between:

Latitude	25° 29'11.48" N to 25° 30'30.90" N
Longitude	80° 18'40.03" E to 80° 17'30.31" E
Nearest Railway Station	Banda Junction Railway Station- About 2.5 km away in SE direction.

Nearest Airport	Kanpur airport- About 104 km away in N direction.
Nearest Highway	NH-76 (about 2 km in SE direction)

Buffer map and satellite map of the study area is attached as **Map No. 1 & 2.**

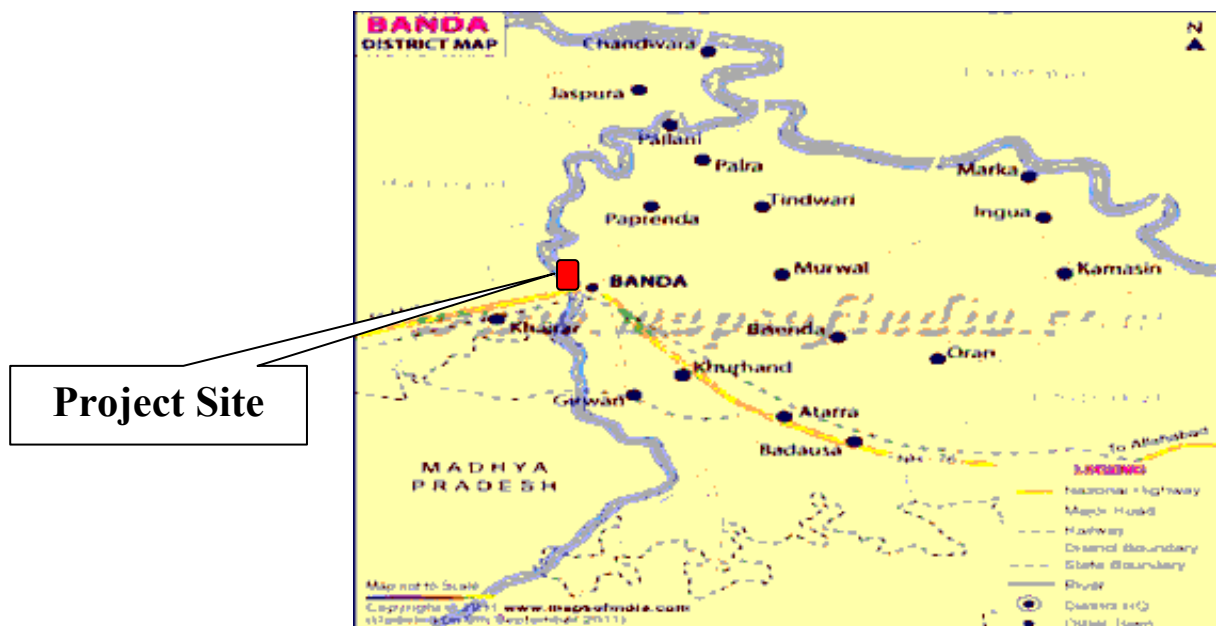
2.4 LEASE HOLD AREA

The entire lease hold area of 122.81 ha lies on the river bed of Ken. The lease has been decided as per the lease agreement dated 24.12.2009 in favor of Mr. Somesh Bharadwaj.

Details of the Lease Hold Area

Lot No.	River	Village	Area in Hectares
Khand – 13 Zone - 1	Ken	Kanvara, Bhuredi & Chilehata	122.81

The general location & Project site layout with pillar coordinates are shown below:



2.5 TOPOGRAPHY & GEOLOGY

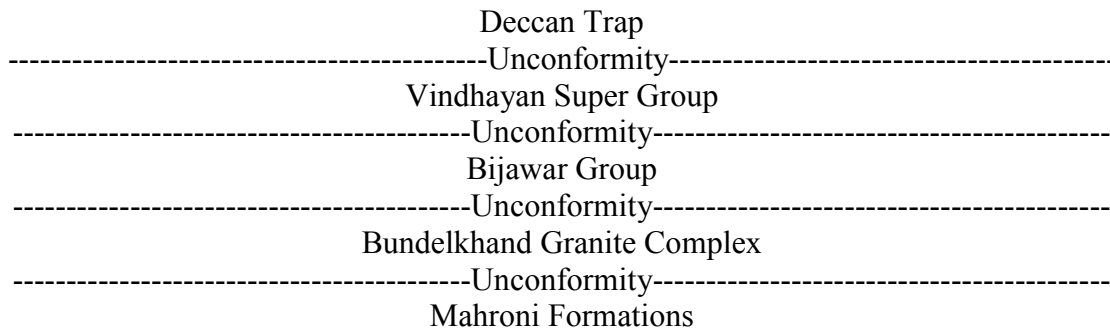
Topography:

The district largely consists of irregular uplands with outcrops of rocks intermingling with mostly lowlands, frequently under water during rainy season. The Baghein River traverses the district from south-west to north-east. The tract lying to the right of the river is intersected by numerous smaller river and rivulets (Nallas), but to its left is a flat expanse, for the most part made up of Mar and

Kabar soils, eroded and converted into ravines along the banks of the Ken and the Yamuna and to a lesser extent, the Baghein river and the Gadara Nala. The general slope of the district is from southwest to north-east, along with the course of Baghein River as mentioned earlier. The district falls into two sharply defined portions, one is upland called Patha situated on the Vindhyan plateau in the south of Mau and Karwi tehsils (presently known as Chitrakut district) and the other is lowlands of alluvium (presently known as Banda district).

Banda district lies between latitude 25°00'00" N and 25°59'00" N and longitude 80°06'00" E and 81°00'00" E. Total geographical area of the district is 4460 sq. km. the geological formation of the region is from Archaeans to recent origin. The crystalline rocks of Archaeans consist of granite, gneiss and quartz reefs. The Vindhyan area is represented by sand stone, lime stone and shale. The rocks are dominant in the region while the unconsolidated formations of recent consisting of sand, silt and clay occupies northern parts of the region towards the Yamuna confluence. The underlying Archaeans is mostly composed of basal crystalline, mostly granites, popularly known as Bundelkhand granite and metamorphic mostly gneisses. The alluvium deposit are mostly found along the river flow area

The stratigraphy of bundelkhand granite complex area is as below:



CLIMATE

Surface Drainage Pattern

It is a river bed mining project. The total lease area is located on the Ken river catchment/water shed area. Mining work will not be done during monsoon seasons; the main river/stream will not be diverted. Surface drainage map is **attached as Map No. 3**.

2.6 RESERVES

The lease area is covered with sediment deposition and only the middle portion of the lease area is considered for reserve estimation after leaving a stability zone for the banks for protection. The

sand which is exposed in all the three dimensions (3.0m maximum) is considered as proved. To estimate the reserve, the bulk density has been considered as 1.8 t/cum.

Category wise updated reserves with grade are as follows:

Category	Total (in Tonnes)	UNFC Code
Proved	66,34,348.2 tonnes	111

Reserve estimation has been done by considering the volume of material available in the given area up to a maximum depth of 3m. It is also expected that the excavated minerals will get replenished annually due to sediment inflow along with water flow. Mining will be carried only in the middle portion of the lease area leaving buffer zone on one side from the bank and other side from the river stream. Hence mining will not be done in the flowing stream of the river.

2.7 MINING

Sand/Moram Mining

The mining process is open cast river bed mining of minor minerals. Mining is proposed to be carried out manually, using hand tools like Shovel, Pan, Sieve, etc. In case of any exigency, excavators will be used.

Working Depth (below ground level)

During the entire lease period, the deposit will be worked from the top surface to 3 m bgl or above the ground water table whichever comes first.

Mining Process:

1. Mining will be started at the farthest downstream end, moving upstream from there.
2. At the cross section of the flood plain at the downstream end, the mining will be initiated from the middle of the cross section of the river bed.
3. Mining will be done up to 3 meters in layers of 1 m each and opposite to stream flow which will avoid ponding effect.
4. Mining will be done in such a way that the process of mining remains confined to the middle of the flood plain.
5. To start with it may be covered with wooden plank or metal sheet if required to prevent any sagging.

6. Having excavated that, the process will be continued to the flanks, of a truck width, alternating from one side to the other every time.
7. After the first layer is excavated, the process will be repeated for the next layers.
(Refer to Figure 2.1)

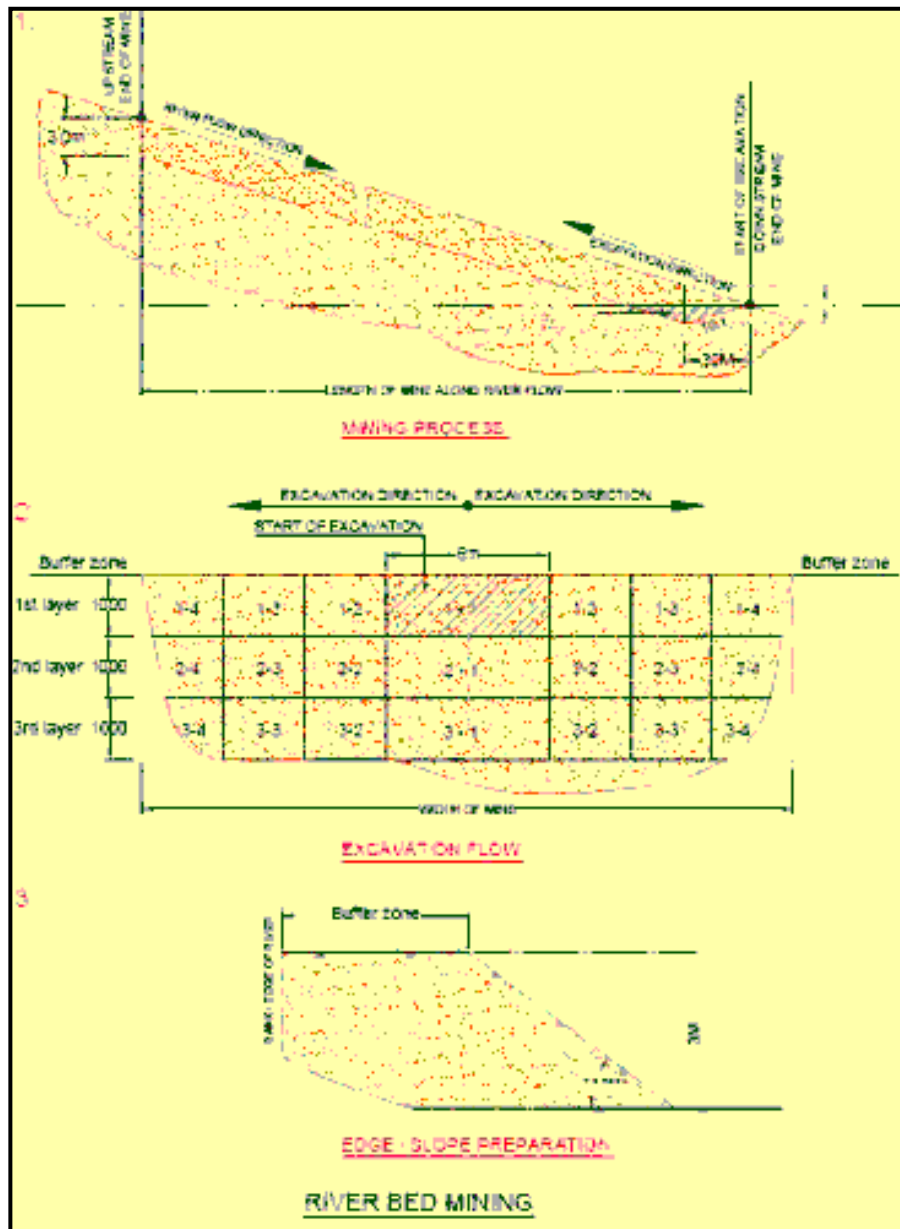


Fig. 2.7 Mining Process

Restriction of mining:

- No mining operation shall be carried out within 50 m of railway line bridge, Road Bridge or reservoir horizontally from the outer toe of the bank or the outer edge of the cutting, as the case may be.
- The mining will not be allowed below the water table.

- No mining operation will be allowed in forest area.
- The contractors will abide by U.P. Minor Mineral Concession Rules, 1963.
- The contractors will abide at the time of mining with the terms and conditions as laid down under Mines Act, 1952 and Mines & Minerals (Regulation and Development) Act, 1957, Forest (Conservation) Act, 1980 and the stipulations of the EIA/EMP.
- The contractor with the satisfaction of competent authority will provide domestic water, temporary rest shelter, and first aid box, welfare facilities as per Central and State Govt. labor laws.
- No mining will be done during monsoon season and during night times.
- The reclamation of mined out areas will be natural, as during the next monsoon the void will be filled up with sand, which will be available for fresh quarrying for the next dry season.

2.8 GENERAL FEATURES

Topography:

The district largely consists of irregular uplands with outcrops of rocks intermingling with mostly lowlands, frequently under water during rainy season. The Baghein River traverses the district from south-west to north-east. The tract lying to the right of the river is intersected by numerous smaller river and rivulets (Nallas), but to its left is a flat expanse, for the most part made up of Mar and Kabar soils, eroded and converted into ravines along the banks of the Ken and the Yamuna and to a lesser extent, the Baghein river and the Gadara Nala. The general slope of the district is from southwest to north-east, along with the course of Baghein River as mentioned earlier. The district falls into two sharply defined portions, one is upland called Patha, situated on the Vindhyan plateau in the south of Mau and Karwi tehsils (presently known as Chitrakut district), and the other is lowlands of alluvium (presently known as Banda district)

Waste Generation & Disposal

No waste will be generated as all the minerals excavated will be saleable.

Township

Since this mining is intermittent and labor employed would be mostly from adjoining areas, no colony is proposed.

Accessibility

The lease area is connected to a metalled road through an unmetalled road via village Bhuredi and Kanvara, this road finally joins to NH 76.

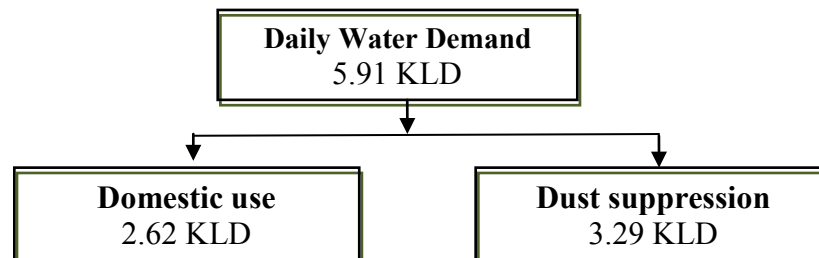
2.9 SITE FACILITIES & INFRASTRUCTURE REQUIREMENT

Power

All the activities will be carried out by manual method i.e. excavation & loading the trucks/trolley/carrying vehicles will be done manually by the working people. There is no power requirement for the project as the mining will be done manually. In case of any exigency, excavators will be used, these will run by diesel.

Water Supply

In the river bed mining projects there is as such no need of water to carry out operations; however water will be required for dust suppression and domestic purpose. Domestic water requirement for workers will be around 2.62 KLD and for the dust suppression 3.29 KLD. So, the total water requirement will be around 5.91 KLD. This water will be supplied from the nearby villages with the permission of Gram Panchayat.



Temporary Rest Shelter:

A temporary rest shelter will be provided for the workers near to the site for rest.

Provisions will also be made for following in the rest shelter:

- First aid box along with anti-venoms to counteract poison produced by certain species of small insects, if any.
- Sanitation facility i.e. septic tank or community toilet facility will be provided for the workers.

Manpower Requirement:

The manpower requirement for the proposed project will be around 350. Apart from these the local manpower may also be required for excavation, transportation and loading/unloading of Sand/moram in trucks/trolleys.

Manpower requirement

S. No.	Category	Numbers
1.	Administrative	3
2.	Supervisory	6
3.	Workers	341
TOTAL		350

80°12'0"E

80°18'0"E

80°24'0"E

25°36'0"N

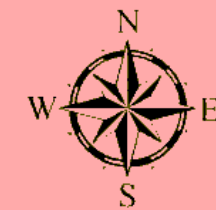
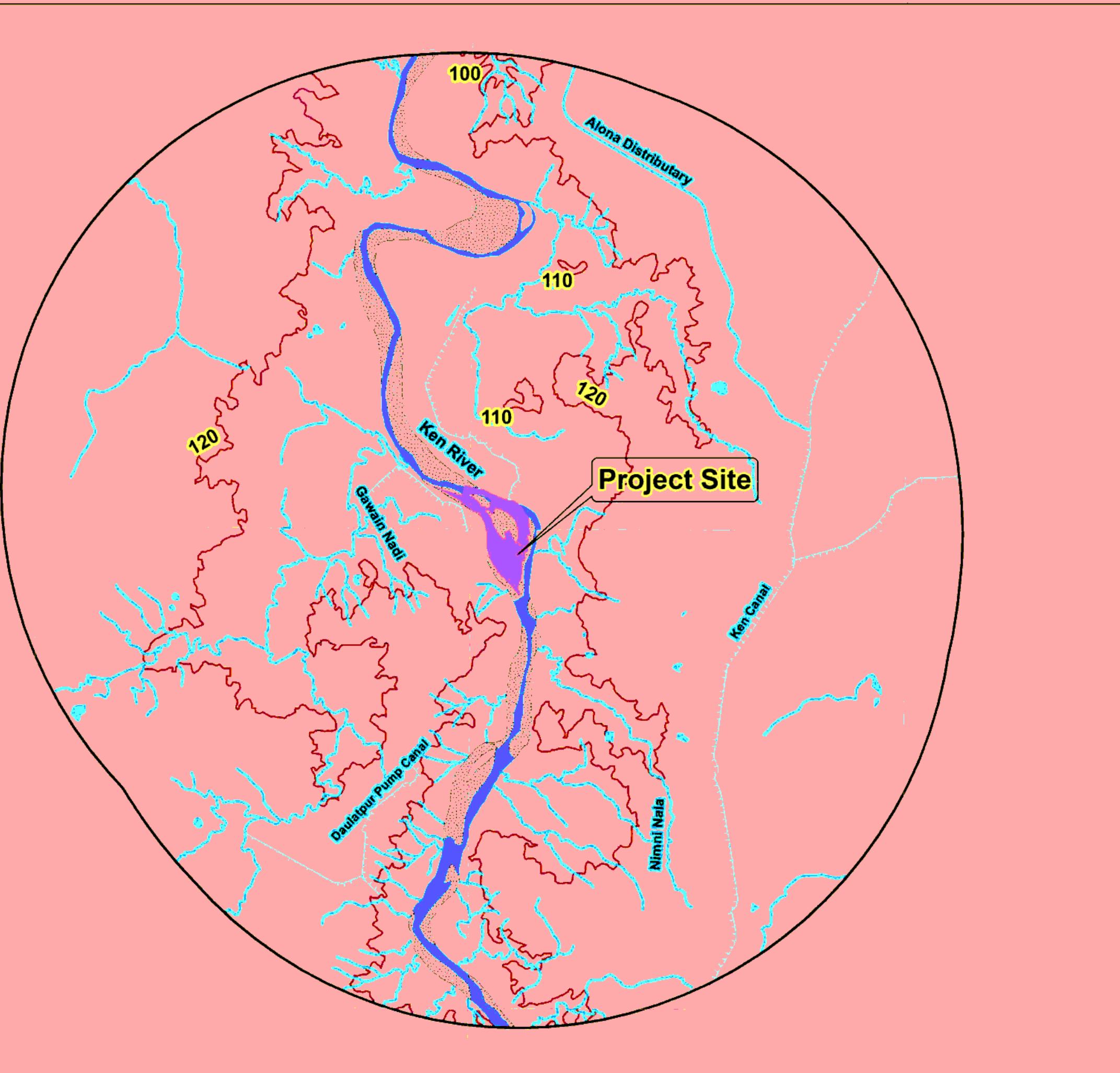
25°36'0"N

25°30'0"N

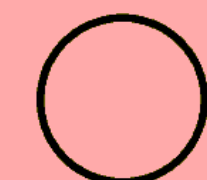
25°30'0"N

25°24'0"N

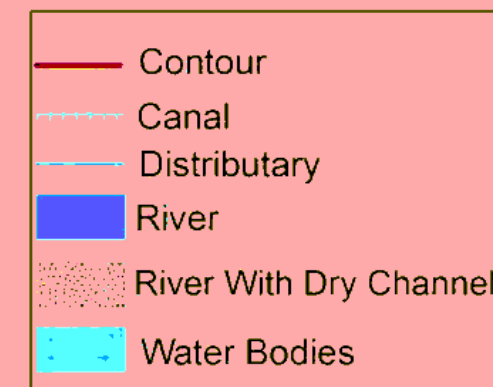
25°24'0"N



Project Site



Buffer Boundary



Contour Interval : 10 Meters

**Kanvara Sand/Moram
Mining Dist-Banda (U.P)**

Drainage Map of The Study Area



80°12'0"E

80°18'0"E

80°24'0"E

**CHAPTER-III
DESCRIPTION OF ENVIRONMENT**

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March, 2016

DESCRIPTION OF ENVIRONMENT

3.0 INTRODUCTION

This Chapter contains the description of baseline studies of the area within 10 Km radius surrounding the Kanvara Sand/moram Mine, Banda, Uttar Pradesh. The study was undertaken for prevailing environment in respect of land, air, water (both ground and surface), soil, noise, biological (both flora and fauna). The data collected has been used to understand the existing environment scenario around the proposed mining project against which the potential impacts of the proposed project can be assessed.

3.1 LAND ENVIRONMENT

This chapter includes the study of natural features like topography, climate etc. Land use/ Land cover map.

Topography

The proposed area is a river bed which is undulating. The difference of the highest & the lowest elevation of the area are about 7-8 meters. The lease area is surrounded mostly with agricultural land and few reserved and protected forests.

Climate:

The climate is typical subtropical penetrated by long and intense summers. About 80% of the annual rainfall is received from south-west monsoon. The average annual rainfall is 902.00 mm. May is the hottest month with mercury shooting upto 47.0 °C. With the advance of monsoon by mid June, temperature starts decreasing. January is usually the coldest month with temperature going upto 5.8°C.

The relative humidity is highest in August about 85% and lowest in April.

Land use / Land cover statistics of project study area:

Table 3.1: Land Use cover of the project study area

S.No.	Description	Area in Hectares	Percentage share in total area (%)
1	Water Bodies	8.71	0.02
2	Vegetation	218.70	0.55
3	Settlement	1505.63	3.84
4	River	483.21	1.23
5	Open/Barren	1878.80	4.80
6	Forest	187.36	0.47
7	Agriculture	34838.60	89.05
Total		39121.00	100

3.2 AIR ENVIRONMENT

Selection of Air Quality Monitoring Stations

Ambient air quality monitoring stations were selected primarily on the basis of surface influence, demographic influence and meteorological influence. From the meteorological data already available at the near-most site the frequency and duration of wind is preliminary determined, from which the likely wind rose diagram is first drawn. Three monitoring stations are selected in the direction of the most predominant wind direction; one in the leeward (downwind) side, one closer to the project site and one in the windward (upwind) side. Two more stations are selected across this direction.

24 hourly monitoring was carried out for SO₂, NO₂, PM_{2.5} & PM₁₀ twice a week at each station for a study period of 3 months (Oct'14 to Dec'14).

a. Site-specific meteorological data

Month	Wind Speed (kmph)			Temperature (oC)			Relative Humidity (%)			Rain Fall (mm)			Cloud Cover (Octas of sky)
	Mean	Max .	% of calm	Mean (Dry Bulb)	Highest	Lowest	Mean	Highest	Lowest	Total	24-hours Highest	No. of rainy days	Mean
October,14	4.2	6.6	24	29.8	35.7	24.4	44.2	56.8	29.9	60.4	26.5	3	4
November, 14	4.6	6.6	22	25.2	32.1	19.2	28.4	40.4	9.0	0.0	0	0	0
December, 14	5.6	7.5	18	18.8	26.2	13.3	37.7	53.8	13.0	1.73	1.2	3	3

b. Wind rose diagram

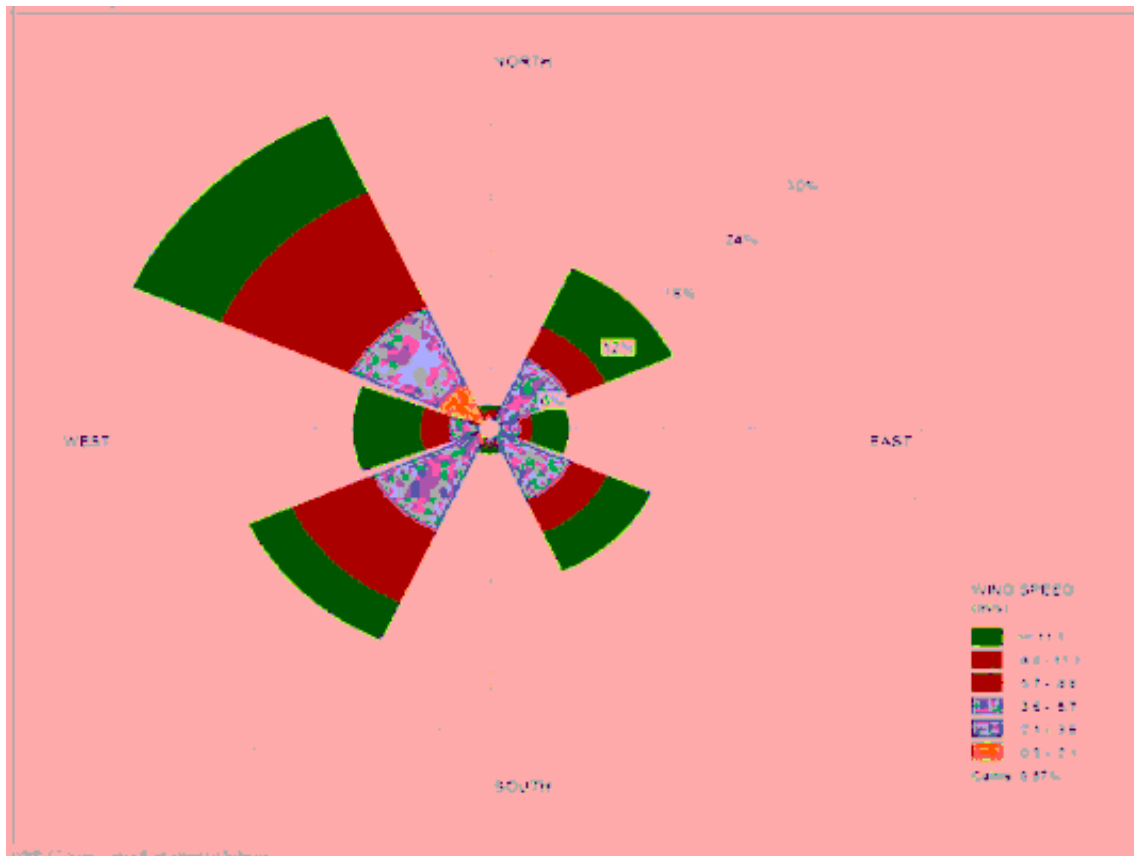


Figure 3.2: Wind Rose Diagram

Observations:

The prominent seasonal wind direction is North West direction contributing more than approximately 26 % of the total.

Methods for monitoring

The Central Pollution Control Board (CPCB) has published comprehensive document on Guidelines for the Measurement of Ambient Air Pollutants Volume-I, May 2011. Those procedures relevant to the Manual Sampling & Analyses of Ambient Air Pollutants monitoring are summarized below:

Table 3.2(i): Methods adopted for PM_{2.5}, PM₁₀, SO₂ and NO_x (as NO₂)

Parameters	Technique	Technical Protocol	Minimum Detectable Limit
PM _{2.5}	Gravimetric method	CPCB Guidelines - Volume-I, May 2011	5 (µg/m ³)
PM ₁₀	Gravimetric method	IS 5182 (Part-XXIII)	5 (µg/m ³)
Sulphur Dioxide	West and Gaeke method	IS-5182 (Part-II)	4 (µg/m ³)
Nitrogen Oxides as NO ₂	Jacob & Hochheiser method	IS-5182 (Part-VI)	7(µg/m ³)

i. Particulate Matter (PM) and Gases:-

Respirable dust sampler APM 460 B L & Fine particulate Sampler APM 550 w as used for monitoring Particulate Matter PM₁₀ and PM_{2.5} respectively. Gaseous pollutants like SO₂, and NO_x were collected by Gaseous Pollutant Sampler APM 411. Sampling & Analysis of Ambient Air Pollutants is carried out as per the relevant Indian standard methods and Guidelines for the Measurement of Ambient Air Pollutants Volume-I, May 2011 published by the Central Pollution Control Board (CPCB).

ii. Equipment calibration:

For accurate testing of Ambient Air Pollutants, the sampling Instruments and Gaseous attachments are calibrated by Master Calibrator having direct traceability from F CRI Palaghat and NPL.

The ambient air quality data were collected to find the existing Ambient Air Quality. The data is given in Table No. 3.2 (iii)

Table 3.2 (ii)
Ambient air quality monitoring stations

S. No.	Location	Station name	Distance(km) and direction from the lease area		Zone (Core/ Buffer)
1.	AQ1	Achhraund	5	NW	Buffer zone
2.	AQ2	Project Site	-	-	Core zone
3.	AQ3	Banda	3	SE	Buffer zone
4.	AQ4	Tribeni	2	WSW	Buffer zone
5.	AQ5	Mawar Buzurg	5	NE	Buffer zone



Fig.3.2 Ambient air quality monitoring in the study area

Table 3.2(iii) Ambient Air Quality Status

Site	Particulars	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)
AQ1 (24 Observations)	Minimum	70.6	<5.0	11.8
	Maximum	85.7	6.6	17.0
	Average	79.0	5.5	14.5
	98 th Percentile*	84.8	6.5	16.8
AQ2 (24 Observations)	Minimum	71.6	5.1	14.5
	Maximum	84.4	5.7	20.1
	Average	77.5	5.3	17.5
	98 th Percentile*	83.8	5.7	19.7
AQ3 (24 Observations)	Minimum	88.6	5.6	16.1
	Maximum	115.3	7.0	20.8
	Average	103.1	5.9	17.8
	98 th Percentile*	114.3	6.9	20.5
AQ4 (24 Observations)	Minimum	77.6	<5.0	13.7
	Maximum	92.3	5.5	19.4
	Average	83.1	5.2	16.4
	98 th Percentile*	91.1	<5.0	13.7
AQ5 (24 Observations)	Minimum	75.7	<5.0	18.9
	Maximum	92.4	5.8	24.4
	Average	83.1	5.4	21.3
	98 th Percentile*	91.4	5.7	23.7
CPCB Standards ($\mu\text{g}/\text{m}^3$)		100	80	80

Observations:

Ambient Air Quality Monitoring reveals that the minimum & maximum concentrations of PM₁₀ for all the 5 AQ monitoring stations were found to be 70.6 $\mu\text{g}/\text{m}^3$ at AQ1 and 115.3 $\mu\text{g}/\text{m}^3$ at AQ3, respectively. The 98 percentile values are within NAAQS at each

station except at AQ3 where it is observed that PM_{10} is marginally high due to traffic movement.

As far as the gaseous pollutants SO_2 and NO_x are concerned, the prescribed CPCB limit of $80\mu g/m^3$ for residential and rural areas has never surpassed at any station. The minimum concentrations ranged from $5.0\mu g/m^3$ to $5.6\mu g/m^3$ at AQ1 & AQ3. However the maximum concentrations ranged from $5.5\mu g/m^3$ to $7.0\mu g/m^3$ at AQ4 & AQ3, respectively. The minimum & maximum concentrations of NO_2 were found to be $11.8\mu g/m^3$ at AQ1 & $24.5\mu g/m^3$ at AQ5, respectively.

The air environment around this area is also affected by agriculture activities in the area.

Free SiO_2 :

Table 3.2 (iv)

SiO_2 ($\mu g/m^3$)	AQ1	AQ2	AQ3	AQ4	AQ5
Minimum	1.41	1.43	1.77	1.55	1.51
Maximum	1.71	1.68	2.30	1.84	1.84

The standard for respirable dust is $3mg/m^3$ for 8 hour of working period where free silica content should not exceed 5% as prescribed by Directorate General of Mines Safety.

Observations:

The minimum & maximum concentrations of SiO_2 were found to be $1.41\mu g/m^3$ at AQ1 & $1.84\mu g/m^3$ at AQ5 respectively.

3.3 WATER ENVIRONMENT

Sampling Frequency and Sampling Techniques

Parameters for analysis of water quality were selected based on the utility of the particular source of water as per MoEF & CC guidance. Hence quality of ground water was compared with IS: 10500: 1991 (Reaffirmed 1993 with Amendment No.3 July 2010) for drinking purposes. Surface water quality was analyzed for parameters as mentioned in the 'Methods of Monitoring & Analysis published by CPCB (in Annexure IV of CPCB guidelines)' and it was

rated according to the CPCB Water Quality Criteria (Designated Best Use). Grab water samples were collected from sampling locations in a 5 liter plastic jerry can and 500 ml sterilized clean glass bottles for complete physio-chemical and bacteriological tests respectively. The samples were analyzed as per standard procedure / method given in IS: 3025 (Revised Part), IS:1622-1981 r eaff.2003 and Standard Method for Examination of Water and Wastewater Ed. 21st (2005), published jointly APHA, AWWA and WEF.

As per the standard practice, one sample from each station was taken each month in the study period. Sampling was done by standard sampling technique as per the Standard Methods IS: 3025 (Revised Part), IS: 1622-1981 r eaff.2003. Necessary precautions were taken for preservation of samples.

3.3 (a) Ground Water

Three water samples were collected from the study area. The location of sampling points is shown in Table 3.3 (i) and the physio-chemical analysis of the water samples is given in the Table 3.3 (ii).

Table 3.3 (i)
Ground water sampling locations

Station No.	Location	Direction	Distance (km)	Buffer Zone / Core Zone
GW1	Achhraund	NW	5	Buffer Zone
GW2	Project Site	-	-	Core Zone
GW3	Durendi	S	4	Buffer Zone

Table 3.3 (ii)
Physio-chemical properties of ground water
Study Period – Oct: 2014

S.No	Parameter	Limit (as per IS:10500:2012)		Unit	GW1	GW2	GW3
		Desirable Limit	Permissible Limit		Achhrannd	Project	Durendi
1	Colour	5	15	Hazen	<5	<5	<5
2	Odour	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
3	Taste	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
4	Turbidity	1	5	NTU	<1	<1	<1
5	pH	6.5-8.5	No Relaxation	-	7.42	7.52	7.62
6	Total Hardness (as CaCO ₃)	200	600	mg/l	195	210	230
7	Iron (as Fe)	0.3	No Relaxation	mg/l	0.13	0.11	0.09
8	Chlorides (as Cl)	250	1000	mg/l	71	60	74
9	Fluoride (as F)	1	1.5	mg/l	0.7	0.6	0.5
10	TDS	500	2000	mg/l	370	382	415
11	Calcium(as Ca ²⁺)	75	200	mg/l	47	50	55
12	Magnesium (as Mg ²⁺)	30	100	mg/l	19	20	22
13	Copper (as Cu)	0.05	1.5	mg/l	<0.01	<0.01	<0.01
14	Manganese(as Mn)	0.1	0.3	mg/l	0.03	0.04	0.03
15	Sulphate (as SO ₄)	200	400	mg/l	25	31	41
16	Nitrate(as NO ₃)	45	No Relaxation	mg/l	7	6	5
17	Phenolic Compounds (as C ₆ H ₅ OH)	0.001	0.002	mg/l	<0.001	<0.001	<0.001
18	Mercury (as Hg)	0.001	No Relaxation	mg/l	<0.001	<0.001	<0.001
19	Nickel (as Ni)	0.02	No Relaxation	mg/l	<0.001	<0.001	<0.001
20	Selenium (as Se)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
21	Arsenic (as As)	0.01	0.05	mg/l	<0.01	<0.01	<0.01
22	Cyanide (as CN)	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01

23	Lead (as Pb)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
24	Zinc (as Zn)	5	15	mg/l	0.03	0.04	0.04
25	Anionic Detergent (as MBAS)	0.2	1	mg/l	<0.01	<0.01	<0.01
26	Chromium (as Cr6+)	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01
27	Mineral oil	0.5	No Relaxation	mg/l	<0.1	<0.1	<0.1
28	Alkalinity (as CaCO ₃)	200	600	mg/l	182	191	213
29	Aluminum (as Al)	0.03	0.2	mg/l	<0.02	<0.02	<0.02
30	Boron (as B)	0.5	1	mg/l	0.1	0.2	0.2
Microbiological Parameter							
1	Total Coliform	Shall not be detectable		MPN/10 0ml	Absent	Not Detected (<2)	Not Detected (<2)
2	E.coli	Shall not be detectable		E.coli /100ml	Absent	Absent	Absent

Note: Un- Unobjectionable

Study Period – Nov-2014

S.No	Parameter	Limit (as per IS:10500:2012)		Unit	GW1	GW2	GW3
		Desirable Limit	Permissible Limit				
1	Colour	5	15	Hazen	<5	<5	<5
2	Odour	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
3	Taste	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
4	Turbidity	1	5	NTU	1	2	1
5	pH	6.5-8.5	No Relaxation	-	7.45	7.58	7.52
6	Total Hardness (as CaCO ₃)	200	600	mg/l	202	218	236
7	Iron (as Fe)	0.3	No Relaxation	mg/l	0.09	0.11	0.08
8	Chlorides (as Cl)	250	1000	mg/l	82	72	82
9	Fluoride (as F)	1	1.5	mg/l	0.7	0.5	0.4
10	TDS	500	2000	mg/l	400	412	442

11	Calcium(as Ca ²⁺)	75	200	mg/l	48	52	56
12	Magnesium (as Mg ²⁺)	30	100	mg/l	20	21	23
13	Copper (as Cu)	0.05	1.5	mg/l	<0.01	<0.01	<0.01
14	Manganese(as Mn)	0.1	0.3	mg/l	0.03	0.04	0.02
15	Sulphate (as SO ₄)	200	400	mg/l	32	35	39
16	Nitrate(as NO ₃)	45	No Relaxation	mg/l	5	7	9
17	Phenolic Compounds (as C ₆ H ₅ OH)	0.001	0.002	mg/l	<0.001	<0.001	<0.001
18	Mercury (as Hg)	0.001	No Relaxation	mg/l	<0.001	<0.001	<0.001
19	Nickel (as Ni)	0.02	No Relaxation	mg/l	<0.001	<0.001	<0.001
20	Selenium (as Se)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
21	Arsenic (as As)	0.01	0.05	mg/l	<0.01	<0.01	<0.01
22	Cyanide (as CN)	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01
23	Lead (as Pb)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
24	Zinc (as Zn)	5	15	mg/l	0.06	0.04	0.05
25	Anionic Detergent (as MBAS)	0.2	1	mg/l	<0.01	<0.01	<0.01
26	Chromium (as Cr ⁶⁺)	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01
27	Mineral oil	0.5	No Relaxation	mg/l	<0.1	<0.1	<0.1
28	Alkalinity (as CaCO ₃)	200	600	mg/l	186	206	212
29	Aluminum (as Al)	0.03	0.2	mg/l	<0.02	<0.02	<0.02
30	Boron (as B)	0.5	1	mg/l	0.2	0.1	0.2
Microbiological Parameter						<5	<5
1	Total Coliform	Shall not be detectable		MPN/10 0ml	Not Detected (<2)	Not Detected (<2)	Not Detected (<2)
2	E.coli	Shall not be detectable		E.coli /100ml	Absent	Absent	Absent

Note: Un- Unobjectionable

Study Period – Dec-2014

S.No	Parameter	Limit (as per IS:10500:2012)		Unit	GW1	GW2	GW3
		Desirable Limit	Permissible Limit				
1	Colour	5	15	Hazen	<5	<5	<5
2	Odour	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
3	Taste	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
4	Turbidity	1	5	NTU	<1	<1	<1
5	pH	6.5-8.5	No Relaxation	-	7.52	7.61	7.35
6	Total Hardness (as CaCO ₃)	200	600	mg/l	211	230	234
7	Iron (as Fe)	0.3	No Relaxation	mg/l	0.11	0.14	0.12
8	Chlorides (as Cl)	250	1000	mg/l	84	81	90
9	Fluoride (as F)	1	1.5	mg/l	0.7	0.6	0.5
10	TDS	500	2000	mg/l	430	440	475
11	Calcium(as Ca ²⁺)	75	200	mg/l	51	55	56
12	Magnesium (as Mg ²⁺)	30	100	mg/l	20	22	23
13	Copper (as Cu)	0.05	1.5	mg/l	<0.01	<0.01	<0.01
14	Manganese(as Mn)	0.1	0.3	mg/l	0.03	0.02	0.03
15	Sulphate (as SO ₄)	200	400	mg/l	41	38	42
16	Nitrate(as NO ₃)	45	No Relaxation	mg/l	6	9	8
17	Phenolic Compounds (as C ₆ H ₅ OH)	0.001	0.002	mg/l	<0.001	<0.001	<0.001
18	Mercury (as Hg)	0.001	No Relaxation	mg/l	<0.001	<0.001	<0.001
19	Nickel (as Ni)	0.02	No Relaxation	mg/l	<0.001	<0.001	<0.001
20	Selenium (as Se)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
21	Arsenic (as As)	0.01	0.05	mg/l	<0.01	<0.01	<0.01
22	Cyanide (as CN)	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01
23	Lead (as Pb)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
24	Zinc (as Zn)	5	15	mg/l	0.05	0.03	0.04

25	Anionic Detergent (as MBAS)	0.2	1	mg/l	<0.01	<0.01	<0.01
26	Chromium (as Cr ⁶⁺)	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01
27	Mineral oil	0.5	No Relaxation	mg/l	<0.1	<0.1	<0.1
28	Alkalinity (as CaCO ₃)	200	600	mg/l	195	210	225
29	Aluminum (as Al)	0.03	0.2	mg/l	<0.02	<0.02	<0.02
30	Boron (as B)	0.5	1	mg/l	0.1	0.1	0.2

Microbiological Parameter

						Not Detected (<2)	Not Detected (<2)
1	Total Coliform	Shall not be detectable		MPN/100ml	Absent		
2	E.coli	Shall not be detectable		E.coli /100ml	Absent	Absent	Absent

Note: Un- Unobjectionable

Observation:

Analysis results of ground water in the study area reveal the following: -

- pH varies from 7.35 to 7.62.
- Total hardness varies from 195 mg/l to 236 mg/l.
- Total dissolved solids vary from 370 mg/l to 475 mg/l.

The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards promulgated by Indian Standards IS: 10500.

Fluorides and nitrates are within the permissible limits. Most of the parameters in ground water sources are well within the permissible limits as per IS: 10500-1991, Drinking Water Standards.



Fig.3.3 Ground water sampling at village

3.3 (b) SURFACE WATER

Three surface water samples were collected from the study area. The location of surface water samples is given in Table 3.3 (iii). The physio-chemical analysis of these samples are given in the Table 3.3 (iv)



Fig.3.4 Surface water sampling from River Ken

Table 3.3 (iii)
Surface water sampling locations

Station No.	Location	Direction	Distance (km)	Buffer Zone / Core Zone
SW1	Upstream Near Village Madhopur	NW	5	Buffer Zone
SW2	Project Site	-	-	Core Zone
SW3	Downstream Near Kanwara	S	4	Buffer Zone

Table 3.3 (iv)

Physio-chemical properties of surface water

Kanvara Sand Moran Mining Kanvara Bhuredi Chilehata Banda UP					
SURFACE WATER QUALITY STUDY oct.- 2014					
S.No.	Parameter	Unit	S.W. 1	SW 2	SW 3
			Ken river (Up Stream)	Ken river (P.Site)	Ken river (D.Stream)
1	pH	-	7.52	7.41	7.39
2	Dissolved Oxygen	mg/l	6.8	6.1	6.4
3	BOD(3Daysat27°C)	mg/l	2.6	3.0	2.8
4	Free Ammonia(as N)	mg/l	<0.1	<0.1	<0.1
5	Sodium Adsorption Ratio	-	0.62	0.77	0.61
6	Boron	mg/l	0.2	0.2	0.2
7	Conductivity	µmhos/cm	352	438	395
8	Temperature	(°C)	27.2	27.5	27.1
9	Turbidity	NTU	4	10	6
10	Magnesium Hardness(asCaCO ₃)	mg/l	47	56	53
11	Total Alkalinity (asCaCO ₃)	mg/l	110	120	118
12	Chloride (as Cl)	mg/l	32	45	38
13	Sulphate (as SO ₄)	mg/l	10	18	13
14	Nitrate(as NO ₃)	mg/l	0.05	0.07	0.06
15	Fluoride(as F)	mg/l	0.3	0.4	0.3
16	Sodium (as Na)	mg/l	16	22	17
17	Potassium(as K)	mg/l	2.3	3.4	3.2
18	TKN (as N)	mg/l	0.8	1.6	1.2
19	Total Phosphorous (as P)	mg/l	0.005	0.04	0.008
20	COD	mg/l	10	14	12
21	Phenolic compounds (asC ₆ H ₅ OH)	mg/l	<0.001	<0.001	<0.001
22	Lead (as Pb)	mg/l	<0.01	<0.01	<0.01
23	Iron (as Fe)	mg/l	0.09	0.12	0.11
24	Cadmium (as Cd)	mg/l	<0.001	<0.001	<0.001
25	Zinc (as Zn)	mg/l	0.06	0.07	0.06
26	Arsenic (as As)	mg/l	<0.01	<0.01	<0.01
27	Mercury (as Hg)	mg/l	<0.001	<0.001	<0.001
28	Chromium (as Cr)	mg/l	<0.01	<0.01	<0.01
29	Nickel (as Ni)	mg/l	<0.01	<0.01	<0.01
30	TDS	mg/l	211	262	240
Bacteriological Parameters					
1	Total Coliform	MPN/100ml	1600	2000	1700
2	Faecal Coliform	MPN/100ml	500	900	700

Physio-chemical properties of surface water (Nov-2014)

Kanwara Sand Moran Mining Kanwara Bhuredi Chilehata Banda up					
SURFACE WATER QUALITY STUDY Nov- 2014					
S.No.	Parameter	Unit	S.W. 1	SW 2	SW 3
			Ken river (Up Stream)	Ken river (P. Site)	Ken river (D. Stream)
1	pH	-	7.49	7.36	7.42
2	Dissolved Oxygen	mg/l	6.2	5.6	6.1
3	BOD(3Daysat27°C)	mg/l	2.5	2.9	2.8
4	Free Ammonia(as N)	mg/l	<0.1	<0.1	<0.1
5	Sodium Adsorption Ratio	-	0.55	0.54	0.71
6	Boron	mg/l	0.1	0.2	0.2
7	Conductivity	µmhos/cm	375	442	432
8	Temperature	(°C)	26.4	26.3	26.3
9	Turbidity	NTU	4	12	8
10	Magnesium Hardness(asCaCO3)	mg/l	52	61	56
11	Total Alkalinity (asCaCO3)	mg/l	113	125	123
12	Chloride (as Cl)	mg/l	34	40	42
13	Sulphate (as SO ₄)	mg/l	14	21	17
14	Nitrate(as NO ₃)	mg/l	0.07	0.09	0.05
15	Fluoride(as F)	mg/l	0.3	0.4	0.3
16	Sodium (as Na)	mg/l	15	16	20
17	Potassium(as K)	mg/l	2.4	3.5	3.6
18	TKN (as N)	mg/l	0.6	1.2	1.0
19	Total Phosphorous (as P)	mg/l	0.006	0.008	0.007
20	COD	mg/l	12	15	14
21	Phenolic compounds (asC ₆ H ₅ OH)	mg/l	<0.001	<0.001	<0.001
22	Lead (as Pb)	mg/l	<0.01	<0.01	<0.01
23	Iron (as Fe)	mg/l	0.11	0.14	0.13
24	Cadmium (as Cd)	mg/l	<0.001	<0.001	<0.001
25	Zinc (as Zn)	mg/l	0.05	0.07	0.07
26	Arsenic (as As)	mg/l	<0.01	<0.01	<0.01
27	Mercury (as Hg)	mg/l	<0.001	<0.001	<0.001
28	Chromium (as Cr)	mg/l	<0.01	<0.01	<0.01
29	Nickel (as Ni)	mg/l	<0.01	<0.01	<0.01
30	TDS	mg/l	225	265	260
Bacteriological Parameters					
1	Total Coliform	MPN/100ml	1100	1300	1400
2	Faecal Coliform	MPN/100ml	330	400	500

Physio-chemical properties of surface water

Kanwara Sand Moram Mining Kanwara Bhuredi Chilehata Banda UP					
SURFACE WATER QUALITY STUDY Dec. 2014					
S.No.	Parameter	Unit	S.W. 1	SW 2	SW 3
			Ken river (Up Stream)	Ken river (P.Site)	Ken river (D.Stream)
1	Ph	-	7.53	7.4	7.48
2	Dissolved Oxygen	mg/l	6.5	6.2	6.3
3	BOD(3Daysat27°C)	mg/l	2.3	2.8	2.6
4	Free Ammonia(as N)	mg/l	<0.1	<0.1	<0.1
5	Sodium Adsorption Ratio	-	0.31	0.49	0.57
6	Boron	mg/l	0.2	0.2	0.1
7	Conductivity	µmhos/cm	402	470	455
8	Temperature	(°C)	23.1	22.9	22.6
9	Turbidity	NTU	6	15	10
10	Magnesium Hardness(asCaCO3)	mg/l	60	65	62
11	Total Alkalinity (asCaCO3)	mg/l	118	130	127
12	Chloride (as Cl)	mg/l	36	42	45
13	Sulphate (as SO ₄)	mg/l	16	23	18
14	Nitrate(as NO ₃)	mg/l	0.8	1.2	0.8
15	Fluoride(as F)	mg/l	0.4	0.3	0.4
16	Sodium (as Na)	mg/l	9	15	17
17	Potassium(as K)	mg/l	3.1	3.6	4.1
18	TKN (as N)	mg/l	0.9	2.1	1.8
19	Total Phosphorous (as P)	mg/l	0.011	0.06	0.012
20	COD	mg/l	10	12	11
21	Phenolic compounds (asC ₆ H ₅ OH)	mg/l	<0.001	<0.001	<0.001
22	Lead (as Pb)	mg/l	<0.01	<0.01	<0.01
23	Iron (as Fe)	mg/l	0.12	0.16	0.14
24	Cadmium (as Cd)	mg/l	<0.001	<0.001	<0.001
25	Zinc (as Zn)	mg/l	0.07	0.08	0.06
26	Arsenic (as As)	mg/l	<0.01	<0.01	<0.01
27	Mercury (as Hg)	mg/l	<0.001	<0.001	<0.001
28	Chromium (as Cr)	mg/l	<0.01	<0.01	<0.01
29	Nickel (as Ni)	mg/l	<0.01	<0.01	<0.01
30	TDS	mg/l	242	284	275
Bacteriological Parameters					
1	Total Coliform	MPN/100ml	700	1100	900
2	Faecal Coliform	MPN/100ml	260	400	320

Observation:

The analysis results indicate that the pH ranges between 7.36 and 7.53.

Dissolved Oxygen (DO) was observed in the range of 5.6 mg/l to 6.8 mg/l against the minimum requirement of 4 mg/l. BOD values were observed to be in the range of 2.3-3.0 mg/l. The chlorides and Sulphates were found to be in the range of 32-45 mg/l and 10-23 mg/l respectively.

Bacteriological examination of surface water samples revealed the presence of total coliform in range of 700 MPN/100 ml to 2000 MPN/100 ml against the limit of 5000 MPN/100 ml.

Based on the results it is evident that most of the parameters of the samples comply with **‘Category C’ standards of CPCB**, indicating its suitability for Drinking water source after conventional treatment and disinfection.

3.4 SOIL ENVIRONMENT

Soil may be defined as a thin layer of earth's crust, medium for the growth of plants. The soil characteristics include both physical and chemical properties. The soil survey and soil samples were carried out / collected to assess the soil characteristics of the study area. Soil samples were collected from 3 locations & analyzed as per CPCB norms.

Methodology

Soil samples were collected from different depths below the surface. The samples were homogenized and the quantity was reduced using the coning and quartering method to provide a representative sample for analysis. They were stored in air tight Polythene Bags and analyzed at the laboratory. The samples were analyzed as per standard procedure/ method given in IS: 2720 (Revised Parts), and Soil Chemical Analysis by M. L. Jackson.

Soil samples were collected from 3 locations (project site, one upstream & one downstream side) as shown in Table 3.4(i) and analyzed as per CPCB norms.

The physio-chemical characteristics of these soil samples are given in Table No. 3.4(ii).

Table No. 3.4 (i) Description of soil sampling locations

Station No.	Location	Direction	Distance (km)	(Core Zone /Buffer Zone)
SQ1	Achhruaund	5	NW	Buffer zone
SQ 2	Project Site	-	-	Core Zone
SQ 3	Banda	3	SE	Buffer zone
SQ 4	Tirbeni	2	WSW	Buffer zone
SQ 5	Mawar Buzurg	5	NE	Buffer zone

Table 3.4 (ii)
Physio-chemical properties of soil

S.No	Parameter	Unit	SQ-1(Achhraund)	SQ-2 (P.site)	SQ-3 (Banda)	SQ-4 (Tribeni)	SQ-5 (Mawar Buzurg)
1	Texture	-	Sandy clay Loam	sandy Loam	sandy Clay Loam	Sandy clay Loam	Sandy loam
	Sand	%	55.9	68.6	60.1	58.2	62.3
	Silt	%	20.8	17.6	18.7	19.7	19.5
	Clay	%	23.3	13.8	21.2	22.1	18.2
2	pH (1:2)	-	7.85	7.51	7.75	8.12	7.85
3	Electrical Conductivity (1:2)	µmhos/cm	391	203	285	421	396
4	Cation exchange capacity	meq/100 gm	15.06	11.93	12.82	15.58	13.79
5	Exchangeable Potassium	meq/100 gm	0.41	0.21	0.26	0.48	0.32
6	Exchangeable Sodium	meq/100 gm	0.63	0.33	0.41	0.75	0.53
7	Exchangeable Calcium	meq/100 gm	9.86	8.16	8.61	10.23	9.32
8	Exchangeable Magnesium	meq/100 gm	4.16	3.23	3.54	4.12	3.62
9	Sodium Absorption Ratio	-	0.75	0.47	0.53	0.89	0.66
10	Water Holding Capacity	%	27.9	24.5	25.3	26.8	26.1
11	Porosity	%	36.2	39.9	38.8	35.1	37.8
12	Permeability	cm/hr	1.8	2.3	2.2	1.9	2.0
13	Total kjehdahl Nitrogen	%	0.053	0.031	0.032	0.057	0.042

Observations:

Samples collected from identified locations indicate the soil is Sandy loam type and the pH value ranging from 7.51 to 8.12, which shows that the soil is moderately alkaline in nature. Potassium is found to be from 0.21 meq/100gm to 0.48 meq/100 gm the water holding capacity is found in between 24.5 % to 27.9%.



Fig.3.5 Soil sampling near village

3.5 NOISE ENVIRONMENT

The noise levels within the study area were recorded using Sound Level Meter and noise monitoring results were compared with the Ambient Noise Quality Standard notified under Environment Protection Act, 1986.

Methodology

The intensity of sound energy in the environment is measured in a logarithmic scale and is expressed in a decibel, dB(A) scale. In a sophisticated type of sound level meter, an additional circuit (filters) is provided, which modifies the received signal in such a way that it replicates the sound signal as received by the human ear and the magnitude of sound level in this scale is denoted

as dB(A). The sound levels are expressed in dB(A) scale for the purpose of comparison of noise levels, which is universally accepted by the international community.

Noise levels were measured using an Integrating sound level meter manufactured by Pulsar Instruments Plc, Model NO. 91.

The noise level monitoring locations are shown in Table 3.5 (i) and the levels recorded are as stated in Table 3.5 (ii).

Table 3.5 (i)
Noise quality monitoring stations

S. No.	Location	Station name	Distance(km) and direction from the lease area		Core Zone / Buffer Zone
1.	NQ1	Mawar Buzurg	5	NE	Buffer zone
2.	NQ2	Project Site	-	-	Core zone
3.	NQ3	Banda	3	SE	Buffer zone
4.	NQ4	Tirbeni	2	WSW	Buffer zone

Table No. 3.5 (ii)
Noise level status

S.No.	PROJECT SITE	ZONE	LIMIT as per CPCB Guidelines Leq, dB(A)		Observed value Leq, dB(A)	
			DAY*	NIGHT*	DAY*	NIGHT*
1	Mawar Buzurg	Residential Area	55	45	54.1	43.2
2	Project Site	Industrial Area	75	70	53.4	41.4
3	Banda	Residential Area	55	45	56.3	47.2
4	Tirbeni	Residential Area	55	45	53.5	42.1
*	Day time	Leq(6.00AM TO 10.00PM)				
	Night time	Leq(10.00PM TO 6.00AM)				

Results

Noise monitoring reveals that the maximum & minimum noise levels at day time were recorded as 56.3 dB (A) at NQ3, & 53.4 dB (A) at NQ2 respectively. The maximum & minimum noise levels at night time were found to be 47.2 dB (A) at NQ3 & 41.4 dB (A) at NQ2.

There are several other sources in the 10 km radius of study area, which contributes to the local noise level of the area. Traffic activities as well as activities in nearby villages and agricultural fields add to the ambient noise level of the area.

3.6 THE TRAFFIC STUDY

The unmetalled road connecting from the mining site to the National Highway 76 via village Bhuredi is 7m wide and the existing traffic load on the road is around 80 vehicles/ day and the capacity is 3000 PCU/day.

The unmetalled road connecting from the mining site to the National Highway 76 via village Kanvara is 6m wide and the existing traffic load on the road is around 120 vehicles/ day and the capacity is 3000 PCU/day.

3.7 BIOLOGICAL ENVIRONMENT

Biological diversity comprises the variability of genes, species and ecosystems and is very crucial for maintaining the basic processes on which the life depends. Broadly it can be divided in to two types i.e. the floral diversity and faunal diversity. Conservation of the biodiversity is essential for the sustainable development as it not only provides the food, fodder and medicine but also contribute in improvement of essential environmental attributes like air, water, soil, etc.

Before starting any Environmental Impact Assessment study, it is necessary to identify the baseline of relevant environmental parameters which are likely to be affected as a result of operation of the proposed project. A similar approach has been adopted for conducting the study on Biological Environment for this Project. Both terrestrial and aquatic ecosystems have been studied to understand the biological environment.

Physical Environment of the study area:

This is the easternmost district of Bundelkhand. The division of the district into two has been done by splitting Banda district, tahsil and block-wise. Karwi and Mau Tehsils lying in the eastern and

South-eastern direction comprising the Manikpur, Mau, Pahadi, Chitrakut and Ramnagar blocks from the present Chitrakut district. The district largely consists of irregular uplands with outcrops of rocks intermingling with mostly lowlands, frequently under water during rainy season. The Baghein river traverse the district from south-west to north-east. The tract lying to the right of the river is intersected by numerous smaller river and rivulets (Nallas), but to its left is a flat expanse, for the most part made up of Mar and Kabar soils, eroded and converted into ravines along the banks of the Ken and the Yamuna and to a lesser extent, the Baghein river and the Gadara Nala.

River System

Yamuna flowing north of the district is the principal river attracting all the drainage of the district. For long this river had a general tendency of cutting the southern bank: this rendered many villages displaced and destructed. A famous village Shaipur near Chilla-ghat the head quarters of Pargana Pailani during Moghul time, is said to have been entirely swallowed by it. Flowing circuitously towards north, south and south-east directions Yamuna is joined by Ken at Chillaghat, Bhahein near Bilas, and Paisuni near Kankota villages. Total length of the river in this tract is 215 km. of this 130 km lies with Banda while the rest 85 km with Chitrakut

Ken River where mining is proposed, rises from district Damoh, touches Banda near village Bilaharka in Naraini tahsil for about two km and then turns towards Chhatarpur district appearing again in the same tahsil. Then entering Banda tahsil near Utarandi village it flows north-east boarding district Hamirpur and then turns eastward to meet Yamuna at Chillghat. On the whole it flows in a deep and well defined channel scoured out by the action of flood-waters which occasionally comes down in enormous volumes. The right bank is generally high and steep, scarred with innumerable ravines, but the left bank slopes somewhat more gently, and is subject to a certain amount of fluvial action. From Pailani to its junction with Yamuna, the Ken is much affected by the stream of the larger river, which blocks occasionally its flow resulting in the swell of river water, submergence of even high-level villages and deposition of valuable silt in elevations which are normally above the flood plains.

Baghein is the second important river of this district. Emanating from a hill near Kohari of Panna district, it enters Banda district at Masauni Bharatpur village (the. Naraini). It flow north-east-ward and at a point separates Banda from the newly created Chitrakut district forming boundaries between A tarra, Baberu and Karwi tahsils. Continuing north-east it joins Yamuna near Bilas village. It being most capricious in its action, deposits quantities of sand or Kankar shingles, but near its junction with Yamuna it tends to flood a large area of low lying land, if the stream in the Yamuna is sufficient to block its outlet.

Forests cover in Banda district:

The Banda district has 103 km² forest cover out of which 26 km² is moderately dense and 77km² is open forest (India State of Forests Report 2011). The proposed project area comes under Banda forest division and the area comprises of agricultural land and riverine vegetation. Due to high temperature and humidity the area comprises of *Anogeissus pendula* forest E1. No Reserved Forest, Protected Forest or wildlife protected area declared under "Wildlife (Protection) Act-1972" is located within 10 km radius of the proposed mining area.

Study period and methodology

Detailed survey was conducted to evaluate floral and faunal composition of the study area. Primary data on floral and faunal composition was recorded during site visit and secondary data was collected from the Forest department and published relevant literature. Inventory of flora and fauna has been prepared on the basis of collected data.

Field study period: The ecological survey has been conducted for one season. All data were collected in pre-monsoon period in order to reduce metrological biasness. The details are given as below:

Pre-monsoon	:	March 2013-May-2013
Core zone	:	At the project site
Buffer zone	:	Around the project site in 10 km radius.

Methodology:**Table:** Mode of data collection & parameters considered during the survey

Aspect	Data	Mode of data collection	Parameters monitored
Terrestrial Ecology	Primary data collection	By conducting field survey	Floral and Faunal diversity
	Secondary data collection	From authentic sources like Forests Department of Banda and available published literatures	Floral and Faunal diversity and study of vegetation, forest type, importance etc.
Aquatic Ecology	Primary data collection	By conducting field survey	Floral and Faunal diversity
	Secondary data collection	From authentic sources like Forests Department of Banda and available published literatures	Floral and Faunal diversity and study of vegetation, forest type, importance etc.

General Vegetation Study of the area:

Area supports moderately healthy vegetation, the main forest species are either along the Ken River or a long roadside. These plants support the species of Sisam, Arjuna, Kanchi, Khar, Sargaun, Subabul, Neem, Eucalyptus, Babul etc. Ground vegetation mainly consists of grasses and small shrubs. Useful fodder grasses, *Cynodon dactylon*, *Eleusine indica*, *Trifolium alexandrinum*, etc. can be seen growing in the area. The large weeds which infest uncultivated tracts are Aak (*Calotropis procera*), Castor (*Ricinus communis*), Dhatura (*Datura metel*) and Thorn (*Opuntia stricta*). Other noxious weeds and those which appear in crops are Pohli or Thistle (*Carthamus oxyacantha*), Shial Kanta (*Argemone mexicana*), kandyari (*Solanum xanthocarpum*), *Parthenium hysterophorus* and Bhang (*Cannabis sativa*).

Flora of the Core zone

The core zone comprises of Ken river bed, where mining operation is proposed. This area consists of riparian vegetation in which aquatic and marshland plants are the main component. Most among them are weeds. No ecologically sensitive plant species has been reported from this area. Riparian vegetation is found along the river side. In stagnant water growth of hydrophytes likes *Hydrolea zeylanica*, *Ipomoea carnea*, *Ludwigia adscendens*, *Sagittaria sagittifolia*, *Spilanthes paniculata*, *Typha latifolia*, etc. can be commonly observed.

Flora of the Buffer zone: Buffer zone of the proposed project is mainly agricultural land. The flora of buffer zone comprises of plants growing on the edges of agricultural land, village woodlots and trees planted along the roads. Many tree species are planted in the area because of their usefulness, economic and aesthetic values. The tree species observed in the area are, Aam (*Mangifera indica*), Jamun (*Syzygium cumini*), Bail (*Aegle marmelos*), Bakain (*Melia azedarach*), Bargad (*Ficus bengalensis*), Neem (*Azadirachta indica*), Peepal (*Ficus religiosa*), Popular (*Populus dealtoides*), Safeda (*Eucalyptus umbelatus*), Sisam (*Dalbergia sissoo*), etc.

In agricultural waste land and along the roadside, growth of weeds like *Argemone mexicana*, *Cannabis sativa*, *Cenchrus ciliaris*, *Heteropogon contortus*, *Lantana camara*, *Parthenium hysterosporus*, etc. are very common. These weeds are affecting the agricultural productivity of the region due to fast growth, short life cycle and enormous production of seeds.

Waste land:

Most of the areas nearby the Core zone are waste land. Commonly seen plant species in such areas are *Cannabis sativa*, *Lantana camara*, *Ipomea carnea*, *Calotropis procera*, *Cassia tora*, *Parthenium hysterophorus*, *Ziziphus mauritiana*, *Heteropogon contortus*, *Argemone Mexicana*, etc.

These weeds are affecting the agricultural productivity of the region due to fast growth, short life cycle and enormous production of seeds.

Vegetation in and around human settlement:

Vegetation pattern in villages and surrounding areas are slightly different from the rest of the areas. The common species grown near villages are mostly edible or useful plants such as *Mangifera indica*, *Syzygium cumini*, *Azadirachta indica*, *Albizia lebbeck*, *Delonix regia*, *Tamarindus indica*, *Ficus religiosa*, etc.

A list of flora of the study area is enclosed as Table

Table 3.7 (i): Flora of the Core zone

Sl.No.	Species	Family	Habit
1	<i>Ageratum conyzoides</i>	Asteraceae	Herb
2	<i>Amaranthus spinosus</i>	Amaranthaceae	Herb
3	<i>Calotropis procera</i>	Asclepiadaceae	Shrub
4	<i>Cannabis sativa</i>	Cannabaceae	Herb
7	<i>Chenopodium album</i>	Chenopodiaceae	Herb
8	<i>Datura innoxia</i>	Solanaceae	Shrub
9	<i>Hydrolea zeylanica</i>	Hydrophylaceae	Herb
10	<i>Ipomoea carnea</i>	Convolvulaceae	Shrub

Table 3.7 (ii): Flora of the Buffer zone

Sl.No.	Species	Family	Habit
1	<i>Alternanthera paronychioides</i>	Amaranthaceae	Herb
2	<i>Alternanthera pungens</i>	Amaranthaceae	Herb
3	<i>Amaranthus spinosus</i>	Amaranthaceae	Herb
4	<i>Colocasia esculenta</i>	Araceae	Herb
5	<i>Ageratum conyzoides</i>	Asteraceae	Herb
6	<i>Grangea maderaspatana</i>	Asteraceae	Herb
7	<i>Parthenium hysterophorus</i>	Asteraceae	Herb
8	<i>Cassia tora</i>	Fabaceae	Herb
9	<i>Cannabis sativa</i>	Cannabaceae	Herb
10	<i>Chenopodium album</i>	Chenopodiaceae	Herb
11	<i>Argemone mexicana</i>	Papaveraceae	Herb
12	<i>Brachiaria ramosa</i>	Poaceae	Herb
13	<i>Cynodon dactylon</i>	Poaceae	Herb
14	<i>Eleusine indica</i>	Poaceae	Herb
15	<i>Eragrostis tenella</i>	Poaceae	Herb
16	<i>Imperata cylindrica</i>	Poaceae	Herb
17	<i>Saccharum spontaneum</i>	Poaceae	Herb
18	<i>Physalis minima</i>	Solanaceae	Herb
19	<i>Calotropis procera</i>	Asclepiadaceae	Shrub

Sl.No.	Species	Family	Habit
20	<i>Cassia occidentalis</i>	Fabaceae	Shrub
21	<i>Croton bonplandianum</i>	Euphorbiaceae	Shrub
22	<i>Abutilon indicum</i>	Malvaceae	Shrub
23	<i>Bougainvillea spectabilis</i>	Nyctaginaceae	Shrub
24	<i>Ziziphus mauritiana</i>	Rhamnaceae	Shrub
25	<i>Datura innoxia</i>	Solanaceae	Shrub
26	<i>Solanum virginianum</i>	Solanaceae	Shrub
27	<i>Lantana camara</i>	Verbenaceae	Shrub
28	<i>Mangifera indica</i>	Anacardiaceae	Tree
29	<i>Polyalthia longifolia</i>	Annonaceae	Tree
30	<i>Ficus racemosa</i>	Moraceae	Tree
31	<i>Cassia fistula</i>	Fabaceae	Tree
32	<i>Ricinus communis</i>	Euphorbiaceae	Tree
33	<i>Albizia lebbek</i>	Fabaceae	Tree
34	<i>Bauhinia acuminata</i>	Fabaceae	Tree
35	<i>Butea monosperma</i>	Fabaceae	Tree
36	<i>Dalbergia sissoo</i>	Fabaceae	Tree
37	<i>Bombax ceiba</i>	Malvaceae	Tree
38	<i>Azadirachta indica</i>	Meliaceae	Tree
39	<i>Melia azedarach</i>	Meliaceae	Tree
40	<i>Luecena leucocephala</i>	Fabaceae	Tree
41	<i>Bauhinia variegata</i>	Fabaceae	Tree
42	<i>Terminalia bellerica</i>	Combretaceae	Tree
43	<i>Terminalia chebula</i>	Combretaceae	Tree
44	<i>Morus alba</i>	Moraceae	Tree
45	<i>Delonix regia</i>	Fabaceae	Tree
46	<i>Holoptelea integrifolia</i>	Ulmaceae	Tree

Wild life and avifauna of the study area:

The major part of the study area lies under agriculture field and human settlements which restrict the wildlife habitat significantly. Not any wild mammalian species encountered during the field visit to study area, while livestock of local people are significantly using the area.

There are many rivulets present in the buffer zone of study area which are the major attraction sites for avifauna. Common Myna, Kingfisher, and Cormorant are some dominant bird species present in the study area. Any significant migration pattern of birds in the study area has not been reported. As far as the reptile community was concerned, rat snake and house lizard are reported from the study area.

After a potential search, neither any direct sighting nor the indirect evidences were found in whole study area. A list of wild fauna of the study area has been prepared on the basis of local inquiry from the village people and from the available published literatures. The conservation value at regional level of identified fauna was gathered from the Wildlife protection Act, 1972 moreover,

global conservation status of species was estimated from Red data book of IUCN was used. No established habitats of any mammals or birds are noticed in river bed and along the banks.

Mammals: Area is not rich in wild mammals, but many domesticated mammal species are reported from buffer zone during the field survey. Common grazing animals like buffalo, cow, goat etc. can be noticed in open grass fields. Small mammals like Indian palm squirrel (*Funambulus palmarum*) and field mouse (*Apodemus sylvaticus*) are noticed in vicinity of village. Inquiry from village people regarding wild animals reveals that Rhesus macaque (*Macaca mulatta*), Indian hare (*Lepus nigricollis*), fruit bat (*Pteropus conspicillatus*), Nilgai (*Boselaphus tragocamelus*), etc. are often seen in the area.

Avifauna: Water birds like White throated kingfisher (*Halcyon smyrnensis*), pied kingfisher (*Ceryle rudis*), Red wattled lapwing, Cormorant etc are noticed. House crow (*Corvus splendens*), House sparrow (*Passer domesticus*), Common Myna (*Acridotheres tristis*), *Gracula religiosa*, Red-rumped Swallow (*Cecropis daurica*), Hoopoe (*Upupa epops ceylonensis*) and Cormorant (*Phalacrocorax fuscicollis*) are of common occurrence.

Reptiles: The reptilians species commonly reported are Agama (*Laudakia tuberculata*) in settlement area, Garden lizard (*Calotes versicolor*) and *Eutropis macularia* along shady places in agricultural field or where growth of bushes is noticed. Among non poisonous snakes rat snakes (*Ptyas mucosus*) are commonly noticed in field, followed by poisonous snakes like Indian Cobra (*Naja naja*) are reported to be seen by farmers.

Amphibian: Amphibians are commonly found at the places along the margin of aquatic and terrestrial systems. Due to presence of water bodies like river, nalas, etc. the study area is providing shelter to many amphibian species. Some of the commonly reported species are *Bufo melanostictus* (common Indian toad), *Euphlyctis cyanophlyctis* (Indian skipper frog), *Hoplobatrachus tigerinus* (Indian bull frog) etc.

Fish: The fish species which are commonly found in the proposed site are *Labio bata* (Bhangan or Bata), *Gudusia chapara* (Chappera or Palla), *Labio rohita* (Dumra or Dhambra), *Notopterus notopterus* (Pari or Battu), *Catla catla* (Theila), *Clarius batrachus* (mangur), etc

A list of Fauna of the study area is presented in **Table 3.7(iii) and Table 3.7(iv)**

Table 3.7 (iii): Fauna of the Core zone

S. No.	Common Name	Scientific Name	Wildlife schedule	IUCN Red List Status
AVIFAUNA				
1	Common Myna	<i>Acridotheres tristis</i>	IV	LC
2	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	IV	VU
3	House Crow	<i>Corvus splendens</i>	V	LC
4	Ashy Drongo	<i>Dicrurus leucophaeus</i>	IV	LC
5	Koel	<i>Eudynamys scolopacea</i>	IV	NA
6	Sparrow	<i>Passer domesticus</i>	IV	LC
MAMMALS				
1	Squirrel	<i>Funambulus pennant</i>	IV	DD
2	Rat	<i>Rattus rattus</i>	V	LC
AMPHIBIANS				
1	Common Indian toad	<i>Duttaphrynus melanostictus</i>	IV	NA
2	Indian skipper frog	<i>Euphlyctis cyanophlyctis</i>	IV	NA
3	Indian bull frog	<i>Hoplobatrachus tigerinus</i>	IV	NA
FISHES				
1	Bhangan or Bata	<i>Labeo bata</i>	-	NA
2	Chappera or Palla	<i>Gudusia chapara</i>	-	DD
3	Dumra or Dhambra	<i>Labeo rohita</i>	-	NA
4	Pari or Battu	<i>Notopterus notopterus</i>	-	NA
5	Theila	<i>Catla catla</i>	-	NA
6	mangur	<i>Clarius batrachus</i>	-	

LC: Least Concern, VU: Vulnerable, NA: Not Assessed, DD: Data deficient.

Table 3.7 (iv): Fauna of the Buffer zone

S.No.	Common Name	Scientific name	Wildlife Schedule	IUCN Red Category
MAMMALS				
1	Squirrel	<i>Funambulus pennant</i>	IV	DD
2	Rat	<i>Rattus rattus</i>	V	LC
3	Wild boar	<i>Sus scrofa</i>	III	LC
4	Indian hare	<i>Lepus nigricollis</i>	IV	LC
5	Porcupine	<i>Hystrix indica</i>	IV	LC

6	Monkey	<i>Macaca mulata</i>	II	LC
7	Fruit bat	<i>Rousettus leshenaulti</i>	IV	LC
8	Five striped palm squirrel	<i>Funambulus dennanti</i>	IV	LC
9	Common langoor	<i>Presbytis entellus</i>	II	LC
10	Common mongoose	<i>Herpestes edwardsi</i>	III	LC
AVIFAUNA				
1	Common Myna	<i>Acridotheres tristis</i>	IV	LC
2	King fisher	<i>Halcyon smyrnensis</i>	IV	NA
3	Pond Heron	<i>Ardeola grayii</i>	IV	NA
4	Blue Rock Pigeon	<i>Columba livia</i>	IV	NA
5	House Crow	<i>Corvus splendens</i>	V	NA
6	Cuckoo	<i>Cuculus canorus</i>	IV	NA
7	House Sparrow	<i>Passer domesticus</i>	IV	NA
8	Rose ringed Parakeet	<i>Psittacula krameri</i>	IV	NA
9	Pond Heron	<i>Ardeola grayii</i>	IV	NA
10	Common Babbler	<i>Turdoides caudatus</i>	IV	NA
11	Red vented bulbul	<i>Pychnotus cafer</i>	IV	LC
12	Lesser Pied Kingfisher	<i>Ceryle rudis</i>	IV	LC
13	Wagtail	<i>Montacilla albalboides</i>	IV	LC
14	Jungle myna	<i>Aeridatheres fulcus</i>	IV	LC
15	Slate headed parakeet	<i>Psittacula himalayana</i>	IV	LC
16	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	IV	VU
17	Ashy Drongo	<i>Dicrurus leucophaeus</i>	IV	LC
18	Koel	<i>Eudynamys scolopacea</i>	IV	NA
REPTILES & AMPHIBIANS				
1	Common Toad	<i>Duttaphrynus melanostictus</i>	IV	NA
2	India bull frog	<i>Rana tigrina</i>	IV	DD
3	Indian tree frog	<i>Polypedates maculatus</i>	IV	NA
4	Skipping frog	<i>Bufo stomaticus</i>	IV	NA
5	Garden lizard	<i>Calotes versicolor</i>	IV	NA
6	House lizard	<i>Hemidactylus sp</i>	IV	NA
7	Rat snakes	<i>Ptyas mucosa</i>	II	NA
FISHES				
1	Bhangan or Bata	<i>Labeo bata</i>	-	NA
2	Chappera or Palla	<i>Gudusia chapara</i>	-	DD
3	Dumra or Dhambra	<i>Labeo rohita</i>	-	NA
4	Pari or Battu	<i>Notopterus notopterus</i>	-	NA
5	Theila	<i>Catla catla</i>	-	NA
6	mangur	<i>Clarius batrachus</i>	-	NA

LC: Least Concern, NA: Not Assessed, DD: Data deficient.

CHAPTER-IV**ANTICIPATED ENVIRONMENTAL IMPACT AND MITIGATION MEASURES INDEX**

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March, 2016

ANTICIPATED ENVIRONMENTAL IMPACT AND MITIGATION MEASURES INDEX

4.0 GENERAL

All development projects whether new, under modernization or renovation, do have an impact on the natural set up of the environment. This impact may be beneficial or adverse, depending on the improvement or the deterioration it brings about change in the status of air, water, land, ecology, natural systems, socio-cultural life styles and economics of the population. Depending on the nature of activities and baseline environment status, the impacts are assessed for their importance. On the basis of the impact analysis, the mitigating action and future monitoring requirement are focused in the Environmental Management plan for countering or minimizing the impacts.

Keeping in mind, the environmental baseline scenario as detailed in Chapter III and the proposed mining activity described in Chapter II, it is attempted to assess the likely impact and its extent on various environmental parameters and likely mitigation measures to be adopted.

4.1 LAND ENVIRONMENT

The mining and allied activities involved in river bed mining are creation of temporary haul roads / transportation track and formation of mined pits inside river, etc. The scientific mining i.e. systematic removal of sand will not cause bed degradation and will not affect aquatic environment. This RBM project does not involve any waste generation. Thus no waste dump sites are needed for the project. Impacts of these activities are given below:

IMPACT OF SAND/MORAM MINING

The proposed extraction of streambed materials, mining below the existing streambed, and alteration of channel-bed form and shape leads to several impacts such as erosion of channel bed and banks, increase in channel slope, and change in channel morphology. These impacts may cause:

- a. Undercutting and collapse of river banks.
- b. Loss of adjacent land and/or structures.
- c. Upstream erosion as a result of an increase in channel slope and changes in flow velocity.
- d. Downstream erosion due to increased carrying capacity of the stream
- e. Downstream changes in patterns of deposition.
- f. Changes in channel bed and habitat type.

The site selection was done keeping the following points; minor mineral reserves, site specific problems like flooding, submergence crop lands / fields, need of excavation, rate of sediment deposition etc.

Mitigation measures

- a. Undercutting and collapse of river banks will be avoided as adequate safety distance will be left from banks and stream which will also protect loss of adjacent land and/or structures.
- b. Upstream and downstream erosion due to increased carrying capacity of the stream, downstream changes in patterns of deposition and changes in channel bed and habitat type will be avoided as no instream mining is done
- c. Since the project is mainly for sand excavation (soil deficient), no loss of top soil is involved /anticipated.
- d. The RBM mining activity will be done manually which will avoid adverse effects associated with heavy machinery / equipments / their functioning.
- e. Sand mining will be restricted down to 3m below ground level or above the ground water table whichever comes first.
- f. The RBM mining will be done in unsaturated zone, thus minimizing loss to habitat.
- g. Dredging will not be done.
- h. Quantities will be strictly limited so that sand accumulation rates are sufficient. For this, post project monitoring will be done and if sedimentation is not observed, quantity will be reduced.

4.2 WATER ENVIRONMENT

Mining will be carried out only in the dry portion of the river bed during non monsoon season and no instream mining will be done. Mining of sand from river bed has an impact on the stream's physical habitat characteristics. These characteristics include geometry, substrate composition and stability, roughness elements, depth, velocity, turbidity, sediment transport, stream discharge and temperature.

Water quality can be affected if transportation vehicles (trucks) get washed by the truck drivers in instream portion of the river. Also, if during unpredicted rain fall, some washouts may affect the stream.

Chances of ground water contamination is there if mining will not be done properly

Mitigation measures

Project activity will be carried out only in the dry part of the river bed. Hence, none of the project activities affect the water environment directly. In the project, it is not proposed to divert or truncate any stream. No proposal is envisaged for pumping of water either from the river or tapping the ground water and in stream portion of the river bed is not allowed to use for the domestic purposes.

The deposit will be worked from the top surface up to a maximum depth of 3 m below ground level or above the ground water table whichever comes first. Hence mining will not affect the ground water regime as well.

Further mining will be completely stopped during the monsoon seasons to allow the excavated area to regain its natural profile.

4.3 AIR ENVIRONMENT

Anticipated impacts and evaluation

Emission of fugitive dust is envisaged due to:

- i. Mining Activities includes excavation and lifting of minerals. The whole process will be done manually. Therefore the dust generated is likely to be insignificant as compared to mining processes involving drilling, blasting, mechanized loading etc.
- ii. Transportation of minerals will be done by road using trucks. Fugitive dust emission is expected from the transportation of trucks on the haul roads. Evaluation of fugitive dust emission has been done by using line source model as given below:

Air Modeling

A detailed study on emission sources and quantification of pollutant concentration by means of dispersion modeling is required to assess the environmental impact of a mine. On the basis of the predicted increments to air pollutant concentrations, an effective mitigation and environmental plan can be devised for sensitive areas. In case of river beds and mining, as there is no blasting and drilling activities, the impacts may only be caused by material handling and transportation activities. The material is mostly wet, and therefore effect is minimal.

FUGITIVE DUST- MODELING

Air quality modeling was done using line source model as published by USEPA “Emission Factor Documentation for AP-42”, in section 13.2.2, for transportation through unpaved roads. Emission factors to be used in Line source dispersion equation is adopted from formula as given below:

$$E = k * (s/12)^a * (W/3)^b / (M/0.2^c) \dots\dots\dots(1)$$

Where

E = Emission Rate (lb/VMT)

s = Surface material Silt Content (%) = 10%

W=Mean Vehicle Weight (tonnes) = 20 tonnes

M= Surface material moisture content (%) = 2.5%

K, a, b & c are empirical constants with values given as below:

Constant	PM ₁₀
k	2.6
a	0.8
b	0.4
c	0.3

Thus for vehicles of 20 tonners, the Emission Rate using equation (1) is:

$$E = 1.41020 \text{ lb/VMT}$$

$$E = 0.000276 \text{ g/s/m}$$

Concentration of the fugitive dust was calculated using the formula given in “Workbook of Dispersion Modeling” by Turner. The Concentration of the fugitive Dust is given below:

$$C = (2/\pi)^{1/2} (E / \sigma_z v) \text{ Exp-} [(h^2) / (2 \sigma_z^2)] \times 10^6 \dots\dots\dots(2)$$

Where,

C = Hourly Concentration in microgram/ m³

E = Emission Rate = 0.000276 g/s/m

v = Wind Speed = 1 m/s

h = 0 m

Modeling was done for an infinite line source assuming unpaved road. For conservative calculation wind was assumed to blow at a velocity of 1 m/s perpendicular to the road. The results for 24 hourly concentration values are given in the Fig. 4.1:

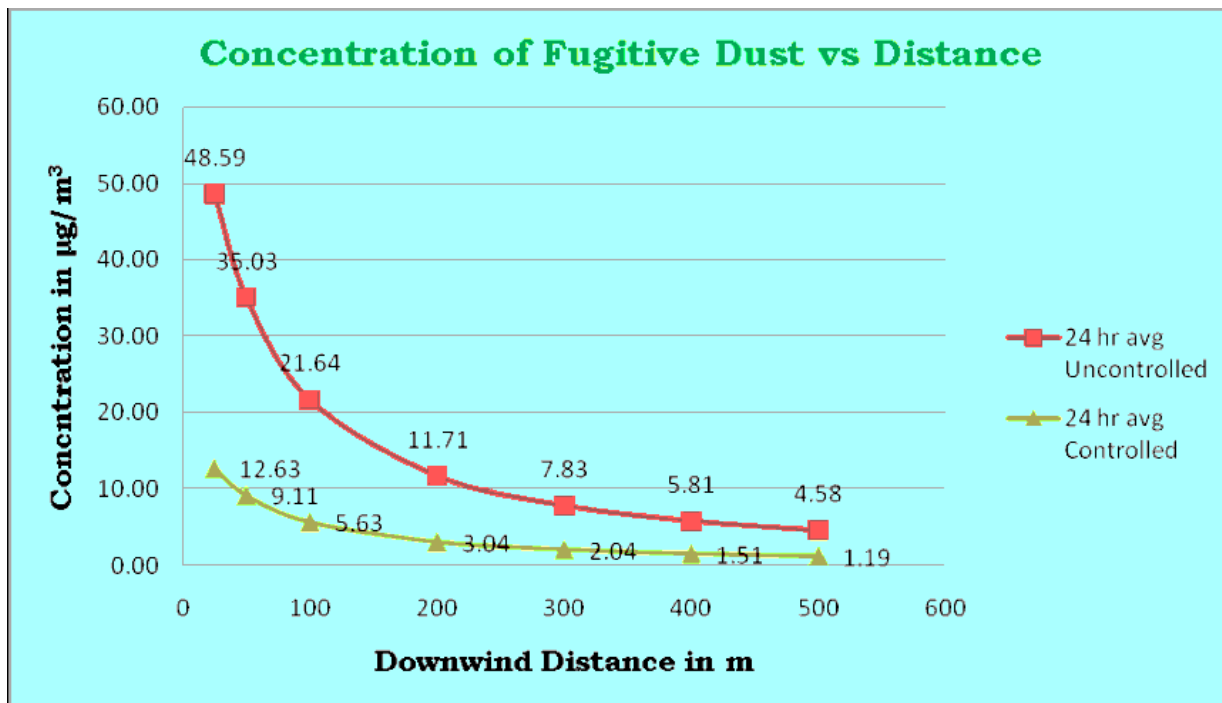


Fig.4.3 Graph showing Concentration of Fugitive dust vs. Distance

It is observed that the ground level concentration (GLC) decreases from $48.59\mu\text{g}/\text{m}^3$ at 25 m to $4.58\mu\text{g}/\text{m}^3$ at 500 m from the centre line of the road. These values have been predicted for a dry unpaved road in an uncontrolled scenario. However, the GLC at 25 m will further reduce down to $12.63\mu\text{g}/\text{m}^3$ and $1.19\mu\text{g}/\text{m}^3$ at 500 m in a controlled scenario i.e. through water sprinkling.

Mitigation measures

The collection and lifting of minerals will be done manually. Therefore the dust generated is likely to be insignificant as there will be no drilling & blasting. The only air pollution sources are the road transport network of the trucks. The mitigation measures like the following will be resorted:

- Water sprinkling will be done on the roads regularly. This will reduce dust emission further by 75%.
- Care will be taken to prevent spillage by covering the carrying vehicles with tarpaulin and sprinkling of water, if dry.
- Fortnightly scraping of road in order to keep the roads almost leveled. This will ensure smooth flow of vehicles and also prevent spillage.
- Overloading will be kept under check by giving prior awareness.

- Proper Tuning of vehicles to keep the gas emissions under check.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Care will be taken to use PUC certified trucks.

4.4 NOISE

The proposed mining activity is manual in nature. No drilling & blasting is envisaged for the mining activity. Hence the only impact is anticipated is due to movement of vehicles deployed for transportation of minerals.

Anticipated Impacts:

- Mental disturbance, stress & impaired hearing.
- Decrease in speech reception & communication.
- Distraction and diminished concentration affecting job performance efficiency.

The noise level in the working environment are compared with the standards prescribed by Occupational Safety and Health Administration (OSHA-USA) which has been adopted and enforced by the Govt. of India through model rules framed under Factories Act, 1980 and CPCB 2000 norms. The summary of the permissible exposures in cases of continuous noise as per above rules is given below:

Table 4.4 Noise impact

Total time of exposure per day in hour	Sound pressure dB(A)	Remarks
1	2	3
8.0	90	No exposure in excess of 115 dB (A) is permissible
6.0	92	--
4.0	95	For any period of exposure falling in between any figure and lower figure as indicated in column (1), the permissible sound is to be determined by extrapolation or proportionate scale.
3.0	97	
2.0	100	
1 ½	102	
1	105	
¾	107	
½	110	
¼	115	

Noise at lower levels (sound pressure) is quite acceptable and does not have any bad effect on human beings, but when it is abnormally high- it incurs some maleficent effects.

Mitigation measures

i. On-site

- a) Well maintained vehicle will be used which will reduced the noise level.
- b) **Plantation:** Plantation of trees along the road will be done to dampen the noise, if possible.
- c) **Hearing Protection:** No hearing protection is generally needed for RBM mining projects

ii. Off-site

- a) The vehicles will be maintained in good running condition so that noise will be reduced to minimum possible level.
- b) Awareness will be imparted prior to mining operations that smoke silencers remain in a good conditions not to generate noise.
- c) In addition, truck drivers will be instructed to make minimum use of horns at the village area.
- d) Where ever space is made available by the authorities’ plantation will be done and also post plantation care will be provided.

4.5 BIOLOGICAL ENVIRONMENT

Mining which leads to the removal of channel substrate, re-suspension of streambed sediment and stockpiling on the streambed, will have ecological impacts. These impacts may have an effect on the direct loss of stream reserve habitat, disturbances of species attached to streambed deposits, reduced light penetration, reduced primary production, and reduced feeding opportunities.

Sand mining generates additional traffic, which negatively impairs the environment.

Anticipated impact and mitigation measures for biological environment:

Impact Predicted	Suggestive measure
Disturbance to free movement / living of wild fauna viz. Birds, Reptiles etc.	<ul style="list-style-type: none"> • Noise produced due to vehicular movement for carrying River bed materials will be within permissible noise limit. Higher noise level in the area may lead to restlessness and failure in detection of calls of mates and young ones; • Care will be taken not to hunt animals/birds by laborers; • If wild animals/birds are noticed crossing the core zone, they will not be disturbed at all; • Laborers will not be allowed to discard food, polythene waste etc., which can attract animals/birds near the core site;

	<ul style="list-style-type: none"> • Only low polluting vehicles having PUC will be allowed for carrying mining materials.
Disturbance of riparian ecosystem/ wetlands	<ul style="list-style-type: none"> • The riparian ecosystem will not be destroyed by the mine owners/workers. Mining will be carried out on the dry river bed area and the river water channel will not be disturbed at all.
Impact on Agriculture	<ul style="list-style-type: none"> • There will be no impact on the Agriculture due to low ground level concentration of dust predicted from project. Dust generated will be suppressed during mining operation at mining site as well as during transportation by sprinkling.
Impact on land use and vegetation	<ul style="list-style-type: none"> • There will be no conversion of Forest land. There will be no impact on the vegetation due to low ground level concentration of dust predicted from project. Dust generated will be suppressed during mining operation at mining site as well as during transportation

Ecological Impacts

In stream Mining leads to the removal of channel substrate and stockpiling on the stream bed, will have ecological impacts. These impacts may have an effect on the direct loss of stream reserve habitat, disturbances of species attached to streambed deposits, reduced light penetration, reduced primary production, and reduced feeding opportunities. Dry bed mining may affect benthic organisms to some extent due to damage to their habitat. Plantation will improve both flora and fauna.

Anticipated Impacts:

- Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.
- Access roads crossing the riparian areas will have impact on the species disturbing the ecosystem.
- Mining may drive away the wild life from their habitat, and significantly affect wildlife and nearby residents.
- Diminution of the quality and quantity of habitat essential for aquatic and riparian species.
- Reduction in the yield of agriculture due to deposition of dust on the leaves, etc. of the crops.

- Fragmentation of wildlife habitat and blocking of migratory paths/corridors. Isolation may lead to local decline of species, or genetic.
- Mining on the streambed, braided flow or subsurface inter-sand flow may hinder the movement of fishes between pools.

Mitigation measures

As the proposed mining will be carried out in a scientific manner and not in stream as mentioned before, not much significant impact is anticipated, however, the following mitigation measures will be taken to further minimize it:

1. No mining will be carried out during the monsoon season to minimize impact on aquatic life which is mainly breeding season for many of the species.
2. As the mining site has no vegetation, no clearance of vegetation will be done.
3. Prior to closure of mining operations / during the rainy season the eroded bank will be restored / reclaimed to minimize negative impacts on aquatic habitats.
4. Haul roads will be sprinkled with water which would reduce the dust emission, thus avoiding damage to the crops.
5. Mining will be carried out on the dry part of the lease area to avoid disturbance to the aquatic habitat and movement of fish species.
6. No discard of food, polythene waste etc will be allowed in the lease area which would distract/attract the wildlife.
7. No night time mining will be allowed which may catch the attention of wild life.
8. Workers will be made aware of the importance of the wildlife and signage will be displayed at the sensitive areas to caution the workers & other passerby.
9. Access roads will not encroach into the riparian zones and if any riparian vegetation cleared off for the mining activity will be restored at the end of closure of mine.

4.6 TRAFFIC ANALYSIS

Transportation Route:

The excavated minerals will be loaded directly into trucks and transported to the concerned market/end users.

Evacuation Route 1: The lease area is connected to NH-76 by an unmetalled road of 490 m and then by a metalled road near village Bhuredi.

Evacuation Route 2: The lease area is connected to NH-76 by an unmetalled road of 180 m and then by a metalled road near village Bodhi Purwa

The evacuation route is shown in the map as given below in fig. 4.6(i)

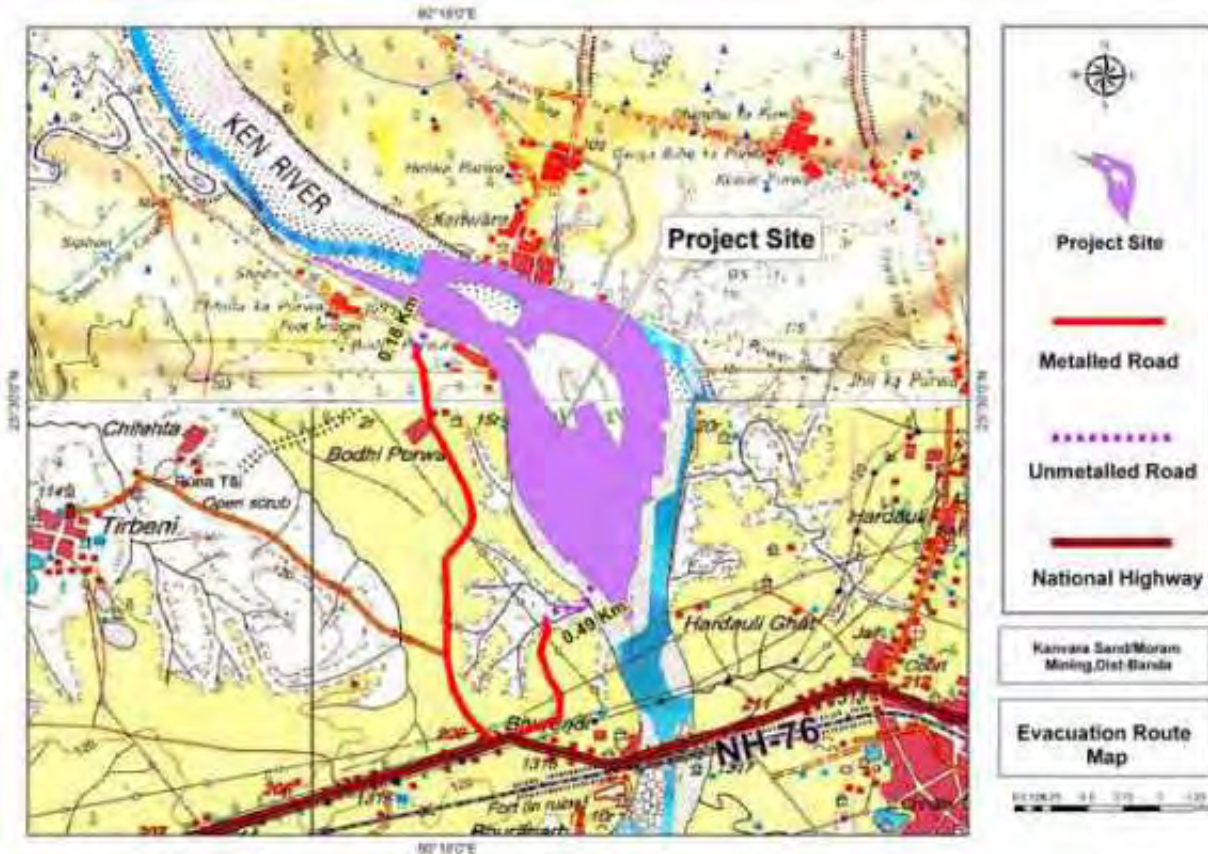


Table 4.6 (i): Existing Traffic Scenario & LOS

Road	V	C	Existing V/C Ratio	LOS
Near Village Bhuredi	80	6000	0.01	A
Near Village Bodhi Purwa	128	6000	0.02	A
NH-76 Intersection	1400	15000	0.09	A

Source: IRC 64-1990

V= Volume in PCU's/day & C= Capacity in PCU's/ day

The existing Level of Service near Village is "A" i.e. excellent and at highway is "A" i.e. excellent.

V/C	LOS	Performance
0.0 - 0.2	A	Excellent
0.2 - 0.4	B	Very Good

0.4 - 0.6	C	Good / Average / Fair
0.6 - 0.8	D	Poor
0.8 - 1.0	E	Very Poor

Reference: ENVIS Technical Report, IISc, Bangalore.

During Mine operation

Transportation scenario from the site through village Kanvara, Chilehata & Bhuredi

Total Capacity of mine : 7, 00,000 tonnes per annum

No. of working days : 250 days

Proposed Capacity of mine/day : 2,800 tonnes

Carrying capacity of truck : 20 tonnes

No. of trucks deployed/day : 140

No. of truck trips/day : 280

Considering both loaded and empty trucks

Increase in PCU/day will be 1260

Table 4.6 (ii): Modified Traffic Scenario & LOS

Road	V	C	Existing V/C Ratio	LOS
Near Village Bhuredi	710	6000	0.11	A
Near Village Bodhi Purwa	758	6000	0.12	A
NH-76 Intersection	2660	15000	0.17	A

Results

From the above analysis it can be seen that the V/C ratio is likely to change to **0.11 & 0.12** in the village roads and **0.17** in NH-76 with LOS being “A” which is ‘Excellent’ in all the cases, as per classification.

Traffic Management:

The additional traffic load if transported through single road might have significant adverse effect deteriorating the road condition and LOS. Hence the traffic load has been diverted through two different roads to reduce the impact and to keep the level of service to an extent which is good.

In addition a supervisor will be hired to keep a check on the traffic scenario for the smooth management. Speed breakers near the schools and sensitive places will be constructed and sign boards will also be maintained to caution and manage the movement of vehicles.

4.7 EVACUATION ROUTE

Evacuation Route 1: The lease area is connected to NH-76 by an unmetalled road of 490 m and then by a metalled road near village Bhuredi.

Evacuation Route 2: The lease area is connected to NH-76 by an unmetalled road of 450 m and then by a metalled road near village Bodhi Purwa.

4.8: IMPACT MATRIX:

Any development project has some environmental impact – either adverse or beneficial. It is necessary to reduce adverse impacts and increase beneficial impacts. Therefore, it is necessary to first identify them to the extent possible. In this project, the identification of impact has been performed by using matrix for Qualitative as well as Quantitative impacts. The qualitative matrix identifies significant impacts for which detailed predictions and mitigation plans are needed. The quantitative matrix compares two scenarios – one with scientific mining (both with and without EMP) and the other with unscientific mining that is mining without complying with statutory guidelines and standards.

OVERALL QUALITATIVE AND QUANTITATIVE IMPACT MATRIX

Table 4.7 (i): Qualitative Matrix

Items	Nature of Likely Impacts								
	Adverse					Beneficial			
	ST	LT	R	IR	L	ST	LT	SI	N
Air Quality	√		√		√				
Surface Water Quality	√		√				√	√	
Ground Water	*	*	*	*	*	*	*	*	*
Land Environment	√		√		√		√	√	
Noise	√		√		√				
Soil	*	*	*	*	*	*	*	*	*

Flora & Fauna	√			√	√		√	√	
Agriculture	√		√		√				
Socio Economic							√	√	

ST: Short Term**LT: Long Term****R: Reversible****IR: Irreversible****L: Local****SI: Significant****N: Neutral*****: Negligible****Table 4.4 (ii): Quantitative Matrix**

Items	With Project (scientific mining)		Without Project (unscientific mining)
	With EMP	Without EMP	
Air Quality	-2	-6	-10
Surface Water Quality	-1	-4	-6
Ground Water	0	0	-2
Land Environment	+8	-2	-10
Noise	-2	-6	-6
Flora	+6	-2	-10
Fauna	+2	-1	-6
Agriculture	0	0	0
Socio Economic	+8	+4	0
Total	+19	-17	-50

4.9 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- The Mines Act, 1952
- The Mines and Mineral (Development and Regulation) Act, 1957
- Mines Rules, 1955
- Mineral Concession Rules, 1960
- Mineral Conservation and Development Rules, 1988
- State Minor Mineral Concession Rules, U.P., 1963
- The Water (Prevention and Control of Pollution) Act, 1974
- The Air (Prevention and Control of Pollution) Act, 1981
- The Environment (Protection) Act, 1986
- The Forest (Conservation) Act, 1980
- The Wildlife (Protection) Act, 1972

80° 10'0"E

80° 15'0"E

80° 20'0"E

80° 25'0"E

25° 35'0"N

25° 35'0"N

25° 30'0"N

25° 30'0"N

25° 25'0"N

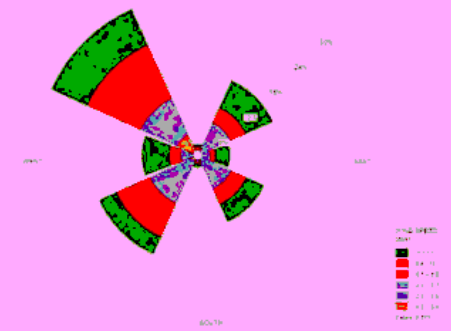
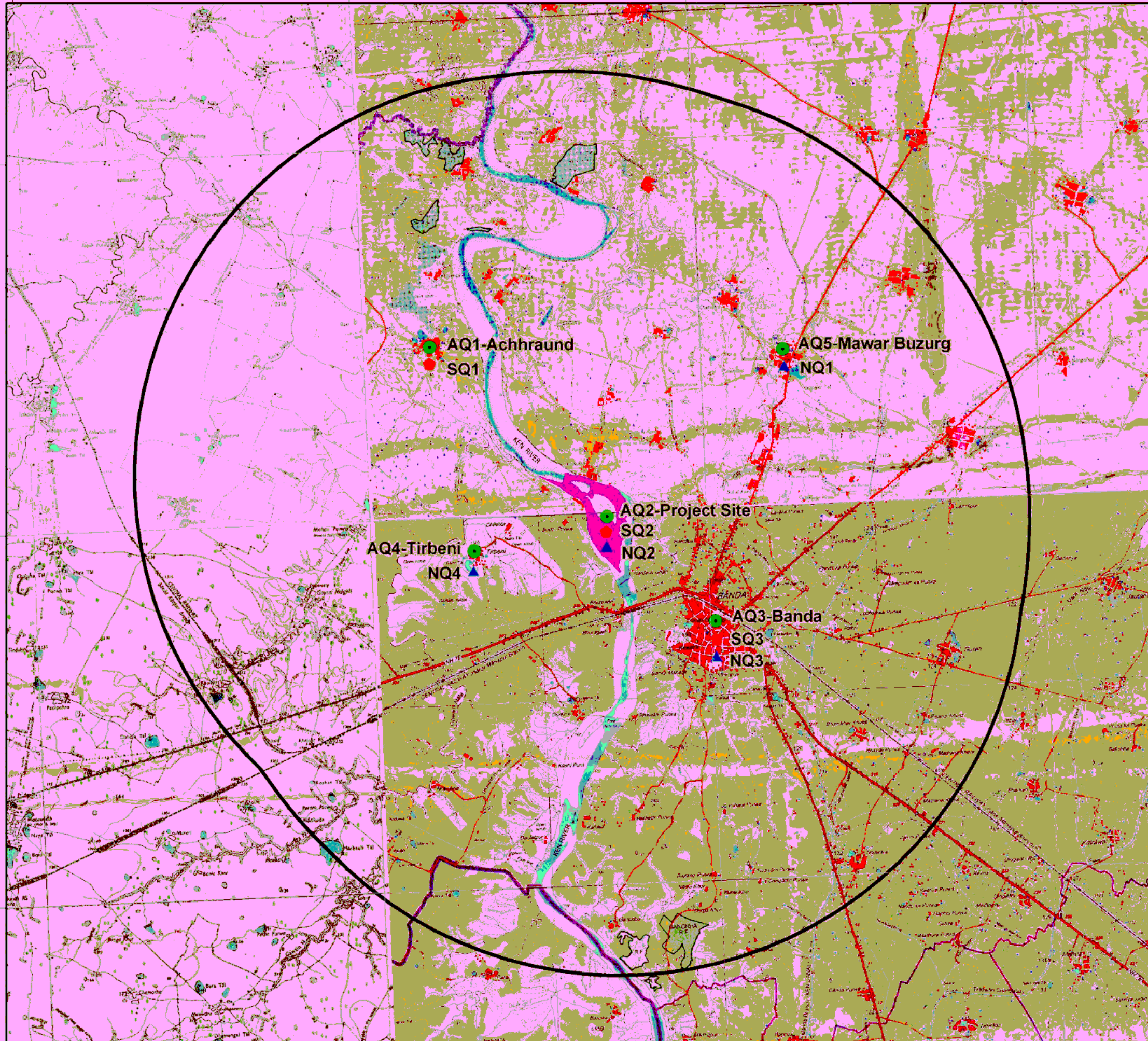
25° 25'0"N

80° 10'0"E

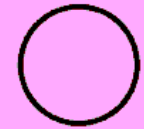
80° 15'0"E

80° 20'0"E

80° 25'0"E



Project Site



Buffer Boundary

	AQ
	NQ
	SQ

Kanvara Sand/Moram Mining, Dist-Banda Uttar Pradesh

Monitoring Map for Ambient Air Quality, Noise Monitoring & Soil Sampling

0 1.25 2.5 5



Kilometer

80° 10'0"E

80° 15'0"E

80° 20'0"E

80° 25'0"E

25° 35'0"N

25° 35'0"N

25° 30'0"N

25° 30'0"N

25° 25'0"N

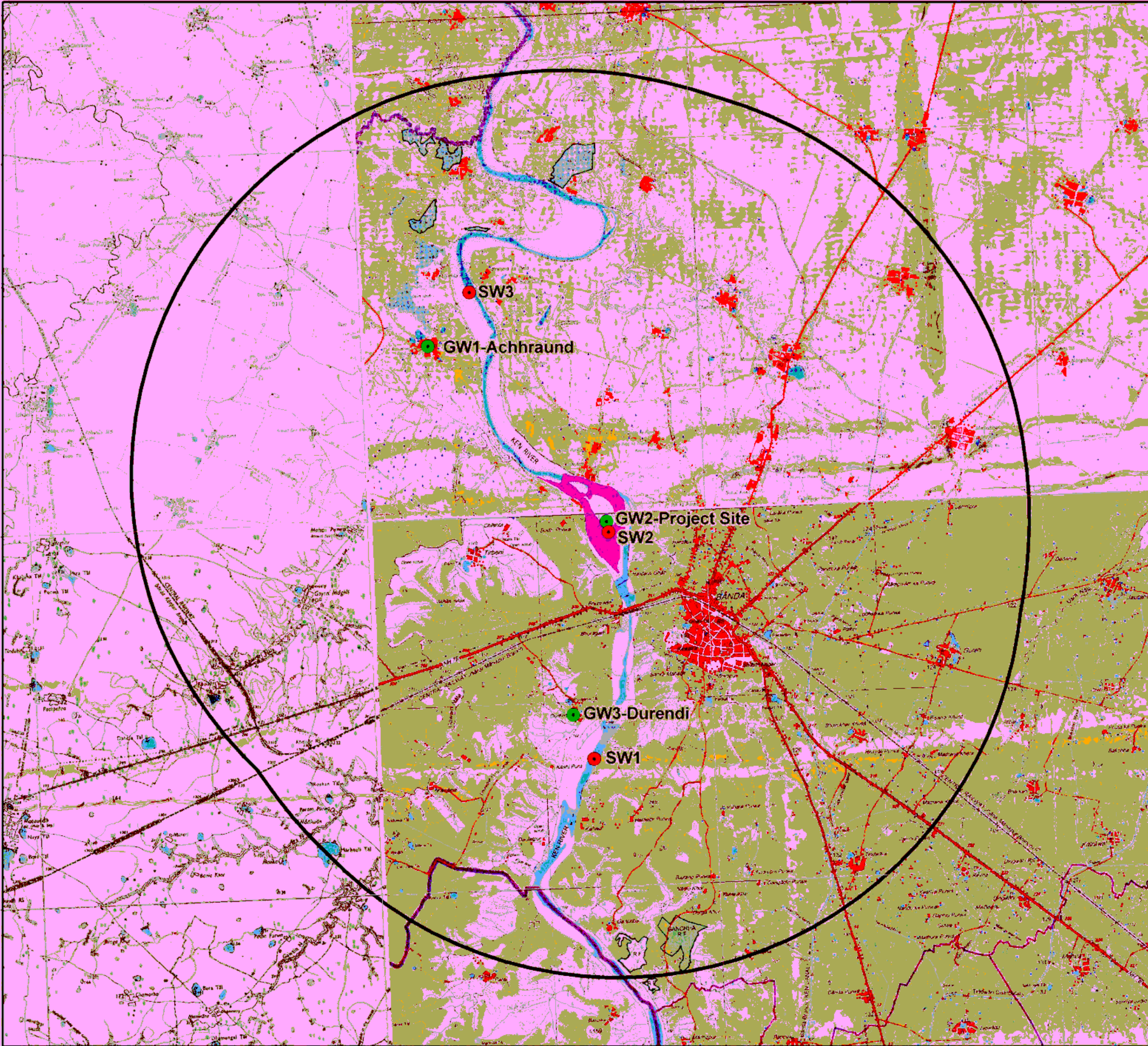
25° 25'0"N

80° 10'0"E

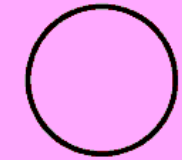
80° 15'0"E

80° 20'0"E

80° 25'0"E



Project Site



Buffer Boundary



GW



SW

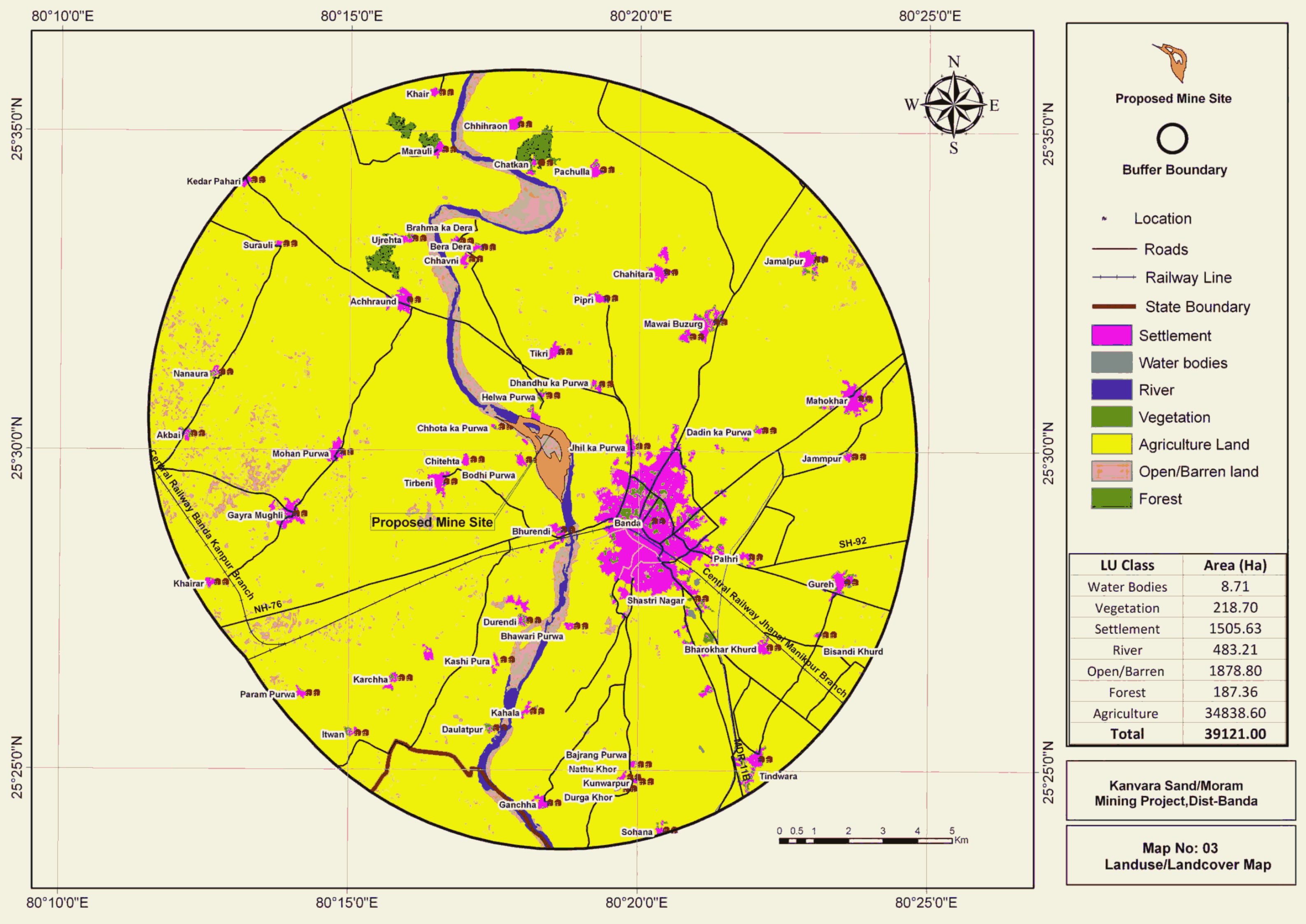
**Kanvara Sand/Moram
Mining, Dist-Banda
Uttar Pradesh**

**Monitoring Map for Ground
Water and Surface Water
Sampling**

0 1.25 2.5 5



Kilometer



Proposed Mine Site

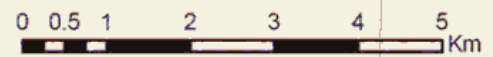
Buffer Boundary

- * Location
- Roads
- +— Railway Line
- State Boundary
- █ Settlement
- █ Water bodies
- █ River
- █ Vegetation
- █ Agriculture Land
- █ Open/Barren land
- █ Forest

LU Class	Area (Ha)
Water Bodies	8.71
Vegetation	218.70
Settlement	1505.63
River	483.21
Open/Barren	1878.80
Forest	187.36
Agriculture	34838.60
Total	39121.00

Kanvara Sand/Moram Mining Project, Dist-Banda

**Map No: 03
Landuse/Landcover Map**



CHAPTER-V
ENVIRONMENTAL MONITORING PROGRAMME
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5.6	REPORTING SCHEDULE OF THE MONITORING DATA	94

March, 2016

ENVIRONMENTAL MONITORING PROGRAMME INDEX

5.0 INTRODUCTION

Regular monitoring of the various environmental parameters is necessary to evaluate the effectiveness of the management programme so that the necessary corrective measures can be taken in case there are some drawbacks in the proposed programme. Since environmental quality parameters at work zone and surrounding areas are important for maintaining sound operating practices of the project in conformity with environmental regulations, the post project monitoring work forms part of Environmental Monitoring Program.

Environmental Monitoring Program will be implemented once the project activity commences. Environmental monitoring program includes (i) environmental surveillance, (ii) analysis & interpretation of data, (iii) preparation of reports to support environmental management system and (iv) Organizational set up responsible for the implementation of the programme.

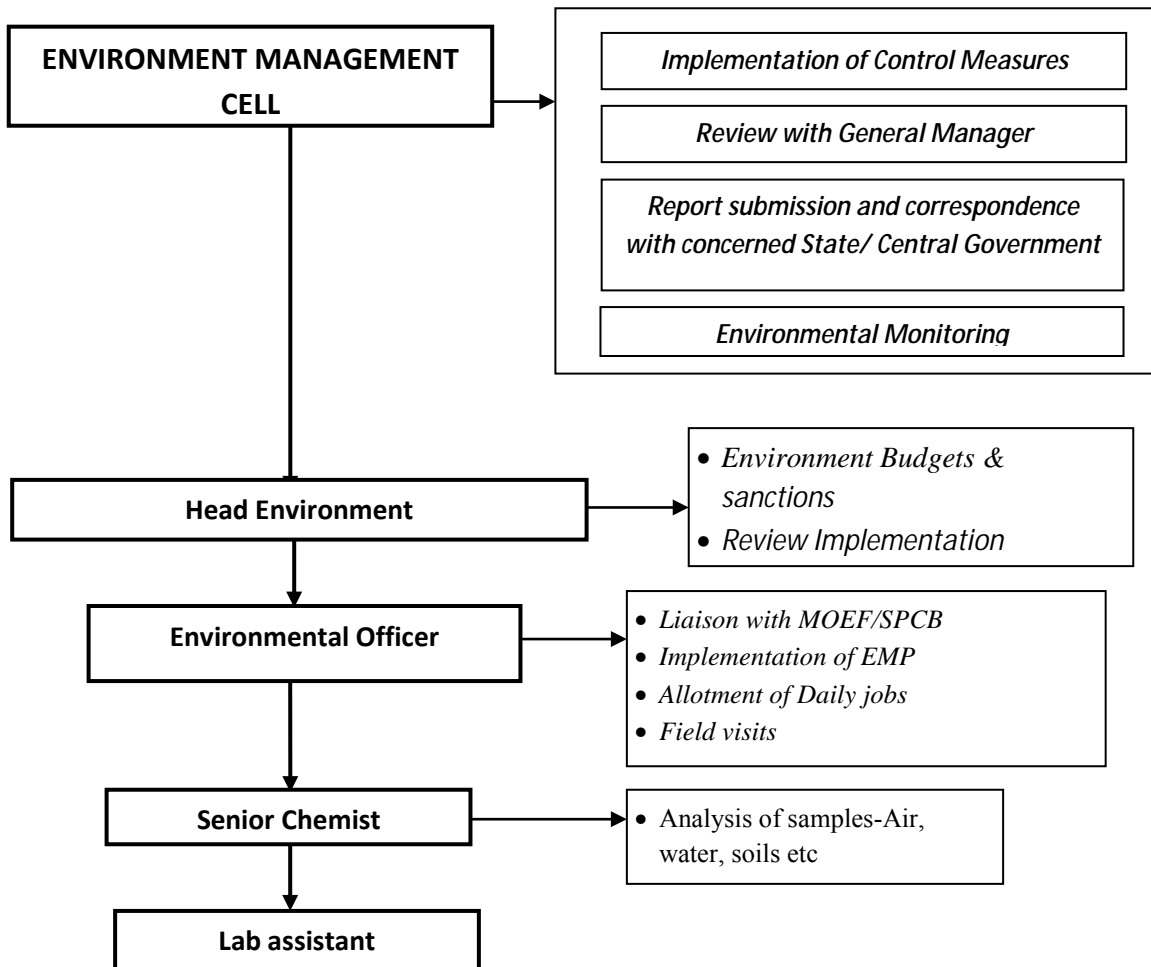


Fig. 5.1 Organization for implementation of Control Measures**5.1 ENVIRONMENTAL MONITORING AND REPORTING PROCEDURE**

Monitoring shall confirm that commitments are being met. This may take the form of direct measurement and recording of quantitative information, such as amounts and concentrations of discharges and wastes, for measurement against corporate or statutory standards, consent limits or targets. It may also require measurement of ambient environmental quality in the vicinity of a site using ecological/biological, physical and chemical indicators. Monitoring may include socio-economic interaction, through local liaison activities or even assessment of complaints.

The preventive approach to environment management may also require monitoring of process inputs, for example, type and method used, resource consumption, equipment and pollution control performance etc.

The key aims of environment monitoring are:

1. To ensure that results/ conditions are as forecast during the planning stage, and where they are not, to pinpoint the cause and implement action to remedy the situation.
2. To verify the evaluations made during the planning process, in particular with risk and impact assessments and standard & target setting and to measure operational and process efficiency.
3. Monitoring will also be required to meet compliance with statutory and corporate requirements.
4. Finally, monitoring results provide the basis for auditing i.e. to identify unexpected changes.

5.2 MONITORING METHODOLOGIES AND PARAMETERS**Air Quality Monitoring**

Air Quality monitoring is essential for evaluation of the effectiveness of abatement programmes and to develop appropriate control measures. Suspended Particulate Matter (SPM), Sulphur Dioxide (SO₂) and Nitrogen Dioxide (NO₂) will be monitored at the workplace i.e. core zone. The methodology proposed for is shown below:

Parameters	Technique	Technical Protocol
PM _{2.5}	Gravimetric method	CPCB Guideline Vol. I May' 2011
PM ₁₀	Gravimetric method	IS 5182 (Part-XXIII)
Sulphur Dioxide	Improved West and Gaeke	IS-5182 (Part-II)

Nitrogen Dioxide	Modified Jacob & Hochheiser	IS-5182 (Part-VI)
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Water Quality monitoring

Water quality monitoring involves periodical assessment of quality of surface water and the ground water near the mining project.

- Surface water samples will be analyzed for all the parameters as per EPA, 1986
- Ground water samples will be analyzed for all the parameters as per IS-10500.

Soil Quality monitoring

The soil quality monitoring is carried out to assess the soil characteristic. The soil quality will be analyzed as per CPCB norms.

Noise Level Monitoring

Noise level monitoring will be done for achieving the following objectives:

- To compare sound levels with the values specified in noise regulations
- To determine the need and extent of noise control of various noise generating sources

Noise level monitoring will be done at the work zone to assess the occupational noise exposure levels. Noise levels will also be monitored at the noise generating sources like mineral handling arrangements, vehicle movements and also at the nearest village for studying the impact due to higher noise levels for taking necessary control measures at the source.

Socio-economic Survey

Socio economic condition will be monitored to assess the demographic particulars of the area including the impacts on the social & economical condition on the residents nearby.

Plantation monitoring programme

Plantation monitoring will be done to ensure survival & growth rate of plantations.

5.3 MONITORING SCHEDULE

The schedule has been shown below for the parameters proposed for monitoring.

S.No.	Description of Parameters	Schedule of Monitoring
1	Air Quality: a) In the vicinity of the mine b) In the vicinity of the transportation Network c) Dust suppression on roads Scraping/ bulldozing of road to shift accumulated dust to the sides	24 hourly samples twice a week in each season except monsoon Regularly in non - monsoon months and whenever occurrence of fugitive dust takes place fortnightly
2	Water Quality (Surface & Groundwater)	Once a season for 4 seasons in a year
3	Soil Quality	Once in a year in project area
4	Noise Level	Twice a year for first two years & then once a year
5	Socio-economic Condition	Once in 3 years
6	Plantation monitoring	Once in a season

5.4 MONITORING SCHEDULE - IMPLEMENTATION

An implementation programme has been prepared as it serves no purpose if it is not implemented in letter and spirit.

The major attributes of environment are not confined to the mining site alone. Implementation of proposed control measures and monitoring programme has an implication on the surrounding area as well as for the region. Therefore, mine management should strengthen the existing control measures as elaborated earlier in this report and monitor the efficacy of the control measures implemented within the mining area relating to the following specific areas:

- a) Collection of air and water samples at strategic locations with frequencies suggested and by analyzing thereof. If the parameters exceed the permissible tolerance limits, corrective regulation measure will be taken.
- b) Collection of soil samples at strategic locations once every two years and analysis thereof with regard to deleterious constituents, if any.
- c) Measurement of water level fluctuations in the nearby ponds dug wells and bore wells and to assess if mining has got any impact on it or not.

- d) Measurement of noise levels at mine site, stationary and mobile sources, and adjacent villages will be done twice a year for first two years and thereafter once a year.
- e) Post plantation, the area will be regularly monitored in every season for evaluation of success rate. For selection of plant species local people should also be involved.

An Environmental Management Cell (EMC) is envisaged which will be responsible for monitoring EMP and its implementation. EMC members should meet periodically to assess the progress and analyze the data collected during the month.

5.5 BUDGET ALLOCATION FOR MONITORING

The EMC will be responsible to carry on the monitoring. Budget allotment has also been proposed for the same:

S. No.	Description	Cost to be incurred (in lakhs/annum)
1	Air Quality	0.5
2	Water Quality (Surface & Groundwater)	0.5
3	Soil Quality	0.3
4	Noise Level	0.3
5	Socio-economic Condition	0.4
6	Plantation monitoring	0.2
TOTAL		2.2

5.6 REPORTING SCHEDULES OF THE MONITORING DATA

It is proposed that voluntary reporting of environmental performance with reference to the EMP should be undertaken. The environmental monitoring cells shall co-ordinate all monitoring programmes at site to furnish the data to the State regulatory agencies regularly in respect of the stipulated prior environmental clearance terms and conditions.

The proponent shall prominently advertise in the newspapers indicating that the project has been accorded environmental clearance and also the details of website where it is displayed.

CHAPTER-VI
ADDITIONAL STUDIES
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March, 2016

ADDITIONAL STUDIES

6.0 PUBLIC CONSULTATION

The public consultation for this project was held on 1st August, 2015. The Public Hearing Notice is shown below which was published on 09-06-2015 in the regional news papers, Times of India (English) & Hindustan (Hindi).

The records of the proceedings with action Plan are attached as Annexure VII (A), VII (B) & VII (C).



उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड

क्षेत्रीय कार्यालय: ए-39, आवास विकास कालोनी, चित्ला रोड, बाँदा

पर्यावरणीय स्वीकृति हेतु लोक सुनवाई के सम्बन्ध में आम सूचना

सर्व साधारण को सूचित किया जाता है कि खण्ड संख्या- 13 जौन-1, ग्राम-कनवारा, भूरेडी एण्ड फिलेहटा, तहसील एवं जनपद-बाँदा (उ०प्र०) में सैण्ड/मोरम माइनिंग परियोजना क्षेत्रफल-122.81 हेक्टर (303.46 एकड़) पर पर्यावरणीय स्वीकृति हेतु लोक सुनवाई के सम्बन्ध में प्रस्ताव उ०प्र० प्रदूषण नियंत्रण बोर्ड, लखनऊ को प्राप्त हुए हैं जिससे सम्बन्धित लोक सुनवाई का आयोजन निम्नलिखित कार्यक्रम के अनुसार किया जाता प्रस्तावित है।

क्र० सं०	आवेदक का नाम	प्रोजेक्ट का नाम	परियोजना स्थल का पता	क्षेत्रफल	स्थान	दिनांक व समय
1	2	3	4	5	6	7
1.	श्री सोमेश भारद्वाज, ग्राम-कनवारा, भूरेडी एण्ड चिलेहटा, तहसील एवं जनपद-बाँदा (उ०प्र०)	सैण्ड/मोरम माइनिंग परियोजना	खण्ड संख्या-13 ग्राम-कनवारा, भूरेडी एण्ड फिलेहटा, तहसील एवं जनपद-बाँदा (उ०प्र०)	122.81 हे० (303.46 एकड़)	परियोजना स्थल ग्राम-फिलेहटा तहसील एवं जनपद-बाँदा (उ०प्र०)	दिनांक 01.08.2015 असाढ़ 3.00 बजे।

बोर्ड द्वारा पर्यावरण वन मंत्रालय, भारत सरकार द्वारा जारी अधिसूचना संख्या-एस०ओ० 1533 दिनांक-14.09.2006 तथा संशोधित-एस०ओ० 3067 (ई) दिनांक-01.12.2009 के अनुपालन में उपरोक्त परियोजना को लोक सुनवाई उपरोक्त सूची में अंकित वर्णित स्थान, दिनांक एवं समय के अनुसार आयोजित की जायेगी। उक्त परियोजना को लोक सुनवाई हेतु जनता के सुझाव, विचार, टीका एवं टिप्पणियाँ आदि आमंत्रित किये जाते हैं। परियोजना से सम्बन्धित ई०आई०ए० एवं संबन्धित अभिलेख निम्नलिखित कार्यालयों में उपलब्ध हैं।

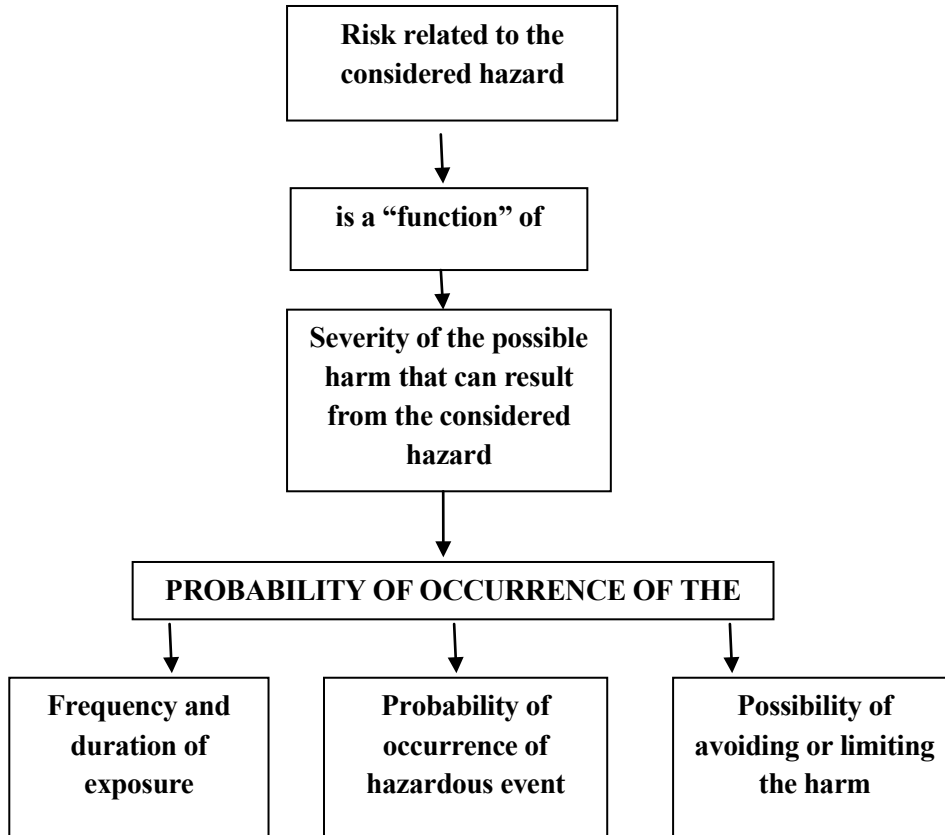
1. जिलाधिकारी, कार्यालय जनपद-बाँदा।
2. महा प्रबन्धक, जिला उद्योग केन्द्र, बाँदा।
3. क्षेत्रीय कार्यालय उ०प्र० प्रदूषण नियंत्रण बोर्ड, ए-39 आवास विकास कालोनी, चित्ला रोड, बाँदा।
4. उ०प्र० प्रदूषण नियंत्रण बोर्ड, टी०सी०-12, वी, विपुल खण्ड, गेपली नगर, लखनऊ।
5. कार्यालय जिला पंचायत, बाँदा।
6. क्षेत्रीय कार्यालय मध्य क्षेत्र, पर्यावरण एवं वन मंत्रालय भारत सरकार प्रबन्धक केन्द्रीय भवन, सेक्टर-एच अलीबाग, लखनऊ।

अंतः समस्त सर्वसाधारण को इस आम सूचना के माध्यम से सूचित किया जाता है कि उक्त प्रस्तावित सैण्ड/मोरम माइनिंग प्रोजेक्ट की पर्यावरणीय स्वीकृति से सम्बन्धित प्रकरण के निस्तारण हेतु उपरोक्त वर्णित स्थान, दिनांक एवं समय के अनुसार आयोजित लोक सुनवाई में उपस्थित होकर अपने आक्षेप/सुझाव प्रस्तुत कर सकते हैं अथवा सुझाव एवं आपत्तियाँ आदि लिखित रूप से प्रकाशन की तिथि से 30 दिन के अन्दर प्रेषित कर सकते हैं।

क्षेत्रीय अधिकारी

6.1 HAZARD IDENTIFICATION AND RISK ASSESSMENT METHODOLOGY

RISK:- Risk concerns the deviation of one or more results of one or more future events from their expected value.



Tolerable risk: Risk which is accepted in a given context based on the current values of society

Protective measure: The combination of risk reduction strategies taken to achieve at least the tolerable risk. Protective measures include risk reduction by inherent safety, protective devices, and personal protective equipment, information for use and installation and training.

Severity: Severity is used for the degree of something undesirable.

Risk Analysis: A systematic use of available information to determine how often specified events may occur and the magnitude of their likely consequences. The different steps of risk assessment procedure are as given below:

Step I: Hazard Identification

The purpose of hazard identification is to identify and develop a list of hazards for each job in the

organization that are reasonably likely to expose people to injury, illness or disease if not effectively controlled. Workers can then be informed of these hazards and controls put in place to protect workers prior to them being exposed to the actual hazard.

Step II: Risk Assessment

Risk assessment is the process used to determine the likelihood that people exposed to injury, illness or disease in the workplace arising from any situation identified during the hazard identification process prior to consideration or implementation of control measures.

Risk occurs when a person is exposed to a hazard. Risk is the likelihood that exposure to a hazard will lead to injury or health issues. It is a measure of probability and potential severity of harm or loss.

Step III: Risk Control

Risk control is the process used to identify, develop, implement and continually review all practicable measures for eliminating or reducing the likelihood of an injury, illness or diseases in the workplace.

Step IV: Implementation of risk controls

All hazards that have been assessed should be dealt in order of priority in one or more of the following hierarchy of controls.

The most effective methods of control are:

- i. Elimination of hazards
- ii. Substitute something safer
- iii. Use engineering/design controls
- iv. Use administrative controls such as safe work procedures
- v. Protect the workers i.e. by ensuring competence through supervision and training, etc.

Each measure must have a designated person assigned for the implementation of controls. This ensures that all required safety measures will be completed.

Step V: Monitor and Review

Hazard identification, risk assessment and control are an on-going process. Therefore regularly review the effectiveness of your hazard assessment and control measures. Make sure that you undertake a hazard and risk assessment when there is change to the workplace including when work systems, tools, machinery or equipment changes. Provide additional supervision

when the new employees with reduced skill levels or knowledge are introduced to the workplace.

B) RISK ANALYSIS

The risk assessment portion of the process involves three levels of site evaluation:

- a) Initial Site Evaluation,
- b) Detailed Site Evaluation,
- c) Priority Site Investigations and Recommendations.

The risk assessment criteria used for all levels of site evaluation take into account two basic factors:

- The existing site conditions
- The level of the travelling public's exposure to those conditions.

The Initial Site Evaluation and Detailed Site Evaluation both apply weighted criteria to the existing information and information obtained from one site visit. The Initial Site Evaluation subdivides the initial inventory listing of sites into 5 risk assessment site groups.

The Detailed Site Evaluation risk assessment is then performed on each of the three highest risk site groups in order of the group priority level of risk. The result of the Detailed Site Evaluation process is a prioritized listing of the sites within each of the three highest risk site groups.

Risk analysis is done for:

- Forecasting any unwanted situation
- Estimating damage potential of such situation
- Decision making to control such situation
- Evaluating effectiveness of control measures

ACCEPTABLE RISK

Risk that is acceptable to regulatory agency and also to the public is called acceptable risk. There are no formally recognized regulatory criteria for risk to personnel in the mining industry. Individual organizations have developed criteria for employee risk and the concepts originally arising from chemical process industries and oil and gas industries. Because of the uncertainties linked with probabilistic risk analysis used for quantification of the risk levels the general guiding principle is that the risk be reduced to a level considered **As Low as Reasonably Practicable (ALARP)**. The risk acceptability criteria are given in following Table. It can be seen that there are three tiers:

- a. A tolerable region where risk has been shown to be negligible and comparable with everyday risks such as travel to work.
- b. A middle level where it is shown the risk has been reduced to As Low As Reasonably Practicable level and that further risk reduction is either impracticable or the cost is grossly disproportionate to the improvement gained. This is referred as the ALARP region.
- c. An intolerable region where risk cannot be justified on any grounds. The ALARP region is kept sufficiently extensive to allow for flexibility in decision making and allow for the positive management initiatives which may not be quantifiable in terms of risk reduction.

6.1: The risk acceptability criteria are given in following table:

1	Risk un-acceptance and must be reduced. The actions may include equipments and people or procedural measures. If risk cannot be reduced to ALARP level, operating philosophy must be fundamentally reviewed by the management.	Intolerable Region
2	Efforts must be made to reduce risk further and to as low as reasonably practicable, without expenditure that is grossly disproportionate to the benefit gained	ALARP Region (As Low as Reasonably Practicable)
3	Risk level is so low as to not require actions to reduce its magnitude further.	Tolerable Region

Risk Likelihood Table for Guidance (Table No- 6.2)

Step 1: Assess the Likelihood				Step 2: Assess the Consequences		
L1	Happens every time we operate	Almost Certain	Common or repeating occurrence	C1	Fatality	Catastrophic
L2	Happens regularly (often)	Likely	Known to have occurred "has happened"	C2	Permanent disability	Major
L3	Has happened (occasionally)	Possible	Could occur or "heard of it happening"	C3	Medical/hospital or lost time	Moderate
L4	Happens irregularly (almost never)	Unlikely	Not likely to occur	C4	First aid or no lost time	Minor

L5	Improbable (never)	Rare	Practically impossible	C5	No injury	Insignificant
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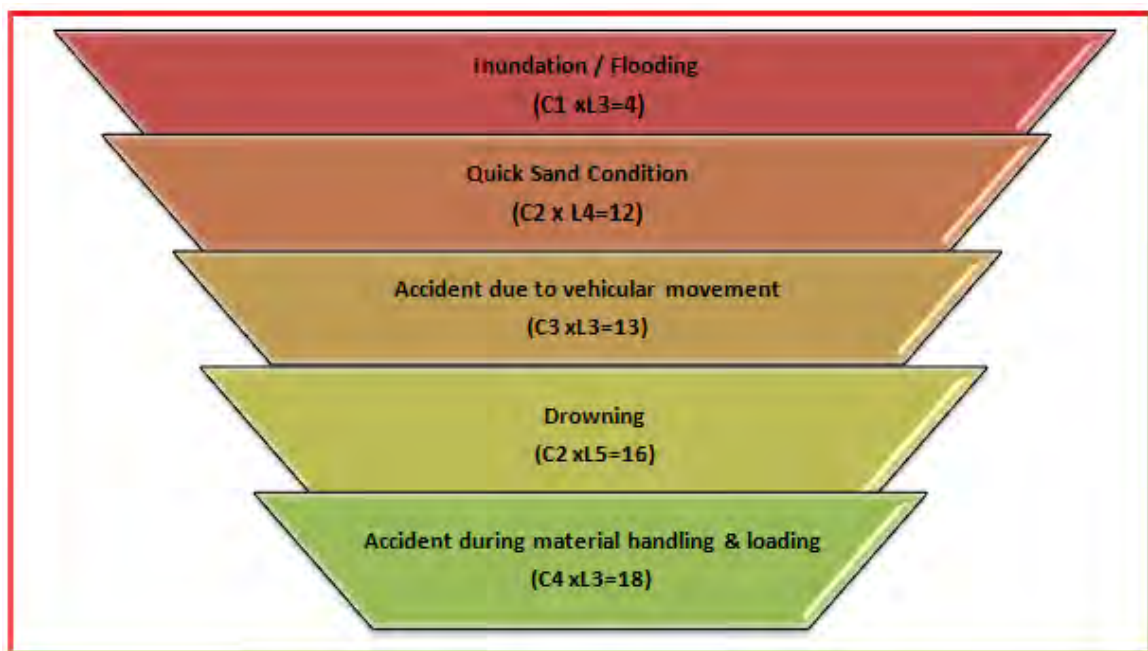
A logical systematic process is usually followed during a qualitative risk assessment to identify the key risk events and to assess the consequences of the events occurring and the likelihood of their occurrence.

Risk Rank	L1	L2	L3	L4	L5
LikelihoodxConsequence	Almost certain	Likely	Possible	Unlikely	Rare
C1 Catastrophic	1	2	4	7	11
C2 Major	3	5	8	12	16
C3 Moderate	6	9	13	17	20
C4 Minor	10	14	18	21	23
C5 Insignificant	15	19	22	24	25

RISK RATING:

HIGH RISK 1-6	MEDIUM RISK 7-15	LOW RISK 16-25
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6.2 RISK ASSESSMENT



There are various factors, which can create unsafe working conditions/hazards in mining of minor minerals from river bed.

The key risk (hazard x probability) event **rating** associated with sand bed mining and to assess its consequences of such events occurring and the likelihood based on above Table-2 are as:-

The Risk rating of such hazards is as follows:

6.2.1 INUNDATION/FLOODING

The risk rating assigned to this activity is assigned as '4' i.e., it is possible and will have catastrophic with major consequences, if work started without assessment of the river bed condition especially during monsoon season. Inundation or flooding is expected and beneficial for these mines as during this time only the mineral reserve gets replenished.

Measures to prevent consequences of Inundation/Flooding

Inundation or flooding is expected and beneficial for these mines as during this time only the mineral reserve gets replenished.

1. During monsoon months and heavy rains the mining operations are ceased.
2. There should be mechanism/warning system of heavy rains and discharges from the upstream dams.

6.2.2 Quick Sand Condition

The risk rating assigned to this activity is assigned as '12' i.e., it is an unlikely event with major consequences as frequency of this risk is less likely to occur.

Two things may create the conditions to form quicksand. Underground water may seep-up and saturate the sand, thereby reducing the friction between the sand grains and giving the sand a liquid nature. Or, sand or another soil may be sifted by the force of an earthquake so that friction is lessened and the earth becomes unsteady.

This creates danger condition to the trucks plying near the river bed and banks for transportation of minerals.

Measures to Prevent Quick Sand Condition

1. The only way to avoid quick sand condition is by avoiding mineral lifting below water table.
2. Mining will be done in layers rather than going for maximum depth at one time.

6.2.3 ACCIDENT DUE TO VEHICULAR MOVEMENT

The risk rating assigned to this activity is assigned as '13' i.e., it is possible event with moderate consequences as frequency of this operation is more but the predicted/assumed intensity is less like minor cuts, bodily injury. The possibilities of road accidents are due to reckless or untimely driver or overloading of trucks or in case pathway is not compacted suitably, etc.

Measures to Prevent Accidents during Transportation

1. All transportation within the main workings should be carried out directly under the supervision and control of the management.
2. The Vehicles will be maintained/ repaired and checked thoroughly by the competent person.
3. A statutory provision of constant education, training etc. will go a long way in reducing the incidents of such accidents.
4. Overloading will not be permitted and will be covered with tarpaulin.
5. The maximum permissible speed limit will be ensured.
6. The truck drivers will have valid driving license.

6.2.4 DROWNING

The risk rating assigned to this activity is assigned as '16' i.e., it is a rare accident but will have major consequences, if occurred. This may occur due to flash floods etc due to which the workers at the site may get seriously injured or drowned.

Measure to Prevent Drowning

1. The mining will be done under strict supervision and only in the dry part of the river.
2. Mining will be completely stopped in monsoon season to avoid such accidents.
3. Deep water areas will be identified and 'No Go Zones' will be clearly marked and made aware to the mine workers.

6.2.5 ACCIDENT DURING MATERIAL HANDLING & LOADING

The risk rating assigned to this activity is assigned as '18' i.e. it is possible event with minor consequences", as frequency of this operation is more but the predicted/assumed intensity is less like minor cuts, abrasion, etc. may be due to river bank collapse, overthrown boulders/pebbles, injuries due to carelessness use of hand tools, etc.

Measures to Prevent Accidents during material handling & loading

1. The trucks should be brought to a lower level so that the loading operation suits to the ergonomic condition of the workers.

-
2. The loading should be done from one side of the truck only to avoid overthrow of materials.
 3. The workers should be provided with gloves and safety shoes during loading.

All the activities will be done under strict supervision/control to avoid anticipated accidents so that the risk is reduced to a level considered **As Low as Reasonably Practicable (ALARP)** conditions which are adequately safe and healthy.

6.3 DISASTERS & ITS MANAGEMENT

6.3.1 Anticipated Disasters & its Mitigation Measures

- 1. Floods:** The area is prone to floods. However bank protection has been taken care by the govt. by constructing of flood embankments/retaining walls/check dams, etc.
Precautionary measures will be taken to avoid the effects on the workers at the site if the disaster occurs.

- 2. Earth Quake:** The lease area falls in seismic zone II which is moderate intensity zone. However there will be no impact as there is no built-in structure at the site.



(Source: <http://www.ndma.gov.in/en/>)

6.4 SOCIO-ECONOMIC IMPACT OF THE PROJECT & SAFETY MEASURES INTRODUCTION

Socio-Economic Impact Assessment (SEIA) refers to systematic analysis of various social and economic characteristics of human being living in a given geographical area during a given period. The geographical area is often called Study Area or Impact Area. SEIA is carried out separately but concurrently with Environment Impact Assessment (EIA). The study area consists of core area where the project is located and a buffer area encircling the project area with a radius of 10 kilometers from the periphery of the core area. For every new project or existing project under expansion or tied for modernization or change in product mix, Socio-economic Impact Assessment is mandatory. The Socio-economic Impact Assessment focuses the effect of the project on social and economic well-being of the community. The impact may be direct or indirect. Further, the impact may be positive or negative.

OBJECTIVES OF SEIA

The prime objective of the current study is to assess the impact of the proposed sand/moram mining project on socio-economic characteristics of people living in the neighborhoods. Further, it is to be established whether the impending impact would be direct or indirect. Furthermore, it is to be examined whether the said impact would be positive or negative. Lastly, it is to be comprehended if the impact is positive how long it would sustain or if it is negative how soon the same could be eased.

SCOPE

The Scope of the study is as follows:

- a) To collect baseline data of the study area
- b) To comprehend socio-economic status of the people living in the study area.
- c) To assess probable impact of the project on social and economic aspects in the study area.
- d) To measure the impact of the project on Quality of life of the people living in the study area.
- e) To ensure sustainability of positive impact.
- f) To suggest mitigation measures and agency responsible for taking action in case of adverse impact.

SOCIO-ECONOMIC IMPACT OF THE PROJECT

Impact on population composition

The impact of the proposed mining project on population composition will be marginal as only few skilled and managerial staff will be recruited from outside and the rest will be recruited locally. The impact will be significant if a large number of people from outside get employed in the proposed project. In that case not only the population of the study area will go up but also the skewed sex ratio may make permanent social effects like rise in exploitation of women, higher crime rate, increase in sexual diseases and depression among youth.

Impact on employment generation

The proposed sand mining project is expected to provide employment opportunities to workers. It is understood that all the persons to be deployed for various mining activities will be recruited locally and there is very little scope for migration of people from outside the study area. The employment potentiality of the project is expected to ameliorate the economic condition of the families of those persons who will get employed in the proposed mining project.

Impact on Health

Extraction of sand/moram from the river bed poses serious health risks due to dust, quarrying and stone crushing. The effects will vary depending upon the nature of the dust particles, silica content in it and the size of the particles. Pneumoconiosis is an occupational lung disease often caused to miners, due to the inhalation of dust. Silica content in the sand may also lead to Silicosis, which is again an occupational lung disease. Miners may also suffer with occupational respiratory ailments, skin allergies etc, but the same are preventable if exposure is minimized. Further, regular health check-up of the miners is required to prevent any negative impact on their health. In the present mining project, no adverse impact on health is expected if minimum precautions are taken by the miners.

Impact on income

In India poverty is widespread. According to an estimate made by World Bank during 2005, 26 percent of the total Indian population falls below the International poverty Line of US\$ 1.25 a day (PPP, in nominal terms ■ 21.6 a day in urban areas and ■ 14.3 in rural areas). Uttar Pradesh is one of the worst poverty ridden states in India, with per capita income of Rs. 26,051. The proposed mining project at Kanwara, Bhuredi and Chilehata are expected to provide casual employment to workers. According to Department of labour, Government of Uttar Pradesh each unskilled worker is eligible to get a minimum basic wage of Rs. 100 per day. In addition they will get V.D.A amounting to Rs. 65.50 per day. Thus the total amount an unskilled worker is expected to get is Rs 165.50 per day. Further, a semi-skilled worker will get a basic wage of Rs 114 and V.D.A amounting to Rs.74.69 making the total amount of Rs. 188.69 per day. Lastly, a skilled worker can expect to get a minimum wage of Rs. 126.54 and V.D.A amounting to Rs. 82.92 making the total amount of Rs. 209.46 per day. The impact of the proposed mining activity on household income in the study area is thus positive since it will provide employment to local people, which will result to an increase in household income of those workers who will be recruited for mining operation. However, this impact will be effective for a limited period of 250 days in a year.

Impact on consumption pattern

The field survey has revealed that people in the study are poverty ridden. Increased household income may slightly change the consumption pattern of few but majority of the people will continue to be burdened with poverty.

Impact on road development

Movement of trucks and other vehicles to and from the quarry is expected to increase substantially, when mining will start. The existing roads connecting the quarry with the national and state highways are mostly narrow mud roads. There will be mud slide and traffic bottle neck if these roads are not widened and their conditions are not improved by making them paved roads. Hence, there is ample scope for road development in and around the mining areas.

Impact on law & Order

As local people will be employed to run the quarry, no law & order problem is envisaged. It is expected that the workers will attend to their duties from their residence and return to their homes after the day's work is over. There would have been law & order problem if the workers were migrants and lived in shanties closed to the mining area. However, to meet any untoward incident one police post may be set up closed to the project area.

Few safety measures are outlined below:

- a) **Safe Working Environment:** The project proponent shall ensure health and safety of all the employees at work. Efforts will be made to provide and maintain a safe work environment and ensure that the machinery and equipment in use is safe for employees. Further, it will be ensured that working arrangements are not hazardous to employees.
- b) **Provision of First Aid:** The first aid treatment reflects the hazards associated with the mining of Sand. The first-aiders will be well trained in handling patients working in the above Mining Project.
- c) **Regular Health Examination:** For all mine workers regular health examination will be made compulsory. Treatment for respiratory diseases or asthma, skin diseases, lung function test (pre and post ventolin), Audiograms, Chest X-ray etc., as required will be given.
- d) **No work for Temporal Disabilities:** The workers having temporary disability will be asked to stop doing the job till he/she recovers from disabilities.
- e) **Health Education:** Adequate health education and information related to the job will be provided to the workers. Baseline health information will be recorded for future references.
- f) **Tie-up with the Nearest Hospital for Medical Assistance:** To meet the medical needs of the mine workers tie-up with nearest hospitals will be made. Efforts will be made to reserve few beds in the above hospitals for the workers of the mining project. This will ensure timely medical aid to the affected persons.

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- g) **Supply of Mask and Gloves:** The workers in the project are subject to respiratory diseases. For protection from dust it will be made compulsory for all workers to wear masks and gloves, while working in the mine.
- h) **Administration of Anti-venom Injections:** Provision of Anti-venom therapy will be made available for administration to the workers in case of snake, spider and insect bites, while working in the mine.
- i) **Special Telephone Number:** A special telephone number will be made available to the workers in case of emergency so that they can dial the same for medical assistance. Further, efforts will be made to provide vehicles to the patients in short duration for shifting to a hospital.
- j) **Special Group Insurance Scheme:** All the mine workers will be covered under a Group Insurance Scheme of LIC or any other Insurance company.

CONCLUSION

The commissioning of sand/moram mining project in Village: Kanvara, Bhuredi & Chilehata, Tehsil: Banda, District: Banda, Uttar Pradesh will provide employment to local people who are in search of the same. The granting of Environment Clearance to the project will make mining of Sand legally valid and it will generate revenue for the state. With the implementation of the project there will be increase in the employment opportunities for the local villagers. The study area is still lacking in health and educational facilities. It is expected that same will improve to a great extent with opening of the project and associated activities. Also, Proposed CSR activity will improve the socio-economic status of the villagers of the study area.

**CHAPTER-VII
PROJECT BENEFITS
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March, 2016

PROJECT BENEFITS

7.0 GENERAL

The execution of the project, bring overall improvement in the locality, neighborhood and the State by bringing industry, roads, employment and hence improving living standard and economic growth.

7.1 PHYSICAL BENEFITS

The opening of the proposed project will enhance the following physical infrastructure facilities in the adjoining areas.

- a. **Road Transport:** There will be improved road communication due to the proposed project and maintenance will also be done time to time.
- b. **Market:** Generating useful economic resource for construction. Excavated mineral will provide a good market opportunity.
- c. **Enhancement of green cover:** As a part of reclamation plan, plantation will be carried along the river banks or along the road sides or near the civic amenities.
- a. **Creation of community assets (infrastructure)** like provision for drinking water, construction of school buildings, village roads/linked roads, dispensary & health centre, community centre, market place etc, as a part of corporate social responsibility.

7.2 SOCIAL BENEFITS

- a) **Increase in Employment** Potential due to the project activity. Employment opportunities will increase both directly as well indirectly.
- b) **Contribution to the Exchequer** as the saleable minerals will be given royalty. Since the quarries will be leased out to successful allottees, mining operation in the state will get legalized and it will fetch income to the state exchequer.
- c) **Increased Health related activities:** Healthcare promotional activities will be undertaken. Pre-placement & Periodic medical checkups will be done, which will lift the general health status of the residents of the area. Health camps, medical aids, family welfare programs, immunization camp sports will be arranged.

S. No.	Activities recommended for communities level services	Tentative cost (Lakh Rs)
1	Assistance to set up a temporary health center during the lease tenure.	0.6

2	Provide free health checkups & medicines to the nearby villagers of the project site.	0.2
3	Awareness campaigns regarding health issues in the nearby villages.	0.5

- d) **Educational at tainments:** Educational a ctivities w ill be pr omoted by t he l essee. Awareness program will be arranged covering basic issues r elated to primary level education, environment, health and hygiene etc.
- e) **Strengthening of e xisting community** facilities thr ough t he Community Development Programme.

7.3 ENVIRONMENTAL BENEFITS

- a. Controlling river channel
- b. Protecting of river banks
- c. Reducing submergence of adjoining agricultural lands due to flooding.
- d. Reducing aggradation of river level.
- e. Protection of crops being cultivated along the river bank.
- f. A check on illegal mining activity.

7.4 EMPLOYMENT

The s ocio-economic conditions of t he s urrounding vi llages i ndicate t hat e mployment generation is s easonal. The oc cupational a ctivities ar e a griculture, cattle r earing and employment in mines but on daily wages. The mining activity will provide employment to local people which will increase socio- economic status of the area.

7.5 IMPROVEMENTS IN PHYSICAL AND SOCIAL INFRASTRUCTURE

The ope ning of t he pr oposed pr oject w ill e nhance t he s ocio-economic activities in the adjoining areas. This will result in following benefits:-

- b. Improvements in physical infrastructure.
- c. Improvements in Social Infrastructure.
- d. Increase in Employment Potential
- e. Contribution to the Exchequer.
- f. Prevention of illegal mining.

g. During and Post-mining enhancement of green cover.

7.5 (a) IMPROVEMENTS IN PHYSICAL INFRASTRUCTURE

The opening of the proposed project will improve the physical infrastructure of the adjoining areas. This will include the following:-

- Improved road communication due to opening of the proposed project.
- Strengthening of existing community facilities through the Community Development Programme.
- Creation of community assets (infrastructure) like provision of domestic water, construction of school buildings, village roads/linked roads, dispensary & health centre, community centre, market place etc.
- Awareness program and community activities, like health camps, medical aids, family welfare programs, immunization camp sports & cultural activities, plantation etc.

7.5(b) IMPROVEMENTS IN SOCIAL INFRASTRUCTURE

There will be some obvious changes in various environmental parameters due to mining activity. There will be positive impact in socio-economic area due to increased economic activities, creation of new employment opportunities, infrastructural development and better educational and health facilities. Lessee will also undertake awareness program and community activities like health, camps, medical aids, family welfare camps, AIDS awareness program etc.

7.5(c) INCREASE IN EMPLOYMENT POTENTIAL: - There is a possibility of creation of direct and indirect employment opportunities due to working of this mine.

7.5(d) PREVENTION OF ILLEGAL MINING & CONTRIBUTION TO THE EXCHEQUER

Since the quarries will be leased out to successful allottees, mining operation in the state will get legalized and it will fetch income to the state exchequer.

7.5(e) ENHANCEMENT OF GREEN COVERS

Plantation/afforestation will be done as per program i.e. along the road sides, river bank and near civic amenities, which will be allocated by Government bodies as it is not feasible to plant trees near the mine lease area. Post plantation, the area will be regularly monitored in every season for evaluation of success rate. For selection of plant species

local people will also be involved. The management will provide free saplings of fruit and other trees, etc. to local during rain for plantation.

7.6 HEALTH

Periodic medical checkups as per Mines Act/ Rules and other social development and promotional activities will be undertaken. All this will lift the general health status of the residents of the area around mines.

7.7 CORPORATE SOCIAL RESPONSIBILITY

About 5% of the project cost (i.e 3,00,000) will be allotted for the Corporate Social Responsibility. The following has been proposed for CSR activity.

SI. No.	Activity	Capital Cost (in Rs.)
1	Provide drinking water facility in surrounding villages and schools by construction water tanks at schools and	50,000/-
2	Solar lamp distribution	50,000/-
3	Construction of Ladies Toilets in schools	1,00,000/-
4	Distribution of Wheel Chairs for the Handicapped people	50,000/-
5	Educational support & sanitary facilities in schools for poor students	50,000/-
TOTAL (in life time)		3,00,000/-

However the activity may change considering the needs & demand of the people.

CHAPTER-VIII
ENVIRONMENTAL MANAGEMENT PLAN
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March, 2016

ENVIRONMENTAL MANAGEMENT PLAN

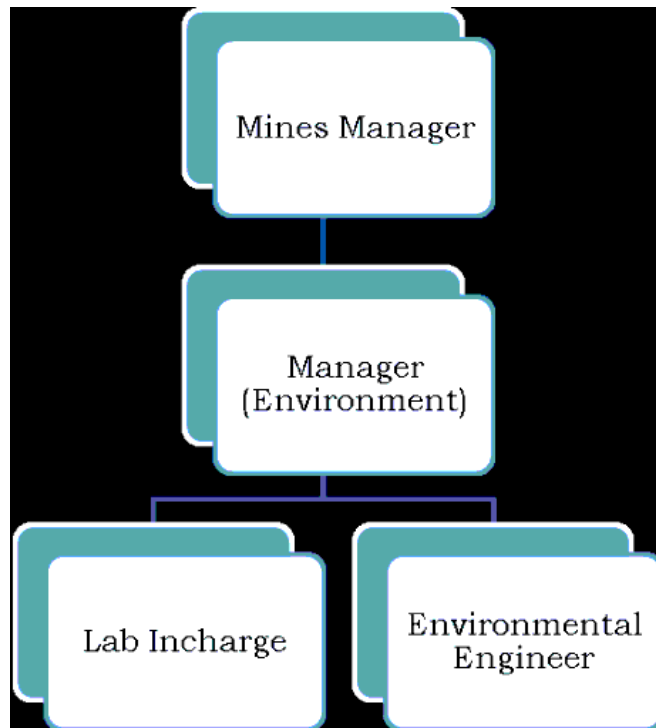
8.0 INTRODUCTION

To mitigate the adverse impacts which are likely to be caused due to the mining operation and overall scientific development of local habitat, environmental management plan (EMP) has been formulated and integrated with the mine planning. The details of the anticipated impacts and mitigative measures have been discussed in Chapter IV of this report, based on the results of present environmental conditions and environmental impact assessment. The EMP has therefore been made considering implementation and monitoring of environmental protection measures during and after mining operations.

The mitigation measures which reduce the impact have already been identified earlier in Chapter IV. To minimize the adverse impact, certain additional EMP considerations are enumerated below for implementation.

8.1 ENVIRONMENTAL MANAGEMENT CELL (EMC)

It is imperative to establish an effective organization to implement, maintain, monitor and control the environmental management system. A separate Environmental Management Cell (EMC) will be formed to look after the environment related matter of the mine. The structure of EMC is as follows:



The EMC will perform the following activities:

- EMC will oversee that environmental control measures are implemented as per the plan.
- EMC will ensure ambient field monitoring like air monitoring, meteorological monitoring and noise monitoring in coordination with outside agencies.
- Coordinating the environment related activities within the organization as well as with outside agencies.
- Reporting the status report to the statutory authorities.
- Systematically document and record keeping w.r.t. environmental issues.
- Plantation and their maintenance.
- Collection statistics of health of workers and population of surrounding villages.
- Environmental compliance to the regulatory authorities.
- Communication with the concerned department on the environmental issue.
- Monitoring the progress of implementation of environmental management program.

8.2 ENVIRONMENTAL MANAGEMENT PLAN (EMP) AND IMPLEMENTATION

Environmental Management Plan involves functions that determines the objectives, adoption of appropriate mitigation measures, protection of ecosystems, enhancement of the quality of life for those affected, and minimization of environmental costs (Barrow, 1999).

Environmental Management Plan (EMP) has been formulated with an objective to mitigate the adverse impacts of any proposed project. This includes an environmental policy on protection of environment and public safety.

1. *Extraction will be done from the river bed leaving safety zone from bank & stream:*

- Mining will be done in scientific and systematic manner.
- In order to maintain safety and stability of river banks a safety distance of 50 meters from main stream & 10 meters from the shore line of the river will be left.

2. *The maximum working depth will remain above ground water table of the area:*

Excavation above the water table will be done i.e. up to a maximum depth of 3 m from the surface, which will provide a depression that would get filled in with sediments gradually in the monsoons. Further it will not disturb the ground water quality of the area as there will be no intersection with the water table.

3. *Provide health facilities to the workers & surrounding people in the impact area to reduce the health impacts:*

- Provision of dust filters / mask to workers working at dust prone and affected areas.
- Conducting periodical medical checkup of all workers for occupation related health problems.
- Awareness program for workers to make them aware of way of working and various precautions to be taken while at work.

4. *Ensuring wildlife protection & arranging awareness campaigns for the same.*

- No wildlife will be disturbed or chased away.
- Also Wildlife Movement Route (Animal Corridors) will not be disturbed.

- To avoid disturbance to the movement of the wild animals through the transport route near the project area, sign boards will be placed detailing the dangers caused and the location of corridors.

5. *Minimize activities that release fine sediment to the river:*

No washing, crushing, screening, stockpiling, or plant operations will be done at or near the streams. These and similar activities have the potential to release fine sediments into the stream, making aquatic habitat conditions harmful to local aquatic species.

6. *Check on traffic load due to transportation & maintenance of evacuation route:*

- To the extent possible, evacuation route will not be through residential areas so as to reduce the effect of dust emission and noise pollution from vehicular movement.
- Alternate evacuation route by using the existing roads will be proposed to avoid traffic congestion.
- A Monitoring Committee including Local Panchayat member may be established to control traffic on evacuation route.

7. *Effective mitigation measures will be adopted to minimize disturbance during transportation & handling of minerals:*

- The haul road will be kept wide, leveled, compacted and water will be sprayed regularly to suppress fugitive dust.
- Evacuation routes will be repaired & maintained regularly.
- Utmost care will be taken to prevent spillage of minerals from the trucks by checking overloading and covering it by tarpaulin sheets.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.

8. *Establishment of reclamation program with plantation of local/native & fast growing species:*

- Plantation will be done along the road sides / near civic amenities in consultation with the local authority/ Govt. bodies.

- It has also been proposed to plant along the river banks with plant species which will hold the soil and check on erosion of the banks. E.g. *Calotropis procera*, *Mangifera indica*, *Melia azadirachta*, etc.
- For plantation purpose, native/local plant species are proposed along the road sides/civic amenities.

9. *Establishment of restoration plan during the closure of mine at the onset of monsoon season:*

- Restoration of banks will be done.
- Ramps & temporary rest shelters will be removed prior to the closure of mine.
- Restructuring/reconstruction of the natural bunds if damaged, so that over flow of water can be controlled and flooding can be avoided
- Maintenance of check dams & retention walls which will prevent erosion of banks during monsoon.

10. *Establishment of effective Disaster Management Plan to take timely precautionary measures to avoid effects of impending disasters:*

Being a project on the river bed and though mining will not be done during monsoon, yet disaster may be caused due to earth quake, release of water from upstream dams or dam burst.

- District Level Cell and State Level Cell along with a nodal officer will be set up. The State Level Cell will be in continuous touch with State Govt. to pass on message so as to take precautionary action to prevent any consequential disaster.
- Disaster Warning System as developed will be strictly implemented.
- Identification of nearby hospitals with route & contact number for emergency assistance.
- Evacuation plan for the workers at site including contract labours will be developed in nearby shelters.
- Emergency Helpline Number will be displayed at all levels.

11. *Establishment of effective Monitoring Program monitored by Environment Management Cell:*

A monitoring program will be provided illustrating any impacts to river stability, riparian vegetation, ground & surface water, air, noise, soil quality and post project sedimentation studies by expert bodies. Monitoring schedule and budget allocation has been detailed Chapter-V.

The monitoring program will also assess & scrutinize the EMP proposed & its implementation by the Environmental Management Cell (EMC).

Other precautionary measures like no cooking, no uprooting or chopping of plants/trees, no throwing of wastes into the stream will also be checked upon by the EMC.

8.3 PROPOSED SET UP

Keeping the utility of monitoring results in the implementation of the environmental management program in view, an organizational chart has been proposed, headed by General Manager as shown in Fig. 5.1 (Chapter V).

The said team will be responsible for:

- a. Collecting water and air samples from surrounding area and work zone monitoring for pollutants.
- b. Analyzing the water and air samples.
- c. Implementing the control and protective measures.
- d. Co-coordinating the environment related activities within the project as well as with outside agencies.
- e. Collecting statistics of health of workers and population of surrounding villages.
- f. Monitoring the progress of implementation of environmental management program.

The laboratory will be suitably equipped for sampling/testing for various environmental pollutants.

8.4 BUDGET ALLOCATION FOR EMP IMPLEMENTATION

Annual budget for EMP is very essential for successful implementation of EMP. As there are no pollution control systems, no capital cost of Pollution Control systems are envisaged. Costs will be annual operating costs as given below. The fund allocated will not be diverted for any other

purposes and the top management will be responsible for this. The budget will take into consideration the following expenses:

- a. Field cost for monitoring of parameters.
- b. Cost of any defined outsourcing
- c. Cost of chemicals, consumables and transport for data generation
- d. Man power cost for environmental cell
- e. Any other cost as per EC condition.

Table 8.1
Cost of EMP

Sr. No.	Description	Capital Cost (in lacs)	Recurring Cost(in lakhs/annum)
1	Pollution Monitoring-Air, Water, Noise	2.0	4.0
2	Pollution control- Water Sprinkling	2.0	4.0
3	Wire Fencing at plantation sites	1.0	0.5
4	Plantation including maintenance	1.0	2.0
5	Rain water Harvesting in nearby villages	2.0	3.0
6	Haul Road Maintenance	2.0	3.0
Total		10.00	16.5

8.5 MONITORING SCHEDULE AND ACTIVITIES

To evaluate the effectiveness of environmental management program regular monitoring of the important environmental activities are shown in Table. 5.1. (Chapter V).

**CHAPTER -IX
EXECUTIVE SUMMARY**

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March, 2016

EXECUTIVE SUMMARY

9.1 INTRODUCTION OF PROJECT & PROPONENT

The project is being proposed by Shri Somesh Bharadwaj as per the lease agreement for a period of 3 years w.e.f 24.12.2009 till 23-12-2012. Application for renewal has been submitted on 15-05-2012.

The proposed project is to mine sand/moram from river bed of Ken and the estimated project cost is Rs. 60 lakh. The proponent has applied for mining lease in the name of Kanvara Sand/moram Mine over an area of 122.81 Hectare at Village: Kanwara, Bhuredi & Chilehata, Tehsil: Banda, District: Banda, Uttar Pradesh.

It has been proposed to collect approximately 7 lakh tonnes of river bed material annually.

As per the M oEF&CC, New Delhi Gazette dated 14th September, 2006 and subsequent amendments, Government of India, for seeking environmental clearance for mining of sand/moram. As per the EIA notification, 2006 the applied mining lease area measures 122.81 hectares, and so the project falls under category "A".

9.2 LOCATION

The mining area is located in Village: Kanwara, Bhuredi & Chilehata, Tehsil: Banda, District: Banda, Uttar Pradesh. The mining lease / proposed project area falls in Survey of India Toposheet No. 63C07. The mine lease area is located between:

Latitude	25° 29'11.48" N to 25° 30'30.90" N
Longitude	80° 18'40.03" E to 80° 17'30.31" E
Nearest Railway Station	Banda Junction Railway Station (About 2.5 km away in SE direction)
Nearest Airport	Kanpur airport (About 104 km away in N direction)
Nearest Highway	National Highway 76 (About 1 km in S direction)

9.3 RESERVES

As much of the lease area is covered with water catchment area, only the middle area is considered for reserve estimation. The sand/moram which is exposed in all the three dimensions

(3.0m on an average) is considered as proved. From the field trials conducted in the sector and information gathered from the applicant, the bulk density is found to be 1.8 t/cum.

Category wise updated reserves with grade are as follows:

Category	Total (in Tonnes)	UNFC Code
Proved	66,34,348.2 tonnes	111

9.4 MINING PROCESS

The mining Process involves the following steps:

1. Mining will be started at the farthest downstream end, moving upstream from there.
2. At the cross section of the flood plain at the downstream end, the mining will be initiated from the middle of the cross section of the river bed.
3. Mining will be continued in layers of 1 m depth to avoid ponding effect.
4. Mining will be done in such a way that the process of mining remains confined to the middle of the flood plain. For achieving this purpose, a width of about 6m, suitable for locating the truck/trolley for simultaneous loading will be first excavated. To start with it may be covered with wooden plank or metal sheet if required to prevent any sagging.
5. Having excavated that, the process will be continued to the flanks, of a truck width, alternating from one side to the other every time.
6. After the first layer is excavated, the process will be repeated for the next layers.

RESERVE (AVAILABLE QUANTUM) & P RODUCTION (EXTRACTABLE QUANTUM)

The sediments proposed to extract sand which is generally found in the river bed in the lease area. The sediments are brought into the bed through transport from the catchment area, are referred as “Wash Load”. And the sediments which are in continuous contact with bed, carried forward by rolling/ sliding are referred to as “Bed Load”.

Reserve (Available Quantum):

The already existing quantity at the river bed in the lease area due to fresh depositions has been considered to be the quantum of mineral available (**Reserve**) which may be mined out. In order to calculate this quantity, the lease area has been considered with an ultimate depth of 3 meter from the surface. For the reserve tonnage estimation, the reserve quantity is multiplied with the bulk density of 1.8 tonnes per cum.

The reserve for the site has been estimated to 56, 33,935.2 tonnes.

Production (Extractable Quantum):

However considering the factors such as geological disturbances, volume that cannot be mined due to flow of water and also considering the safety factor, approximately 7, 00,000 tonnes has been considered as production or the extractable quantity from the mineable area for grant of Environmental Clearance. The extracted sand will be replenished due to sediment inflow, gradually during the monsoon seasons.

- The quantum of replenishable amount for the purpose of EIA i.e. the wash load will be obtained by using widely acceptable sediment yield calculation method i.e. “Dendy-Bolton Formula”.
- Thus the extractable quantum in the first year would be limited to the available quantum. The extractable amount for the further years may vary depending on amount/rate of actual replenishment which will be monitored every year.

9.5 WATER SUPPLY

In the river bed mining projects there is, as such, no need of water to carry out operations, however, water will be required for dust suppression and drinking purposes. The total water requirement will be around 5.91 KLD. About 2.7 KLD will be required for domestic purpose & 3.21 KLD for dust suppression. This water will be supplied from the nearby area.

9.6 BASE LINE DATA

This Chapter contains the description of baseline studies of the 10 km radius of the area surrounding “Kanvara Sand/Moram Mine”, Banda, and U.P. The data collected has been used to understand the existing environment scenario around the proposed mining project against which the potential impacts of the project can be assessed.

Environmental data has been collected in relation to proposed mining for:-

- (a) Air
- (b) Noise
- (c) Water
- (d) Soil
- (e) Ecology and Biodiversity
- (f) Socio-economy

Table 9.1: BASELINE ENVIRONMENTAL STATUS

Attribute	Baseline status
Ambient Air Quality	<p>Ambient Air Quality Monitoring reveals that the minimum & maximum concentrations of PM₁₀ for all the 5 AQ monitoring stations were found to be 70.6 µg/m³ at AQ1 and 115.3 µg/m³ at AQ3, respectively.</p> <p>As far as the gaseous pollutants SO₂ and NO_x are concerned, the prescribed CPCB limit of 80 µg/m³ for residential and rural areas has never surpassed at any station.</p>
Noise Levels	<p>Noise monitoring was carried out at 4 locations. The results of the monitoring program indicated that both the day time and night time levels of noise were well within the prescribed limits of NAAQS, at all the four locations monitored.</p>
Water Quality	<p>3 Groundwater samples and 3 surface water samples were analyzed and concluded that: The groundwater from all sources remains suitable for domestic purposes as all the constituents are within the limits prescribed by drinking water standards by Indian Standards IS: 10500.</p> <p>From the Surface water analysis it is evident that most of the parameters of the samples comply with 'Category C' standards of CPCB, indicating their suitability for Drinking water source after conventional treatment and disinfection.</p>
Soil Quality	<p>Samples collected from identified locations indicate the soil is Loamy type and the pH value ranging from 7.51 to 8.12, which shows that the soil is moderately alkaline in nature.</p>
Ecology and Biodiversity	<p>There are no Ecologically Sensitive Areas present in the study area but some Reserved and Protected Forests are present in the buffer area of the project site.</p>
Socio-economy	<p>The implementation of the Kanvara Sand/Moram Mining Project on river Ken in district Banda will throw opportunities to local people for both direct and indirect employment. The study area is slightly lacking in housing, water, electricity etc. It is expected that same will improve to a great extent due to proposed mining project and associated activities.</p>

9.7 BIOLOGICAL ENVIRONMENT

FLORA

Flora of the Study area:

However, the nearby areas i.e. buffer area is having all kinds of plants (herbs, shrubs and trees). Dominant among them are mostly tropical elements. Species of *Abutilon indicum*, *Achyranthes aspera*, *Amaranthus tenuifolius*, *Calotropis procera*, *Ziziphus mauritiana* etc. are of common occurrence in the waste land along the river. Among the tree species *Acaccia nilotica*, *Cassia fistula* L., *Dalbergia sissoo* Roxb. ex DC., *Ficus benghalensis* L., *Mangifera indica* L., *Melia azadirachta*, etc. are commonly found.

Core Zone

The core zone comprises of sand bed and water channel of Ken River, where mining operation is proposed. No wild life or any sensitive habitat was observed in the core zone. No ecologically sensitive plant species has been reported from this area.

Buffer Zone

Buffer zone of the proposed project is mainly agricultural land. The flora of buffer zone comprises of plants growing on the edges of agricultural land, village woodlots, few mixed forest vegetation and trees planted along the roads. Many tree species are planted in the area because of their usefulness, economic and aesthetic values. Some tree species observed in the buffer zone of the study area are Dhak (*Butea monosperma*), Teak (*Tectona grandis*), Mahua (*Madhuca indica*), Babool (*Acacia nilotica*) and Tendu (*Diospyros melanoxylon*), Siris (*Albizia lebbek*), Aam (*Mangifera indica*), Jamun (*Syzygium cumini*), Bail (*Aegle marmelos*), Tut (*Morus alba*), Bakain (*Melia azedarach*), Bargad (*Ficus bengalensis*), Neem (*Azadirachta indica*), Peepal (*Ficus religiosa*), Safeda (*Eucalyptus umbelatus*), Sisam (*Dalbergia sissoo*), etc.

Fauna of the Study area:

Among animals the common antelope called Chital are found in the black cotton soil. The Nilgai is found chiefly in northern part of Banda and Baberu Tehsils. The wolf is in the district as a whole uncommon but it's frequently met with in one or two places such as the ravines. Hares and common langur are abundant in the nearby forests.

Anticipated Impacts:

- Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- Access roads crossing the riparian areas will have impact on the species disturbing the ecosystem.
- Mining may drive away the wild life from their habitat, and significantly affect wildlife and nearby residents.
- Diminution of the quality and quantity of habitat essential for aquatic and riparian species.
- Reduction in the yield of agriculture due to deposition of dust on the leaves, etc. of the crops.
- Fragmentation of wildlife habitat and blocking of migratory paths/corridors. Isolation may lead to local decline of species, or genetic.
- Mining on the streambed, braided flow or subsurface inter-sand flow may hinder the movement of fishes between pools.

Mitigation measures

As the proposed mining will be carried out in a scientific manner, not much significant impact is anticipated, however, the following mitigation measures will be taken to further minimize it:

- No mining will be carried out during the monsoon season to minimize impact on aquatic life which is mainly breeding season for many of the species.
- As the mining site has no vegetation, no clearance of vegetation will be done.
- Prior to closure of mining operations / during the rainy season the eroded bank will be restored / reclaimed to minimize negative impacts on aquatic habitats.
- Haul roads will be sprinkled with water which would reduce the dust emission, thus avoiding damage to the crops.
- Mining will be carried out on the dry part of the lease area to avoid disturbance to the aquatic habitat and movement of fish species.
- No discard of food, polythene waste etc will be allowed in the lease area which would distract/attract the wildlife.
- No night time mining will be allowed which may catch the attention of wild life.
- Workers will be made aware of the importance of the wildlife and signage will be displayed at the sensitive areas to caution the workers & other passerby.
- Access roads will not encroach into the riparian zones and if any riparian vegetation cleared off for the mining activity will be restored at the end of closure of mine.

9.8 LAND ENVIRONMENT

Mining Activity: Harvesting of river bed minerals and other associated activities are the main sources of environmental degradations and most serious ones are detailed hereunder:

- Damage of river bank due to access ramps to river bed, causing damage to vegetation, soil erosion, micro disturbance to ground water, possible inducement of changed river course.
- Loss of riparian vegetation standing along the bank due to making roads connecting successive access to river bed.
- Contamination of sand aquifer water due to ponding: Due to uneven rocky bed of river, sand bed thickness vary considerably and digging more sand from a pocket where thickness of sand is more may cause ponding. In this stagnant water, biodegradable materials especially flora waste gets accumulated causing contamination and inducing an unhealthy environment.
- Surface degradation due to stockpiling and road network.

Mitigation measures

- Minimum number of access roads to river bed for which cutting of river banks will be avoided and ramps are to be maintained.
- Access points to the river bed will be decided based on least steepness of river bank and least human activity.
- Mining is avoided during the monsoon season and at the time of floods.
- Mining schedule is synchronized with the river flow direction and the gradient of the land.
- Haulage roads parallel to the river bank and roads connecting access to river bed will be made away from the bank.
- Care will be taken to ensure that ponds are not formed in the river bed
- Access roads from public roads and up to river bank will be aligned in such a way that it would cause least environmental damage.
- Vegetation development is proposed along the road sides of the approach roads, to arrest soil erosion. While selecting the plant species, preference will be given for planting native species of the area.

9.9 AIR ENVIRONMENT

Anticipated impacts and evaluation

Information on air quality was studied and various modelling techniques predicted that the mining activity will not affect the air quality in a significant manner. In mining operations, loading, transportation and unloading operations may cause deterioration in air quality due to handling dry materials. In the present case, only wet materials will be handled, thus eliminating problems of fugitive dust. Also, the collection and lifting of minerals will be done manually. Therefore the dust generated is insignificant as compared to mining process of other hard minerals like the process of drilling, blasting, mechanized loading etc.

Mitigation measures

The only air pollution sources are the road transport network of the trucks.

- i. Water sprinkling will be done on the roads regularly.
- ii. Care will be taken to prevent spillage by covering the carrying vehicles with tarpaulin and sprinkling of water, if dry.
- iii. Fortnightly scraping of road in order to keep the roads almost leveled. This will ensure smooth flow of vehicles and also prevent spillage.
- iv. Overloading will be kept under check by giving prior awareness.
- v. Proper tuning of vehicles to keep the gas emissions under check.
- vi. Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.

9.10 WATER ENVIRONMENT

Mining of sand/moram from within or near a streambed has a direct impact on the stream's physical habitat characteristics. These characteristics include geometry, bed evaluation, substrate composition and stability, in stream roughness elements, depth, velocity, turbidity, sediment transport, stream discharge and temperature. Altering these habitat characteristics can have deleterious impacts on both in stream biota and associated riparian habitat.

The detrimental effects to biota resulting from bed material mining are caused by three main processes:

- i. Alteration of flow patterns resulting from modification of the river bed
- ii. An excess of suspended sediment
- iii. Damage to riparian vegetation and in stream habitat.

Mitigation measures

The deposits occur in the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface up to 3 m bgl or above ground water table, whichever comes first.

9.11 NOISE ENVIRONMENT

Anticipated Impacts:

- Mental disturbance, stress & impaired hearing.
- Decrease in speech reception & communication.
- Distraction and diminished concentration affecting job performance efficiency

The following measures have been envisaged to reduce the impact from the transportation of minerals:

- The vehicles will be maintained in good running condition so that noise will be reduced to minimum possible level.
- In addition, truck drivers will be instructed to make minimum use of horns in the village area and sensitive zones.
- No such machinery is used for mining which will create noise to have ill effects.
- Awareness will be imparted to the workers about the permissible noise levels & maximum exposure to those levels

9.12 TRAFFIC ANALYSIS

From the above analysis it can be seen that the V/C ratio is likely to change to **0.11 & 0.12** in the village roads and 0.17 in NH-76 with LOS being “A” which is ‘Excellent’ in all the cases, as per classification.

9.13 SOCIO-ECONOMIC ENVIRONMENT

The implementation of the Kanvara Sand/Moram mining project will generate both direct and indirect employment. Besides, it will provide a check on existing system of mining operation. Since the quarries will be allotted on lease basis, mining operation will be legally valid and it will bring income to the state exchequer. It will also reduce flooding of river banks, destruction of standing crops, land and property to a great extent. The project will also provide impetus to industrialization of the area. With the implementation of the proposed mining project the occupational pattern of the people in the area will change making more people engaged in industrial and business activities. Further, the mining and industrial activities in the area may

lead to rapid increase in population and thereby urbanization. Due to urbanization of the area, employment opportunities will further increase.

9.14 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Proper environmental management plan is proposed for “ Sand/Moram” mining project to mitigate the impact during the mining operation.

- i. No labour camps will be established on river bed.
- ii. No cooking, or burning of woods will be allowed in the nearby area.
- iii. Prior to commencement of mining, a short awareness program will be conducted for labours to make them aware of way of working and various precautions to be taken while at work. Such program will be repeated occasionally.
- iv. In the event of any some causality or injury to any animal occurs, proper treatment will be given.
- v. No tree cutting, chopping, lumbering, uprooting of shrubs and herbs will be allowed.
- vi. Corridor movement of wild animals, if exists mining operations will be avoided in the area.
- vii. It will be ensured that noise produced due to vehicles movement while carrying sand and are within the permissible noise level.
- viii. No piling of River Bed Material will be done in adjoining area.
- ix. If wild animals are noticed crossing the river bed, they will not be disturbed or chased away, instead the labors will move away from their path.

9.15 ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION

Environmental Management Plan serves no purpose if it is not implemented with true spirit. Some loopholes in the EMP can also be detected afterwards when it is implanted and monitored. Thus, an implementation and monitoring programme has to be prepared.

The major attributes of environment are not confined to the mining site alone. Implementation of proposed control measures and monitoring programme has an implication on the surrounding area as well as for the region. Therefore, mine management will strengthen the existing control measures as elaborated earlier in this report and monitor the efficacy of the control measures implemented within the mining area relating to the following specific areas for eco-friendly mining:

- a. Collection of air and water samples at strategic locations with frequency suggested and by analyzing thereof. If the parameters exceed the permissible tolerance limits, corrective regulation measure will be taken.

- b. Collection of soil samples at strategic locations once in every two years and analysis thereof with regard to deleterious constituents, if any.
- c. Measurement of water level fluctuations in the nearby ponds dug wells and bore wells.
- d. Regular visual examination will be carried out to look for erosion of river banks. Any abnormal condition, if observed will be taken care of.
- e. Measurement of noise levels at mine site, stationary and mobile sources, and adjacent villages will be done in every six months for first two years thereafter once a year
- f. Plantation/ afforestation will be done as per program i.e. along the road sides, river banks, and near civic amenities, which will be allotted by Government bodies as it is not feasible to plant trees near the mine lease area. Post plantation, the area will be regularly monitored in every two years for evaluation of success rate. For selection of plant species local people will also be involved.

9.16 BUDGET ALLOCATION FOR EMP IMPLEMENTATION

Table 9.2 COST OF EMP

Sr. No.	Description	Capital Cost (in lacs)	Recurring Cost(in lakhs/annum)
1	Pollution Monitoring-Air, Water, Noise	2.0	4.0
2	Pollution control- Water Sprinkling	2.0	4.0
3	Wire Fencing at plantation sites	1.0	0.5
4	Plantation including maintenance	1.0	2.0
5	Rain water Harvesting in nearby villages	2.0	3.0
6	Haul Road Maintenance	2.0	3.0
	Total	10.00	16.5

9.17 MONITORING SCHEDULE AND PARAMETERS:**Table 9.3 Monitoring Schedule and Parameters**

S No	Description of Parameters	Schedule and Duration of Monitoring/Execution
1	Air Quality: a) In the vicinity of the mine b) In the vicinity of the transportation Network c) Dust suppression on roads d) Scraping/ bulldozing of road to shift accumulated dust to the sides	24 hourly samples twice a week for one month in each season except monsoon season. Regularly i n non - monsoon m onths a nd whenever oc currence of f ugitive dus t t akes place. Fortnightly.
2	Water Quality near or around the site: a) Surface water quality b) Ground water quality	Once in a season for 4 seasons in a year
3	Ambient Noise Level	Twice a year for two years & then once a year
4	Soil Quality	Once in two years on project monitoring area
5	Inventory of Flora(tree plantation, survival etc) & Fauna	Once in two years on project monitoring area
6	Socio-economic condition of local, population, physical survey	Once in 3 years

9.18 BENEFITS OF MINING

- i. Controlling river channel.
- ii. Preventing flooding
- iii. Protecting river banks.
- iv. Reducing submergence of adjoining agricultural lands.
- v. Protection of crops being cultivated along the river bank
- vi. Reducing aggradations of river level.
- vii. Generating useful economic resource for construction.
- viii. Generating employment.
- ix. Improvement in socio economic conditions of the people of the study area.

CHAPTER-X

DISCLOSURE OF CONSULTANT ENGAGED

The EIA/EMP Report for **Kanvara Sand/Moram Mining Project** has been prepared by Grass Roots Research & Creation India (P) Ltd.

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	Mr. B.K. Jha

Accreditation from Quality Council of India, QCI NABET


Grass Roots Research & Creation India (P) Ltd. has got the accreditation from QCI NABET and has undergone Surveillance Assessment and Reccreditation as well. The result of continued accreditation is published on the QCI website.

As per the recently published QCI NABET ‘List of Accredited Consultant Organizations/Rev. 38 (A)/Feb. 08, 2016’, listed in as accredited consultant, **Category ‘A’ Sl. No. 77**. The list of accredited consultants is published on QCI NABET and MoEF&CC websites as well.

For reference, a snapshot of the list where GRC India’s name is listed is pasted below:



Scheme for Accreditation of EIA Consultant Organizations



S. No.	Consultant Organization	Scope of Accreditation			Project or Activity as per Schedule of MoEF Notification dated September 14, 2006 and subsequent amendments
		Sector Number	Name of Sector	Category	
			projects including shopping malls, multiplexes, commercial complexes, housing estates, hospitals, institutions		
77	Grass Roots Research and Creation India (P) Ltd.* Address: F- 375, Sec – 63, Noida – 201301 e. mail: md@grc-india.com , info@grc-india.com Tel.: 0120 – 4044630, 4044660 09811554031, 09818184005 Conditions apply	1	Mining of minerals including Open cast/ Underground mining	A	1 (a) (i)
		4	Thermal power plants	B	1 (d)
		6	Coal Washeries	A	2 (a)
		7	Mineral beneficiation including pelletisation	B	2 (b)
		8	Metallurgical industries(ferrous and non-ferrous) - both primary & secondary	A	3 (a)
		31	Industrial estates/parks/ complexes/ Area, export processing Zones (EPZs), Special economic zones (SEZs), Biotech Parks, Leather Complexes	A	7 (c)
		38	Building and large construction projects including shopping malls, multiplexes, commercial complexes, housing estates, hospitals, institutions	B	8 (a)
		39	Townships and Area development projects	B	8 (b)

ACCREDITATION CERTIFICATENational Accreditation Board
for Education and Training

NABET/EIA/RA/017/07C
Grass Roots Research and Creation India (P) Ltd
F: 374-375,
Sector-63,
Noida - 201301, (UP)
(Kind Attention: Dr. Dhirej Kt. Singh)

Nov.18, 2016

Dear Sir,

Sub: Re-Accreditation

This is in reference to your application to QCI-NABET for re-accreditation (RA) as EIA Consultant Organization and the assessment carried for same in your organization from Feb. 11 -14, 2015.

We are pleased to inform you that based on the document and office assessments during RA, the Accreditation Committee has approved renewal of accreditation given to your organization for a period of three years from Feb. 14, 2015 to Feb. 13, 2018 subject to coverage of balance functional areas and specific response to NCs/Obs./Alerts, as applicable (Refer Annexure III) with the following details:

1. Annexure I - Scope of accreditation
2. Annexure II - List of experts with approved sectors/ functional areas
3. Annexure III - Non-Conformances/ Observations/ Alerts (NCs/ Obs./ Alerts)
4. Annexure IV - Observations on Quality Management System (QMS)
5. Annexure V - Terms and conditions of accreditation
6. Annexure VI - Result of Assessment
7. Annexure VII - Guidelines for addressing Major Non-Conformances/ Observations/ Alerts
8. Annexure VIII - Format to be followed for monitoring the names of the experts involved in

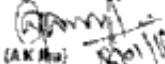
RA reports prepared by Grass Roots Research and Creation India (P) Ltd.

Result of RA for approved candidates are already posted on QCI/NABET website vide minutes of the Accreditation Committee meeting dated Sep. 30, 2015. Details including those not approved and NCs/ Obs./ Alerts as applicable are given in Annexure III. You are requested to take necessary actions to close the NCs/ Obs. as per guidelines and timeframe mentioned in Annexure VII of this letter. You are also advised to visit QCI website to understand Version 3 of the Scheme effective from Sep. 1, 2015 for necessary actions at your end.

You are required to make all payments to NABET as applicable, within one month from the date of invoice sent to you. Continuation of this accreditation of your organization is subject to the clearance of all dues by your organization, satisfactory compliance to Annexure III and V.

With best regards,

Yours sincerely,


(A.K. Singh)
Senior Director



Guidelines for Accreditation of EIA Consultant Organizations



Scope of Accreditation

Annexure I

NAME OF THE CONSULTANT ORGANIZATION: Grass Roots Research and Creation India (P) Ltd
F: 374-375,
Sector-63,
Noida - 201301. (UP)

Sl. No.	Sector number		Name of Sector	Category A/B
	As per MoEF Notification	As per NABRI Scheme		
1.	1 (a) (i)	1	Mining of Minerals	A
2.	1 (a)	4	Thermal power plants	A
3.	2 (a)	6	Coal washeries	A
4.	2 (b)	7	Mineral beneficiation including pelletisation	B
5.	3 (a)	8	Metallurgical Industries (ferrous & non-ferrous)- both primary and secondary	A
6.	7 (c)	11	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes	A
7.	8 (a)	15	Building and large construction projects	B
8.	8 (b)	19	Townships and Area development projects	B
Total = 08 Sectors				
<i>Individual EIA Coordinators approved for different sectors are mentioned in Annexure II</i>				

The ACO has overall obtained more than 60 % marks and therefore qualifies for Cat. A.


(A.K. Jha)
Senior Director

ANNEXURES

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भारतीय गैर न्यायिक INDIA NON JUDICIAL

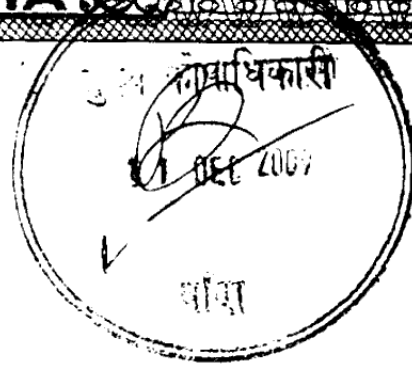
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25000
TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

A 058577



(2)

गया है जिस पदावलि में यदि संदर्भ में ऐसा ग्राह्य हो,

उत्तराधिकारी तथा अभिहस्ताकिती भी सम्मिलित समझे जावेंगे

(एक पक्ष) और श्री सोमेश भरद्वाज पुत्र श्री ओमप्रकाश

Soul Khisti

Om
(जे. पी. विवेकी)
खान निरीक्षक
जनित कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

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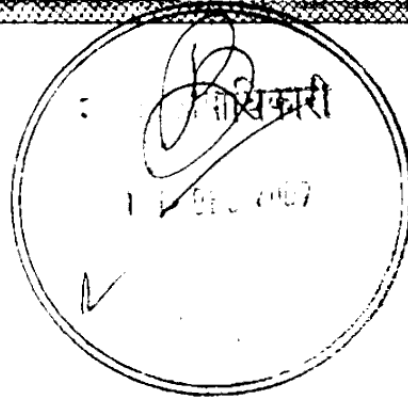


सत्यमेव जयते

INDIA

उत्तर प्रदेश UTTAR PRADESH

A 058578



(3)

भरद्वाज निवासी—अमर टाकीज, शहर बांदा, जनपद बांदा

जिसे भागे पट्टेदार कहा गया है जिस पदावलि में यदि

संदर्भ में ऐसा ग्राह्य हो, उक्त समस्त भागीदार, उनके

Saul Bhandari

Om
(श्री ० पी० द्विवेदी)
बतन निरीक्षक
जनित कार्यालय, बांदा

(रंजन कुमार)
विलासिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

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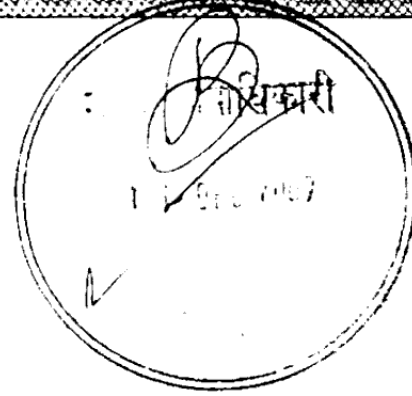


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A 058578



(3)

भरद्वाज निवासी—अमर टाकीज, शहर बांदा, जनपद बांदा

जिसे भागे पट्टेदार कहा गया है जिस पदावलि में यदि

संदर्भ में ऐसा ग्राह्य हो, उक्त समस्त भागीदार, उनके

Sant Bhandari

Sanjiv
(जे० पी० सिन्धुवा)
खान निरीक्षक
खनिज कार्यालय, बांदा

(रंजम कुमार)
बिलाधिकारी, बांदा

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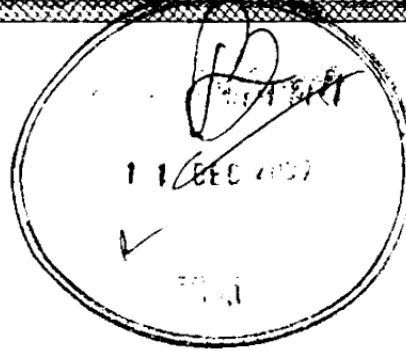
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A 058579



(4)

अपने-अपने उसके दायद निष्पादक प्रशासक तथा विधिक

प्रतिनिधि भी सम्मिलित समझे जावेंगे। (दूसरा पक्ष)

चूंकि पट्टेदार ने उ०प्र० उपखनिज (परिहार)

Saul Bhead

Q. S.
(जे० पी० द्विवेदी)
बाल निरीक्षक
जनक कार्यालय, बांदा

(दंजक कुंभार)
विसाधिकारी, बांदा

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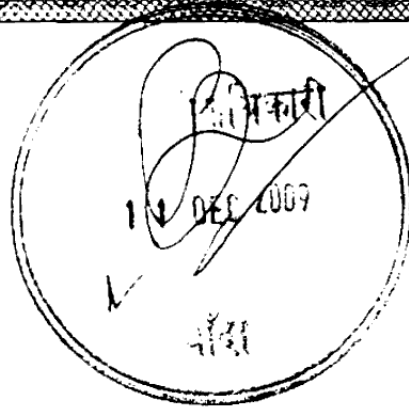
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A 058580



(5)

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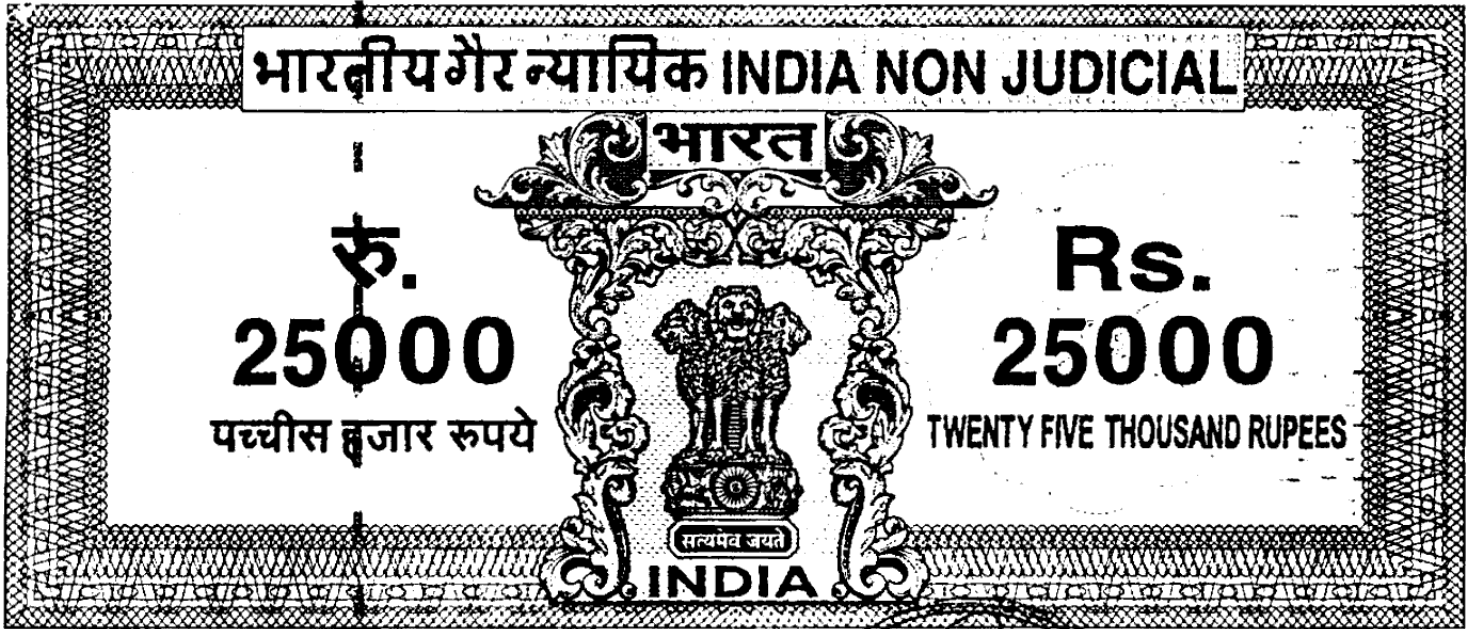
के अनुसार राज्य सरकार को निम्नलिखित अनुसूची भाग-1

में वर्णित जोन संख्या-1 खण्ड संख्या 13 ग्राम-भुरेड़ी,

Sand Bhandari

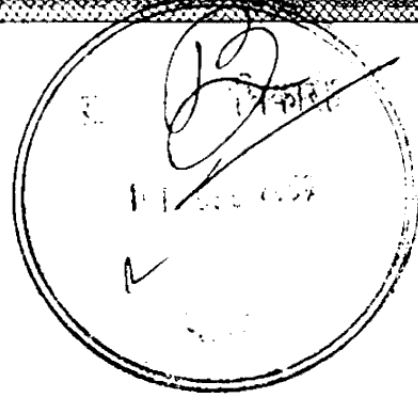
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अन निरीक्षक
जनित कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058581



(6)

कनवारा, चिलेहटा तहसील-बांदा, जिला-बांदा के निमित्त

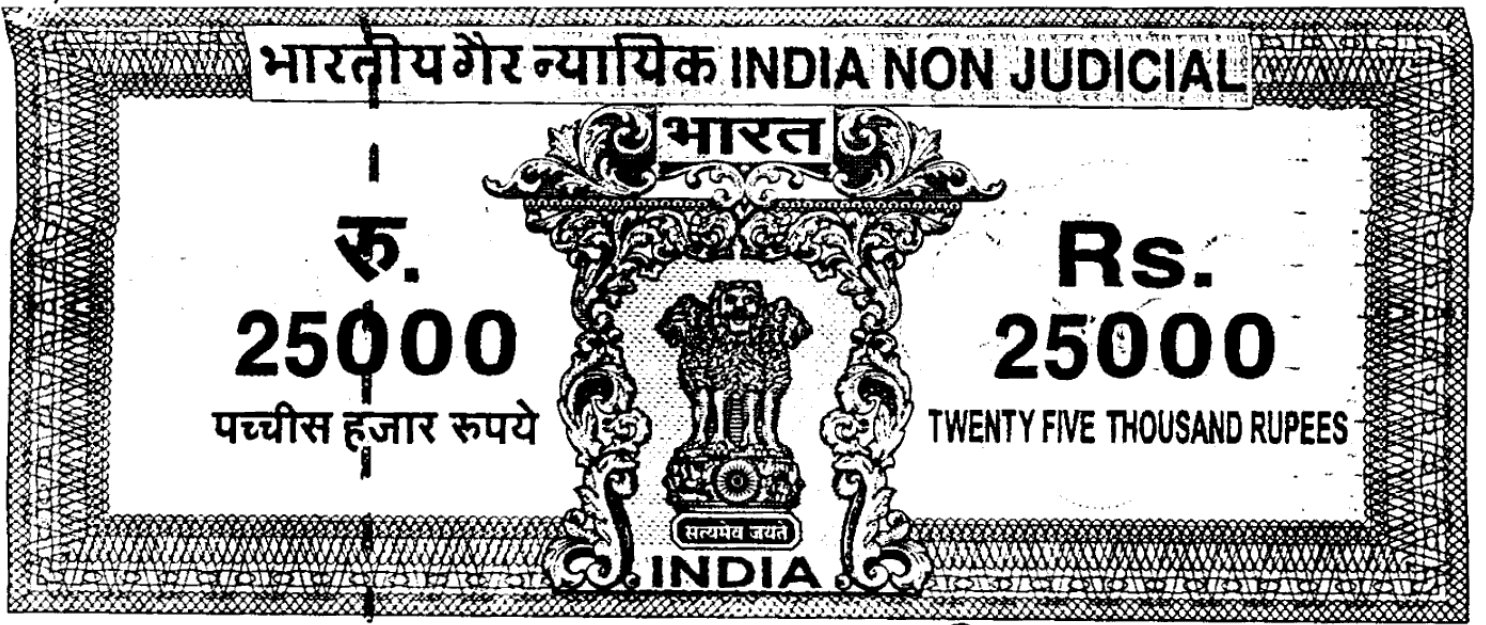
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Soul Bhandari

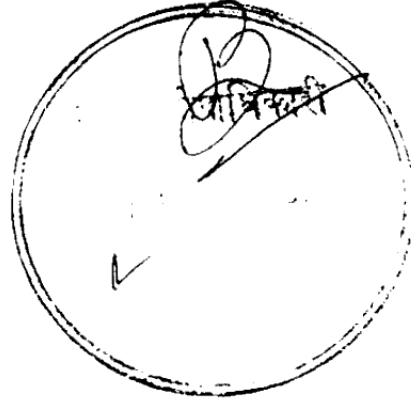
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खान निरीक्षक
जनित कार्यालय, बांदा

(रंजित कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058582



(7)

इनराशि प्रतिभूति के रूप में तथा 2000.00 रुपये की धनराशि

खनन पट्टे के हेतु प्रारंभिक व्ययों की पूर्ति के लिये जमा

कर दी है।

Saul Bhandari

Om
(जे० पी० द्विवेदी)
खनन निरीक्षक
खनिज कार्यालय, बांदा

(रंजल कुमार)
विसाधिकारी, बांदा

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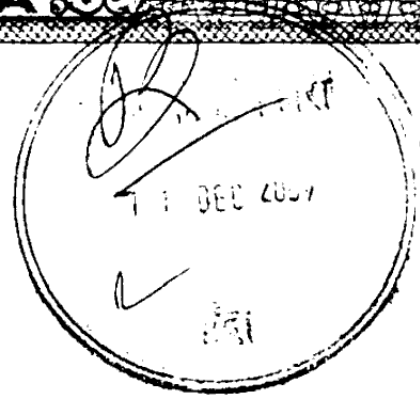
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A 058583



(8)

यह इस बात की साक्ष्य है कि उपस्थापना पत्र और

निम्नलिखित द्वारा रक्षित और उनमें दिये गये और पट्टेदार

की ओर से भुगतान किये जाने वाले पालन और सम्पादन

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(जे० पी० द्विवेदी)
घरने निरीक्षक
जनित कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा

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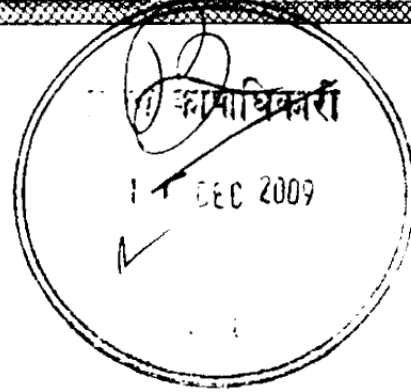
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A 058584



किये जाने वाले किरायों, स्वामित्वों प्रसंविदाओं तथा अनुबन्ध

ओं के प्रतिफल में राज्य सरकार एतद् द्वारा पट्टेदार को

निम्नलिखित प्रदान और पट्टान्तरित करती हैं।

Soul Bhandari

Chaitanya
(नि. वी. के. के. के.)
का. न. न. न. न. न.
उ. न. न. न. न. न.

(रंजन कुमार)
बिलाधिकारी, बांदा

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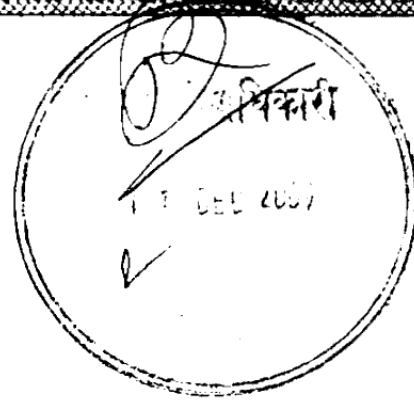


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INDIA

उत्तर प्रदेश UTTAR PRADESH

A 058585



(10)

खनन पट्टा बालू/मोरम, (जिन्हें आगे अभिदिष्ट

अनुसूची में 'उक्त खनिज' कहा गया है) की समस्त खाने

तल्प, सदरसीम्स जो उक्त अनुसूची के भाग-1 में अभिदिष्ट

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(जे० पी० द्विवेदी)
खन निरीक्षक
खनिज कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

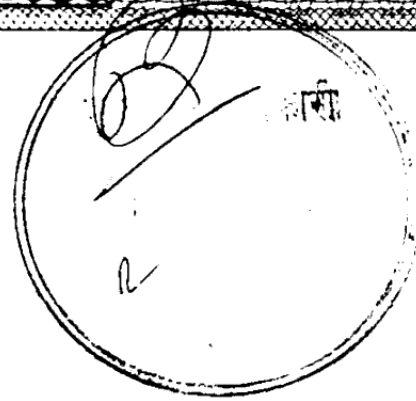
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उत्तर प्रदेश UTTAR PRADESH

A 058586



(11)

भूमि में या उसके नीचे स्थित हो पड़ी हो, या हो उन

स्वतन्त्रताओं या अधिकारों तथा विशेषधिकारों के साथ जिनको

इसके संबंध में उन निबन्धनों तथा शर्तों के अधीन रहते हुये

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बतन निरीक्षक
बतन कार्यालय, बांदा

(रंजण कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

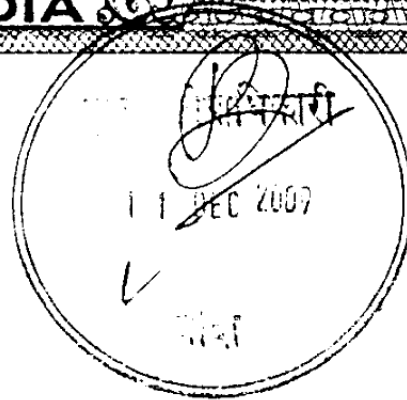
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उत्तर प्रदेश UTTAR PRADESH

A 058587



प्रयोग या उपयोग किया जायेगा, जो ऐसी स्वतन्त्रताओं,

अधिकारों तथा विशेषाधिकारों के प्रयोग तथा उपयोग करने

के बारे में हो, सिवायें इसके और इसमें से आरक्षित उक्त

नियमवली में उल्लिखित स्वतंत्रता में, अधिकार तथा विशेषाधि

Sant Bhandari

Sant Bhandari
(जे० पी० द्विवेदी)
बतन निरीक्षक
बनियन कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

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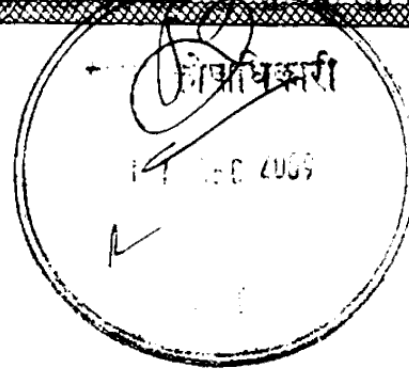


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उत्तर प्रदेश UTTAR PRADESH

A 058588



(13)

कार राज्य सरकार में पट्टान्तरित हो जायेंगे। दिनांक

24-12-2009 से तीन वर्ष की आगामी अवधि के लिये पट्टेदार

को एकद्वारा दिये और पट्टान्तरित ऐसे भू गृहदिधारण

Paul Bhandari

Ques
(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज कार्यालय, बाँदा

(रंजण कुमार)
जिलाधिकारी, बाँदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

भारत

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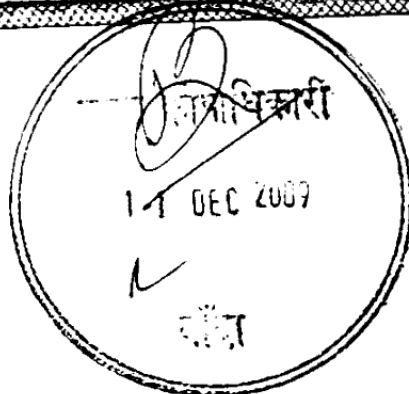


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TWENTY FIVE THOUSAND RUPEES

INDIA

उत्तर प्रदेश UTTAR PRADESH

A 058589



(14)

करना, जिनमें खनिज निकलने लगे और राज्य सरकार को
उत्तर अनुसूची के भाग दो में उल्लिखित किरायों और स्वामित्वों,
का सुगतान उसमें विनिर्दिष्ट भिन्न-भिन्न समयों पर होने

[Handwritten signature]

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(जे० पी० द्विवेदी)
खत निरीक्षक
जनक काशीनाथ, प. ६

(रंजक कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

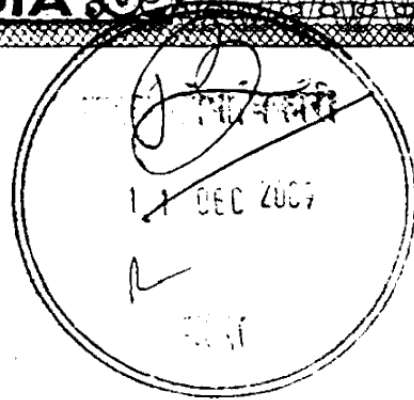
रु.
25000
पच्चीस हजार रुपये



Rs.
25000
TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

A 058590



(15)

लगे किन्तु प्रतिबन्ध यह है कि ऐसा उक्त भाग में उपबन्धों

के अधीन हो और पट्टेदार एतद्वारा राज्य सरकार के साथ

प्रसंकिदा करता हो और राज्य सरकार एतद्वारा पट्टेदार के

Saul B...

[Signature]
(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज कार्यालय, बांदा

[Signature]
(रंजन कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

₹.
25000

पच्चीस हजार रुपये



Rs.
25000

TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

A 058591

मुख्य कार्याधिकारी

06C 2099

बाँदा

(16)

साथ प्रसंविदा करती हैं जैसा कि उक्त नियमावली में अभिव्यक्त है

और एतद्वारा उसके साथ दिये गये पक्षों के बीच परस्पर सहमत

हुआ है और जैसा कि उक्त अनुसूची के भाग-3 में अभिव्यक्त है।

Saul Bhandari

(जे० पी० द्विवेदी)

बतन निरीक्षक

जनक कार्यालय, बाँदा

(रंजन कुमार)
जिलाधिकारी, बाँदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.
25000
पच्चीस हजार रुपये



Rs.
25000
TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

A 058592

(17)

भाग-1

पट्टे का क्षेत्रफल और स्थान भुरेड़ी, कनवारा,

चिलेहटा जो जिला, बांदा वह समस्त भूखण्ड, तहसील-बांदा,

Saul Bhandari

Q. S.
(जे. पी. विवेदी)
खज. निरीक्षक
जनित कौन्सिल, बांदा

(रंजण कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

₹.
25000

पच्चीस हजार रुपये



Rs.
25000

TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

A 058593

मुख्य क्लर्क

15 DEC 2009

बांदा

(18)

थाना-मटौंध, के अंतर्गत (परगना) बांदा में स्थान भुरेड़ी,

कनवारा, चिलेहटा पर (क्षेत्र अथवा क्षेत्रों का विवरण) गाटा

सं०- 1123 / 2, 1131, 1132, 1136, 1137, 1141 / 2, 1148,

Sant Bhisah

(जे० पी० द्विवेदी)
खान निरीक्षक
जनित कार्यालय, बांदा

(रंजन कुमार)
बिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.
25000

पच्चीस हजार रुपये



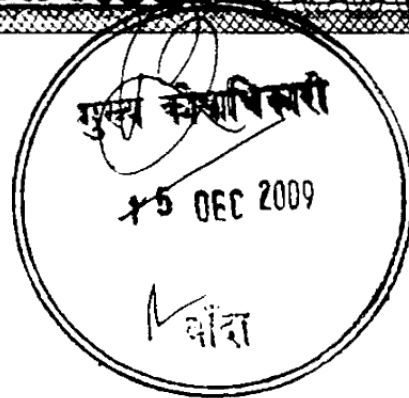
Rs.
25000

TWENTY FIVE THOUSAND RUPEES

INDIA

उत्तर प्रदेश UTTAR PRADESH

A 058594



(19)

1149, 476, 477, 478, 479, 491, 492, 515, 516, 517, 518,

519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 534,

535, 542, 544, 555, 556, 557, 558, 559, 560, 561, 562,

Soul R...

[Signature]
(जे० पी० द्विवेदी)
खान निरीक्षक
जनित कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

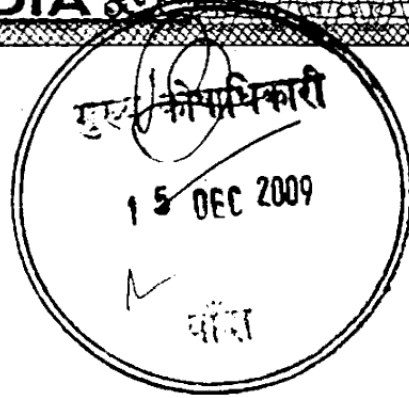
रु.
25000
पच्चीस हजार रुपये



Rs.
25000
TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

A 058595



(20)

563, 564, 565, 566, 567, 568, 569, 570, 619, 623,

624 / 500, 638, 639, 540, 641, 642, 643, 644, 645, 646,

647, 648 कुल योग-- 303.46 एकड़ है और जिसकी भूकर

Soul Bhush

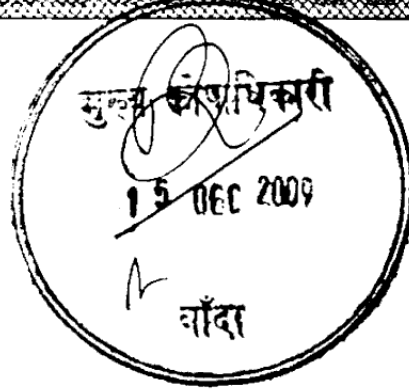
[Signature]
(जे० पी० द्विवेदी)
खान निरीक्षक
जनित कार्यालय, बांदा

(रंजम कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058596



(21)

सर्वेक्षण संख्या उपरोक्त है जो यहां संलग्न नक्शे में चिन्हित

है और उसे लाल रंग से रंजित किया गया है और जिसकी

सीमायें निम्नलिखित हैं:-

(रंजन कुमार)
जिलाधिकारी, बाँदा

Saul Bhandari

Saul
(जे० पी० द्विवेदी)
खान निरीक्षक
वनिक कार्यालय, बाँदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

भारत

रु.
25000

पच्चीस हजार रुपये

Rs.
25000

TWENTY FIVE THOUSAND RUPEES

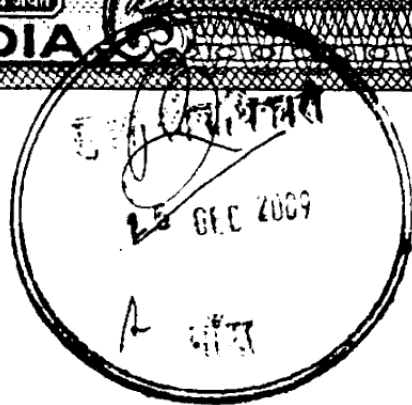


सत्यमेव जयते

INDIA

उत्तर प्रदेश UTTAR PRADESH

A 058597



(22)

उत्तर में :- केन नदी

दक्षिण में :- केन नदी तथा पुल

पूरुब में :- केन नदी

पश्चिम में :- प्राय-पूरुब के राजस्वकारों के क्षेत्र

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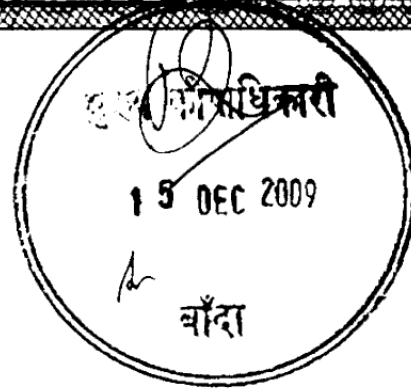
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(जे० पी० दिवेदी)

(रंजना कुमार)
जिमाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058598



(23)

एतदपश्चात् जिसे 'उक्त भूखण्ड' कहा गया है।

भाग-2

1. पट्टेदार पट्टे के प्रत्येक वर्ष के लिये प्रत्येक खनिज

के संबंध इस भाग के खण्ड (2) में विनिर्दिष्ट पट्टा धनराशि

Sudh

(जे० पी० विवेदी)
खान निरीक्षक
खनिज कार्यालय, बाँदा

(रंजम कुमार)
जिलाधिकारी, बाँदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

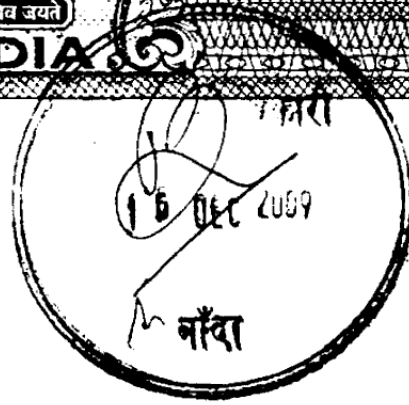
रु.
25000
पच्चीस हजार रुपये



Rs.
25000
TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

A 058599



(24)

का वार्षिक भुगतान करेगा। प्रतिबन्ध यह है कि पट्टेदार

प्रत्येक खनिज के संबंध में पट्टा धनराशि या स्वामित्व जो

भी धनराशि इसमें से अधिक हो, देनदार होगा किन्तु दोनों

का नहीं।

Soul Bhush

Am
(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज कार्यालय, बाँदा

(रंजना कुमार)
बिलाधिकारी, बाँदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.
25000

पच्चीस हजार रुपये

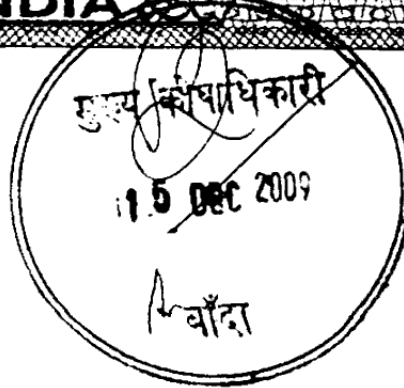
Rs.
25000

TWENTY FIVE THOUSAND RUPEES



उत्तर प्रदेश UTTAR PRADESH

A 058600



(25)

2. इस भाग के खण्ड (1) के उपबन्ध के अधीन रहते हुये पट्टे की अवधि में पट्टेदार राज्य सरकार को इस अनुसूची के भाग-1 में वर्णित और पट्टान्तरित भूमि के वार्षिक पट्टा

Saul Bledy

Chal
(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज, कार्पोरेशन, बाँदा

(रंजन कुमार)
जिलाधिकारी, बाँदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

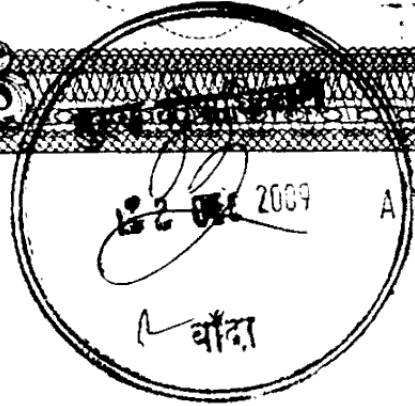
रु.
25000
पच्चीस हजार रुपये



Rs.
25000
TWENTY FIVE THOUSAND RUPEES

INDIA

उत्तर प्रदेश UTTAR PRADESH



(27)

खनिज का नाम	पट्टे की अवधि	उपनियम 14(3) के अधीन जमा पट्टा धनराशि	प्रथम वर्ष की किश्तें		
			प्रथम	द्वितीय	तृतीय
साधारण बालू/ मोरम	तीन वर्ष	25 प्रतिशत	50 प्रतिशत	25 प्रतिशत	--
			01.04.2010	01.07.2010	--
			13,36,250.00	26,72,500.00	13,36,250.00
द्वितीय वर्ष की किश्तें			तृतीय वर्ष की किश्तें		
प्रथम	द्वितीय	तृतीय	प्रथम	द्वितीय	तृतीय
25 प्रतिशत	25 प्रतिशत	50 प्रतिशत	25 प्रतिशत	25 प्रतिशत	50 प्रतिशत
01.10.2010	01.01.2011	01.04.2011	01.10.2011	01.01.2012	01.04.2012
14,69,875.00	14,69,875.00	29,39,750.00	16,16,863.00	16,16,863.00	32,33,725.00

पट्टाधनराशि का राज्य सरकार के प्रति भुगतान जिला बाँदा के मुख्यालय के राजकीय कोषागार में निर्धारित लेखाशीर्षक के अन्तर्गत जमा करेगा।

3. इस भाग के खण्ड (4) के उपबन्धों के अधीन रहते हुये पट्टेदार की अवधि में राज्य सरकार को ऐसे समयों पर ऐसी रीति से जो राज्य सरकार विहित करें, पट्टे पर दिये हुये क्षेत्र से उसके द्वारा हटाये गये खनिज के सम्बन्ध में उक्त नियमावली की प्रथम अनुसूची में तत्समय विनिर्दिष्ट दर पर स्वागित्व का भुगतान करेगा।

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(जि. ए. ए. वि. ए. सी.)

भारतीय गैर न्यायिक INDIA NON JUDICIAL

भारत

₹. 25000

पचास हजार रुपये

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सत्यमेव जयते

INDIA

उत्तर प्रदेश UTTAR PRADESH

22 DEC 2009

A 058603

बांदा

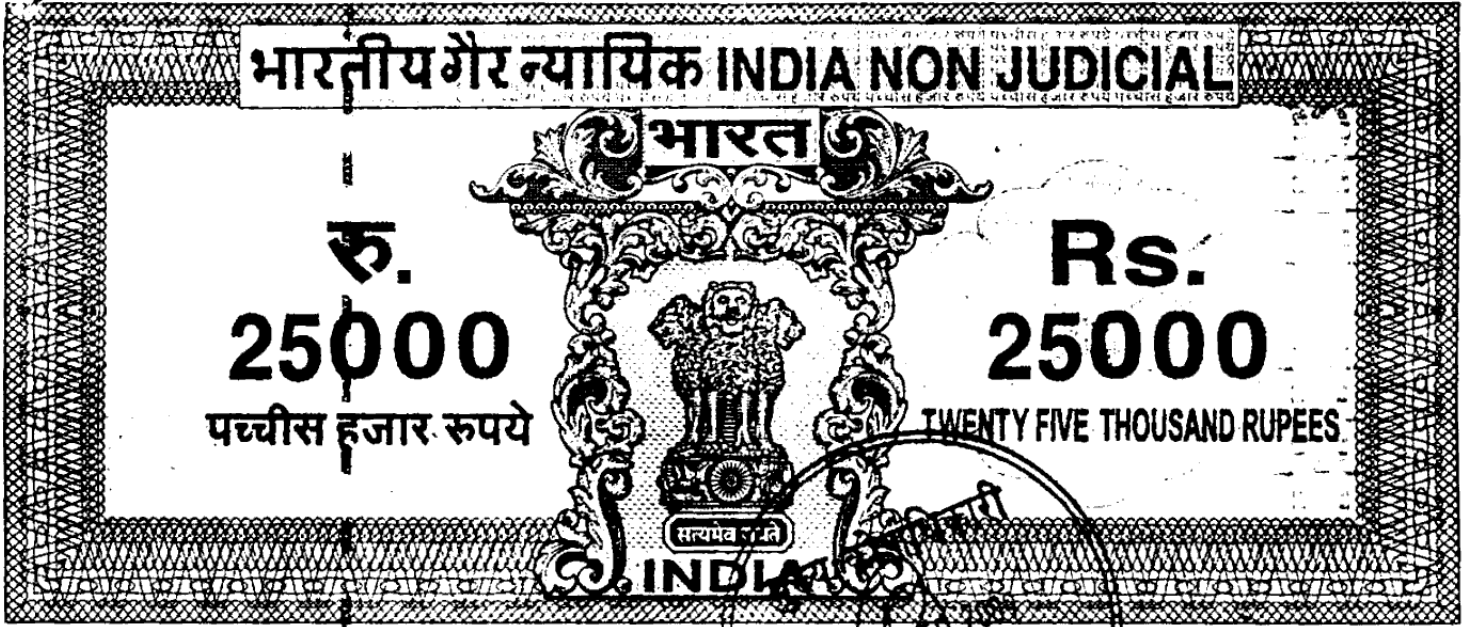
(28)

4. साधारण बालू/मोरम के पट्टेदार की आगामी वर्षों में पट्टा धनराशि पूर्ववर्ती वर्ष में भुगतान की गयी धनराशि से 10 प्रतिशत की बढ़ी हुयी दर से जमा करेगा साधारण बालू/मोरम के पट्टेदार पट्टे के आगामी तीन वर्षों से पट्टा धनराशि का

Soul Bhada

Q. S.
(जे० पी० द्विवेदी)
खान निरीक्षक
अनिज कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058604

(29)

भुगतान पूर्ववर्ती वर्ष में भुगतान की गयी धनराशि से 10 प्रतिशत की बढ़ी हुयी दर से करेगा। यदि पट्टा क्षेत्र से हटाये गये खनिज पर देय रायल्टी पट्टा धनराशि से अधिक होती है तो पट्टेदर द्वारा उस धनराशि का भुगतान करेगा जो इसमें से

Saul Bhandari

Saul Bhandari
(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज कार्यालय, बान्दा

Saul Bhandari
(टी० ज० गुप्ता)
जिलाधिकारी, बान्दा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.
25000

पच्चीस हजार रुपये

Rs.
25000

TWENTY FIVE THOUSAND RUPEES



उत्तर प्रदेश UTTAR PRADESH

A 058605

(30)

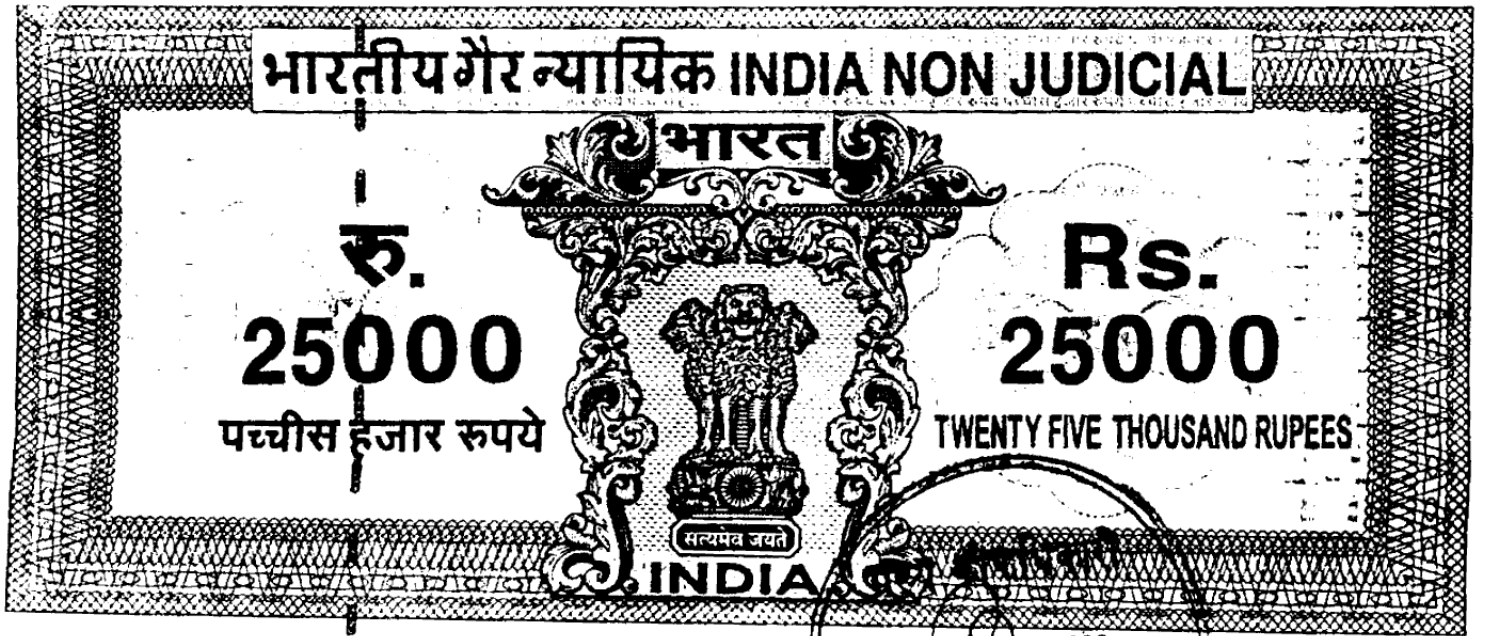
अधिके होगी ।

5. इस भाग में उल्लिखित अपरिहार्य माटक और स्वामित्व का अुगतान बिना किसी कटौती के राज्य सरकार को जिले के कोषागार पर और ऐसी रीति से किया जायेगा जो राज्य

Saul Bheedi

[Signature]
(जे० पी० द्विवेदी)
खान निरीक्षक
जनित कार्यालय, बांदा

(रंजक कुमार)
बिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058606

(31)

सरकार विहित करें।

6. उक्त स्वामित्वों के संगणन के प्रयोजन के लिये पट्टेदार खान से संग्रह किये गये खनिज और उसके भेजने की रीति का सही-सही लेखा रखेगा, जिसमें वह परिवहन की प्रणाली

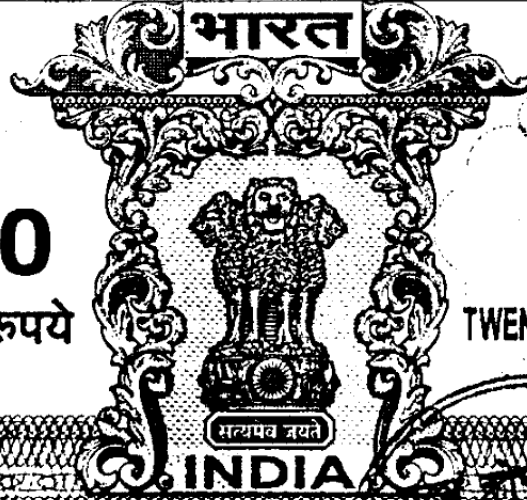
Santosh Chandra

Santosh Chandra
(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज कार्यालय, बांदा

Ranjit Kumar
(रंजित कुमार)
जिलाधिकारी, बांदा

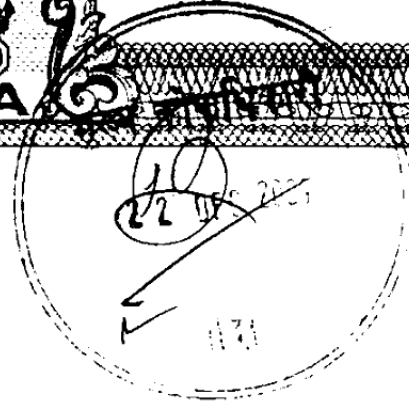
भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.
25000
पच्चीस हजार रुपये



Rs.
25000
TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH



A 058607

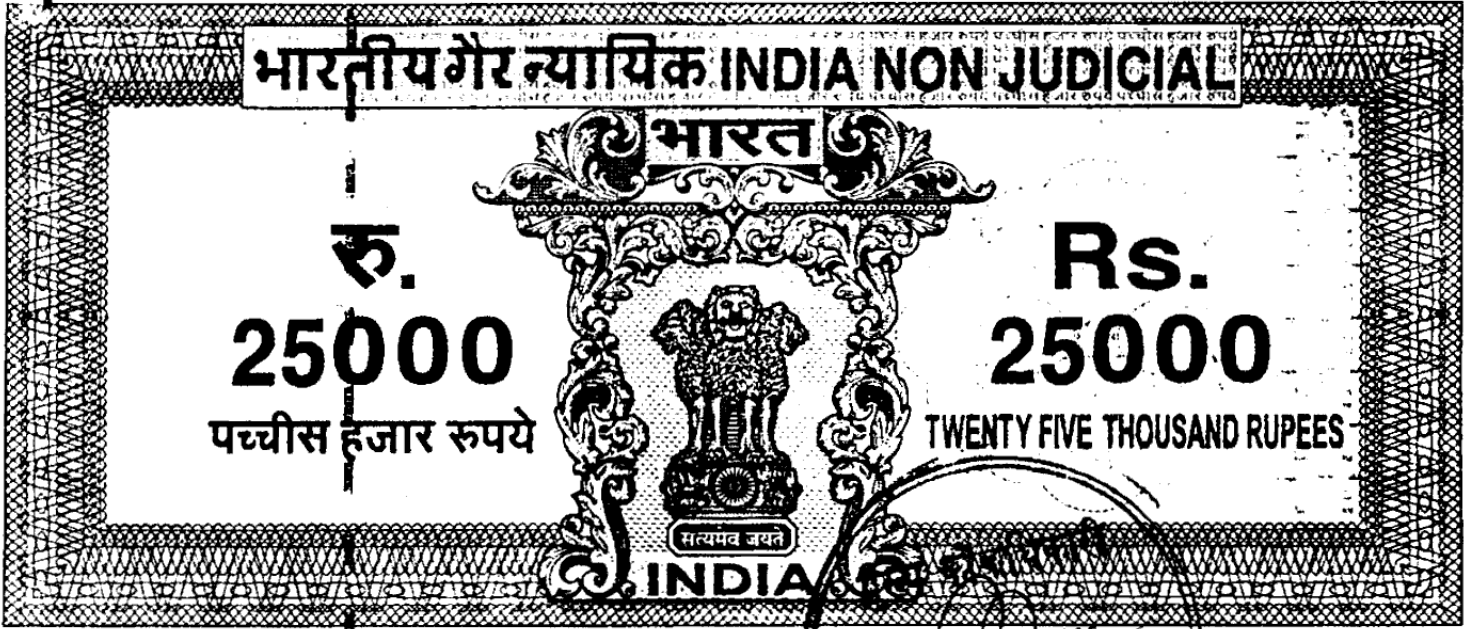
(32)

काह की निबंधन संख्या वाहन के प्रभारी व्यक्ति, वाहन द्वारा
परिवहन किये गये खनिज का विवरण त परिणाम का उत्तरदाय
करमा, जो राज्य सरकार सामान्य या विशेष आदेश द्वारा
विनिर्दिष्ट करें। नियम-68 के अधीन अधिकृत अधिकारी का

Saul Bhus

Q
(जे०पी० पियेवी)
खान निरीक्षक
खनिज कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058608

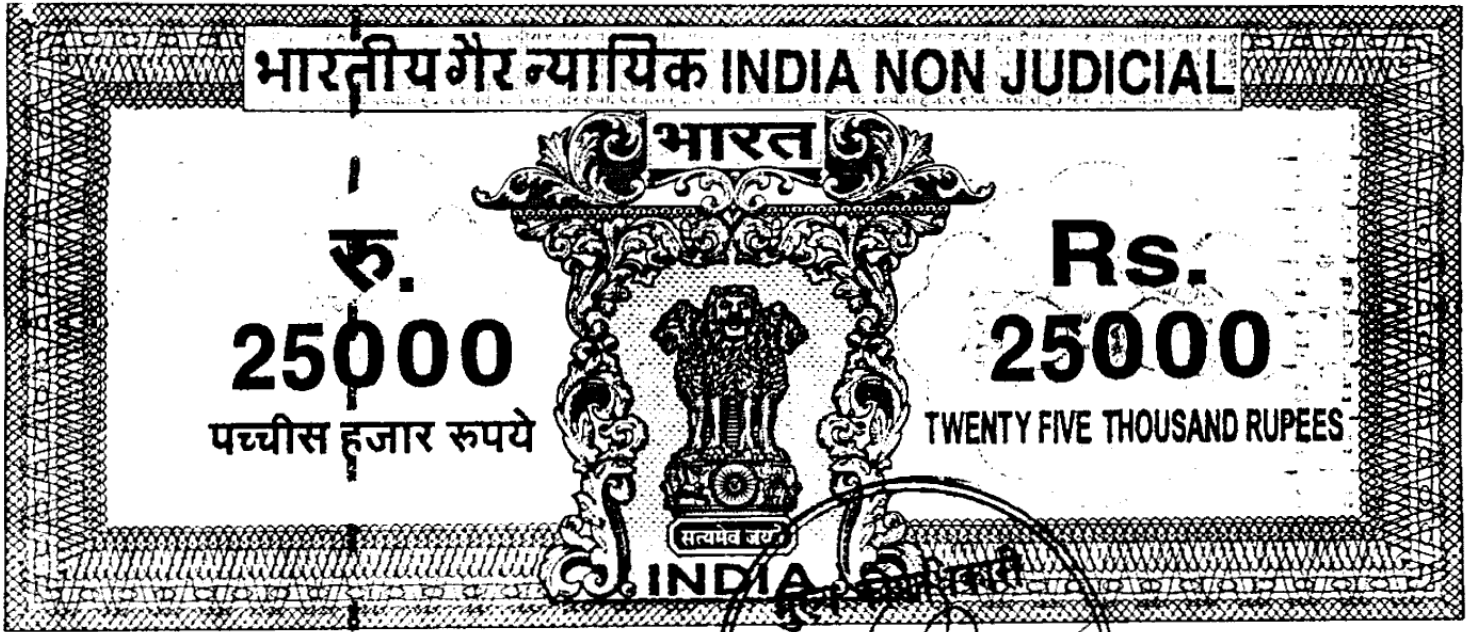
(33)

ऐसे अन्य अधिकारी जिन्हें राज्य सरकार नियमावली के अधीन समय-समय पर प्राधिकृत करें, स्टॉक में रखे गये और निर्यात किये जाने वाले या प्रपत्र एम0एम0-11 में उल्लिखित खनिज का लेखा उसके भार या परिमाण की

Santosh Kumar

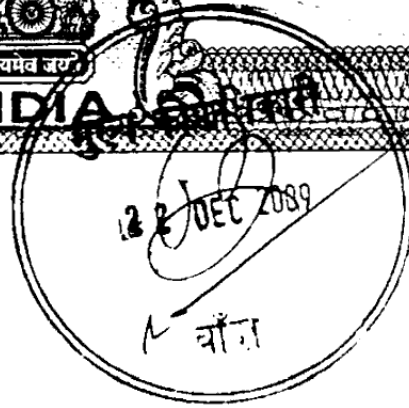
Santosh Kumar
(जे० पी० द्विवेदी)
जनरल मैनेजर
खनिज कार्यालय, बोधा

(रंजित कुमार)
जिलाधिकारी, बोधा



उत्तर प्रदेश UTTAR PRADESH

A 058609



(34)

जांच कर सकता है। पट्टेदार प्रतिवर्ष जिलाधिकारी और भूतत्व एवं खनिकर्म निदेशालय के क्षेत्रीय कार्यालय को पूर्ववर्ती तिमाही के 15 दिनों के भीतर जुलाई, अक्टूबर, जनवरी और अप्रैल में प्रपत्र एम0एम0-12 में तिमाही विवरणी

Souk Bhundy

(जे० वी० द्विवेदी)
खान निरीक्षक,
खनिज कार्यालय, बाँदा

(रंजन कुमार)
जिलाधिकारी, बाँदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.
25000
पच्चीस हजार रुपये



Rs.
25000
TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

A 058610

(35)

प्रस्तुत करेगा और यदि विवरणी नियम समय के भीतर प्रस्तुत नहीं की जाती तो पट्टेदार चूक के प्रत्येक अवसर पर मु० 400.00 रुपये की धनराशि का भुगतान करेंगा।

7. पट्टेदार जिलाधिकारी के कार्यालय प्रपत्र एम०एम०-11

Soul Bhushy

Qul
(जे० पी० द्विवेदी)
खान निरीक्षक
जनित कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

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TWENTY FIVE THOUSAND RUPEES



उत्तर प्रदेश UTTAR PRADESH

A 058611

(36)

की पुस्तिका जैसा की नियमावली के नियम 70(1) में अपेक्षित है भुगतान करने पर प्राप्त करेगा।

8. यदि, पट्टेदार द्वारा इस उपस्थापना पत्र के निबंधनों

और शर्तों के अधीन किसी भाटक, स्वामित्व या राज्य सरकार

Saul Bhandari

Saul
(जे० पी० द्विवेदी)
खान निरीक्षक
अनित्र कार्यालय, बाँदा

(रंजम कुमार)
जिलाधिकारी, बाँदा



उत्तर प्रदेश UTTAR PRADESH

A 058612

(37)

को देय किसी अन्य धनराशि का भुगतान विहित समय के भीतर नहीं किया जाता है तो वह ऐसे अधिकारी के प्रमाणपत्र पर जिसे राज्य सरकार सामान्य या विशेष आदेश द्वारा विनिर्दिष्ट करें, उसी प्रकार से वसूली की जावेगी, जिस

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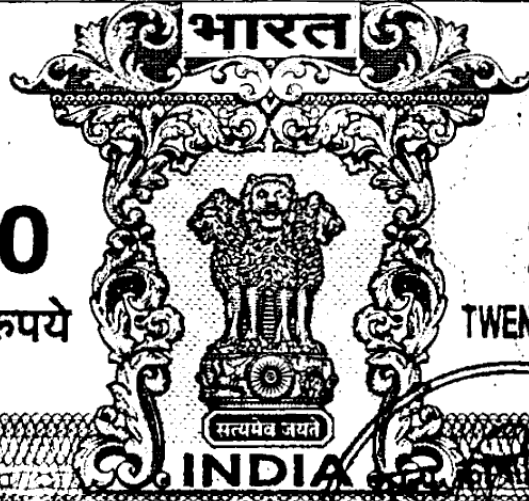
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जि० पी० द्विवेदी
जन निरीक्षक
जनित कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.
25000

पच्चीस हजार रुपये



Rs.
25000

TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

A 058613

(38)

प्रकार से मालगुजारी का बकाया वसूल किया जाता है।

भाग-3

1. यदि पट्टेदार उ०प्र० उपखनिज परिहार नियमावली 1963

के किसी नियम या इस पट्टे की किसी प्रसंविदा और शर्त

Soul Bharti

Chait
(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज पर्याय, बंदा

(रंजन कुमार)
जिलाधिकारी, बंदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

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उत्तर प्रदेश UTTAR PRADESH

A 058614

(39)

को भंग करे तो राज्य सरकार पट्टा समाप्त कर सकती है
और प्रतिभूति जमा को पूर्णतः या अंशतः जब्त कर सकती हैं,
किन्तु प्रतिबन्ध यह है कि पट्टा समाप्त किये जाने के पूर्व
पट्टेदार को उक्त शर्त को भंग करने का स्पष्टीकरण देने के

Sanjiv Bhandari

(जे० पी० द्विवेदी)
खान निरीक्षक
खनि, बारांसी, य. प्र. रा.

(रंजम कुमार)
जिलाधिकारी, बारांसी

भारतीय गैर न्यायिक INDIA NON JUDICIAL

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A 058615



(40)

लिये युक्ति-युक्ति अवसर दिया जायेगा यदि पट्टेदार यथास्थिति नियमावली या इस पट्टे के अधीन किसी अधिकारी द्वारा पारित किया आदेश से क्षुब्ध है तो वह इस नियमावली के नियम-77 और 78 के अधीन अपील/पुनरीक्षण

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(जे० पी० द्विवेदी)
जान निरीक्षक

(रंजम कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

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उत्तर प्रदेश UTTAR PRADESH

A 058616

(41)

दायर कर सकता है।

2. पट्टेदार इस उपस्थापना पत्र के आधार पर देय किराये और स्नामित्वों का पहले भुगतान और उन्मोचन कर चुकने पर उक्त अवधि की समाप्ति पर या उसके शीघ्रतर समाप्त पर या तत्पश्चात् तीन कलेंडर मास के भीतर (जब तक

Soul Bledy

(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज कार्यालय, बाँदा

(रंजन कुमार)
जिलाधिकारी, बाँदा

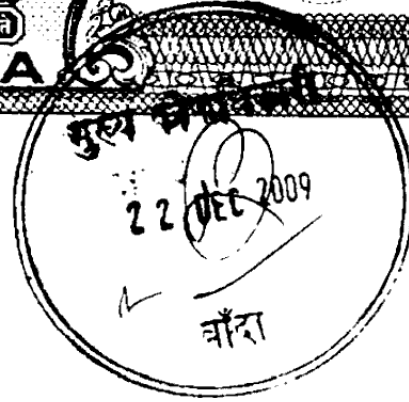
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उत्तर प्रदेश UTTAR PRADESH



A 058617

(42)

पट्टा इस भाग के खण्ड (1) के अधीन समाप्त न कर दिया जाये, और उस दशा में किसी समय ऐसे समाप्ति के पश्चात् कम से कम एक कलेंडर मास में) और अधिक से अधिक तीन कलेंडर मास में अपने लाभ के लिये ऐसे या किसी

Soul Bhed

(जे० पी० दिवेदी)

खान निरीक्षण
चेनिज कार्यालय, बाँदा

(एजक कुमार)
जिलाधिकारी, बाँदा

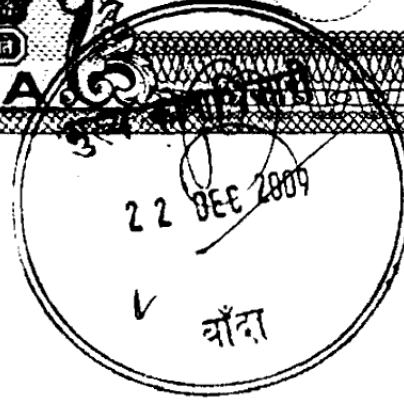
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पच्चीस हजार रुपये



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25000
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उत्तर प्रदेश UTTAR PRADESH



A 058618

(43)

इंजन, मशीन, संयंत्र भवन, संरचनाओं और अन्य निर्माण कार्य और निर्माण और अस्थायी आवास स्थानों को उखाड़ सकता है और हटा सकता है, जो उक्त भूमि में या उस पर पट्टेदार राज्य सरकार को देने के लिये बाध्य नहीं है और

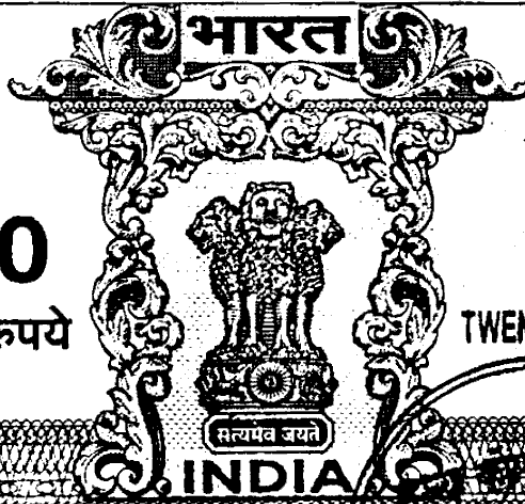
Sach Bindu

Q. 11
जि० पी० द्विवेदी)
खान निरीक्षक
संनिज कार्यालय, बाँदा

(रंजन कुमार)
जिलाधिकारी, बाँदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

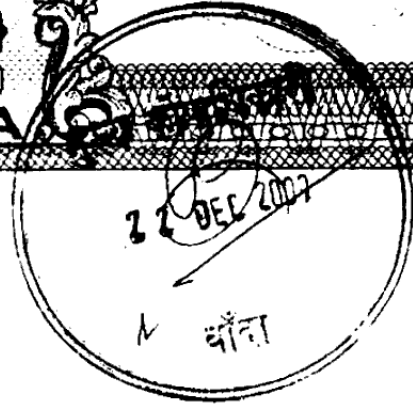
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INDIA

उत्तर प्रदेश UTTAR PRADESH



A 058619

(44)

राज्य सरकार जिन्हें खरीदने के लिये इच्छुक न हों।

3. यदि उक्त अवधि की समाप्ति या उसके शीघ्रतर समाप्ति के पश्चात् तीन कलेंडर मास के अंत तक उक्त भूमि या उस पर कोई इंजन, मशीन संयंत्र भवन, संरचनाओं और

Saul Bhandari

Asy
(जे० पी० द्विवेदी)
खतम निरीक्षक
समिति कार्यालय, बाँदा

(रंजन कुमार)
जिलाधिकारी, बाँदा

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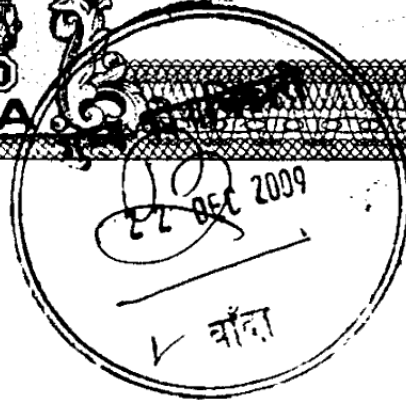


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A 058620



(45)

अन्य निर्माण कार्य, परिनिर्माण और अस्थायी आवास स्थान
या अन्य सम्पत्ति रहे तो उनके संबंध यदि व ऐसे लिखित
नोटिस देने के पश्चात् जिसमें जिलाधिकारी द्वारा पट्टेदार
से उन्हें हटाने की अपेक्षा की गयी है, एक कलेंडर मास के

Sanjiv Bhandari

Sanjiv
(जे० पी० टिकेदी)
खान निरीक्षक
संज्ञित कार्यालय, बाँदा

(रंजक कुमार)
जिलाधिकारी, बाँदा

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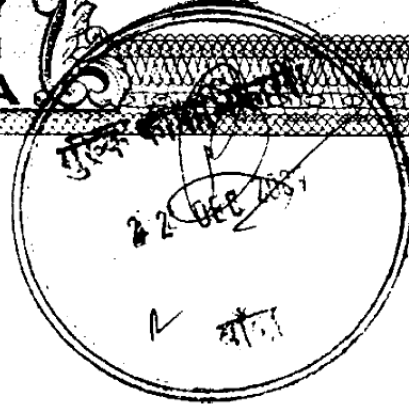


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उत्तर प्रदेश UTTAR PRADESH

A 058621



(46)

भीतर पट्टेदार द्वारा न हटाया जाये यह समझा जायेगा कि
वे राज्य सरकार की सम्पत्ति हो गयी है और किसी प्रकार
का भुगतान किये बिना या उसके संबंध में पट्टेदार को कोई
हिसाब दिये बिना उसकी बिक्री कर के निस्तारण ऐसे रीति

Sant Singh

(जे० पी० शिबेदी)
वन निरीक्षक
खनिज कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा

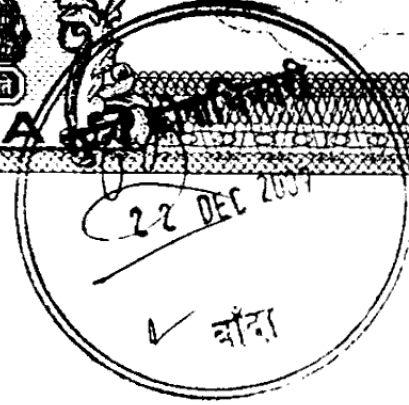
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रु.
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पच्चीस हजार रुपये



Rs.
25000
TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH



A 058622

(47)

के किया जा सकता है जो राज्य सरकार उचित समझें।

4. यदि राज्य सरकार इस प्रकार निर्देश दे तो पट्टेदार

इस उपस्थापना पत्र द्वारा संरक्षित स्वामित्वों और अपरिहार्य

भाटक या भुगतान स्वामित्व की वसूली करने वाले ठेकेदार

Sanjiv Bhandari

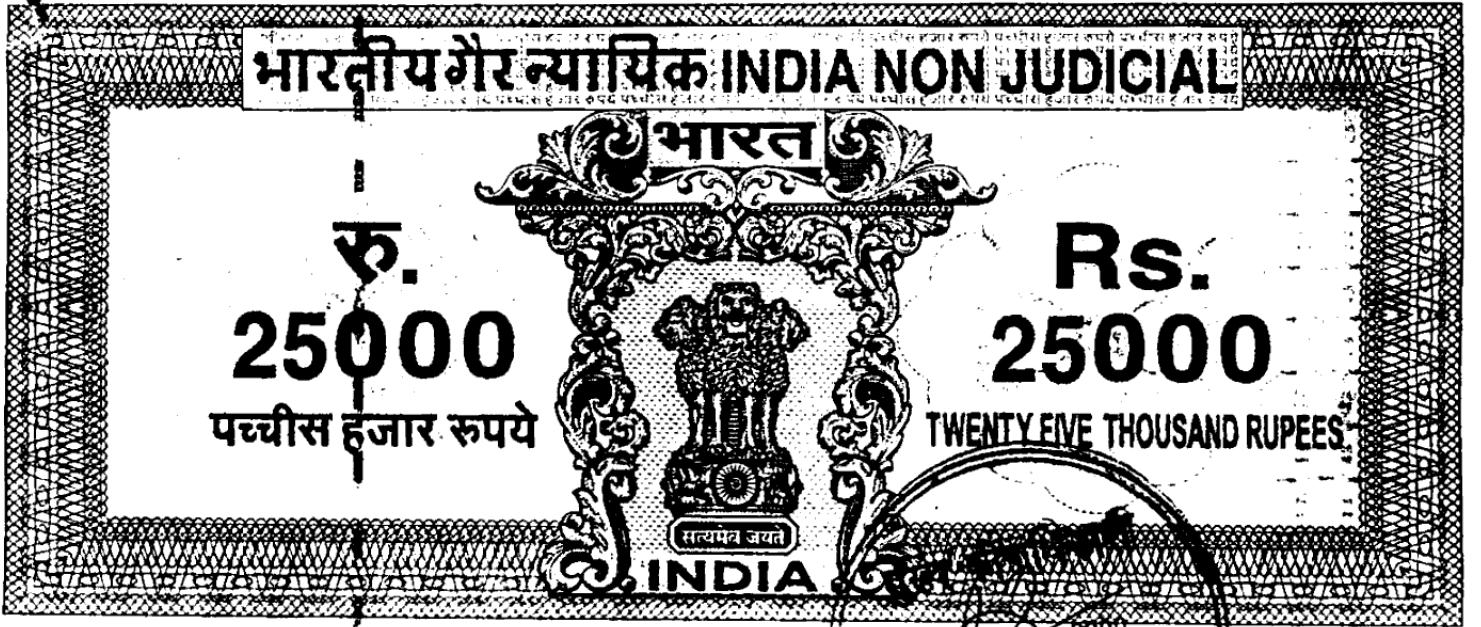
(जे० पी० द्विवेदी)

खान निरीक्षक

खनिज कार्यालय, बाँदा

(रंजण कुमार)

जिलाधिकारी, बाँदा



उत्तर प्रदेश UTTAR PRADESH

A 058623

(48)

को राज्य सरकार द्वारा नियमित रीति से ऐसे अवधियों में करेगा जो विनिर्दिष्ट की जाये।

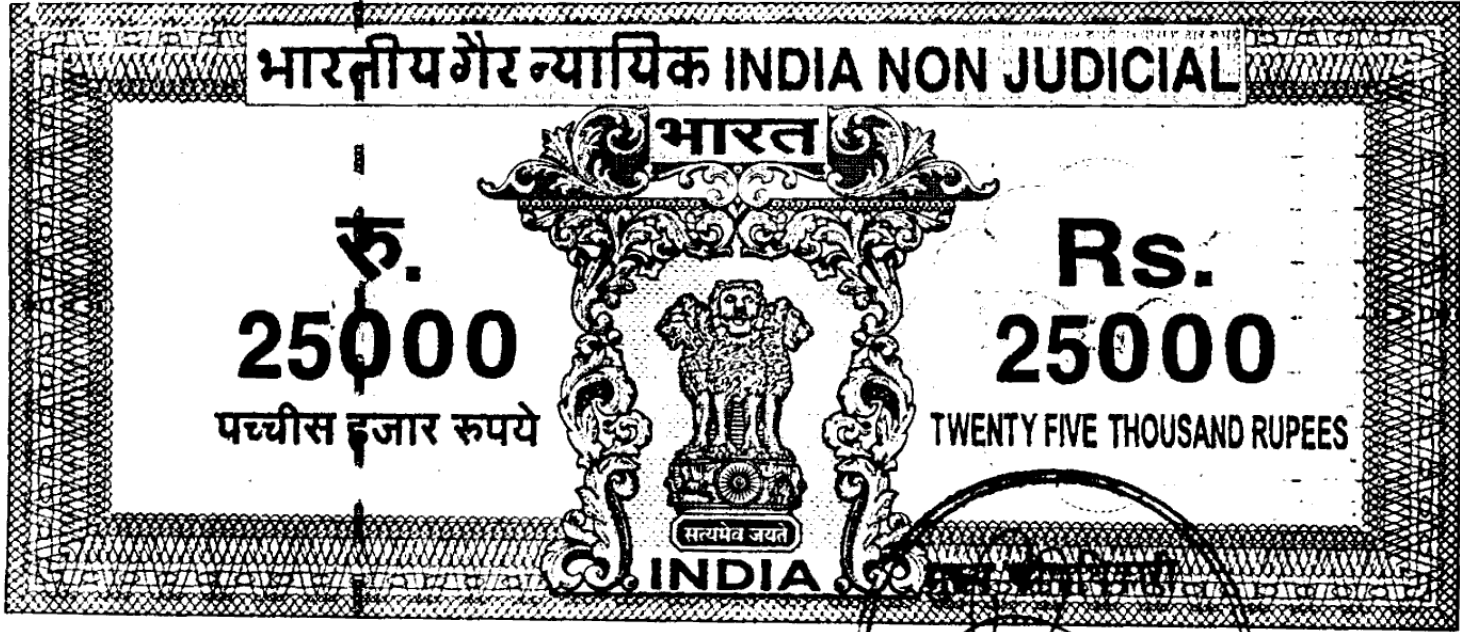
5. इस उप. स्थापन पत्र द्वारा पट्टे को दिये जाने के लिये

अपेक्षित प्रत्येक नोटिस उक्त भूमि पर रखने वाले ऐसे व्यक्ति

Santh Bhusky

Santh Bhusky
(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज कार्यालय, बोदा

(रंजण कुमार)
जिलाधिकारी, बोदा



उत्तर प्रदेश UTTAR PRADESH

(49)

को लिखित रूप से दिया जायेगा। जिसे पट्टेदार ऐसी नोटिस प्राप्त करने के लिये नियुक्ति करें और यदि इस प्रकार कोई नियुक्ति नहीं की गयी हो, ऐसी प्रत्येक नोटिस पट्टेदार को रजिस्ट्रीकृत डाक द्वारा पट्टे से उसके अभिलिखित

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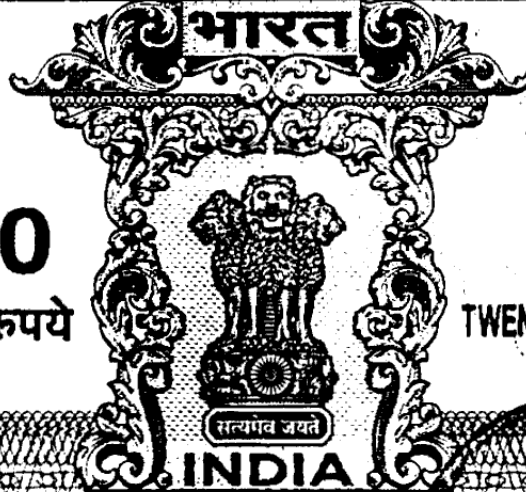
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खान निरीक्षक
अतिरिक्त कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा

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रु.
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पच्चीस हजार रुपये



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उत्तर प्रदेश UTTAR PRADESH

22 DEC 2011

A 058625

(50)

पते पर या भारत में ऐसे अन्य पते पर भेजी जायेगी जिसे
पट्टेदार समय-समय पर लिखित रूप से राज्य सरकार को
नोटिसों का प्राप्त करने के लिये दे और प्रत्येक ऐसी तामील
पट्टेदार पर उचित और वैध तामील समझी जायेगी और

Saul Bhandari

(जे० पी० वि०)
खरम निरीक्षक
सचिव, न्यायिक विभाग, नया

(रंजम कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.
25000

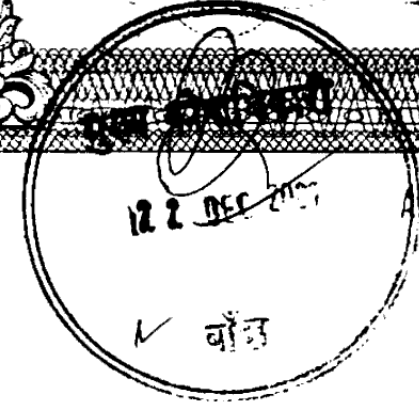
पच्चीस हजार रुपये



Rs.
25000

TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH



058626

(51)

उसके संबंध में उसके द्वारा न तो आपत्ति की जायेगी और

न उसे चुनौती दी जायेगी।

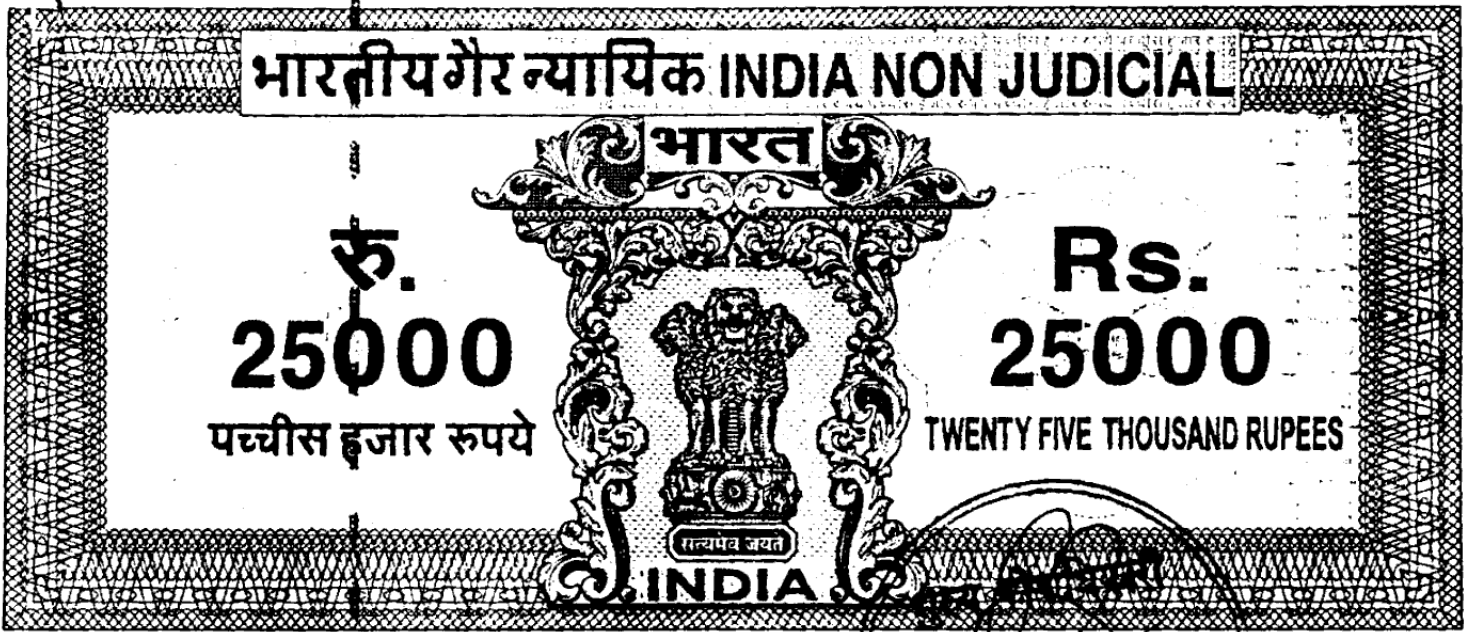
6. यदि पट्टाधारक के माफिया होने अथवा माफिया या

किसी असामाजिक तत्वों या संगठित अपराध से सक्रिय रूप

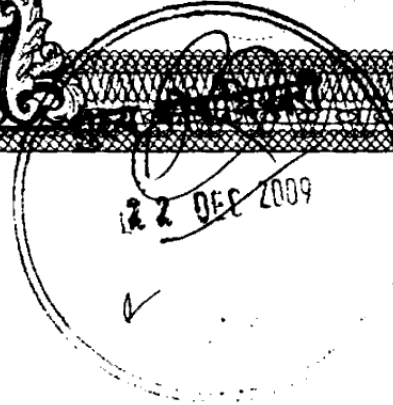
Soul Bhady

[Signature]
(जे० पी० द्विवेदी)
खान निरीक्षक
मनित्र कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH



A 058627

(52)

से संलिप्त होने का तथ्य राज्य सरकार अथवा संबंधित
जिलाधिकारी के संज्ञान में आता है तो उन्हें सुनवायी का
अवसर प्रदान करने के पश्चात् यथास्थिति पट्टा समय पूर्व

समाप्त किया जा सकता है।

Santh Bhandari

(जे० पी० द्विवेदी)
खान निरीक्षक
मन्निज कार्यालय, बांदा

(रंजक कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.
25000

पच्चीस हजार रुपये



Rs.
25000

TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

22 FEB 2009

A 058628

(53)

7. खनन कार्य में मशीनों का प्रयोग किये जाने पर यदि पर्यावरण, नदी की प्राकृतिक धारा एवं किनारों को कोई क्षति पहुंचती हो या क्षति पहुंचाने की आशंका हो तो ऐसी स्थिति में निर्देशक, भूतत्व एवं खनिकर्म या उसके द्वारा अधिकृत अधि

Sanku Bhandari

(जे० पी० द्विवेदी)
खनन निरीक्षक
राज्य न्यायिक अदालत, बांदा

(रंजम कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.5000

पाँच हजार रुपये

Rs.5000

FIVE THOUSAND RUPEES

सत्यमेव जयते

INDIA

उत्तर प्रदेश UTTAR PRADESH

मुख्य जिलाधिकारी

D 509480

22 DEC 2009

बाँदा

(54)

कार्य या जिलाधिकारी द्वारा मशीनों के प्रयोग को प्रतिबन्धित

किया जा सकेगा, जो पट्टाधारक को मान्य एवं बाध्यकारी

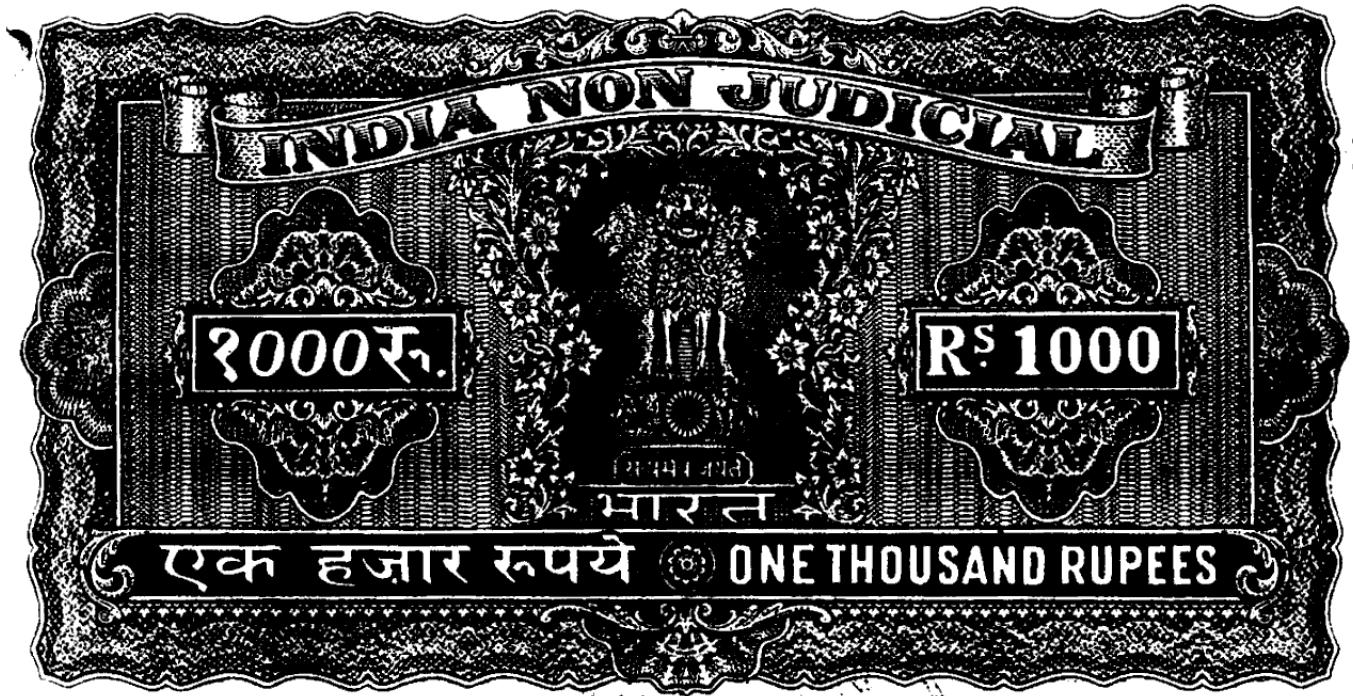
होगा। इसके अतिरिक्त मशीनों के प्रयोग के संदर्भ में

समय-समय पर शासन एवं निदेशक, भूतत्व एवं खनिकर्म

Sanjiv Bhandari

(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज कार्यालय, बाँदा

(रंजन कुमार)
जिलाधिकारी, बाँदा



045382

(55)

द्वारा निर्देश दिये जायेंगे, वे पट्टाधारकों को मान्य होंगे।

यह भी उल्लिखित किया जायेगा कि यदि ऐसे आदेश या

किसी शर्त के उल्लंघन का प्रकरण प्रकाश में आता है तब

पट्टाधारक को ऐसे उल्लंघन की नोटिस देकर तथा उस पर

Saul Bieder

Qul
(जे० पी० द्विवेदी)
खान निरीक्षक
मन्त्रि कार्यालय, बांदा

(रंजक कुमार)
जिलाधिकारी, बांदा



42 986
[Handwritten signature]

045384

(57)

उत्तर प्रदेश के राज्यपाल के लिये उनकी ओर से—

1.

2.

3.

[Signature]
 (जनक शर्मा)
 वनिज लिपिक, बांदा

[Signature]
 (जे० पी० द्विवेदी)
 वान निरीक्षक
 वनिज कार्यालय, बांदा

[Signature]
 (रंजन कुमार)
 विसाधिकारी, बांदा

की उपस्थिति में जिला मजिस्ट्रेट, बांदा द्वारा हस्ताक्षरित

1. श्रीरंज सिन्हा, प्रभुपति, ग्राम लखुरी, मक, सितापुर

2. श्री जगदीश चंद्र शर्मा, ग्राम लखुरी, मक, सितापुर

की उपस्थिति में पट्टेदार द्वारा हस्ताक्षरित

[Signature]



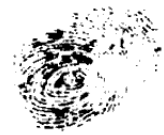




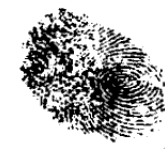


निरालाचंद्र

[Signature]

निष्पादित प्रलेख श्री. सोमेश्वर आर्या नविस्ते श्री मन्मथ चन्द्रा प्रसाद सोमेश्वर बाँदा
बहक श्री सोमेश्वर आर्या के प्रस्तुतकर्ता/

विक्रेता/क्रेता श्री सोमेश्वर आर्या पुत्र श्री ओमप्रकाश आर्या

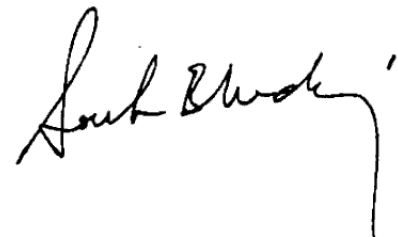
निवासी आमराजपुरा परगना बाँदा जिला बाँदा के
लगाये गये दोनों हाथों के फिंगर प्रिन्ट्स का विवरण-

	बायाँ हाथ		दायाँ हाथ
1	निशान अँगूठा 	1	निशान अँगूठा 
2	निशान तर्जनी अँगुली 	2	निशान तर्जनी अँगुली 
3	निशान मध्यमा अँगुली 	3	निशान मध्यमा अँगुली 
4	निशान अनामिका अँगुली 	4	निशान अनामिका अँगुली 
5	निशान कनिष्ठका अँगुली 	5	निशान कनिष्ठका अँगुली 

उक्त प्रपत्र निष्पादित-प्रलेख का अनिवार्य अंग माना/समझा जायेगा।

निष्पादक

निष्पादक



प्रपत्र एम0एम0-1 (क)
20वां संशोधन
(चार प्रतियों में प्रस्तुत किया जायेगा)
खनन पट्टे के नवीनीकरण के लिये प्रार्थना पत्र (नियम 6(क) देखिये)

स्थान :- बाँदा

दिनांक 15-5-12 को प्राप्त हुआ।

दिनांक :
के माध्यम से :

सेवा में,

जिलाधिकारी
बाँदा।

महोदय,

मै/हम उत्तर प्रदेश उप खनिज परिहार नियमावली 1963 के अधीन अपसे खनन पट्टे से नवीकरण हेतु निवेदन करता हूँ/करते हैं। उक्त नियमावली के नियम-6-क के उपनियम 1) के अधीन देय 5,000.00 रू0 (पाँच हजार रूपये) का प्रार्थनापत्र शुल्क जमा कर दिया गया है। चा0नं0 बी0 020044 दिनांक 04.04.2012 आपेक्षित विवरण नीचे दिये गये है :-

पाने वाले अधिकारी के हस्ताक्षर
बान निरीक्षक
बाँदा

1. प्रार्थी का नाम और पूरा पता :-

श्री शोमेश भारद्वाज पुत्र श्री ओमप्रकाश नि0
अमर टाकीज बाँदा।

2. क्या प्रार्थी कोई गैर-सरकारी व्यक्ति/
निजी कम्पनी/सार्वजनिक कम्पनी/
फर्स या निकाय है।

गैर सरकारी।

3. यदि प्रार्थी :-

(क) व्यक्ति विशेष है, तो उसकी राष्ट्रीयता
(ख) निजी कम्पनी है, तो कम्पनी के सभी
सदस्य के रजिस्ट्रीकरण के स्थान के
साथ उसकी राष्ट्रीयता।

भारतीय।
लागू नहीं है।

(ग) सार्वजनिक कम्पनी है, तो निदेशकों की
राष्ट्रीयता, भारतीय राष्ट्रीयता द्वारा घृत
अंशपूँजी का प्रतिशत तथा उसके निगमन
के स्थान

लागू नहीं है।

(घ) फर्म या निकय है तो फर्म के सभी
भागीदारों या संगम के सदस्यों की राष्ट्रीयता

लागू नहीं है।

(ङ) यदि प्रार्थनापत्र बालू और मोरम के लिये तो
प्रत्येक प्रार्थी की जाति और निवास स्थान के पते का
प्रमाणपत्र दिया जायेगा।

संलग्न है।

4. प्रार्थी/प्रार्थियों के व्यवसाय या कारागार की प्रकृति

कृषि/व्यापार/ठेकेदारी।

5. खनन देय बकाया न होने का जिलाधिकारी अथवा
प्राधिकृति अधिकारी द्वारा जारी किया गया प्रमाणपत्र
संलग्न किया जाना चाहिये (21वां संशोधन)

संलग्न है।

6. (क) खनन पट्टे का विवरण जिनका नवीनीकरण वांछित है।

ग्रा0 भुरेड़ी/चिलेहटा/कनवारा खण्ड सं0-13
रकबा 303.46 एकड़।

(ख) पूर्व में स्वीकृत नवीनीकरण का ब्योरा यदि कोई हो।

नहीं।

7. अवधि जिसके लिये खनन पट्टे का नवीकरण आपेक्षित है।

तीन वर्ष।

8. क्या नवीनीकरण का आदेश घृत पट्टे के सम्पूर्ण या उनके मांग के लिये किया गया है।

(क) क्षेत्र जिसका नवीनीकरण के लिये आवेदन किया गया

ग्रा0 भुरेड़ी/चिलेहटा/कनवारा खण्ड सं0-13
रकबा 303.46 एकड़।

(ख) उस क्षेत्र का विवरण, जिनका नवीनीकरण के लिये आवेदित किया गया है (विवरण भूखण्ड के सीमांकन के लिये पर्याप्त होना चाहिये

ग्रा0 भुरेड़ी/चिलेहटा/कनवारा खण्ड सं0-13
रकबा 303.46 एकड़।

(ग) घृत पट्टा क्षेत्र के मानचित्र का विवरण जिसमें नवीनीकरण के लिये आपेक्षित क्षेत्र का स्पष्ट रूप से चिन्हित किया गया हो (संलग्न)

संलग्न है।

8. विद्यमान सा सृजित मलवे के विवरण यदि कोई हो

लागू नहीं है।

9. क्या प्रार्थी का उस भूमि के धरातल, जिसके खनन पट्टे के नवीकरण के लिये उसने अपेक्षा की है, अधिकारी है

नहीं।

10. यदि उसकी सतही अधिकारी प्राप्त नहीं है तो क्या उसने खनन संक्रिया के लिये क्षेत्र के स्वामी और अधिभोगी की सहमति प्राप्त कर ली हो यदि सहमति प्राप्त कर ली है तो स्वामी और अधिभागी की लिखित सहमति प्रस्तुत की जायेगी।

खनन विभाग द्वारा विज्ञापित क्षेत्र।

11. शपथपत्र द्वारा समर्थित प्रत्येक राज्य में खनिजवार क्षेत्र का विवरण जिस पर आवेदक या उसके साथ संयुक्त स्वत्व रखने वाला व्यक्ति :-

(क) खनन पट्टे के अधीन पहले से धारित करता है।

लागू नहीं है।

(ख) पहले ही आवेदन किया हो, किन्तु यह स्वीकार न किया गया हो गया।

लागू नहीं है।

(ग) साथ-साथ आवेदन कर रहा हो।

लागू नहीं है।

12. खनन योजना में निम्नलिखित सम्मिलित होंगे :-

(क) क्षेत्र का मानचित्र जिसमें खनिज निकाय तथा खनिज स्थल-स्थलों का प्रकार और उनका विस्तार दर्शाया गया हो, जिसमें प्रथम वर्ष में उत्खनन किया जाना हो, और उसका विस्तार द्वारा एकत्र किये गये पूर्वक्षण आंकड़ों पर आधारित उत्खनन स्थल का विस्तृत ब्योरा पट्टे की अवधि के लिये अनन्तिम खनन योजना।

प्रस्तावित।

(ख) क्षेत्र के नू-विज्ञान एवं अश्म-विज्ञान

लागू नहीं है।

मशीन द्वारा खनन का विस्तार।

(ग) वार्षिक कार्यक्रम और वर्षानुवर्ष उत्खनन योजना और

लागू नहीं है।

(घ) क्षेत्र का नक्शा, जिसमें प्राकृतिक जल स्रोत आरक्षित वन तथा अन्य वनों की सीमा और वृक्षों की संघनता, खनन क्रिया-कलाप का वन, भूमि और पर्यावरण, जिसमें वायु प्रदूषण और जल प्रदूषण भी सम्मिलित है पर प्रभाव का आकलन और वन रोपण भूमि-पुनरुद्धार प्रदूषण नियंत्रण के उपायों के प्रयोग की योजना के ब्यारे दर्शाये गये है।

लागू नहीं है।

टिप्पणी :- इसकी आवश्यकता नदी तल के बालू/मोरम, बजरी इत्यादि के लिये लिये नहीं होगी (21वां संशोधन)।

13. साधन, जिससे खनिज निकाला जाना है अर्थात् शारीरिक श्रम द्वारा यान्त्रिक या विद्युत युक्ति द्वारा

नहीं।

14. रीति जिसके अनुसार संग्रह किया गया खनिज उपयोग में लाया जायेगा।

(क) भारत में विनियोग के लिये।

(ख) विदेशो को निर्यात करने के लिये

नहीं।

निर्माण कार्य हेतु।

(ग) पूर्ववर्ती दशा में उन उद्योगों को, जिसे सम्बन्ध में यह अपेक्षित है, विनिर्दिष्ट किया जायेगा पश्चातवर्ती दशा में उन देशों का उल्लेख किया जाना चाहिये, जिनकी खनिज का निर्यात किया जायेगा का उल्लेख किया जाना चाहिये कि क्या खनिज प्रक्रमण्ड के पश्चात् निर्माण किया जायेगा या कच्चे रूप में।

15. विगत तीन वर्षों में उत्पादन का ब्योरा और आगामी तीन वर्षों के दौरान विकास के लिये अभिन्यास योजना सहित उत्पादन के लिये चरणबद्ध कार्यक्रम यदि कोई हो का उल्लेख किया जाना चाहिये।

संलग्न है।

16. विद्यमान उपलब्ध रेल्वे परिवहन सुविधा और अतिरिक्त परिवहन सुविधा, यदि कोई अपेक्षित हो।

ट्रकों व ट्रक्टरों द्वारा।

17. कोई अन्य विवरण जो प्रार्थी देना चाहते हो।

संलग्न है।

मैं/हम एतद्वारा घोषित करता हूँ/करते हैं कि ऊपर दिये गये विवरण सही है और मैं/हम पट्टा दिये जाने या उसकी नवीकरण किये जाने के पूर्व आपके द्वारा अपेक्षित कोई अन्य ब्योरा, जिसमें नक्शे भी हैं, देने का तत्पर हूँ/हैं।

स्थान :- बाँदा

दिनांक :-

भवदीय,


प्रार्थी के हस्ताक्षर और पदनाम

अवधेय - यदि प्रार्थनापत्र पर प्रार्थी द्वारा प्राधिकृत अधिकर्ता द्वारा हस्ताक्षर किया जाता है तो अभिकरण पत्र/संलग्न किया जाना चाहिये।

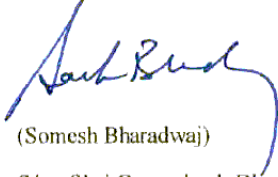
PRIOR PRODUCTION DETAILS

Year wise	Production details
2006	Nil.
2007	Nil.
2008	Nil.
2009	Nil.
2010	2,05,723 काग रीत
2011	1,97,433 काग रीत.

Total = 4,03,156 काग रीत

Thanking you,

Yours sincerely



(Somesh Bharadwaj)

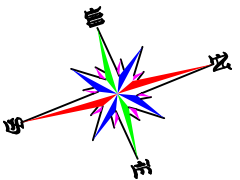
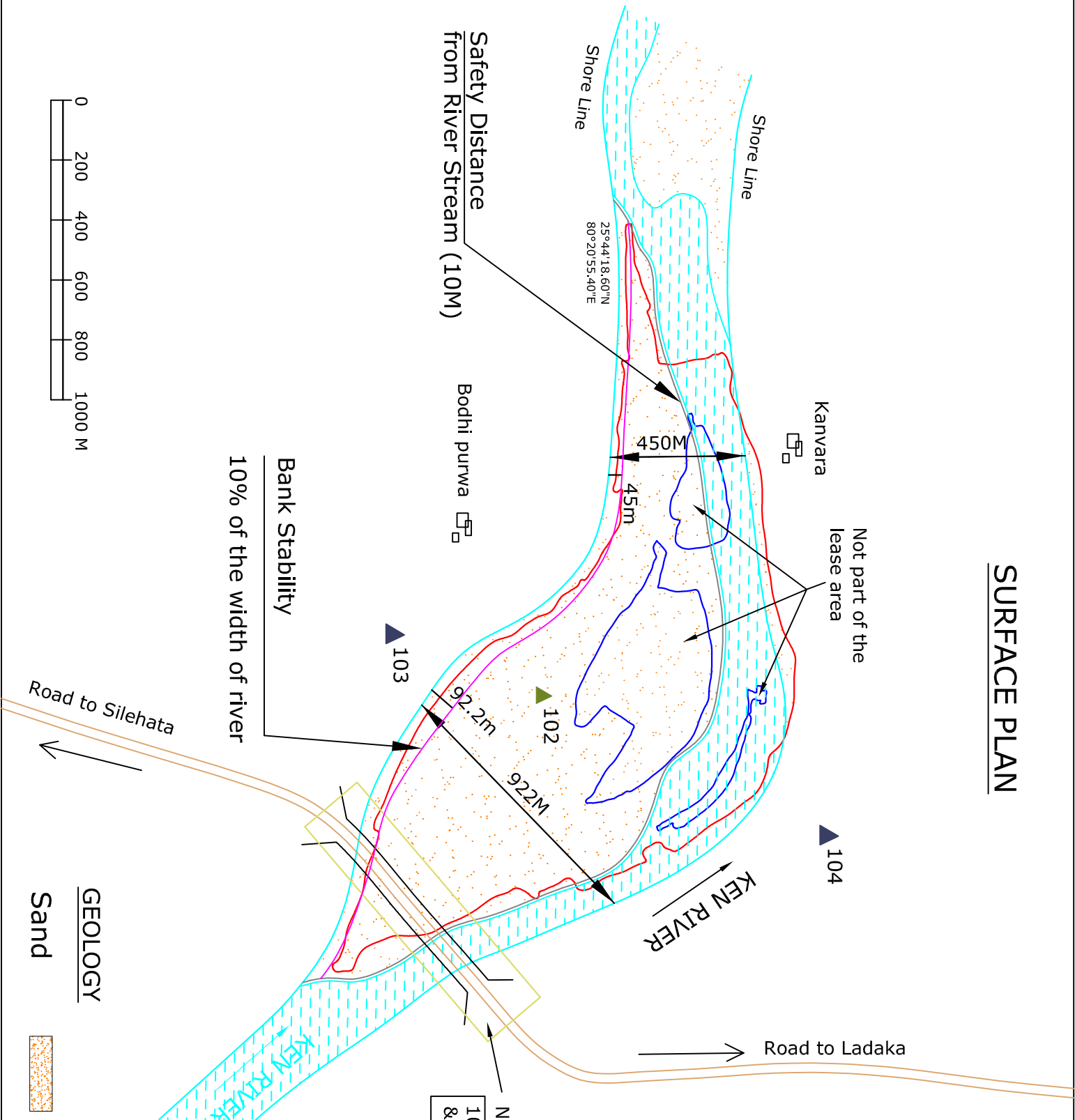
S/o -Shri Omprakash Bharadwaj

Amar Talkies

Tehsil : Banda,

District : Banda (UP)

SURFACE PLAN



Not part of the lease area



LEGEND

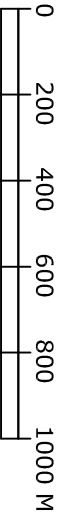
S.no	Particulars	Symbol
1	Lease Boundary	
2	River	
3	Bank's Stability	
4	Safety distance from stream	
5	River stream	
6	Settlement	
7	River Bed Elevation	
8	River Bank Elevation	

SAND MINE

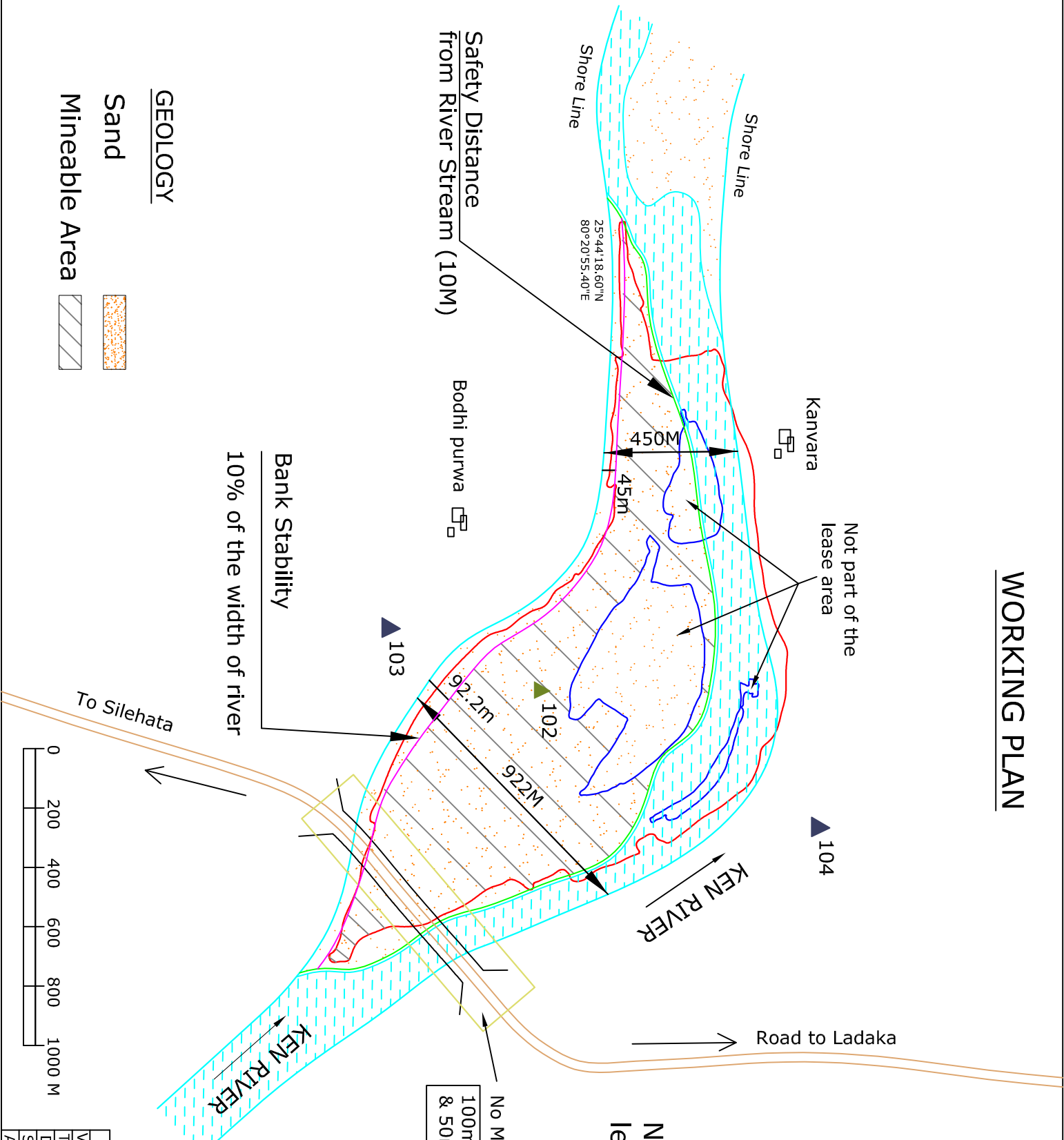
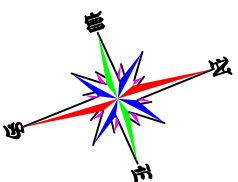
Village :-	Kanvara, Bhuredi, Chillehata
Tehsil :-	Banda
Dist :-	Banda
State :-	Uttar Pradesh
Area :-	122.81 Hectare

GEOLOGY

Sand



WORKING PLAN



Not part of the lease area



No Mining Zone
100m towards down stream
& 50m towards upstream

LEGEND

S.no	Particulars	Symbol
1	Lease Boundary	[Red outline]
2	River	[Blue wavy line]
3	Bank's Stability (50M)	[Light blue wavy line]
4	Safety distance from stream	[Pink wavy line]
5	River stream	[Green wavy line]
6	Settlement	[House icon]
7	River Bed Elevation	[Green triangle]
8	River Bank Elevation	[Blue triangle]

SAND MINE

Village :-	Kanvara, Bhuredi, Chillehata
Tehsil :-	Banda
Dist :-	Banda
State :-	Uttar Pradesh
Area :-	122.81 Hectare

GEOLOGY

- Sand
- Mineable Area

Somesh Bharadwaja

**S/o –Shri Omprakash Bharadwaja
Banda,U.P.**

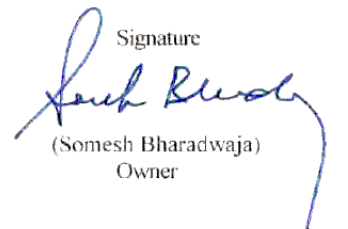
Corporate Environmental Policy

I, Somesh Bharadwaja, mine owner, river bed sand/moram mine at Village: Kanvara, Bhuredi & Chilehata Tehsil: Banda, District: Banda, State: Uttar Pradesh.

I reaffirm my commitment to contributing towards a clean and sustainable environment and continually enhancing our environmental performance as an integral part of our business philosophy and values.

Towards this commitment, I shall:

- Integrate sound environmental management practices in all our activities.
- Conduct our operations in an environmentally responsible manner to comply with applicable legal and other requirements related to its environmental aspects and strive to go beyond.
- Progressively adopt cleaner and energy efficient technologies.
- Increase greenery in and around our working areas and mines.
- Strive for continual improvement in our environmental performance by setting challenging targets, measuring progress, taking corrective action and communicating environmental information to all concerned.
- Enhance environmental awareness amongst employees working for and on behalf of us and the general populace around working areas and mines.
- Encourage our business associates to adopt similar approach for environmental protection.

Signature

(Somesh Bharadwaja)
Owner

Baseline Data of Ambient Air Quality

ANNEXURE-VI

Kanvara Sand/Moran Mining Project					
Ambient Air Quality Data (Oct-Dec, 2014)				Location: AQ1 (Achhraund)	
S. No	Date	PM ^{2.5} (µg/m ³)	PM ¹⁰ (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
		Gravimetric	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6
1	01.10.2014	39.1	81.4	5.2	13.7
2	05.10.2014	37.9	78.2	<5.0	12.9
3	11.10.2014	39.8	81.9	5.2	13.4
4	13.10.2014	40.8	80.3	5.5	14.7
5	17.10.2014	38.7	81.4	<5.0	15.5
6	21.10.2014	38.9	77.9	5.1	13.9
7	25.10.2014	33.7	70.6	5.9	15.6
8	30.10.2014	36.1	76.0	5.3	13.9
9	02.11.2014	38.0	81.9	<5.0	14.4
10	04.11.2014	40.8	81.4	5.7	15.2
11	08.11.2014	37.9	77.5	6.2	16.5
12	12.11.2014	39.0	78.9	5.3	14.5
13	16.11.2014	36.0	76.4	<5.0	13.2
14	20.11.2014	35.2	74.5	5.1	13.7
15	24.11.2014	36.0	75.4	5.3	13.9
16	28.11.2014	37.7	74.9	5.6	15.0
17	01.12.2014	39.1	80.6	<5.0	11.8
18	04.12.2014	38.9	77.7	6.6	14.2
19	08.12.2014	39.5	80.5	5.7	15.0
20	12.12.2014	42.7	83.7	<5.0	14.2
21	16.12.2014	43.1	82.4	5.6	15.7
22	20.12.2014	37.7	75.6	5.3	14.2
23	24.12.2014	40.4	85.7	<5.0	17.0
24	28.12.2014	38.0	81.0	5.3	14.8
	Min	33.7	70.6	<5.0	11.8
	Max	43.1	85.7	6.6	17.0
	Average	38.5	79.0	5.5	14.5
	98 Percentile	42.9	84.8	6.5	16.8
NAAQS, For 24 hourly monitoring (except CO for One hour)		60	100	80	80

Kanvara Sand/Moran Mining Project

Ambient Air Quality Data (Oct-Dec, 2014)			Location: AQ2 (Project Site)		
S. No	Date	PM ^{2.5} (µg/m ³)	PM ¹⁰ (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
		Gravimetric	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6
1	01.10.2014	39.3	72.9	5.3	16.1
2	05.10.2014	38.5	77.1	<5.0	15.5
3	11.10.2014	39.9	81.4	5.3	17.5
4	13.10.2014	39.3	78.1	5.6	17.2
5	17.10.2014	39.4	82.5	<5.0	17.8
6	21.10.2014	38.7	72.1	5.3	19.1
7	25.10.2014	38.5	76.3	5.2	17.8
8	30.10.2014	39.3	75.6	<5.0	16.3
9	02.11.2014	40.7	80.1	5.2	17.5
10	04.11.2014	38.6	74.4	5.1	17.6
11	08.11.2014	38.4	77.1	<5.0	16.7
12	12.11.2014	38.5	73.4	<5.0	17.9
13	16.11.2014	39.5	76.5	5.4	17.8
14	20.11.2014	38.7	72.4	5.2	16.8
15	24.11.2014	39.5	78.1	5.5	18.1
16	28.11.2014	38.2	71.6	<5.0	17.5
17	01.12.2014	41.5	79.9	5.2	14.5
18	04.12.2014	41.4	77.0	<5.0	18.3
19	08.12.2014	40.6	80.0	<5.0	16.8
20	12.12.2014	41.5	83.0	5.7	18.5
21	16.12.2014	41.9	81.3	<5.0	17.6
22	20.12.2014	38.6	74.9	5.4	19.3
23	24.12.2014	44.2	84.4	<5.0	20.1
24	28.12.2014	40.3	80.3	5.2	18.8
	Min	38.2	71.6	5.1	14.5
	Max	44.2	84.4	5.7	20.1
	Average	39.8	77.5	5.3	17.5
	98 Percentile	43.1	83.8	5.7	19.7
	NAAQS, For 24 hourly monitoring (except CO for One hour)	60	100	80	80

Kanvara Sand/Moran Mining Project					
Ambient Air Quality Data (Oct-Dec, 2014)				Location: AQ3 (Banda)	
S. No	Date	PM^{2.5} (µg/m³)	PM¹⁰ (µg/m³)	SO₂ (µg/m³)	NO₂ (µg/m³)
		Gravimetric	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6
1	01.10.2014	54.2	93.5	5.8	16.8
2	05.10.2014	53.1	108.6	6.0	16.2
3	11.10.2014	54.7	112.8	5.6	18.1
4	13.10.2014	53.3	89.7	6.7	17.9
5	17.10.2014	55.2	110.9	6.1	17.8
6	21.10.2014	52.9	94.5	5.8	19.6
7	25.10.2014	66.8	112.6	5.6	20.8
8	30.10.2014	48.2	94.3	5.6	17.1
9	02.11.2014	56.8	109.8	5.8	17.5
10	04.11.2014	53.8	88.6	5.9	16.6
11	08.11.2014	53.5	107.1	5.8	17.8
12	12.11.2014	51.8	93.1	5.9	17.2
13	16.11.2014	53.8	107.2	5.6	18.1
14	20.11.2014	53.7	103.9	5.7	17.4
15	24.11.2014	53.2	90.5	5.9	18.6
16	28.11.2014	51.8	107.2	6.2	17.8
17	01.12.2014	55.7	100.2	5.7	16.1
18	04.12.2014	55.3	107.6	6.0	16.9
19	08.12.2014	54.7	110.3	6.1	17.6
20	12.12.2014	57.8	94.9	5.7	18.5
21	16.12.2014	67.3	113.2	5.7	18.1
22	20.12.2014	53.7	97.6	5.9	16.8
23	24.12.2014	63.6	115.3	7.0	17.7
24	28.12.2014	55.8	110.6	5.9	20.2
	Min	48.2	88.6	5.6	16.1
	Max	67.3	115.3	7	20.8
	Average	55.4	103.1	5.9	17.8
	98 Percentile	67.1	114.3	6.9	20.5
	NAAQS, For 24 hourly monitoring (except CO for One hour)	60	100	80	80

Kanvara Sand/Moran Mining Project					
Ambient Air Quality Data (Oct-Dec, 2014)				Location: AQ4 (Tirbeni)	
S. No	Date	PM^{2.5} (µg/m³)	PM¹⁰ (µg/m³)	SO₂ (µg/m³)	NO₂ (µg/m³)
		Gravimetric	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6
1	01.10.2014	40.1	83.6	5.3	15.9
2	05.10.2014	38.2	81.3	5.2	16.7
3	11.10.2014	39.1	86.5	<5.0	16.4
4	13.10.2014	40.8	82.3	5.5	16.8
5	17.10.2014	40.2	87.4	5.1	17.3
6	21.10.2014	38.1	81.1	<5.0	16.2
7	25.10.2014	37.8	80.5	5.3	16.4
8	30.10.2014	38.1	81.5	<5.0	15.2
9	02.11.2014	38.6	84.3	5.2	16.6
10	04.11.2014	37.9	78.6	<5.0	17.1
11	08.11.2014	38.1	80.4	5.3	17.6
12	12.11.2014	40.3	77.6	<5.0	14.9
13	16.11.2014	39.2	79.9	5.3	16.8
14	20.11.2014	46.9	92.3	<5.0	19.4
15	24.11.2014	38.9	78.9	5.1	17.5
16	28.11.2014	37.5	79.5	<5.0	17.1
17	01.12.2014	39.4	84.1	5.3	14.5
18	04.12.2014	38.3	81.7	5.1	15.8
19	08.12.2014	39.1	84.6	<5.0	16.1
20	12.12.2014	40.5	88.4	5.3	13.7
21	16.12.2014	40.2	85.9	5.3	15.6
22	20.12.2014	38.6	79.1	<5.0	16.9
23	24.12.2014	41.1	89.7	5.1	15.3
24	28.12.2014	40.5	84.5	5.2	17.5
	Min	37.5	77.6	<5.0	13.7
	Max	46.9	92.3	5.5	19.4
	Average	39.5	83.1	5.2	16.4
	98 Percentile	44.2	91.1	5.4	18.6
	NAAQS, For 24 hourly monitoring (except CO for One hour)	60	100	80	80

NAAQS, For 24 hourly monitoring (except CO for One hour)	60	100	80	80
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Kanvara Sand/Moran Mining Project					
Ambient Air Quality Data (Oct-Dec, 2014)				Location: AQ5 (Mawai Buzurg)	
S. No.	Date	PM^{2.5} (µg/m³)	PM¹⁰ (µg/m³)	SO₂ (µg/m³)	NO₂ (µg/m³)
		Gravimetric	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6
1	01.10.2014	44.4	83.1	5.2	20.6
2	05.10.2014	42.5	81.2	5.3	20.1
3	11.10.2014	43.4	84.5	5.3	22.5
4	13.10.2014	50.6	90.2	<5.0	21.6
5	17.10.2014	42.9	81.6	<5.0	22.5
6	21.10.2014	42.1	81.2	5.3	22.6
7	25.10.2014	41.7	80.4	5.6	21.7
8	30.10.2014	40.2	79.3	<5.0	19.2
9	02.11.2014	42.5	84.2	<5.0	20.7
10	04.11.2014	53.6	92.4	5.4	24.4
11	08.11.2014	42.7	82.1	<5.0	22.9
12	12.11.2014	41.5	77.5	5.5	21.2
13	16.11.2014	42.1	79.8	<5.0	22.5
14	20.11.2014	42.3	77.7	5.3	19.6
15	24.11.2014	44.2	84.5	5.2	19.2
16	28.11.2014	42.1	75.7	<5.0	20.1
17	01.12.2014	43.6	84.2	5.4	18.9
18	04.12.2014	44.9	81.1	<5.0	21.6
19	08.12.2014	44.1	86.2	<5.0	19.9
20	12.12.2014	44.7	87.1	5.5	22.1
21	16.12.2014	46.9	85.8	<5.0	21.9
22	20.12.2014	42.5	79.5	5.4	22.4
23	24.12.2014	45.8	89.1	5.2	20.6
24	28.12.2014	41.7	86.5	5.8	21.9
	Min	40.2	75.7	<5.0	18.9
	Max	53.6	92.4	5.8	24.4
	Average	43.9	83.1	5.4	21.3
	98 Percentile	52.2	91.4	5.7	23.7

NAAQS, For 24 hourly monitoring (except CO for One hour)	60	100	80	80
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ग्राम-कनवारा, भूरेड़ी एण्ड चिलेहटा, तहसील व जनपद -बॉदा (उ०प्र०) में केन नदी के समीप स्थित खण्ड संख्या-13 (पट्टा क्षेत्रफल 122.81 हेक्टेयर) उत्पादन क्षमता 7 लाख मी०टन/वर्ष पर सैण्ड/मौरम माइनिंग परियोजना हेतु पट्टा धारक श्री सोमेश भारद्वाज पुत्र श्री ओमप्रकाश भारद्वाज निवासी अमर टाकीज, तहसील व जनपद-बॉदा (उ०प्र०) द्वारा बोर्ड मुख्यालय लखनऊ में प्राप्त कराये गये प्रस्ताव पर पर्यावरण (संरक्षण) अधिनियम 1986 के अन्तर्गत पर्यावरण एवं वन मंत्रालय भारत सरकार द्वारा जारी अधिसूचना संख्या एस०ओ० 1533 (अ) दिनांक 14.09.2006 यथा संशोधित एस०ओ० 3067 (ई) दिनांक 01.12.2009 के प्राविधानों के अनुपालनार्थ पर्यावरणीय स्वीकृति हेतु दिनांक 01.08.2015 को अपराह्न 3:00 बजे प्रस्तावित परियोजना स्थल ग्राम- चिलेहटा, तहसील व जनपद -बॉदा (उ०प्र०) में श्री डी०एस० पाण्डेय अपर जिलाधिकारी (वि०/रा०), बॉदा, अध्यक्ष लोक सुनवायी की अध्यक्षता में सम्मन्न लोक सुनवाई की कार्यवृत्त का विवरण।

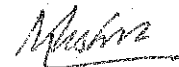
उ०प्र० प्रदूषण नियन्त्रण बोर्ड लखनऊ के पत्र सं० एफ० 62519/सी-2/एन० ओ० सी०-4068/2015 दिनांक 09.06.2015 द्वारा जिलाधिकारी महोदय जनपद बॉदा को सम्बोधित एवं इस कार्यालय को पृष्ठांकित पत्र के अनुक्रम में अपर जिलाधिकारी (वि०/रा०) जनपद-बॉदा द्वारा उक्त परियोजना की पर्यावरणीय स्वीकृति हेतु लोक सुनवाई के लिए स्थल/तिथि एवं समय की सहमति/अनुमति प्रदान करने के उपरान्त क्षेत्रीय कार्यालय उ०प्र० प्रदूषण नियन्त्रण बोर्ड बॉदा द्वारा प्रतिष्ठित दैनिक समाचार पत्रों हिन्दुस्तान, (हिन्दी) एवं टाइम्स आफ इण्डिया- (अंग्रेजी) में प्रकाशित प्रेस विज्ञापित के उपरान्त दिनांक 01.08.2015 को अपराह्न 3:00 बजे प्रस्तावित परियोजना स्थल ग्राम- चिलेहटा, तहसील व जनपद -बॉदा (उ०प्र०) में अपर जिलाधिकारी (वित्त/राजस्व) महोदय की अध्यक्षता में लोक सुनवाई आयोजित की गयी जिसकी कार्यवृत्त का विवरण निम्नवत है।

अध्यक्ष महोदय की अनुमति से उक्त प्रस्तावित सैण्ड/मौरम माइनिंग परियोजना की पर्यावरणीय स्वीकृति हेतु लोक सुनवाई का आयोजन किया गया जिसमें सर्वप्रथम क्षेत्रीय अधिकारी, उ०प्र० प्रदूषण नियन्त्रण बोर्ड बॉदा द्वारा उक्त अवसर पर उपस्थित अधिकारियों/कर्मचारियों एवं जनसमूहों का अभिवादन करते हुये उक्त परियोजना के विषय में संक्षिप्त रूप से अवगत कराया गया इस परियोजना कि पट्टा धारक श्री सोमेश भारद्वाज पुत्र श्री ओमप्रकाश भारद्वाज निवासी अमर टाकीज, तहसील व जनपद -बॉदा (उ०प्र०) है जिनके द्वारा उक्त परियोजना प्रस्तावित की गयी है। इस परियोजना का उद्देश्य केन नदी के समीप स्थित ग्राम- कनवारा, भूरेड़ी एण्ड चिलेहटा, तहसील व जनपद -बॉदा (उ०प्र०) में स्थित भूखण्ड संख्या-13 (पट्टा क्षेत्रफल 122.81 हेक्टेयर उत्पादन क्षमता-7.0 लाख मी०टन/वर्ष) में सैण्ड/मौरम माइनिंग के खनन का कार्य किया जाना है। इस परियोजना के सम्बन्ध में विस्तृत विवरण से अवगत कराने हेतु श्री सुभाष पाण्डेय, प्रतिनिधि परामर्शी मैसर्स ग्रास रूट रिसर्च एण्ड क्लिएशन इण्डिया (प्रा०) लि०, नोएडा से अनुरोध किया गया।

परियोजना विवरण-

श्री सुभाष पाण्डेय, प्रतिनिधि परामर्शी मैसर्स ग्रास रूट रिसर्च एण्ड क्लिएशन इण्डिया (प्रा०) लि०, नोएडा द्वारा अवगत कराया गया कि श्री सोमेश भारद्वाज पुत्र श्री ओमप्रकाश भारद्वाज निवासी-अमर टाकीज तहसील व जनपद-बॉदा (उ०प्र०) जो कि इस परियोजना के पट्टा धारक है। इस खण्ड संख्या-13 से सैण्ड/मौरम खनन के लिए खनन पट्टा की प्रारम्भिक लीज अवधि दिनांक 24.12.2009 से दिनांक 23.12.2009 थी। जिसके नवीनीकरण हेतु दिनांक 15.05.2012 को पट्टा धारक द्वारा पुनः आवेदन खनिज विभाग, जनपद-बॉदा में किया गया। सम्बन्धित आवेदन पत्र सक्षम अधिकारी के पास विचाराधीन है। इस खनन पट्टा का क्षेत्रफल 122.81 हेक्टेयर तथा उत्पादन क्षमता 7.0 लाख मी०टन/वर्ष है जो कि बॉदा जिले में स्थित है। सूचना क्षेत्रफल गैर वन भूमि में आता है। यह भूमि सरकारी राजस्व भूमि है। यह खनन पट्टा केन नदी के तलहटी और तट पर आता है। पर्यावरण मंत्रालय के पर्यावरण आंकलन अधिसूचना 2006 के अनुसार खनन पट्टे को संचालन से पूर्व पर्यावरण क्लीयरेंस लेना जरूरी है इसलिए अभी तक इस खनन पट्टे की लीज लंबित पडी हुई है। इस परियोजना की पर्यावरण स्वीकृति प्राप्त करने हेतु इम्पैक्ट असस्सेट डिवीजन पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार के पत्र सं० जे०11०15/245/2012-आई०ए०द्वितीय(एम) दिनांक 19.08.2014 द्वारा सम्बन्धित टर्म ऑफ रिफरेंस (टोर) सशर्त निर्गत किया गया था। इ०आई०ए/ई०एम०पी० (झापट) को फील्ड मानीटरिंग और एकत्रित सेंकन्ड्री आंकड़ों के आधार पर तैयार किया गया है। उक्त सैण्ड/मौरम माइनिंग परियोजना को प्रस्तावित श्रेणी (ए) में रखा गया है।





परियोजना का उद्देश्य — इस परियोजना का उद्देश्य निम्नवत है —

1. इस खनन परियोजना से प्राप्त सैण्ड/मोरम का उपयोग आस-पास के क्षेत्रों के विकास तथा इमारतों, पुल एवं सड़क निर्माण आदि में किया जायेगा।
2. नदी के किनारों को चौड़ा होने से रोकना तथा आस-पास के क्षेत्रों को बाढ़ एवं नुकसान से बचाना।
3. नदी के बहाव क्षेत्र से लघु खनिजों (सैण्ड/मोरम) इत्यादि के खनन एवं संग्रहण के द्वारा नदियों के मौजूदा मार्ग को बनाये रखना।
4. समीपवर्ती समाज के गरीब वर्ग के लिए जीविका के अद्वार उपलब्ध कराना।
5. परियोजना के क्रियान्वन से निर्माण सामग्री जैसे बालू/मौरंग की आपूर्ति में सुधार होगा तथा राज्य मे बुनियादी आवश्यकताओं जैसे सड़को, पुलों एवं इमारतों आदि के निर्माण पर सकारात्मक प्रभाव पड़ेगा।
6. खनन नदी के उस भाग मे होगा जो किसी भी प्रकार की वनस्पति से रहित होगा।
7. संदर्भित क्षेत्र से प्रत्येक वर्ष नदी से सैण्ड/मौरम सामग्री का संग्रहण किया जाना प्रस्तावित है। तथा प्रस्तावित खण्ड क्षेत्र में नदी के प्राकृतिक प्रवाह को बाधित नहीं किया जायेगा। बाढ़/मानसून के दौरान खनन की कोई गतिविधि नहीं की जायेगी। सैण्ड/मौरम खनन नदी के बहाव क्षेत्र तक ही सीमित रहेगा। खनन का कार्य समीपवर्ती ग्रामीण मजदूरों के द्वारा हाथ के औजारों का प्रयोग करते हुये नदी के बहाव क्षेत्र से किया जायेगा। तथा रेत सामग्री उसके मौजूदा स्वरूप से ही संग्रह की जायेगी खनन की प्रक्रिया केवल 3.0 मीटर की गहराई अथवा भूजल स्तर से जो भी कम हो तक ही की जायेगी। उक्त परियोजना से समीपवर्ती लोगों को रोजगार उपलब्ध होगा जिसके कारण उनके सामाजिक एवं आर्थिक स्थिति में सुधार होगा। इस प्रकार लघु खनिजों का अवैज्ञानिक संग्रहण रुक जायेगा तथा राज्य के आर्थिक विकास के लिये राजस्व भी उपलब्ध होगा।

अवैज्ञानिक खनन के कारण समीपवर्ती वातावरण में निम्नलिखित कृप्रभाव पड़ते है।

- 1- खनन किये गये खनिजों की मात्रा का निर्धारण(आवश्यकता से अधिक दोहन, राजस्व की प्राप्ति एवं अवशेष मे कमी।
 - 2- बेतरतीब खुदाई के कारण जगह-जगह गड्ढे होना, जल भराव होना। प्रवाह के दौरान ऊँची-नीची ऐंडी होना, भूजल स्तर को खतरा एवं खनिजों का आवश्यकता से अधिक दोहन।
 - 3- खराब वाहनों के उपयोग के कारण जीव-जन्तुओं के लिए परेशानियां, ईंधन एवं तेल का रिसाव तथा वाहनों से वायु एवं ध्वनि प्रदूषण जनित होता है। इसके अलावा खनन प्रक्रिया में अप्राधिकृत मशीनों का उपयोग अंधाधुंध रूप से किया जाता है।
- पर्यावरणीय प्रबन्धन परियोजना के अन्तर्गत सड़कों पर पानी का छिड़काव किया जायेगा, गीली बालू/मौरंग को तिरपाल से ढक कर ले जायेगा जिससे कि धूल एवं बालू/मौरम को गिरने से रोका जा सकता है। खराब वाहनों का उपयोग नहीं किया जायेगा। इसके अतिरिक्त प्रयुक्त वाहनों के हार्न का उपयोग सीमित मात्रा में किया जायेगा जिससे कि समीपवर्ती आवासीय वातावरण को निर्यंत्रित ध्वनि प्रदूषण के रूप में रखा जायेगा। समीपवर्ती क्षेत्र में स्थित जल, वायु एवं ध्वनि का समय-समय पर अनुश्रवण किया जायेगा तथा समीपवर्ती क्षेत्र के सामाजिक एवं शैक्षणिक उत्थान के लिए समय-समय पर योजनाएँ चलाई जायेगी। परियोजना में कार्यरत कर्मचारियों एवं समीपवर्ती लोगों के स्वास्थ्य का परीक्षण समय-समय पर किया जायेगा तथा प्रभावित व्यक्ति के स्वास्थ्य की उचित चिकित्सा की व्यवस्था की जायेगी।

Mishra

DX

समीपवर्ती वातावरण एवं सम्पर्क मार्ग के किनारे पर्याप्त वृक्षारोपण का कार्य किया जायेगा। इसके बाद बैठक में उपस्थित जनसमुदाय द्वारा उठायी गयी आपत्तियों के प्रश्नवार उत्तरों का विवरण निम्न है।

प्रश्न 1 :- श्री जगरूप निषाद पुत्र श्री बैजू निषाद ग्राम-बोधीपुरवा, तहसील व जनपद बॉदा, (उ०प्र०) द्वारा पूछा गया कि खदान चलाने से क्या हम लोगों को रोजगार मिलेगा ? वाहनो के आवागमन से जो धूल उड़ेगी उसके रोकथाम की क्या व्यवस्था की जायेगी ?

उत्तर 1:- परामर्शी मैसर्स ग्रास रूट रिसर्च एण्ड क्वाेशन इण्डिया (प्रा०)लि०, नोएडा के श्री सुभाष पाण्डेय द्वारा अवगत कराया गया कि पट्टेधारक द्वारा ग्रावासियों को रोजगार दिया जायेगा तथा धूल की रोकथाम हेतु पानी का छिड़काव किया जायेगा तथा ट्रको को तिरपाल से ढक कर ले जायेंगे।

प्रश्न 2 :- श्री दिनेश तिवारी पुत्र श्री चकधर तिवारी, द्वारा पूछा गया कि खनन कार्य से उत्सर्जित धूल के निराकरण हेतु क्या उपाय किये जायेंगे ? माइनिंग के समय खनन स्थल पर भूजल आ जाने के उपरान्त खनन कार्य निरन्तर चलता रहता है इसके निराकरण के लिए क्या उपाय किए जायेंगे ?

उत्तर 2:- परामर्शी मैसर्स ग्रास रूट रिसर्च एण्ड क्वाेशन इण्डिया (प्रा०)लि०, नोएडा के प्रतिनिधि श्री सुभाष पाण्डेय, द्वारा अवगत कराया गया कि खनन कार्य एवं से उत्सर्जित वायु धूल के नियंत्रण हेतु आस पास पानी का छिड़काव तथा वाहनो को तिरपाल से ढक्कर ले जाये जयागा माइनिंग के समय खननाना स्तर पर भुजल आ जाने के उपरान्त खनन कार्य बन्द का दिया जयेगा परियोजना स्थल पर खनन कार्य 3.0मीटर की गहराई अथवा मुजल स्थल से, जो भी कम हो तक ही किया जायेगा। इसके अतिरिक्त खनन कार्य में भारी मशीनों का प्रयोग ना करके मैनुअल रूप से कार्य करते हुए खनन स्थल के आस-पास के निवासियों को रोजगार दिया जायेगा।

प्रश्न 3 :- श्री पप्पू निषाद पुत्र श्री पुन्ना निषाद ग्राम-बोधीपुरवा, तहसील—व जनपद—बॉदा, (उ०प्र०) द्वारा अवगत कराया गया कि इस परियोजना के चालू होने पर स्थानीय मजदूरों को रोजगार उपलब्ध होगा ?

उत्तर 3:- श्री सुभाष पाण्डेय, प्रतिनिधि परामर्शी मैसर्स ग्रास रूट रिसर्च एण्ड क्वाेशन इण्डिया प्रा०लि०, नोएडा द्वारा अवगत कराया गया कि पट्टेधारक द्वारा अधिकांशतः स्थानीय लोगो से ही खनन कार्य कराया जायेगा जिससे अधिक से अधिक ग्रामवासियों को रोजगार मिलेगा।

प्रश्न 4 :- श्री बुन्ना पाल पुत्र श्री भगीरथ पाल ग्राम-विलहेटा तहसील व जनपद बॉदा, (उ०प्र०) द्वारा पूछा गया कि खनन कार्य से कोई समस्या तो उत्पन्न नहीं होगी ?

उत्तर 4:- परामर्शी मैसर्स ग्रास रूट रिसर्च एण्ड क्वाेशन इण्डिया (प्रा०)लि०, नोएडा के प्रतिनिधि श्री सुभाष पाण्डेय, द्वारा अवगत कराया गया कि पट्टे धारक द्वारा किये जाने वाले खनन कार्य से किसी भी प्रकार की कोई परेशानी नहीं होगी।

प्रश्न 5 :- श्री इन्दू पुत्र श्री हुसेना ग्राम-बोधीपुरवा, तहसील व जनपद—बॉदा, (उ०प्र०) द्वारा पूछा गया कि खनन कार्य के दौरान किसी व्यक्ति को चोट लग जाने पर इसका इलाज कौन करयेगा ?

उत्तर 5:- परामर्शी मैसर्स ग्रास रूट रिसर्च एण्ड क्वाेशन इण्डिया (प्रा०)लि०, नोएडा के प्रतिनिधि श्री सुभाष पाण्डेय, द्वारा अवगत कराया गया कि प्रमोद खनन पट्टे धारक द्वारा चोट पर सम्बन्धित इलाज पट्टा धारक द्वारा कराया जायेगा।

DM

Mishra

प्रश्न 6 :- श्री प्रमोद पुत्र श्री शिवशंकर गौतम ग्राम-भूरागढ, तहसील व जनपद-बाँदा, (उ०प्र०) द्वारा पूछा गया कि खनन कार्य में क्या स्थानीय लोगों को रोजगार मिलेगा।

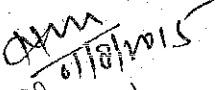
उत्तर 6:- श्री सुभाष पाण्डेय, प्रतिनिधि परामर्शी मैसर्स ग्रास रूट रिसर्च एण्ड क्रिएशन इण्डिया (प्रा०) लि०, नोएडा द्वारा अवगत कराया गया कि अधिकांशतः स्थानीय लोगों को अधिक से अधिक रोजगार दिये जायेंगे।

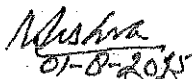
उक्त बैठक में उपस्थित पट्टाधारक के प्रतिनिधि श्री वीरेन्द्र सिंह द्वारा आश्वासन दिया गया कि समीपवर्ती ग्रामवासियों के पेयजल समस्या के निराकरण हेतु हैण्डपम्प की पर्याप्त व्यवस्था की जायेगी इसके अतिरिक्त इस परियोजना के परामर्शी द्वारा समस्याओं के निराकरण हेतु जो भी समाधान सुझाये गये हैं उनका अनुपालन किया जायेगा। उक्त परियोजना में सैण्ड/मोरंग खनन का कार्य नियमानुसार ही किया जायेगा तथा सम्बन्धित सक्षम विभागों द्वारा समय-समय पर दिये गये दिशा निर्देशों का अनुपालन किया जायेगा।

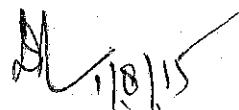
उक्त बैठक में उपस्थित श्री एच०डी० यादव खान अधिकारी खनिज विभाग जनपद बाँदा द्वारा अवगत कराया गया कि अधिकांशतः ऐसा देखा जाता है कि पट्टा धारक द्वारा खनन परियोजना में उत्पादन क्षमता कम दर्शायी जाती है जिसके कारण राजस्व की हानि होती है इसलिए परियोजना आख्या में वास्तविक उत्पादन क्षमता को दर्शाया जाना चाहिए। केन नदी में अच्छी किस्म की मौरमं / बालू पायी जाती है जिसके कारण इस क्षेत्र में अवैध खनन की सम्भावनाएँ बनी रहती है। वैध पट्टा धारक द्वारा परियोजना प्रारम्भ कराने के उपरान्त इस क्षेत्र में सम्भावित अवैध खनन पर अंकुश लगाना सम्भव हो सकेगा।

अपर जिलाधिकारी (वित्त/राजस्व), बाँदा एवं अध्यक्ष लोक सुनवाई द्वारा अवगत कराया गया कि परियोजना प्रारम्भ होने के उपरान्त स्थानीय लोगों को ही रोजगार मिलना चाहिए। प्रस्तावित परियोजना में मैनुअल कार्य होने से स्थानीय लोगों को काम मिलेगा, नाबालिक बच्चों से खनन कार्य ना कराया जाये, उनको पढाया-लिखाया जाये। यदि कोई परेशानी हो तो अपनी समस्या से स्थानीय प्रशासन अथवा सम्बन्धित विभागों को अवगत करा सकते हैं। जिससे कि सम्बन्धित समस्या का निराकरण किया जा सके।

अन्त में क्षेत्रीय अधिकारी, उ०प्र० प्रदूषण नियंत्रण बोर्ड, बाँदा द्वारा बैठक में उपस्थित सभी जन समुदाय से प्रस्तावित परियोजना के क्रियान्वयन के सम्बन्ध में सहमति चाही गयी जिस पर बैठक में उपस्थित जन समुदाय ने करतल ध्वनि से अपनी सहमति व्यक्त की। इसी मन्तव्य के साथ उक्त परियोजना की पर्यावरणीय स्वीकृति हेतु आयोजित लोक सुनवाई की बैठक का समापन किया गया तथा अध्यक्ष महोदय एवं उपस्थित जनसमुदाय को धन्यवाद प्रस्तुत किया गया।


(एच०डी० यादव)
खान अधिकारी
खनिज विभाग, बाँदा


(विजय कुमार मिश्र)
क्षेत्रीय अधिकारी
उ०प्र० प्रदूषण नियंत्रण बोर्ड, बाँदा


(डी०एस० पाण्डेय)
अपर जिलाधिकारी (वि०/रा०)
जनपद-बाँदा

PUBLIC HEARING ENGLISH TRANSLATION

Village-Kanwara, Bhuredi and Chilehata, Tehsil & District-Banda (Uttar Pradesh) in River Ken lies near Khand No-13 (Lease Area 122.81 Hectare) Production Capacity 7 Lakh MT/Annum on sand/ Moram mining project for lease holder Shri. Somesh Bharadwaj S/o Shri. Om Prakash Bharadwaj lives in Amar Talkies, **Tehsil & District –Banda (Uttar Pradesh)** through Board Headquarters Lucknow received proposal on environment (protection) act, 1986 within Ministry of Environment and Forest & Climate Change, Indian Government through issued notification no- S.O. 1533 (A) dated 14-09-2006 amendment on S.O. 3067 (E) dated 01-12-2009 rules for environmental clearance conducted on 01-08-2015 at 3 P M of proposed project located in village-Chilehata, Tehsil & District- Banda (Uttar Pradesh) chaired by Shri. D .S. Pandey Additional District Magistrate, Banda, accomplished public hearing schedule are explained.

By the trailing letter of UPPCB, Letter no F62519/C-2/NOC-4098/2015 on dated 09-06-2015 on which DM granted permission for the Place/Date/Time for the public hearing, after this UPPCB published the notice in the respective news papers which is Danik Samachar Patra (Hindustan) in Hindi newspaper and Times of India in English newspaper and the public hearing was chaired by ADM on 01-08-2015 at 3 P M in village- Chilehata, Tehsil & District –Banda (Uttar Pradesh). The proceedings are as follows.

With due permission of honorable President, the Public hearing for Sand/Moram Mining regarding Environmental Clearance had started, in which firstly RO, UPPCB, welcomed all the dignitaries and the public present there and introduced briefly regarding the project proponent Shri Somesh Bharadwaj, S/o Shri Om Prakash Bharadwaj, R/o Amar talkies Colony, Tehsil-Banda, Tehsil & District-Banda UP is present in the public hearing and the mining activity will be undertaken by him on/ near river Ken near village- Kanwara, Bhuredi & Chilehata, Tehsil-Banda, District-Banda UP on Bhand No.13(lease area of 122.81 ha, Production Capacity -7 Lakh MT/ Annum) in which Sand/Moram Mining process will take place. Mr. Subhash Pandey representative of M/s Grass Roots Research & Creations India (P) Ltd, Noida, provides the brief description to introduce the project.

Project Description-

Shri. Subhash Pandey, representative consultant of M/s Grass Roots Research & Creations India (P) Ltd., Noida introduces Shri Somesh Bharadwaj S/o Shri Om Prakash Bharadwaj R/o Amar Talkies, Tehsil & District –Banda (Uttar Pradesh) who was the lease holder of this project whose lease was valid for 3 years i.e from 24-12-2009 to 23-12-2012 and its renewal is applied in Mining Department, District- Banda on 15-05-2012 to the representative officer which is under consideration. The Area of mining lease was 122.81 hectare and production capacity was 7 lakh MT/ Annum which lies in District Banda. Informed area lies in non-forest area. This land belongs to Government Revenue Land. This area lies on the bottom and on the bank of the river.

Before starting of Mine Environmental Clearance is necessary of MoEF & CC notification 2006, that's why mining activity has not started yet. After receiving environmental clearance for this project impact assessment division of Ministry of environment & Forest & Climate Change letter no. J 11015/245/2012-II.A (M) dated 19-08-2014 regarding Terms of Reference (ToR) issued with terms & conditions. DEIA/ EMP have been prepared according to field monitoring and secondary data. The Category 'A' has been provided to the said sand/morum project.

OBJECTIVES OF THE PROJECT

The Objectives of the project are as follows:

1. The sand/ morum obtained from this mining project will be used in nearby areas of districts and also in construction of buildings, bridges or roads etc
2. Prevention of river bank widening as well as safeguard of the nearby area from flood and losses.
3. Upholding of present channel of the river by mining and collection of the minor minerals (sand/moram) from the flow of the river.
4. Accessibility of the employment for the poor people of the immediate society.
5. There will be improvement in supply of the building material with the activation of the project and positive impact on the building of the basic necessity like road and bridges in the state.
6. Mining will be done over the area without vegetation.
7. Collection of Sand / moram every year from river is proposed from the related area. Natural flow of the river will not be affected in the proposed mining area. There will be no mining activity during flood. Sand / moram will be restricted up to flow area of the river. Mining will be done in the flow area of the river by the local workers with the help of hand tool. Sand will be collected in its natural state from the river and mining will be restricted to depth of 3m or up to ground water table whichever comes earliest. Local peoples will get employment by which their social and economic status will be improved. With this illegal mining of the minor minerals will be avoided and also state will generate revenue for economic development.

FOLLOWING ARE THE IMPACTS ON ADJACENT ENVIRONMENT WITH UNSCIENTIFIC MINING-

1. Assessment of the collected minor minerals (Excessive mining and generation of the revenue and absence of trace)
2. Formation of the pits and water logging by the random mining. Irregular flow and surface water flow will be affected due to the excessive mining.
3. Due to the use of improper vehicles, local biodiversity will get affected with the low fuel quality and continuous leakage of the oil and excessive noise will be generated which is

used to lift the material. A part from this there is a continuous use of unauthorized vehicles which is going on within the local area.

Under the Environment Management water will be sprinkled on the road and the Sand/Moram will be transported by covering it, so that dust emission can be suppressed. Improper vehicles will not be used. Beyond this horns of used vehicles will be used in bounded volume only due to which noise pollution will be controlled in the adjacent residential areas. Time to time monitoring will be done for air, water & noise & also for socio and economic development time to time planning will be done for adjacent areas. For the examination working employers and nearby people's health and arrangement of proper treatment of affected people will be done.

On adjacent environment /surroundings and on the sides of connected roads enough afforestation will be done. After that the public sitting there asked questions whose details are given below:

Question 1:- Shri Jaagroop Nishad S/o Shri Baiju Nishad Village: Bodhipurva, Tehsil & District Banda, (Uttar Pradesh) asked that starting of mine will give employment to us? Due to the commuting vehicles dust will blow so what are the arrangements for its prevention?

Answer 1:- Consultant of Grass Roots Research and Creations (P) Ltd. Noida, Shri Subhash Pandey told that leaseholder will give employment to the village people and for the prevention of dust water will be sprinkled and Sand/ moram will be carried through trucks will be covered with tarpaulin.

Question 2:- Shri Dinesh Tiwari S/o Shri Chakradhar Tiwari asked what are the measures taken for dust generated by mine working? At the time of mining, mining will be continue at mine after reaching the ground water level so what were the preventive measures will be taken for this?

Answer 2:- Consultant of Grass Roots Research and Creations (P) Ltd. Noida, Shri Subhash Pandey told that dust originated from mine working should be controlled by sprinkling of water or vehicles should be covered with tarpaulins while commuting, mining will be stopped after reaching the ground water level. Mining will be done till 3m depth or ground water level whichever is minimum. Beyond that no heavy machines will be used in mining moreover mining will be done manually due to which local villagers will get the employment.

Question 3:- Shri Pappu Nishad S/o Shri Punna Nishad Village- Bodhipurva, Tehsil & District – Banda, (Uttar Pradesh) queried that due to starting of this project will local laborers get employment?

Answer 3:- Shri Subhash Pandey, Consultant of Grass Roots Research and Creations (P) Ltd., Noida, told that leaseholder would employ mostly local villagers for mining due to which villagers will get more employment.

Question 4:- Shri Chhunna Pal S/o Shri Bhagirath Pal, Village- Chilehata, Tehsil & District – Banda, (Uttar Pradesh) queried that no problems will arise due to mining?

Answer 4:- Consultant of Grass Roots Research and Creations (P) Ltd. Noida, Shri Subhash Pandey aware that no problem will occur due to mining done by lease holder.

Question 5:- Shri Iddu S/o Shri Husena, Village- Bodhipurva, Tehsil & District –Banda, (Uttar Pradesh) asked that during mining if someone will get injured who will take the responsibility of their treatment?

Answer 5:- Consultant of Grass Roots Research and Creations (P) Ltd. Noida, Shri Subhash Pandey informed that treatment will be provided by lease holder itself.

Question 6:- Shri Pramod S/o Shri Shivshankar Gautam Village- Bhuragarh, Tehsil & District – Banda, (Uttar Pradesh) asked that local villagers will get employment or not due to mining?

Answer 6:- Shri Subhash Pandey, Consultant of Grass Roots Research and Creations (P) Ltd., Noida, informed that employment will be given to mostly local villagers.

Shri Virender Singh, representative of lease holder sitting in the public informed that the facility of hand pump will be provided to the villagers of nearby areas to prevent water problems beyond that the measures provided by the consultant at the project site will be strictly followed. In this project sand/ morum mining will be done as per the rules and regulations and necessary actions would be taken time to time as provided by the concerned authorities.

Shri H .D Y adav, Mines Officer, Mining Department, District-Banda sitting in the public informed that most of the time it was seen that production capacity shown by lease holder will be less due to which revenue generation will be affected therefore appropriate production should be shown. Good Quality of Sand/Morum is found in Ken River therefore possibilities of illegal mining can be formed. Possibilities of illegal mining will be stopped if the project starts with the legal lease holder in this area.

ADM, Banda and Chairperson of the Public Hearing informed that only local people will be employed after starting the project. Proposed project involves manual working, due to which local people will get employment; child labor will not be done moreover they should be sent to schools for learning. Local peoples can discuss their problems with the local authorities or with the concerned departments due to which related problems can be solved.

Lastly Regional Officer, Uttar Pradesh Pollution Control Board, Banda asked the public sitting the regarding the proposed Mining activity and also asked for the consent of the people regarding Mining activity, the Public present there in one voice showed their consent regarding mining. On this note the public hearing regarding environmental clearance has been concluded and sincere thanks had been given to the president present there.

KANVARA SAND/MORAM MINING

Public hearing for the proposed project was held on 01/08/2015 at 3.00 PM in Village Chilehata, District – Banda, Uttar Pradesh, as published in Hindustan & Times of India Newspaper on 09-06-2015.

The public hearing was chaired by Shri D.S Pandey ADM, Banda.

S. No.	Name of Person with address	Queries asked	Replies	Plan of Action	Budget Allocation
1.	Shri Jaagroop Nishad S/o Shri Baiju Nishad Village: Bodhipurva, Tehsil & District Banda, (Uttar Pradesh)	He asked that starting of mine will give employment to us. Due to the commuting vehicles dust will blow so what are the arrangements for its prevention.	Representative of the project proponent replied that leaseholder will give employment to the village people and for the prevention of dust water will be sprinkled and Sand/moram will be carried through trucks will be covered with tarpaulin.	Employment preferences will be given to local villagers. Water sprinkling to suppress dust will be ensured.	Wages will be paid to the employees as per agreement. Rs. 2, 00,000/- per annum for water sprinkling.
2.	Shri Dinesh Tiwari S/o Shri Chakradhar Tiwari	He asked what the measures are taken for dust generated by mine working. At the time of mining, mining will be continue at mine after reaching the ground water level so what were the preventive measures will be taken for this.	Dust originated from mine working should be controlled by sprinkling of water or vehicles should be covered with tarpaulins while commuting, mining will be stopped after reaching the ground water level. Mining will be done till 3 m deep or ground water level whichever is minimum. Beyond that no heavy machines will be used in mining moreover mining will be done manually due to which local villagers will get the employment.	Water sprinkling to suppress dust will be ensured. Employment preferences will be given to local villagers.	Rs.2, 00,000 /- per annum for water sprinkling. Wages will be paid to the employees as per agreement.

KANVARA SAND/MORAM MINING

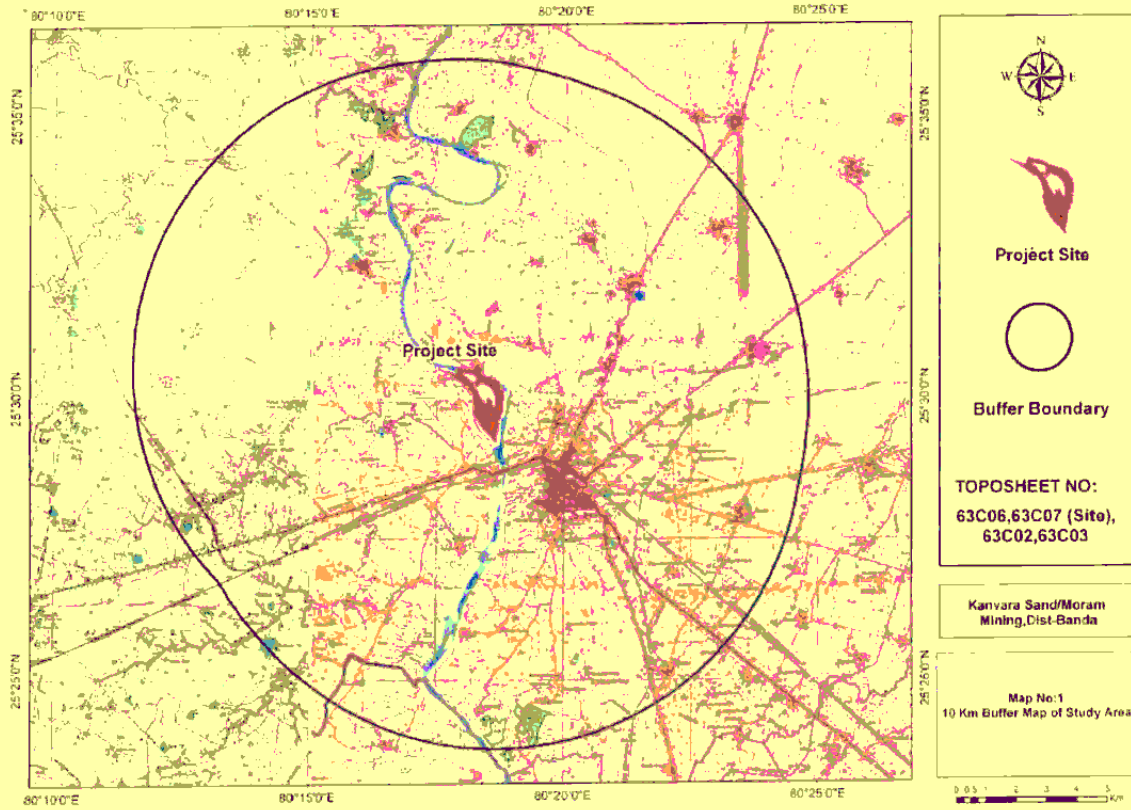
3.	Shri Pappu Nishad S/o Shri Punna Nishad Village-Bodhipurva, Tehsil & District – Banda, (Uttar Pradesh)	He queried that due to starting of this project will local laborers get employment.	Lease holder would employ mostly local villagers for mining due to which villagers will get more employment.	Employment preferences will be given to local villagers.	Wages will be paid to the employees as per agreement.
4.	Shri Chunna Pal S/o Shri Bhagirath Pal, Village-Chilehata, Tehsil & District – Banda, (Uttar Pradesh)	He queried that no problems will arise due to mining.	No problem will occur due to mining done by lease holder.	Same will be ensured.	--
5	Shri Iddu S/o Shri Husena, Village-Bodhipurva, Tehsil & District – Banda, (Uttar Pradesh)	He asked that during mining if someone will get injured who will take the responsibility of their treatment.	Treatment will be provided by lease holder itself.	Same will be ensured.	--
6	Shri Pramod S/o Shri Shivshankar Gautam Village-Bhuragarh, Tehsil & District – Banda, (Uttar Pradesh)	He asked that local villagers will get employment or not due to mining.	Employment will be given to mostly local villagers	Employment preferences will be given to local villagers.	Wages will be paid to the employees as per agreement.
7	ADM (Chairperson), Banda		Informed that only local people will be employed after starting the project.		

KANVARA SAND/MORAM MINING

			Proposed project involves manual working, due to which local people will get employment; child labor will not be done moreover they should be sent to schools for learning. Local people can discuss their problems with the local authorities or with the concerned departments due to which related problems can be solved.		
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8/21.2015

Kanwara BUFFAR MAP IS TO BE AUTHENTICATED.jpg



प्रशासकीय वनाधिकारी
बाँदा वन प्रभाग, बाँदा

कार्यालय प्रभागीय वनाधिकारी, बाँदा वन प्रभाग, बाँदा
पत्रांक 1632 / 51-न दिनांक, बाँदा, नवम्बर, 14 2008.

संकेत :-

प्रभारी अधिकारी खनिज,
बाँदा।

विषय :- खनन पट्टय स्वीकृत हेतु अनापत्ति दिये जाने के सम्बन्ध में।

सन्दर्भ :- ऑफिस पत्रांक-383/खनिज-30, दिनांक 03.09.2008, पत्रांक 422/खनिज-30, दिनांक 06.10.2008, पत्रांक-428/खनिज-30 दिनांक 15.10.2008 एवं पत्रांक-413/खनिज-30, दिनांक 27.09.2008।

वर्णन :-

उपरोक्त सदरभित पत्र के क्रम में क्षेत्रीय वन अधिकारी, बाँदा से स्थानीय जांच करायी गयी जाचके द्वारा प्रेषित जांच आख्या निम्न प्रकार है :-

क्र. सं.	आवेदक का नाम	तहसील	ग्राम का नाम	क्षेत्रफल एकड़ में	निरीक्षण उपर्या
1	2	3	4	5	6
1	1	बाँदा	हरीसोपुरवा	20.259	(1) आवेदित क्षेत्र वन भूमि नहीं है। (2) आवेदित क्षेत्र वन स्वरूप नहीं है। (3) आवेदित क्षेत्र वन सीमा से 100मी की परिधि से बाहर है। (4) खनन होने पर पर्यावरण पर कुप्रभाव नहीं पड़ेगा।
2	2		लडाकापुरवा / भवानी पुरवा	39.68	"
3	3		"	31.69	"
4	4		"	29.60	"
5	5		"	30.00	"
6	6		"	29.33	"
7	7		दुरेडी	54.47	"
8	8		"	38.08	"
9	9		"	38.15	"
10	10		"	30..	"
11	11		"	51.50	"
12	12		"	30.00	"
13	13		"	30.00	"
14	14		"	31.60	"
15	15		"	30.00	"
16	16		"	30.00	"
17	17		"	30.52	"
18	18		"	33.77	"
19	19		"	41.70	"
20	20		गुरेडी	30.59	"
21	21		"	30.00	"
22	22		"	30.00	"

M/
प्रभागीय वन अधिकारी
बाँदा
17/11/08

8. तत्पश्चात् निविदाकार द्वारा धरोहर धनराशि से सम्बन्धित कॉलम में ₹2000/- की धनराशि का बैंक ड्राफ्ट का नम्बर बैंक का नाम इत्यादि विवरण भरना होगा। भुगतान के विवरण की प्रविष्टियाँ भरने के बाद उसको Save कर लिया जाएगा।
 9. निविदाकार द्वारा अपनी निविदा को अपलोड करने हेतु कम्प्यूटर स्क्रीन पर प्रदर्शित इनक्रिप्ट एण्ड अपलोड (Encrypt and Upload) पर क्लिक करना होगा जिससे कि धरोहर धनराशि को टेण्डर के साथ जमा किये जाने से सम्बन्धित कार्य पूर्ण माने जायेंगे।
 10. निविदाकार द्वारा तकनीकी निविदा (Technical Bid) के आईकॉन पर क्लिक करने के उपरान्त निविदा प्रपत्र-I से सम्बन्धित पीडीएफ फाईल (Scanned Copy) को अपलोड करना होगा।
 11. निविदाकार द्वारा समस्त तकनीकी अभिलेखों की पीडीएफ फाईल (Scanned Copies) के अपलोड हो जाने के बाद सबमिट (Submit) आईकॉन पर क्लिक कर तकनीकी प्रपत्र (Technical Bid Submission) की कार्यवाही पूर्ण हो जाएगी।
 12. तत्पश्चात् वित्तीय निविदा प्रपत्र-II (Financial Bid Submission Form-II) जो निविदाकार द्वारा अपने कम्प्यूटर पर ई-टेण्डर डाउन लोड करते समय सेव (Save) किया गया था, में अपनी वित्तीय निविदा धनराशि अंकों में अंकित कर सेव (Save) कर लें। इसकी (Financial Bid Submission Form-II) की एक्सेल फाईल ई-टेण्डर पोर्टल पर अपलोड कर वित्तीय निविदा प्रस्तुत की जानी होगी।
 13. समस्त अगिलेख तकनीकी (निविदा प्रपत्र-I) एवं वित्तीय निविदा (Financial Bid Submission Form-II) प्रपत्रों को ई-टेण्डर पोर्टल पर जमा किये जाने के उपरान्त Freeze Bid आईकॉन पर क्लिक कर निविदाकार ई-टेण्डर साफ्टवेयर द्वारा जनरेटेड बिड आईडी प्राप्त कर लें।
 14. यदि निविदाकार को ऐसा प्रतीत होता है कि उनके द्वारा सबमिट की गयी तकनीकी एवं वित्तीय बिड में कोई त्रुटि है अथवा उनके द्वारा पूर्व में जमा की गयी निविदा/बिड्स में संशोधन करना वांछनीय है, तो माई बिड्स (My Bids) आईकॉन में क्लिक कर पुनः तकनीकी अथवा वित्तीय निविदा पूर्व प्रक्रिया को अपनाते हुए रि-बिड सबमिशन (Rebid Submission) पर क्लिक कर पुनः सबमिट (Submit) कर सकते हैं। निविदाकार द्वारा यह कार्य टेण्डर जमा करने की निर्धारित अन्तिम तिथि और समय से पूर्व किया जा सकता है। अन्तिम बार प्रस्तुत की गयी निविदा (Last Submitted Bid) ही ई-टेण्डर पोर्टल पर अनुमन्य होगी। पूर्व में प्रस्तुत की गयी बिड्स अनुमन्य नहीं होगी।
- 12-ई-टेण्डर पोर्टल पर अपनी निविदा अपलोड करते समय निविदाकार को निम्नांकित बिन्दुओं पर ध्यान देना होगा :
1. संलग्न निविदा प्रारूप के संलग्नक निविदा प्रपत्र-I के कालम संख्या-1 से 11 में सूचनाएं अंकित करनी होगी तथा सूचना प्रपत्र-II (Financial Bid Submission Form-II) के सफेद भाग में निविदा धनराशि अंकों में अंकित करनी होगी।
 2. जिलाधिकारी के पक्ष में निर्गत बैंक ड्राफ्ट की मूल प्रति जिलाधिकारी कार्यालय में टेण्डर जमा करने की तिथि समाप्त होने से पूर्व जमा करनी होगी तथा उस बैंक ड्राफ्ट की स्कैण्ड (Scanned) कापी ई-टेण्डर पोर्टल पर भी अपलोड (UPLOAD) करनी होगी।
 3. बैंक गारण्टी या सम्पत्ति प्रमाण पत्र अथवा समाषोधन क्षमता प्रमाण पत्र (Solvency Certificate) मूल रूप में जिलाधिकारी कार्यालय में टेण्डर जमा करने की तिथि समाप्त होने से पूर्व जमा करना होगा तथा उसकी स्कैण्ड (Scanned) कापी भी ई-टेण्डर पोर्टल पर अपलोड करनी होगी।
 4. खनन सम्बन्धी कोई बकाया न होने का घोषणा पत्र के आशय का शपथ पत्र की स्कैण्ड (Scanned) कापी ई-टेण्डर पोर्टल पर अपलोड करनी होगी।
- अथवा
- खनन सम्बन्धी कोई बकाया न होने का जिलाधिकारी का प्रमाण पत्र की स्कैण्ड (Scanned) कापी ई-टेण्डर पोर्टल पर अपलोड करनी होगी।
5. सक्षम राजस्व अधिकारी द्वारा निर्गत स्थायी पते के प्रमाण पत्र की स्कैण्ड (Scanned) कापी ई-टेण्डर पोर्टल पर अपलोड करनी होगी।
 6. स्थायी रूप से निवासित जिले के जिलाधिकारी द्वारा निर्गत चरित्र प्रमाण पत्र की स्कैण्ड (Scanned) कापी ई-टेण्डर पोर्टल पर अपलोड करनी होगी।

23	23		38.00	
24	24	कनवारा	51.86	
25	25	गुरेडी	39.47	
26	26	कनवारा	30.18	
27	27		46.96	
28	28	कनवारा, गुरेडी	36.99	
29	29	चिलेहटा	36.095	
30	30	कनवारा		
31	31	हरीपुरवा	2.310	
		रमाली गढपुरा (अपनो 99)	1.00	

उपरोक्त स्थलीय जांच आख्या/शासनादेश सं०-728(3)/14-2-2008-65/2004सी०
सी० दिनांक 20.02.2008 में उल्लिखित निम्न शर्तों पर अनापत्ति दी जाती है :-

1. अनापत्ति प्रमाण पत्र सम्बन्धित विवरण के अनुसार दिये गये क्षेत्रफल व गाटा संख्या के विषय में इससे इतर किये गये खनन को अवैध खनन की क्षेणी में माना जायेगा।
2. स्वीकृत खनन पट्टा क्षेत्र में खनन कार्य करते हुये स्थल पर मौजूद वृक्षों को यथासंभव रक्षित किया जायेगा तथा वृक्षों का पातन नहीं किया जायेगा।
खनन स्थल को आल-पारा स्थित वृक्षों तथा अन्य जीवों पर हानि नहीं पहुंचायी जायेगी।
यदि खनन वाली क्षेणी में खनन प्रस्तावित है तब नदी का बहाव परिवर्तन होने के कारण परिवर्तित स्थल से खनन हेतु पुनः अनापत्ति प्राप्त करनी होगी।
3. 30प्र० इमारती लकड़ी एवं वन उपज अभिवहन नियमावली 1978 यथा संशोधित 2004 के अनुसार अभिवहन शुल्क नियमानुसार वन विभाग को देय होगा।
4. यह सुनिश्चित किया जायेगा कि खनन हेतु पट्टा किसी ऐसे व्यक्ति को न स्वीकृत किया जाये, जिसके विरुद्ध पूर्व में वन अपराध दर्ज हो या जिसका अपराधिक इतिहास हो।
5. खनन पट्टा प्राप्त कर्ता द्वारा जितने क्षेत्रफल में खनन किया जा रहा है उतने क्षेत्र में अथवा अधूनतम एक एकड़ क्षेत्रफल में स्थानीय प्रजाति के 200फलदार/छायादार वृक्षों का रोपण सिंचाई एवं फेंसिंग के साथ अपने निजी श्रोतों से करेंगे। एक एकड़ या उससे अधिक क्षेत्रफल के खनन पट्टों की अनापत्ति के मामलों में प्रति एकड़ 200वृक्ष उपरोक्तानुसार लगाया जाना होगा। एक एकड़ से अधिक होने पर प्रति एकड़ के हिसाब से अतिरिक्त 200वृक्ष लगाने होंगे जो पूर्णांक में नहीं होगा।

भवदीय

(नूरुल हुदा)
प्रभागीय वनाधिकारी,
बांदा वन प्रभाग, बांदा।

पृ०सं०-

/अ/सम दिनांक।

प्रतोलिपि क्षेत्रीय वन अधिकारी, बांदा को उनके पत्रांक-241/33-1, दिनांक 10.11.2008 के क्रम में सूचनाथ प्रेषित।

(नूरुल हुदा)
प्रभागीय वनाधिकारी,
बांदा वन प्रभाग, बांदा।

संशोधित

निविदा प्रपत्र-1

1	निविदाकार का नाम	राम पाल सिंह
2	निविदाकार के पिता का नाम-	शु. जी शिवनन्दन सिंह
3	स्थायी पता-	भा. विमान स्वराज कालोनी
4	अस्थायी पता-	बांदा
5	जिस क्षेत्र की निविदा दी जाती है उसका विवरण (अ) तहसील का नाम (ख) अनाम क्षेत्र का प्रा. नं. (ग) गा. सख्खी / जी. सख्खी / उ. सख्खी (घ) अनाम क्षेत्र का क्षेत्रफल एकड़ में (ङ) कुविरा का नाम	बांदा सिंधनल्ला / केन नदी खंड स. 8 100.00 एकड़ कालू
6	निविदाकार को ज्ञात है कि निविदा प्रपत्र का शुल्क 2000/- (प्रत्येक क्षेत्र का निविदा प्रपत्र शुल्क) का 20% इ.र. का निवृत्त कर जमा कर दिवस के बाद बैंक का नाम	इ.र. का शुल्क जमा करके निविदा प्रपत्र का शुल्क रा. इ. टेंडर पोर्टल पर अपलोड करना होगा। आरक्षित मूल्य 25 % का बैंक ड्राफ्ट संलग्न हो।
7	निविदाकार द्वारा प्रेषित पत्र एवं आवेदन के साथ नि. कोई-खनन समझौता देय नहीं है। इस आवेदन का शपथ पत्र अथवा जिलाधिकारी का प्रमाण पत्र को खनन समझौती कोई देय कथना नहीं है।	शपथ पत्र अथवा जिलाधिकारी प्रमाण पत्र को स्कैण्ड कापी निविदा के साथ ई-टेंडर पोर्टल पर अपलोड करनी होगी। ✓
8	बैंक गारण्टी अथवा अनापत्ति प्रमाण पत्र अथवा समझौता अथवा जिलाधिकारी द्वारा निर्गत सम. बोधन क्षमता प्रमाण पत्र (Solveny Certificate)	बैंक गारण्टी अथवा अनापत्ति प्रमाण पत्र अथवा समझौता क्षमता प्रमाण पत्र को स्कैण्ड कापी निविदा के साथ ई-टेंडर पोर्टल पर अपलोड करनी होगी। ✓
9	राशन राजस्व अधिकारी द्वारा निर्गत स्थायी पते का प्रमाण पत्र	स्थायी पते का प्रमाण पत्र को स्कैण्ड कापी निविदा के साथ ई-टेंडर पोर्टल पर अपलोड करनी होगी। ✓
10	जिलाधिकारी द्वारा निर्गत चरित्र प्रमाण पत्र	चरित्र प्रमाण पत्र को स्कैण्ड कापी निविदा के साथ ई-टेंडर पोर्टल पर अपलोड करनी होगी। ✓
11	अंशित मूल्य रु. दो लाख अथवा अधिक होने पर निम्नलिखित प्राधिकारियों के अनापत्ति प्रमाण पत्र ✓ जिलाधिकारी का प्राधिकार अधिकारी ✓ जिलाधिकारी का प्राधिकार अधिकारी ✓ जिलाधिकारी का प्राधिकार अधिकारी ✓ जिलाधिकारी का प्राधिकार अधिकारी	अनापत्ति प्रमाण पत्र को स्कैण्ड कापी निविदा के साथ ई-टेंडर पोर्टल पर अपलोड करनी होगी। आपका भा. का स्कूल (दि. 10-2-04 संलग्न है। जिलाधिकारी द्वारा जारी चरित्र प्रमाण पत्र अनापत्ति उल्लिखित है।

निविदाकार को ज्ञात है कि निविदा प्रपत्र का शुल्क 2000/- (प्रत्येक क्षेत्र का निविदा प्रपत्र शुल्क) का 20% इ.र. का निवृत्त कर जमा कर दिवस के बाद बैंक का नाम

दि. 21-8-12

निविदाकार का नाम, पता एवं हस्ताक्षर

(Handwritten signature)

LIST OF FLORA & FAUNA OF KANVARA SAND/MORAM MINING PROJECT

PROPONENT NAME : SOMESH BHARDWAJ

ADDRESS : SOMESH BHARDWAJ

S/O- SHRI OMPRAKASH BHARDWAJ

AMAR : TALKIES

TEHSIL : BANDA

DISTRICT : BANDA(UP)

FLORA OF THE CORE ZONE

Sl.No.	Species	Family	Habit
1	<i>Ageratum conyzoides</i>	Asteraceae	Herb
2	<i>Amaranthus spinosus</i>	Amaranthaceae	Herb
3.✓	<i>Calotropis procera</i>	Asclepiadaceae	Shrub
4	<i>Cannabis sativa</i>	Cannabaceae	Herb
7	<i>Chenopodium album</i>	Chenopodiaceae	Herb
8	<i>Datura innoxia</i>	Solanaceae	Shrub
9	<i>Hydrolea zeylanica</i>	Hydrophyllaceae	Herb
10	<i>Ipomoea carnea</i>	Convolvulaceae	Shrub
13	<i>Dalbergia sissoo</i>	Fabaceae	Tree
14	<i>Bombax ceiba</i>	Bombacaceae	Tree

Note: Trees are near the banks of the river (Periphery of the leased area)

FLORA OF THE BUFFER ZONE

Sl.No.	Species	Family	Habit
1	<i>Alternanthera paronychioides</i>	Amaranthaceae	Herb
2	<i>Alternanthera pungens</i>	Amaranthaceae	Herb
3	<i>Amaranthus spinosus</i>	Amaranthaceae	Herb
4	<i>Colocasia esculenta</i>	Araceae	Herb
5	<i>Ageratum conyzoides</i>	Asteraceae	Herb
6	<i>Grangea maderaspatana</i>	Asteraceae	Herb
7	<i>Parthenium hysterophorus</i>	Asteraceae	Herb
8.✓	<i>Cassia tora</i>	Fabaceae	Herb
9	<i>Cannabis sativa</i>	Cannabaceae	Herb
10	<i>Chenopodium album</i>	Chenopodiaceae	Herb
11	<i>Argemone mexicana</i>	Papaveraceae	Herb
12	<i>Brachiaria ramosa</i>	Poaceae	Herb
13	<i>Cynodon dactylon</i>	Poaceae	Herb
14	<i>Eleusine indica</i>	Poaceae	Herb
15.✓	<i>Eragrostis tenella</i>	Poaceae	Herb
16	<i>Imperata cylindrica</i>	Poaceae	Herb
17	<i>Saccharum spontaneum</i>	Poaceae	Herb
18	<i>Physalis minima</i>	Solanaceae	Herb
19.✓	<i>Calotropis procera</i>	Asclepiadaceae	Shrub
20	<i>Cassia occidentalis</i>	Fabaceae	Shrub
21	<i>Croton bonplandianum</i>	Euphorbiaceae	Shrub

प्रभागीय वनाधिकारी
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22	<i>Abutilon indicum</i>	Malvaceae	Shrub
23	<i>Bougainvillea spectabilis</i>	Nyctaginaceae	Shrub
24	<i>Ziziphus mauritiana</i>	Rhamnaceae	Shrub
25	<i>Datura innoxia</i>	Solanaceae	Shrub
26	<i>Solanum virginianum</i>	Solanaceae	Shrub
27	<i>Lantana camara</i>	Verbenaceae	Shrub
28	<i>Mangifera indica</i>	Anacardiaceae	Tree
29	<i>Polyalthia longifolia</i>	Annonaceae	Tree
30	<i>Ficus racemosa</i>	Moraceae	Tree
31	<i>Cassia fistula</i>	Fabaceae	Tree
32	<i>Ricinus communis</i>	Euphorbiaceae	Tree
33	<i>Albizia lebbek</i>	Fabaceae	Tree
34	<i>Bauhinia acuminata</i>	Fabaceae	Tree
35	<i>Butea monosperma</i>	Fabaceae	Tree
36	<i>Dalbergia sissoo</i>	Fabaceae	Tree
37	<i>Bombax ceiba</i>	Malvaceae	Tree
38	<i>Azadirachta indica</i>	Meliaceae	Tree
39	<i>Melia azadirach</i>	Meliaceae	Tree
40	<i>Lucentia leucocephala</i>	Fabaceae	Tree
41	<i>Bauhinia variegata</i>	Fabaceae	Tree
42	<i>Terminalia bellarica</i>	Combretaceae	Tree
43	<i>Terminalia chebula</i>	Combretaceae	Tree
44	<i>Morus alba</i>	Moraceae	Tree
45	<i>Delonix regia</i>	Fabaceae	Tree
46	<i>Haloptelea integrifolia</i>	Ulmaceae	Tree

Fauna of the Core zone

Sr. No.	Common Name	Scientific Name	Wildlife schedule	IUCN Red List Status
AVIFAUNA				
1	Common Myna	<i>Acridotheres tristis</i>	IV	LC
2	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	IV	VU
3	House Crow	<i>Corvus splendens</i>	V	LC
4	Ashy Drongo	<i>Dicrurus leucophaeus</i>	IV	LC
5	Koel	<i>Eudynamis scolopacea</i>	IV	NA
6	Sparrow	<i>Passer domesticus</i>	IV	LC
MAMMALS				
1	Squirrel	<i>Funambulus pennant</i>	IV	DD
2	Rat	<i>Rattus rattus</i>	V	LC
AMPHIBIANS				
1	Common Indian Toad	<i>Duttaphrynus melanostictus</i>	IV	NA
2	Indian skipper frog	<i>Euphlyctis cyanophlyctis</i>	IV	NA

प्रभागीय वनाधिकारी
 वन प्रभ.ग. बोदा

3	Indian bull frog	<i>Hoplobatrachus tigerinus</i>	IV	NA
FISHES				
1 ✓	Bhangan or Bata	<i>Labeo bata</i>	-	NA
2	Chappera or Pallia	<i>Gudusia chapara</i>	-	DD
3 ✓	Dumra or Dhambra	<i>Labeo rohita</i>	-	NA
4	Pari or Battu	<i>Notopterus notopterus</i>	-	NA
5	Theila	<i>Catla catla</i>	-	NA
6 ✓	mangur	<i>Clarius batrachus</i>	-	

LC: Least Concern, VU: Vulnerable, NA: Not Assessed, DD: Data deficient


Fauna of the Buffer zone

S.No.	Common Name	Scientific name	Wildlife Schedule	IUCN Red Category
MAMMALS				
1 ✓	Squirrel	<i>Funambulus pennant</i>	IV	DD
2 ✓	Rat	<i>Rattus rattus</i>	V	LC
3	Wild boar	<i>Sus scrofa</i>	III	LC
4 ✓	Indian hare	<i>Lepus nigricollis</i>	IV	LC
5 ✓	Porcupine	<i>Hystrix indica</i>	IV	LC
6 ✓	Monkey	<i>Macaca mulata</i>	II	LC
7	Fruit bat	<i>Rousettus leshenaulti</i>	IV	LC
8	Five striped palm squirrel	<i>Funambulus demmanti</i>	IV	LC
9	Common langoor	<i>Presbytis entellus</i>	II	LC
10 ✓	Common mongoose	<i>Herpestes edwardsi</i>	III	LC
AVIFAUNA				
1	Common Myna	<i>Acridotheres tristis</i>	IV	LC
2	King fisher	<i>Halcyon smyrnensis</i>	IV	NA
3	Pond Heron	<i>Ardeola grayii</i>	IV	NA
4 ✓	Blue Rock Pigeon	<i>Columba livia</i>	IV	NA
5 ✓	House Crow	<i>Corvus splendens</i>	V	NA
6	Cuckoo	<i>Cuculus canorus</i>	IV	NA
7	House Sparrow	<i>Passer domesticus</i>	IV	NA
8	Rose ringed Parakeet	<i>Psittacula krameri</i>	IV	NA
9	Pond Heron	<i>Ardeola grayii</i>	IV	NA
10	Common Babbler	<i>Turdoides caudatus</i>	IV	NA
11 ✓	Red vented bulbul	<i>Pychnotus cafer</i>	IV	LC
12	Lesser Pied Kingfisher	<i>Ceryle rudis</i>	IV	LC
13	Wagtail	<i>Montacilla albalboides</i>	IV	LC
14 ✓	Jungle myna	<i>Aeridatheres fulcus</i>	IV	LC
15	Slate headed parakeet	<i>Psittacula himalayana</i>	IV	LC
16	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	IV	VU
17	Ashy Drongo	<i>Dicrurus leucophaeus</i>	IV	LC
18	Koel	<i>Eudynamys scolopacea</i>	IV	NA
REPTILES & AMPHIBIANS				

प्रभागीय वनोत्पिकादी
बाँदा वन प्रभाग, बाँदा

1	Common Toad	<i>Duttaphrynus melanostictus</i>	IV	NA
2	India bull frog	<i>Rana tigrina</i>	IV	DD
3	Indian tree frog	<i>Polypedates maculatus</i>	IV	NA
4	Skipping frog	<i>Bufo stomaticus</i>	IV	NA
5	Garden lizard	<i>Calotes versicolor</i>	IV	NA
6	House lizard	<i>Hemidactylus sp</i>	IV	NA
7	Rat snakes	<i>Ptyas mucosa</i>	II	NA
FISHES				
1	Bhangan or Bata	<i>Labeo bata</i>	-	NA
2	Chappera or Palla	<i>Gudusia chapara</i>	-	DD
3	Dumra or Dhambra	<i>Labeo rohita</i>	-	NA
4	Pari or Battu	<i>Notopterus notopterus</i>	-	NA
5	Theila	<i>Catla catla</i>	-	NA
6	mangur	<i>Clarius batrachus</i>	-	NA

LC: Least Concern, NA: Not Assessed, DD: Data deficient.


 प्रभागीय वनाधिकारी
 बाँदा वन प्रभाग, बाँदा

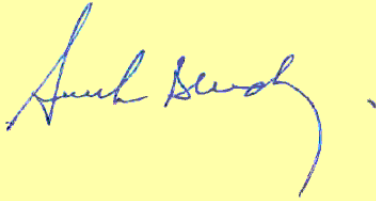
Somesh Bharadwaj

S/o –Shri Omprakash Bharadwaj

Banda,U.P.

TO WHOME SO EVER IT MAY CONCERN

This is regarding confirmation that the compliance of Terms of Reference (TOR) is provided with the cross-referencing of the relevant section/Pages of the Draft EIA Report for Kanvara Sand/Moram Mining Project at village Kanvara, Bhuredi & Chilehata, district Banda, U.P



Somesh Bharadwaj

S/o –Shri Omprakash Bharadwaj

Amar Talkies

Tehsil : Banda,

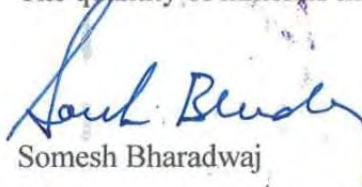
District : Banda (UP)




उत्तर प्रदेश UTTAR PRADESH AFFIDAVIT

73AC 996720

This is to certify that I, Somesh Bharadwaj resident of Amar Talkies, District Banda, U.P has been granted lease of an area of 122.81 ha at Village Kanvara, Bhuredi & Chilehata, Tehsil & District Banda, U.P. on 24-12-2009 for a period of 3 years. Mining was in operation till 30/06/2011. The quantity of minerals mined during this time was 7.1 Lakhs tonnes.


Somesh Bharadwaj
S/o - Shri Omprakash Bharadwaj
Amar Talkies
Tehsil : Banda,
District : Banda (UP)


K. P. Yadav
22/08/2015



AFFIDAVIT

I, the applicant, hereby solemnly affirm and owe for the contents (information And Data) of the EIA/EMP Report of the proposed Kanvara Sand/Moram Mining Project in view of the O.M. No. J-11013/41/2006-IA-II (1) dated: 5th October, 2011 issued by Ministry of Environment and Forest, GoI

(Somesh Bharadwaj)

S/o -Shri Omprakash Bharadwaj
Amar Talkies
Tehsil : Banda,
District : Banda (UP)

Identified
Sugh Ad.
22/08/2015

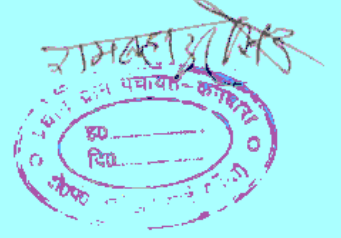
This *श्री. य. व. व. व.* is solemnly affirmed
before me today between the hours of *12* & *1*
by Sri *श्री. य. व. व. व.* & *श्री. य. व. व. व.*
whose true identity *has* been
proved to me.
Received by *श्री. य. व. व. व.*
Notary
Date: *22/08/15*
4284
238 *387* *239*
Kamta Prasad Yadav
Notary, Banda



दिनांक

अनापत्ति प्रमाण पत्र

प्रमाणित किया जाता है कि कंवारा रेत/ मोरम खनन परियोजना ग्राम- कंवारा, भुरेड़ी और चिलेहटा, तहसील बाँदा जिला बाँदा, उत्तर प्रदेश में स्थित है। इस खान में पौधारोपण, धूल नियंत्रण के लिये पानी का छिड़काव और पीने के लिए उपयोग में लाए जाने वाला पानी जो की 5.91 KLD है, ग्राम पंचायत के अधिकार क्षेत्र में स्थित पानी के स्रोत में से किए जाने पर पंचायत समिति को कोई आपत्ति नहीं है।



हस्ताक्षर
(सरपंच)

स्थान:.....



MINE PLAN

AND PROGRESSIVE MINE CLOSURE PLAN
(Submitted under Rule 34 of U.P. MMCR-1963)

FOR
RIVER SAND/MORRUM

AT
VILLAGE BHUREDI/CHILEHATA/KANWARA, TEHSIL BANDA,
DISTRICT-BANDA

AT
GATA NOS. 1123/2, 1131, 1132, 1136, 1137, 1141/2, 1148, 1149,
KHAND - 13 476, 477, 478, 479, 491, 492, 515, 516, 517, 518, 519,
520, 521, 522, 523, 524, 525, 526, 527, 528, 534, 535,
543, 544, 555, 556, 557, 558, 559, 560, 561, 562, 563,
564, 565, 566, 567, 568, 569, 570, 619, 623, 624/553,
638, 639, 540, 641, 642, 643, 644, 645, 646, 647 & 648

AREA 303.46 ACRE [122.81 HA]

LEASE PERIOD—24.12.2009 TO 23.12.2012

(अभिजित कुमार) APPLIED FOR RENEWAL

उपरोक्त खान अधिकारी
भूतत्व एवं खनिकर्म निदेशालय,

APPLICANT/LESSEE

SRI SOMESH BHARDWAJ
S/O SRI OMPRAKASH BHARDWAJ
AMAR TAKIZ, BANDA,
DISTRICT BANDA, U.P.



Directorate of Geology and Mining, U.P.

APPROVED

with / without condition vide letter

No...1578.../MP/15 date 22/12/15

DIRECTOR

PREPARED BY

UMESH PRATAP SINGH CHAUHAN

RQP/DDN/165/2005/A

(VALID UPTO 15.03.2025)

(सतोष कुमार)

निदेशक

भूतत्व एवं खनिकर्म निदेशालय,

लखनऊ-226022

4/366, VIKASH NAGAR, LUCKNOW-226022 ::PHONE 9415195706

Email:ups.chauhan@rediffmail.com

PREPARED ON 19.05.2015

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Ujjwal Chauhan
19/05/2015

LIST OF ANNEXURE

- I CONSENT LETTER FROM APPLICANT
- II MoEF LETTER NO. L-11011/47/2011-IA.II(M) dated 18.05.2012
- III COPY OF RQP CERTIFICATE
- IV COPY OF RENEWAL APPLICATION AND LEASE DEED
- V COPY OF ENVIRONMENT CLEARANCE/RELEVANT PAPERS
- VI COPY OF KHASARA MAP



LIST OF PLATES

- 1. LOCATION PLAN
- 2. KEY PLAN-BUFFER ZONE GOOGLE IMAGE SHOWING 5 KM RADIUS AREA
- 3. SURFACE GEOLOGICAL PLAN
- 4. WORKING PLAN
- 5. ULTIMATE/CONCEPTUAL PLAN

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1.0 INTRODUCTION

Mining is a major contributor (2nd) to the national GDP (4%) occupying about 0.11% of total land area (329 m ha) and providing employment generation to 1.1 million people (4 %) of the country (**Saviour, M.N**)

Mining is essentially a destructive development activity where ecology suffers at the altar of economy. Scientific mining operations accompanied by ecological restoration and regeneration of mined wastelands and judicious use of geological resources, with search for eco-friendly substitutes and alternatives must provide sensational revelation to the impact of mining on human ecosystem.

Sand has become a very important mineral for the expansion of society. Sand is a naturally occurring granular material composed of finely divided rock and mineral particles. River sand is one of the world's most plentiful resources (perhaps as much as 20% of the Earth's crust is sand) and has the ability to replenish itself. River sand is vital for human well being & for sustenance of rivers.

As a resource, sand by definition is 'a loose, incoherent mass of mineral materials and is a product of natural processes.' These processes are the disintegration of rocks and corals under the influence of weathering and abrasion. When sand is freshly formed the particles are usually angular and sharply pointed but



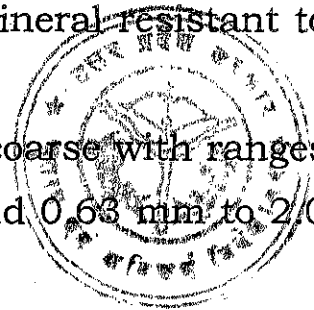
they grow gradually smaller and more rounded as they become constantly worn down by the flow or water.

Sand is an important mineral for our society in protecting the environment, buffer against strong tidal waves and storm, habitat for crustacean species and marine organisms, used for making concrete, filling roads, building sites, brick, making glass, sandpapers, reclamations, and in our tourism industry in beach attractions. Sand also plays an important role in our tourism industry as it is an integral part of our beach attractions. The composition of sand is highly variable, depending on the local rock sources and conditions, but the most common constituent of sand in inland continental settings and non-tropical coastal settings is silica (silicon dioxide, or SiO_2), usually in the form of quartz which because of its chemical inertness and considerable hardness, is the most common mineral resistant to weathering.

ISO 14688 grades sands as fine, medium and coarse with ranges 0.063 mm to 0.2 mm, 0.25 mm to 0.50 mm and 0.63 mm to 2.0 mm respectively.

Mining of Sand is the process of removal of sand and gravel. This practice is now becoming an environmental issue as the demand for sand increases in industry and construction. The role of sand is very vital with regards to the protection of the coastal environment.

Although Sand is required for development of Human being, but at the same time the damages due to sand mining can't be ignored. Hence an environment friendly mining plan has been



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developed to collect the sand from the river beds, without disturbing the environment.

This proposal is being prepared for an area of about **303.46 Acre [122.81 Ha]** in villages **Bhuredi, Chilehata, Kanwara, Tehsil & District Banda, Uttar Pradesh** located in the bank of river Ken (A tributary of Yamuna river). Applicant **Sri Somesh Bhardwaj** intends to mine out the river sand from this area. The applicant approaches us to develop a scientific, environment friendly mine plan to work in this area. His consent is attached as **Annexure-I**.

1.1 NAME & ADDRESS OF APPLICANTS

Sri Somesh Bhardwaj,
S/o Sri Omprakash Bhardwaj,
R/o Amar Takiz, Banda,
District Banda, U.P.



1.2 STATUS OF APPLICANT: Individual

1.3 JUSTIFICATION OF PROJECT

The aim and object to carry on mining operations within the said vicinity of river is well in practice since long years back. Local people used to collect sand for their own requirement. As we aware well that the mineral is being used in construction industry and the industry is developing day by day creating an increased demand of material. This will ensure a constant supply of building materials to the industry as well as create several employments to the local people. Besides the above, mining of minor minerals (Sand, bajri

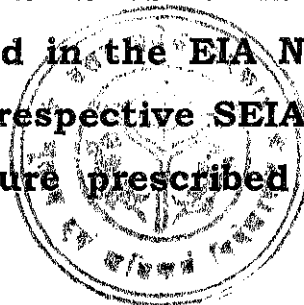
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and boulders in mixed state) is a constant source of revenue generation to the State Government.

1.4 BACKGROUND OF THE PROJECT

Ministry of Environment and Forest, Govt. of India on its order No. L-11011/47/2011-IA.II(M) dated May 18th 2012 (**Enclosed herewith as Annexure II**) states as under:

“In order to ensure compliance of the above referred order of the Hon’ble Supreme Court dated 27.2.2012, it has now been decided that all mining projects of minor minerals including their renewal, irrespective of the size of the lease would henceforth require prior environment clearance. Mining projects with lease area up to less than 50 ha including projects of minor mineral with lease area less than 5 ha would be treated as category ‘B’ as defined in the EIA Notification, 2006 and will be considered by the respective SEIAs notified by MoEF and following the procedure prescribed under EIA Notification, 2006.”



Govt. of Uttar Pradesh, by its notification no. 2216/86-2012-235-2010 dated 23.12.2012 has made mandatory to prepare mine plan for mining of minor mineral including river bed mining of Sand / Morum / Bazari / boulder are found in mixed state in river bed. The mining plan will be approved by director Geology & mining and accordingly the mining will be done as per provision incorporated in Rule 34 of U.P. Minor Mineral Concession Rule 1963, 35th amendment.

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It is noted that submission of an approved Mine Plan has now become mandatory for all the mining projects. Reconstituted committee of the Expert Appraisal Committee for Environmental Appraisal of mining Projects constituted under EIA Notification 2006, states at his various meeting points this clearly.

1.5 Mineral(s) to be mine:

Sand / Morrum

1.6 Name address, registration number of the recognised qualified persons who has prepared the Miing Plan

Sri U.P.S. CHAUHAN
RQP/DDN/165/2005/A
Validity: March 2015
4/366, VIKAS NAGAR,
LUCKNOW-226016
PHONE 9415195706

E-mail :
ups.chauhan@rediffmail.com

Copy of ROP Certificate is
attached as **Annexure -III.**

1.7 Area and date of expiry of lease: **303.46 Acre** lease area was granted to **Sri Somesh Bhardwaj** on 24.12.2009 for a period of 3 years. The lease expires on 23.12.2012. Applicant applied for the renewal of mining lease on 15.05.2012. Copy of renewal application and copy of lease deed is annexed as **Annexure IV.** Obtaining prior Environmental Clearance for extraction of sand/Morrum is under process. MoEF has granted Terms of Reference (ToR) vide letter No. J11015/245/2012-IA.II(M) dated 19th August 2014.. Copy of letter is attached as **Annexure V.**



1.8 Description of the area

An area of about **303.46 Acre (122.81Ha)** was granted in village **Bhuredi, Chilehata & Kanwara**, Tehsil & district Banda, U. P. as **Khand-13 in Gata nos. 1123/2, 1131, 1132, 1136, 1137, 1141/2, 1148, 1149, 476, 477, 478, 479, 491, 492, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 534, 535, 543, 544, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 619, 623, 624/553, 638, 639, 540, 641, 642, 643, 644, 645, 646, 647& 648** to **Sri Somesh Bhardwaj**. Lease was expired on 23.12.2012. Lessee applied for renewal on 15.05.2012. At present there is no mining activity. Lessee **Sri Somesh Bhardwaj** intend to extract river sand/Morrum from the above said area. Khasara Map of the area is attached as **Annexure VI**.

1.8 Basic information of the area

Road: The applied area is situated in the bank of river Ken in villages Bhuredi, chilehata & Kanwara. River Ken flows in zig-zag pattern from south to north near the mining lease. Mining area is demarcated by river Ken in the south, east and north. Village Bhurendi & village Chilehata are in the west of the lease area. Village Kanwara is in the north of the mining lease. The mining area is near to NH 76 (Banda-Mahoba) road and is about 1.5km north from the road. Banda is about 2Km south east from the area. Nearest airport Kanpur is about 107 km in crow fly in north direction from the area.

Drinking water: Hand pumps, wells & bore wells are the main water source for drinking water in nearby areas.

Electricity: All the villages in and around of 5 km radius are electrified.

Education : Primary school is at Bhurendi. Junior High School and Intermediate, Govt. P.G. college is at Banda.

Health: Primary health center is at Banda. Better health facilities are available at Kanpur, Lucknow.

Post & Telegraph: Nearest post office is at Banda. The applied area is well connected with mobile signals.

Bank: Nearest Bank facility is at Banda.

Police Station: The nearest reporting chaukii is at Banda



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CHAPTER—2

CHAPTER—2

2.0 LOCATION AND GENERAL DESCRIPTION

2.1 LOCATION


A) DETAILS OF THE AREA

SL No.	Particulars	Description
1	Lease area	122.81 Ha. (303.46 Acre)
2	Village	Bhuredi , Chilehata & Kanwara
3	Tehsil	Banda
4	District & State	Banda, Uttar Pradesh
5	Name of River	Ken
6	Khasra No	Gata No.s 40-50
7	Toposheet No	63C/6 & 63 C/7
8	Latitude	25° 29' 11.48" N to 25°30'30.90"N
9	Longitude	80° 18' 40.03" E to 80°17'30.31"E

2.2 General

SL No.	Particulars	Description
1	Mineral	River Bed (Minor Mineral) Sand
2	Period of Mining Lease	3 Years (After the Execution of Lease Deed)
3	Category of Land	Govt. Land & Private Land (Non Forest Land)
4	Ownership of Land	Private Individual
5	Approach Road	Un-metalled road of about 3.0 km long.
6	General Ground Level	93 mRL to 95 mRL

Location of Mine is shown in **Plate No. 1**. Key Plan Buffer zone of 5 Km on Google imagery showing in **Plate No.2**. Surface Geological Plan of the area is shown in **Plate No. 3**.


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 M.Sc. Geol., LL.B. (Mumbai)
 Mining & Geology Department
 RQP/1/16/10

3.0 GEOLOGY & RESERVES

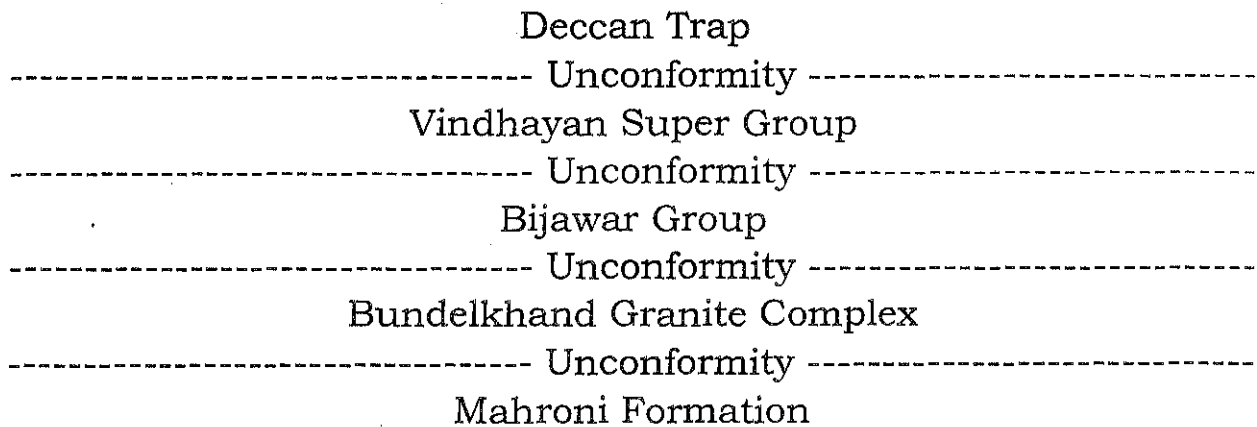
3.1 PHYSIOGRAPHY

The applied lease area has gentle slope towards north. Highest point is at 95mRL in the south corner of the area where as lowest point 93mRL is in the North corner of the area. The physiographic features are shown in **Plate No. 3**.

3.2 REGIONAL GEOLOGY

The geological formation of the region is from Archaeans to recent origin. The crystalline rocks of Achaeans consist of granite, gneiss and quartz reefs. The Vindhyan area is represented by sand stone, lime stone and shale. The rocks are dominant in the region while the unconsolidated formations of recent (Quaternary) consisting of sand, silt and clay occupy northern parts of the region towards the Yamuna confluence. The underlying Archaeans is mostly composed of basal crystalline, mostly granites, popularly known as "Bundel khand Granite" and metamorphic, mostly gneises. These are fractured jointed and weathered. The thickness of weathered zone depends upon the topography, drainages and vegetation cover. The granites are pink to grey colored and area coarse to fine grained. The Granites are normally sloping northerly towards the Yamuna. Apart from, alluviums on the other hand comprise mainly of clays, silt and sand stone mixed with gravel and kankar. These formations have a thickness of about 130 to 150m over the eroded base of Bundel khand granite. The alluvium deposits are mostly found along the river flow area.

The stratigraphy of the Bundel khand granite complex area is as below:



3.3 LOCAL GEOLOGY

Applied area is situated in the bank of river Yamuna River. No soil is present in the area. River sand/Morrums is spread all over the area.

3.4 EXPLORATION

Mining of Sand / Morrums is being done since long time. No specific method of exploration is required as the river borne sediments are deposited all along the river bed and are very well exposed on the surface. Moreover, these sediments are accumulated/replenished every year during rainy season by river waters to almost more than extracted level depending on the intensity of rains on the upstream side. Adequate quantity of sand / Morrums in mixed state reserves is available to meet the market demand.

3.5 METHOD OF ESTIMATION OF RESERVES

River bed mineral reserves have been estimated as per the standard procedures. The area of mining lease and the average thickness of mineral (not more than 3m) is multiplied to get the volume. About



5% mining losses has been considered to get the recoverable quantity.

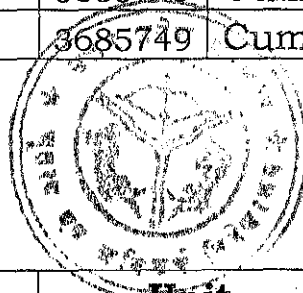
3.6 CLASSIFICATION OF RESERVES

All the quantity estimated as above is considered under proved (111 category under UNFC classification) category.

3.7 GEOLOGICAL RESERVES

Particulars	Unit	
Lease area applied	1228583	Sqm
Average Thickness considered	3	m
Total volume of Mineral	3685749	Cum
Total Geological Reserves	3685749	Cum

The surface Geological Plan is given in **Plate No. 2**



3.8 MINEABLE RESERVES

Particulars	Unit	
Lease area applied	1228583	Sqm
Average Thickness considered	3	m
Total volume of Mineral	3685749	cum
Total Geological Reserves	3685749	cum
Peripheral Strip area & 50m wide barrier zone	130350	sqm
Total Mineable Reserves Considering 95%	3129964	Cum

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CHAPTER—4

4.0 MINING


4.1 MINING (PAST)

The applied lease area has gentle slope towards north direction. Highest point is at 95mRL in south corner of the area where as lowest point 93 mRL is in the North corner of the area. The physiographic features are shown in **Plate No. 3**.

4.2 PROPOSED METHOD OF MINING

Prior to any actual mining being done at a site, it is necessary to remove overburden from the top of the sand formation. Overburden is topsoil or subsoil that is mainly composed of silt, loam, clay, or combinations of the three. Top soil will be kept separate and used on top of the berms once they have reached their final elevation. Finally the berms are seeded and mulched. The berms have multiple purposes; they provide storage for overburden until the mine is reclaimed, they provide a visual barrier between the active mine and roads or adjoining properties, they screen light pollution should the mine be operated after dark, and they act as a noise barrier.

Excavation is typically performed manual means. Hand operated tools like spade, tasla etc will be used to collect the sand. The excavated material may be directly loaded into trucks, dumpers,


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Ministry of Mines
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tippers and tractor trolleys and send to the destination wherever it is required for construction and other purposes. Buffer stockpiles may also be formed by manual means, or by trucks may deposit the sand in a pile and a dozer or rubber-tired loader will push the sand, gradually building a large pile that the trucks drive on top of to deposit more sand.

Transportation of sand from the mine is a process to deliver mined out material to the location where it is going to be used. Collected/mined out sand will manually be loaded into trucks and transported to its destination where the sand will ultimately be used. Sufficient space will be left for loading of trucks.

- Excavation of river bed minerals will commence from the top within the area and commence towards down removing the minerals manually in 0.50m slices. Ultimate depth of a bench will be 1m. Mining will be restricted upto a maximum depth of 3m only.

The entire area does not require excavating at once. About **7.0 Lac MT** production of river sand have been proposed to meet the market requirement.

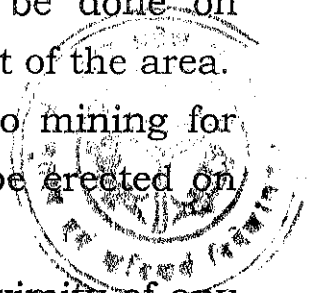
The mineral extraction will be done for a period of 250 days in a year. During this period the areas of mining quarry will be free from submergence. During mining operation the river flow will be away to enable dry pit mining.

- In the lease area the river flow being reduced and sediment load get deposited. During flood season, the area gets replenished with sediments and source of erosion at this location is meager.

The guidelines of the Ministry of Environment and Forests as also of the Geological Survey of India will be followed, the most important is as under:



- Dry pit mining will be followed which means mining at all times will be above the flowing river water level. Mining activity will be immediately stopped when water comes in the mining pits.
- Sand/Morrum will be collected in slices of 1.0m thickness upto a depth of 3m or river water level whichever is less than prescribed 3m depth, maximum depth as per model guidelines of Geological Survey of India and Ministry of Environment & Forest.
- Stream will not be diverted to form inactive channel.
- Mining at the concave side of the river channel will be avoided to prevent bank erosion.
- Mining will be restricted minimum 3m away (inward) from river bank to minimize effect of river bank erosion and to avoid consequent channel migration. Plantation will be done on such area to isolate mining operation from the rest of the area.
- Area of mining lease will be demarcated prior to mining for sustainable development and Pucca Pillars will be erected on ground.
- No mining operations shall be carried out in proximity of any bridge and or embankment.



4.3 PROPOSED RATE OF PRODUCTION AND LIFE OF MINE

Depending upon the market about **7.0 Lac MT** per annum of river sand is proposed to be swiped out from the mining area. This material will be expected to be replenished during the next rainy season. The area has sufficient material for the next 3 years.

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4.4 YEAR WISE MINING & DEVELOPMENT

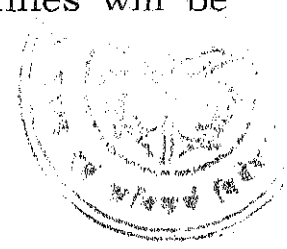
Area does not show any outcrop of soil. The production is generally in the form of sand/Morrum. The general recovery of the river Sand/Morrum is about 95% has been considered as per our past experience.

1st year Mining

Considering the above following quantity of river sand/ morrum will be collected from the river bed.

Total area (Sqm) considered during the year for mining	Average Depth in m.	ROM mineral in cum	Saleable Qty in cum (95%)	Qty of Soil in cum
136453	3	409359	388891	Nil

The Working Plan is shown in **Plate No. 4**. Tonnage factor of 1.8 has been considered. Thus, total Saleable Qty in Tonnes will be **7,00,003** Tonnes.



2nd Year Mining

As mentioned above that the mined out area will be replenished during the monsoon season and the mineral will be filled back over the mined out pit. Planning for 2nd year mining is as below:

Total area (Sqm) considered during the year for mining	Average Depth in m.	ROM mineral in cum	Saleable Qty in cum (95%)	Qty of Soil in cum
136453	3	409359	388891	Nil

The Working Plan is shown in **Plate No. 4**. Tonnage factor of 1.8 has been considered. Thus, total Saleable Qty in Tonnes will be **7,00,003** Tonnes.

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3rd Year Mining

As mentioned above that the mined out area will be replenished during the monsoon season and the mineral will be filled back over the mined out pit. Planning for 3rd year mining is as below:

Total area (Sqm) considered during the year for mining	Average Depth in m.	ROM mineral in cum	Saleable Qty in cum (95%)	Qty of Soil in cum
136453	3	409359	388891	Nil

The Working Plan is shown in **Plate No. 4**. Tonnage factor of 1.8 has been considered. Thus, total Saleable Qty in Tonnes will be **7,00,003** Tonnes.

4.5 CONCEPTUAL MINE PLAN AND LIFE OF MINE

7.5m wide strip all along the lease boundary as a statutory condition has been left. No sand will be collected from the proximity of any bridge/embankment. Collection of sand is restricted up to a maximum depth of 3m. River/stream will not be diverted in any case. No mining is proposed during rainy season. A small quantity of material about **2947** MT per day ROM has been proposed to collect during the course of mining. This will be replenished during the next rainy season. Area has sufficient material for the next coming 3 years. The ultimate/conceptual plan is shown in **Plate No. 5**.



5.0 BLASTING

This is an open cast manual mine. No mining machinery is used to collect the river sand. Sand/Morrum is a loose material. No drilling and blasting is required to undertake mining of riverbed minerals, which consists of river sand/ morrum.

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CHAPTER—6

6.0 MINE DRAINAGE

The present mining area is situated in the bank of river ken a tributary of river Yamunaji. Mining work will not be undertaken during rainy season. The main river/stream will not be diverted in any case.

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7.0 DISPOSAL OF WASTE

No soil cover is present. All the material collected from the mine is saleable.

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8.0 USE OF MINERAL

Sand has become a very important mineral for the expansion of society. Sand is a naturally occurring granular material composed of finely divided rock and mineral particles. River sand is one of the world's most plentiful resources (perhaps as much as 20% of the Earth's crust is sand) and has the ability to replenish itself. River sand is vital for human well being & for sustenance of rivers.

Mineral excavated from mine is directly sold to market. Material is used in construction industry, infrastructure, making concrete, filling roads, building sites, brick making, reclamation etc.



9.0 MINERAL BENEFICIATION

There is no mineral beneficiation in river sand/morrum that is why no mineral beneficiation is involved within the lease area. The mined out mineral Sand/Morrum is directly saleable to industries, construction agencies and private individuals as per requirement

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10.0 TRANSPORT

Trucks, Dumpers, Tipper and Tractor trolleys are usually used to transport the material away from mine. About **2947** cum ROM per day production (considering 250 working days) has been planned to collect from the mine. About 147 trucks (20 tone capacity) will be engaged to perform the task. Required numbers of hired trucks from registered transporters will perform the task.

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CHAPTER—11

11.0 SITE SERVICES

Working Office: Temporary working office will be maintained at site. This will be a temporary structure and can easily shifted one side to another side as & when required. Safe drinking water will be kept in covered buckets / clay pitcher and will be provided to mine workers.

Rest Shelter: A temporary structure as a rest shelter to labours will be provided to the workers near mine site.

Primary Health/First Aid: First aid box with principal medicine will be kept at mine site to facilitate the first aid treatment to the workers.

Protective Measures: Shoes and helmet will be provided to all the workers during mining. Regular sprinkling will be done to check the dust pollution. Ear Plug & dust mask will be provided to the workers for their safety measures.

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12.0 EMPLOYEMENT POTENTIAL

Following direct employment will be generated in this project.

1 Certified Mines Foreman	1
2 Supervisor	3
3 <u>Skilled/unskilled worker</u>	<u>246</u>
Total	350

This project will generate about 500 indirect employments. Truck operators, Puncture-repair works, Dhabas etc. will also get indirect employments.



13.0 ENVIRONMENT MANAGEMENT PLAN

9.1 BASE LINE INFORMATION

Land use/Land Cover

Existing land use of the area is barren land.

Water Regime

Surface Water: Lease area is in the bank of river Ken (a tributary of river Yamunaji), which is a perennial water body. River Yamuna collects with other rivers like Ken, Betwa ultimately merge with river Ganga.

Ground Water: Water level in wells varies 45-50m bgl. However, it varies 0-5 m during monsoon season.

Flora & Fauna:

Top soil layer is not present hence the area devoid off any kind of vegetation. Infact, this is a river bank of river Yamuna where mineral (river sand/Morrum) is spread over the area. Tree species like pipal, mango, Neem, Ber, Babool etc are common in nearby areas. Shurbs like Kaner, Madar, Dhatura, Makoi, Munj are a few common species.

Amphibians and reptiles are common in such type of habitat. Species of fishes like Indian Rohu are also common in river water.

Climate

Temperature: Maximum temperature approx 47-48°C during the summer season in the month of May-June and minimum temperature 7-8°C during the December- January.

Rain Fall: Maximum rain fall in the month of July August is around 200-225mm.



Social Environment:

Peoples, mainly in this area belong to Hindu community.

Occupation

The main occupation in the area is agricultural. Teaching, small business, mining is the other main occupations in nearby villagers.

Drinking Water:

Hand pumps, wells & bore wells are the main water source for drinking water in nearby areas.

Social Building & Historical Monuments:

No such building/monument is located within 2 km periphery of this mine. Panchayat Ghar is common in the surrounding villages.

Impacts & Mitigation

The possible impacts and their mitigation are described ahead:

Sl. No.	Impacts	Mitigation
1	Land use / Land cover	Change in topography due to mining is always a negative impact leaving ugly pits. This river bed extraction project does not have any such type of impacts. River sand collected will be replenished during the coming rainy season.
2	Flora and Fauna	As stated earlier the core zone of activity is barren. Any kind of vegetation is not seen on the activity area. Therefore no effect on floral community is anticipated. Mining or Collection of sand is being proposed in a small piece of land. No major

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		impact is being anticipated in core zone.
3	Air Pollution	During the collection of river sand dust particle will be generated. Air pollution will also increase due increased vehicular activity. Water sprinkling will be done at dust generating places. Masks will be provided to workers at work place.
4	Noise Pollution	Increased vehicular traffic is the main source of Noise Pollution. There will be no blasting activity. Collection of sand will be done only day hours. Earmuffs will be provided to workers of loading points.
5	Rehabilitation and Resettlement	The activity zone is very small. No migration will takes place. Therefore, there is no R & R Plan.

Remedial measures suggested for this mining (if any) is as below:

Activity	Probable Impact	Remedial Measure suggested
Drilling/Blasting	N.A	
Loading	Generation of Particulate Matter and noise	For Particulate Matter Regular sprinkling in haul roads & work site.
Transportation	Generation of Particulate Matter and noise	Dust collection system will be adopted wherever necessary

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Overall

	<p>Change in Land-Use — The land use is mainly rocky barren. Ultimate land-use will be a water reservoir and part of rocky barren area will be developed as fields for agriculture.</p>	<p>For socioeconomic status A comprehensive Rural Development Programme for surrounding community, besides direct and indirect employment</p>
	<p>Loss of vegetation — The vegetation is sketchy, The plantation to be undertaken will add more than removal</p>	<p>For Loss of Vegetation Massive Plantation in the surrounding area in consent with community, besides, development of a vegetative barrier.</p>
	<p>Change in water balance — The water table is deep (occurs as pocket) and not likely to interfere with mining. The ultimate land-use, a water reservoir will add to base flow</p>	<p>For Water Contamination •Toe retaining walls along the dumps to check washouts •Check dams in course of out going rain water or Water harvesting pits</p>
	<p>Contamination of surface water — The granite being an inert rock, the water passing through it will not get any adverse effect.</p>	

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Environment Management

Solid Waste management

The applied area is in the bank of river Yamuna. The area is devoid of top soil layer. No solid waste is generated during the course of mining/collection of sand. All the material collected from the proposed mine is saleable.

Municipal Waste:

All the labours engaged in activity are in nearby villages. Thus the municipal waste generated is minimal. Mobile toilet will be provided if required.

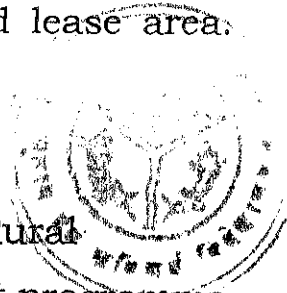
Hazards Waste Management:

The activity is limited to collect river sand from the banks of river and dispatch to buyers. Domestic hand tools will be implied to perform the activity. Trucks used in transportation will be hired from outside. Required Diesel will be filled from the public outlets. No washing activity will be done within the proposed lease area. Therefore, no such waste will be generated.

Corporate Social Responsibility

Lessee/applicant propose to develop a comprehensive Rural Development Programme through a wide spread contact programme using FGDs and PRAs. The Rural Development plan will include —

- ❖ Enlistment of rural poor of the nearby villages by survey
- ❖ Available Resources within the area
- ❖ Assessment of skills, if any, available
- ❖ Study of the self employment programme already running in the area



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- ❖ Identification of gaps in the programmes
- ❖ Development of schemes for bridging the gaps
- ❖ Study will also be conducted for dove-tailing with running programmes

Besides above, a comprehensive afforestation programme will be decided in consent with community. Planting in pits prepared well in advance of planting is a common in practice. Pits of about 0.5m x 0.5m will be dug before the onset of monsoon. The distance between two pits will be kept about 3.0m. Adding a 3- to 4-inch layer of organic mulch on the soil surface around the plant will ensure a healthy growth of plant. Tree species like pipal, mango, Neem, Ber, Babool etc and shrubs like Kaner, Madar, Dhatura, Makoi, Munj etc will be preferred to plant.

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14.0 CONCLUSION

This mining area is small and in the close to the vicinity of river. Infect river sand/Morrum will be collected from the bank of river. Mostly local peoples are employed in this activity. There will be no adverse affect of this activity on the river flow. Instead excavation of river sand is necessary to avoid flooding in monsoon in nearby areas.

Sand has become a very important mineral for the expansion of society. Sand is a naturally occurring granular material composed of finely divided rock and mineral particles. River sand is one of the world's most plentiful resources (perhaps as much as 20% of the Earth's crust is sand) and has the ability to replenish itself. River sand is vital for human well being & for sustenance of rivers.

Besides to generate a number of direct employments, indirect employment will also generated in this area by this activity. This is also a source to generate revenue to the Government.


It can be concluded from the above facts that the mining/collection of sand from this area will not have any adverse impacts but would help in improving the socioeconomic condition of the surround villages. **Hence this mining plan may kindly be approved at earliest.**



PROGRESSIVE MINE CLOSURE PLAN

1. Introduction:

- (a) **Name of Applicant:** Sri Somesh Bhardwaj,
S/o Sri Omprakash Bhardwaj,
R/o Amar Takiz, Banda,
District Banda, U.P.
- (b) **Status of Lessee:** Private Individual
- (c) **Location:** The area is situated at gata nos. Khand-13 in Gata nos. 1123/2, 1131, 1132, 1136, 1137, 1141/2, 1148, 1149, 476, 477, 478, 479, 491, 492, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 534, 535, 543, 544, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 619, 623, 624/553, 638, 639, 540, 641, 642, 643, 644, 645, 646, 647 & 648 in the village Sadi Madanpur of Banda Tehsil of district Banda. The site is shown in **Plate No.1.**
- d) **Extent of Lease area:** **122.81 Ha. OR 303.46 Acre**
- e) **Type of lease area:** The land applied for mining lease is mainly barren/grazing land.
- f) **Present land use pattern:** The area is situated in the bank of river. Existing land-use within Leasehold can be categorized as grazing land.
- i) **Method of mining and mineral processing:**
No mining is being carried at present. Area shows natural topography. Mining pits if any during past year due to mining activity is replenished by the river during monsoon.
- 1.1 Reasons for Closure:**
The progressive mine closure plan is being submitted, under amended Rule 23 (B) MCDR 1988 & 34 of amended rules of UP MMCR 1963. **No premature closure is anticipated.**



1.2 Statutory Obligations:

As per rule 23 B of MCDR 1988 & 34 of amended rules of UP MMCR 1963, for every fresh grant of mining lease a progressive mine closure plan is required to be submitted in compliance of the aforesaid rule of MCDR 1988, the progressive mine closure plan is being in accordance with the guidelines issued by CCOM vide circular no. 14/2003 & 19/2003.

1.3 Closure plan preparation:

a). Name and address of the Applicant:

Sri Sri Somesh Bhardwaj,
S/o Sri Omprakash Bhardwaj,
R/o Amar Takiz, Banda.

b). Name, address & Registration No of R.Q.P.:

Sri Umesh Pratap Singh Chauhan
4/366 Vikash Nagar, Lucknow-226022
E-mail ID: ups.chauhan@redifmail.com
Registration No. RQP/DDN/165/2005/A
Valid upto 15.03.2025

c). Name of the executing agency:

The lessee himself shall execute the provisions of mine closure plan.

2.0 Mine Description:

2.1 Geology:

Topography

The applied lease area has gentle slope towards north. Highest point is at 95mRL in the south corner of the area where as lowest point 93mRL is in the North corner of the area. The physiographic features are shown in

Plate No. 3.

2.2 Geology

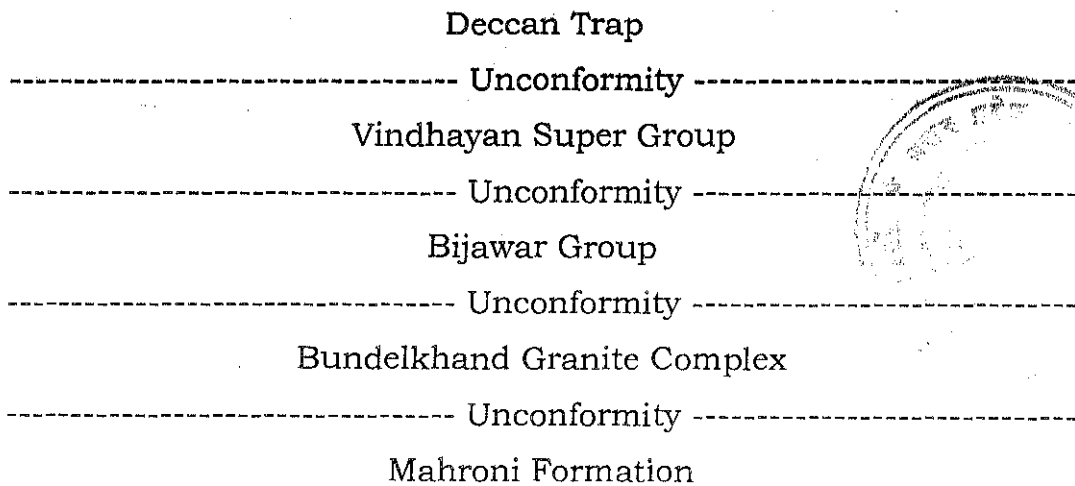
Regional Geology-

The geological formation of the region is from Archaeans to recent origin. The crystalline rocks of Achaeans consist of granite, gneiss and quartz reefs. The Vindhyan area is represented by sand stone, lime stone and shale. The rocks are dominant in the region while the unconsolidated formations of recent (Quaternary) consisting of sand, silt and clay occupy



northern parts of the region towards the Yamuna confluence. The underlying Archaeans is mostly composed of basal crystalline, mostly granites, popularly known as "Bundel khand Granite" and metamorphic, mostly gneises. These are fractured jointed and weathered. The thickness of weathered zone depends upon the topography, drainages and vegetation cover. The granites are pink to grey colored and area coarse to fine grained. The Granites are normally sloping northerly towards the Yamuna. Apart from, alluviums on the other hand comprise mainly of clays, silt and sand stone mixed with gravel and kankar. These formations have a thickness of about 130 to 150m over the eroded base of Bundel khand granite. The alluvium deposits are mostly found along the river flow area.

The stratigraphy of the Bundel khand granite complex area is as below:



LOCAL GEOLOGY

Applied area is situated in the bank of Ken River. No soil is present in the area. River sand/Morrums is spread all over the area.

EXPLORATION

Mining of Sand / Morrums is being done since long time. No specific method of exploration is required as the river borne sediments are deposited all along the river bed and are very well exposed on the surface. Moreover, these sediments are accumulated/replenished every year during rainy season by river waters to almost more than extracted level depending on the intensity of rains on the upstream side. Adequate quantity of

[Handwritten signature]

sand/Morrum in mixed state reserves is available to meet the market demand.

METHOD OF ESTIMATION OF RESERVES

River bed mineral reserves have been estimated as per the standard procedures. The area of mining lease and the average thickness of mineral (not more than 3m) is multiplied to get the volume. About 5% mining losses has been considered to get the recoverable quantity.

CLASSIFICATION OF RESERVES

All the quantity estimated as above is considered under proved (111 category under UNFC classification) category.

GEOLOGICAL RESERVES

Particulars	Unit	
Lease area applied	1228583	Sqm
Average Thickness considered	3	m
Total volume of Mineral	3685749	Cum
Total Geological Reserves	3685749	Cum

The surface Geological Plan is given in **Plate No. 2**

MINEABLE RESERVES

Particulars	Unit	
Lease area applied	1228583	Sqm
Average Thickness considered	3	m
Total volume of Mineral	3685749	cum
Total Geological Reserves	3685749	cum
Peripheral Strip area & 50m wide barrier zone	130350	sqm
Total Mineable Reserves Considering 95%	3129964	Cum

YLL

2.3. Proposed Mining Method:

The guidelines of the Ministry of Environment and Forests and also of the Geological Survey of India will be followed. The most important is as under:

- Dry pit mining will be followed which means mining at all times will be above the flowing river water level. Mining activity will be immediately stopped when water comes in the mining pits.
- Sand/Morrum will be collected in slices of 1.0m thickness upto a depth of 3m or river water level whichever is less than prescribed 3m depth, maximum depth as per model guidelines of Geological Survey of India and Ministry of Environment & Forest.
- Stream will not be diverted to form inactive channel.
- Mining at the concave side of the river channel will be avoided to prevent bank erosion.
- Mining will be restricted minimum 3m away (inward) from river bank to minimize effect of river bank erosion and to avoid consequent channel migration. Plantation will be done on such area to isolate mining operation from the rest of the area.
- Area of mining lease will be demarcated prior to mining for sustainable development and Pucca Pillars will be erected on ground.
- No mining operations shall be carried out in proximity of any bridge and or embankment.

3.0 Review of implementation of mining plan/scheme of mining including next five years progressive closure plan up to the final closure of mine:

No significant activity was taken-up during last 5 years in connection with mining and allied activities.

The activity proposed during the three year plan period is summarized as below:

Sl No.	Activity	Particulars
1	Exploration & Mine Development	At present there is no mining. About 13.62 ha will be exploited to get the required production during 1 st year.
2	Disposal of Solid Waste	All the quantity of mineral has ready market. There is no solid waste during mining.
3	Reclamation & rehabilitation	Reclamation & rehabilitation activity is limited in the close vicinity of mine by

4/11
J

		plantation in the haul road, village plantation with the consent of Surpanch and villagers.
4	Control of Dust	Sprinkling is proposed to reduce the dust generated during mining and allied activity.
5	Noise & Ground Vibration	Green barrier developed all along the roads will help to keep the noise within permissible limits.
6	Afforestation	Plantation will be done in the haul roads, village plantation will be done with the consent of Surpanch and villagers.

4.0 Closure Plan:

4.1. Mined out land:

No proposal can be given for concurrent back-filling. Further, mined out pits will be replenished every by the river.

4.2. Water Quality Management:

Mining activity (collecting sand) will be done in the bank of river Yamuna.



4.3 Air Quality Management:

- Mining in river sand (collection of sand from a river bed) is done in the bank of a river. The material is already wet. Thus, does not increase much air pollution.
- Water sprinkling on mine roads will regularly be undertaken to control dust during transportation

4.4 Waste Management:

All the material excavated from mine has a ready market. Therefore, there will be no waste stacks.

4.5 Top Soil Management:

No top soil is present.

yu

4.6 Tailing Dam Management:

No processing of mineral is proposed in the plan. Hence, no tailing dam is proposed.

4.7. Infrastructure:

As on date no infrastructure facilities like aerial ropeway, conveyor belts, power lines, building & structures, water treatment plant, transport & water supply sources are present within the area. Therefore, at present there is no question of utilization.

4.8 Disposal of Mining Machinery:

No mining machinery is used in the collection of river sand. It will be a manual mine. Truck/Vehicle will be hired from the market. Hand tools will be used to collect the sand.

4.9. Safety and Security:

Presently area has been granted for 3 years period. Mines out pits will naturally replenished every year by the river

4.10. Disaster Management and Risk Assessment:

Disaster Management plan is a comprehensive and structured system for ensuring the prevention of risks / disasters involved. The proposed mining is open cast manual mine. In an open cast mine a major emergency in a mine is one that may cause serious injury or loss of life to the workers engaged in the mining and allied operations. Therefore, the first action under the disaster management is the identification of risks involved and measures to counter them. From this risk assessment the identified hazards in proposed mine may be as below:

- i). Use of explosives and the blasting operation
- ii). Slope Failures in open pit or fall of machinery.
- iii). Road Accidents

Each parameter is discussed below:

- i). Use of explosive and the blasting operation:



No explosive is proposed to be used in the mining activity.

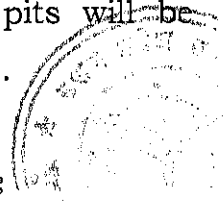
ii). Slope failures/ Fall of machinery:

No machinery is being proposed to be used in the collection of sand.

iii). Road Accidents:

A code of traffic management will be developed within 6 months of operations and will be strictly adhered. Further, Regular capacity building of drivers and spot boys will be under taken of safety aspects during transport.

It is stated earlier that ground water table is quite below the working levels. However, the rain water accumulated in the pits will be pumped out. Problem of inundation of pit is not foreseen.



4.11 Care and Maintenance during Temporary Discontinuance:

At the time of temporary discontinuance of mine, notice (as per rule 24 of MCDR 1988 & Reg. 6 of MMR 1961) shall be sent to IBM and mines safety Authorities. Notices shall be accompanied as per Rule 24 of MCDR 1988, vide form No. D-1. All precautionary steps shall be taken into account in respect of care & maintenance. Further, all access to pit will be properly secured. A joint committee with villagers will be formed to monitor the safety situation of the temporary discontinued mine. The committee will visit periodically (at least once in every month).

5.0 Economic Repercussions of Closure of mine and manpower retrenchments:

The land used of the area for mining is grazing land. At present, it is not used for any purpose. In mining activity about 277 persons will get direct employment besides, more than 500 indirect employments.

6.0 Time Scheduling for Reclamation & Rehabilitation:

No reclamation or rehabilitation activity is proposed.

7.0 Abandonment Cost:

The tentative cost for implementing the protective and rehabilitation measures propose in the mining activity is limited.

8.0 Any other information:

The lessee also intends to spend some amount towards community service. The figures are tentative and are subject to generation of profit. Around of 5 % of the profit will be diverted towards this activity.

9.0 Financial Assurance:

The financial assurance has been calculated on the basis of following parameters:

Activity	Area used during as on date (Hec.)	Area used during Plan Period (Hec.)	Rate of Financial Assurance in Rs./acre	Total Amount in Rs.
Mining	Nil	13.64	15000	5,05,350
Storage and reclamation of soil	Nil	Nil		
Infrastructure	Nil	Nil		
Total		13.64		5,05,350

Area considered for Financial Assurance: 22.0ha or 33.69 Acre
The amount of Financial Assurance: Rs. 5,05,350/-
(Rupees Five Lakh Five Thousand three Hundred Fifty Only)

According to rule 34 of amended rules of UP MMCR 1963, the minimum amount as a financial assurance is Rs. 2 lakh.

Thus the applicant shall submit a financial assurance of Rs. 5.0535 Lakh as applicable to the district officer or the officer authorized by the State Government in this behalf.

10.0 Certificate:

Given separately & enclosed.

11.0 Plans and Sections:

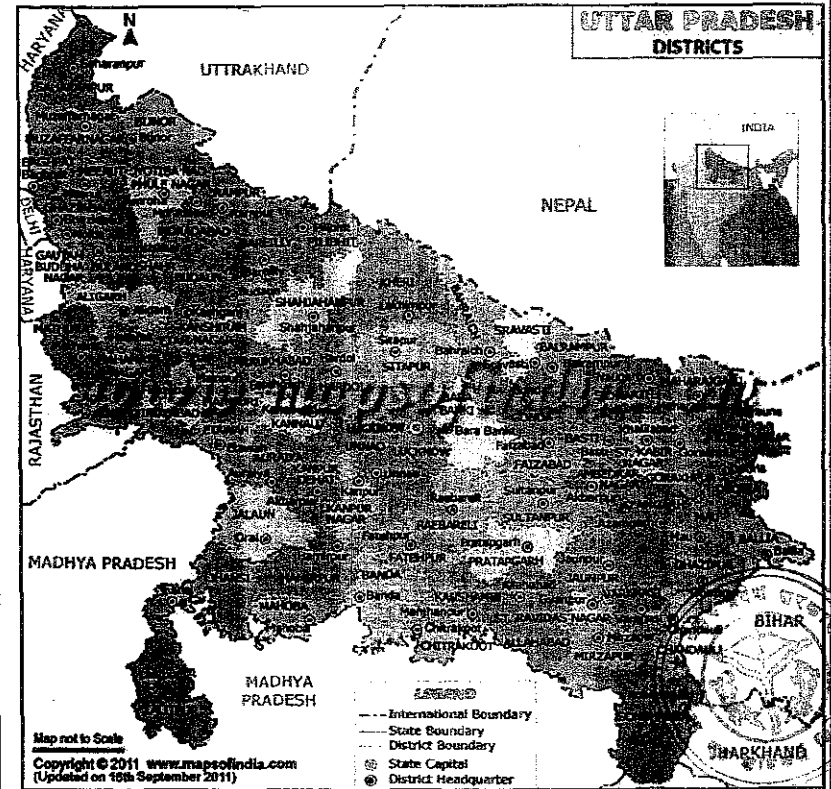
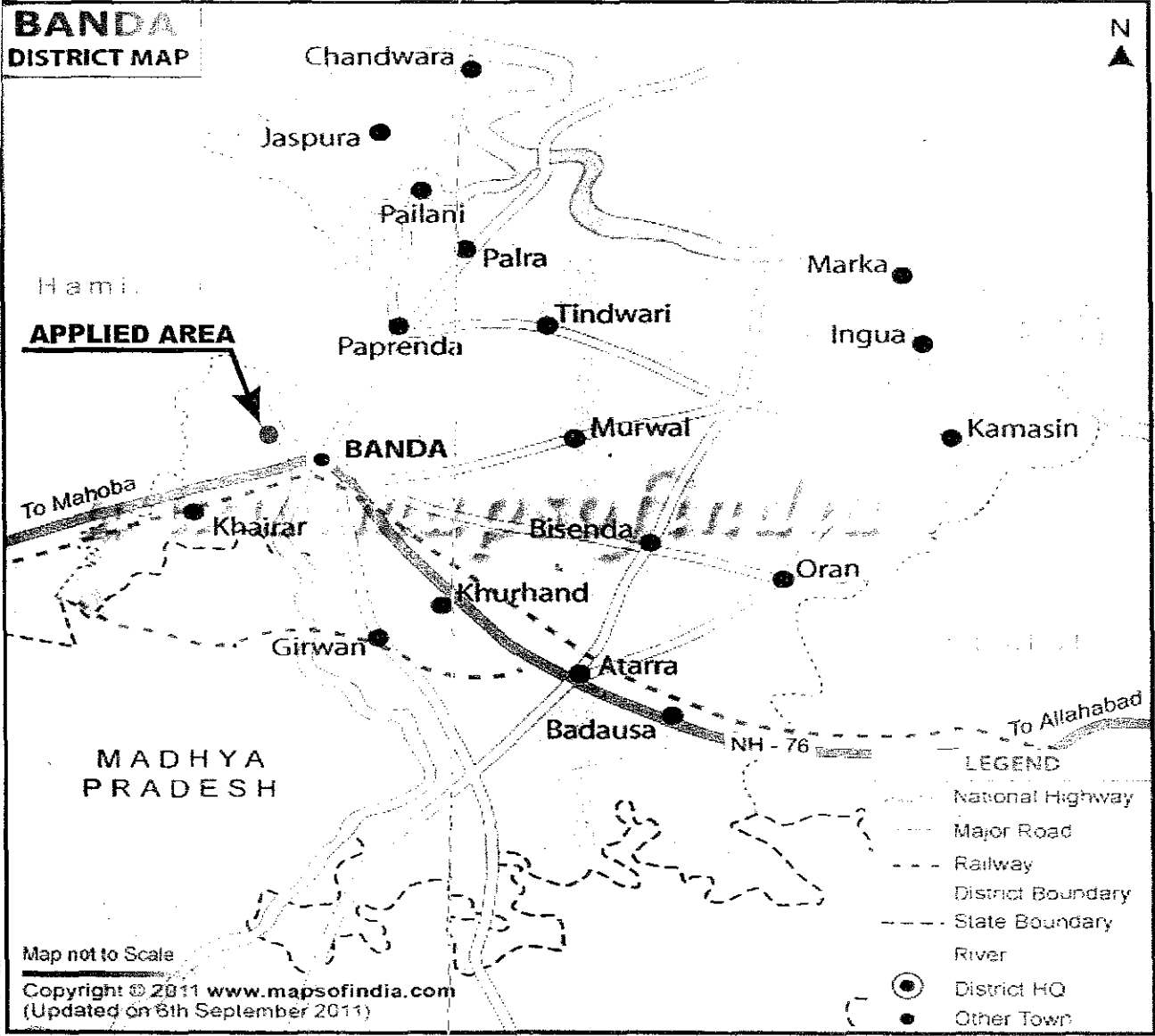
All the plans and sections are enclosed with the Plan.

Date: 19-05-2015

Place: Lucknow

eyechan
19/05/2015

BANDA DISTRICT MAP



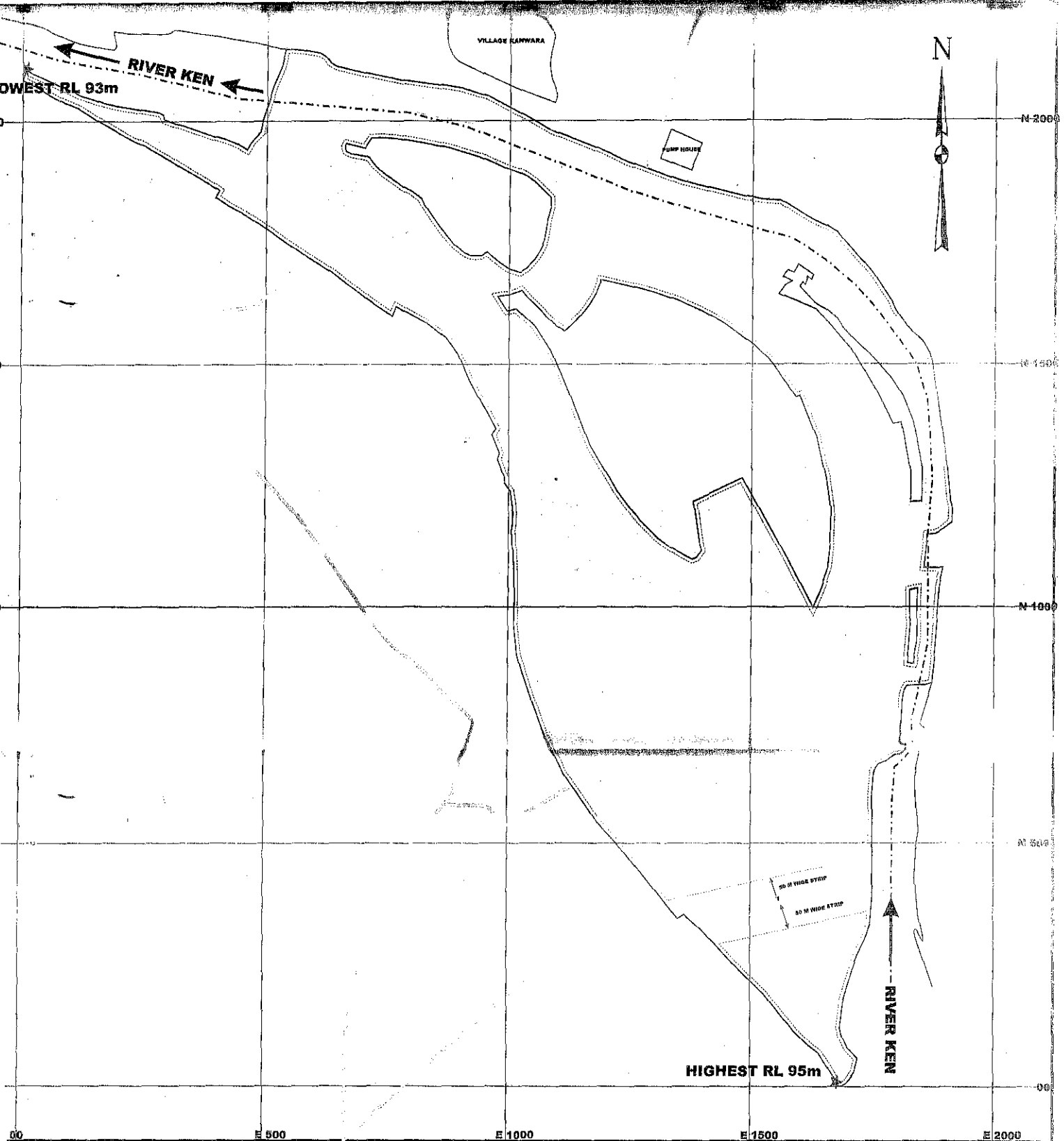
**SRI SOMESH BHARDWAJ
KANWARA, BHUREDI & CHILEHATA
TEHSIL & DISTRICT BANDA
[AREA 303.46 ACRE]**

LOCATION PLAN

SCALE As shown PLATE NO. 1

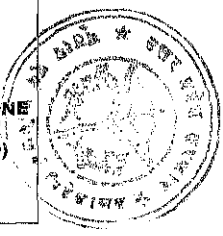
M.Sc. (Geography)

5KM RADIUS AREA GOOGLE IMAGE SHOWING MINING LEASE



INDEX

	LEASE BOUNDARY
	CONTOUR
	RIVER
	ROAD
	HIGHEST RL
	LOWEST RL
	50M WIDE BARRIER ZONE
	MINERAL (RIVER SAND)
	7.5 M WIDE STRIP



SRI SOMESH BHARDWAJ
KANWARA, BHUREDI & CHILEHATA
TEHSIL & DISTRICT BANDA
[AREA 303.46 ACRE]

SURFACE-GEOLOGICAL PLAN

SCALE 1:1000	PLATE NO. 3
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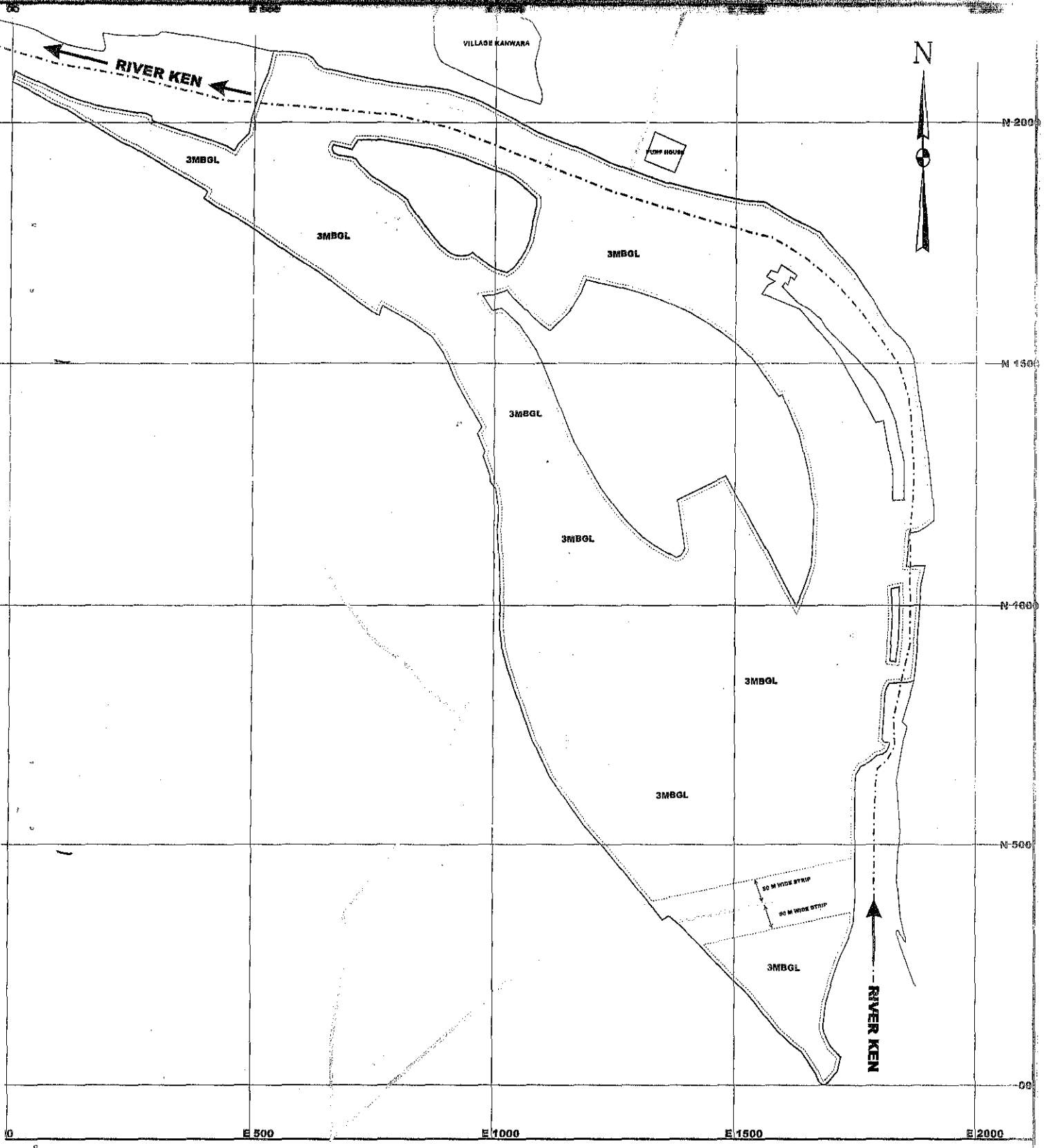


INDEX	
	LEASE BOUNDARY
	CONTOUR
	RIVER
	ROAD
	ADVANCEMENT ARROW
	WORKING PIT
	50M WIDE BARRIER ZONE
	MINERAL (RIVER SAND)
	7.5 M WIDE STRIP



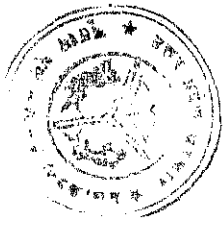
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 SRI SOMESH BHARDWAJ
 (SRI SOMESH BHARDWAJ, A.R.O.P.F.A.E.)
 Mining & Environment Consultant
 REG. NO. CDN/165/2005/A

SRI SOMESH BHARDWAJ KANWARA, BHUREDI & CHILEHATA TEHSIL & DISTRICT BANDA [AREA 303.46 ACRE]	
WORKING PLAN	
SCALE 1:1000	PLATE NO. 4



INDEX

	LEASE BOUNDARY
	CONTOUR
	RIVER
	ROAD
	3M BGL
	50M WIDE BARRIER ZONE
	MINERAL (RIVER SAND)
	7.5 M WIDE STRIP



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**SRI SOMESH BHARDWAJ
KANWARA, BHUREDI & CHILEHATA
TEHSIL & DISTRICT BANDA
[AREA 303.46 ACRE]**

ULTIMATE PIT PLAN
SCALE 1:1000 PLATE NO. 5

CONSENT LETTER FROM APPLICANT

An area of about 122.81ha [303.46 Acre] has been granted for the extraction of river sand/morrum in village Bhuredi/Chilehata/Kanwara, Tehsil Banda in District Banda, U.P. under U.P. minor mineral concession rule 1963. The mine plan in respect of above area has been prepared by Sri U.P.S. Chauhan, R.Q.P., Registration No. RQP/DDN/165/2005/A.

I request to make further correspondence regarding the modification in mining plan with the said recognized person on his following address:

Sri U.P.S. Chauhan,

RQP/DDN/165/2005/A

Validity: November 2025

4/366, VIKASH NAGAR,

LUCKNOW-226022

PHONE 9415195706

E-mail : ups.chauhan@rediffmail.com



I hereby undertake that all the modifications so made in mine plan by the recognized person may be deemed to have been made with my knowledge and consent and shall be acceptable to me and binding on me in all respect. I have understood the content of this mine plan and agree to implement the same.

Date :

Place:

[SOMESH BHARDWAJ]

Annexure-II

No. L-11011/47/2011-IA.II(M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110003.
Telefax: 24362434

Dated the 18th May, 2012

OFFICE MEMORANDUM

Sub: Order of Hon'ble Supreme Court dated 27.2.2012 in I.A. no. 12-13 of 2011 in SLP (C) no. 19628-19629 of 2009 in the matter of Deepak Kumar etc. Vs State of Haryana and Ors. - Implementation thereof - Regarding.

Reference is invited to the above mentioned order of the Hon'ble Supreme Court directing Inter-alia as under:

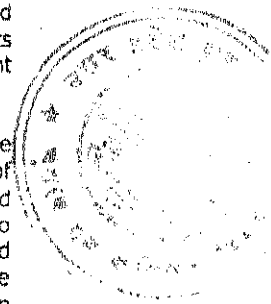
"We in the meanwhile, order that leases of minor mineral including their renewal for an area of less than 5 ha be granted by the States / UTs only after getting environmental clearance from the MoEF."

2. The Environment Impact Assessment (EIA) Notification, 2006, as amended, requires mining projects (new projects, expansion or modernization of existing projects as also at the stage of renewal of mine lease) with lease area of 5 ha and above, irrespective of the mineral (major or minor) to obtain prior environment clearance under the provisions thereof. Mining projects with lease area of 5 ha and above and less than 50 ha are categorized as category 'B' whereas projects with lease area of 50 ha and above are categorized as category 'A'. The category 'A' projects are considered at the central level in the Ministry of Environment & Forests while category 'B' projects are considered by the respective State/UT Level Environment Impact Assessment Authority, notified by MoEF under the EIA Notification, 2006.

3. In order to ensure compliance of the above referred order of the Hon'ble Supreme Court dated 27.2.2012, it has now been decided that all mining projects of minor minerals including their renewal, irrespective of the size of the lease would henceforth require prior environment clearance. Mining projects with lease area up to less than 50 ha including projects of minor mineral with lease area less than 5 ha would be treated as category 'B' as defined in the EIA Notification, 2006 and will be considered by the respective SEIAAs notified by MoEF and following the procedure prescribed under EIA Notification, 2006.

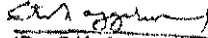
4. Further, the Hon'ble Supreme Court in its order dated 16.4.2012 in the above mentioned matter and the linked applications has observed as under:

"All the same, liberty is granted to the applicants before us to approach the Ministry of Environment and Forests for permission to carry on mining below five hectares and in the event of which Ministry will dispose of all the applications within ten days from the date of receipt of the applications in accordance with law."



Accordingly, the respective SEIAAs in dealing with the applications of the applicants referred to in the above mentioned order shall ensure that the directions of the Hon'ble Supreme Court are effectively complied with and the applications of such applicants are disposed of within the time limit prescribed by the Hon'ble Court in accordance with law.

This issues with the approval of the Competent Authority.


(Dr. S.K. Aggarwal)
Director

To

1. The Secretary, Ministry of Mines, Shastri Bhawan, New Delhi.
2. The Chief Secretaries of all the States / UTs
3. Chairpersons / Member Secretaries of all the SEIAAs/SEACs
4. Chairman, CPCB
5. Chairpersons / Member Secretaries of all SPCBs / UTPCCs

Copy to:-

1. PS to MEF
2. PPS to Secretary (E&F)
3. PPS to JS(RG)
4. All the Officers of IA Division
5. Website, MoEF
6. Guard File



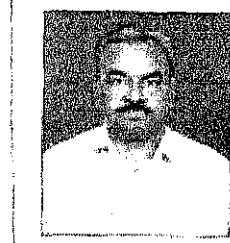
ANNEXURE-III

COPY OF RQP CERTIFICATE



DUPLICATE

भारत सरकार
खान मंत्रालय
भारतीय खान ब्यूरो
क्षेत्रीय खान नियंत्रक का कार्यालय



Uf Singh Chauhan

खान योजना तैयार करने के लिए अर्हता प्राप्त व्यक्ति के रूप में मान्यता
प्रमाण पत्र

**CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON TO PREPARE MINING
PLANS**

(खनिज रियायत नियमावली, 1960 के नियम 22 (सी) के अंतर्गत)
(Under Rule 22(C) of Mineral Concession Rules, 1960)

माननीय श्री/ श्रीमती..... जिनका

M/s Shri. Umesh Pratap Singh Chauhan.

पंजीकृत कार्यालय.....

having registered office at R/o 4/366, Vikash Nagar Lucknow-226022.....

तथा जिन्होंने अपने प्रमुख व्यक्तियों की योग्यताओं एवं अनुभवों का सततोजनक

and having given satisfactory evidence of the qualification and experience of

प्रमाण दिया है उन्हें एतद्वारा खनिज रियायत नियमावली, 1960 के नियम 22 (सी) के अन्तर्गत

their key persons is hereby granted recognition under rule 22 (C) of the Mineral

खान योजनाओं को तैयार करने के लिए अर्हता प्राप्त व्यक्ति के रूप में मान्यता प्रदान की जाती है।

Concession Rules, 1960 as a qualified person to prepare Mining Plans

पंजीकरण क्रमांक-

The registration No. is

RQP/DDN/165/2005/A

यह मान्यता दस वर्ष की अवधि के लिए वैध है जो कि दिनांक

को समाप्त होगी।

This Recognition is valid for a period of ten years ending 16.03.2015

This certificate is liable to be withdrawn/cancelled in the event of furnishing the wrong
information/document in the Mining plan submitted by him.

स्थान/Place: देहरादून

दिनांक / Date: 17.03.2005

Renewed upto...15.12.31...2005...
दिनांक...15/12/2005... तक नवीनीकृत
17/3/2005
क्षेत्रीय खान नियंत्रक
Regional Controller of Mines

Indian Bureau of Mines

Sd/- 17.3.05
(R. K. Sinha)
क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines
Dehradun Region

ANNEXURE-IV

COPY OF RENEWAL APPLICATION AND LEASE DEED



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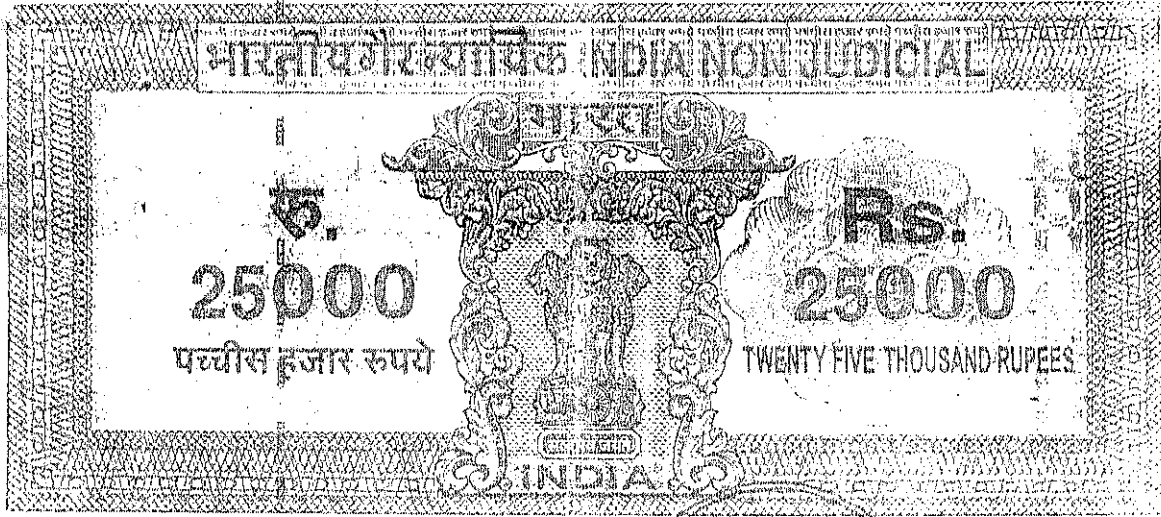
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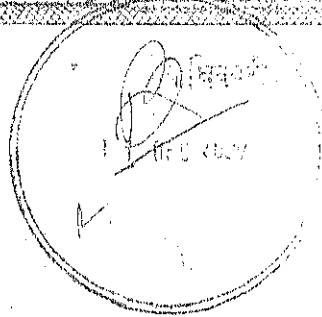


2362



उत्तर प्रदेश UTTAR PRADESH

A 056576



खानन पददा विलेख

(प्रपत्र एम०एन०-३)

यह अनुबन्ध पत्र आज दिनांक 24-12-2008

जो जिला मजिस्ट्रेट बांदा जिन्हें उक्त राज्य सरकार कक्षा

Sandeep Kumar
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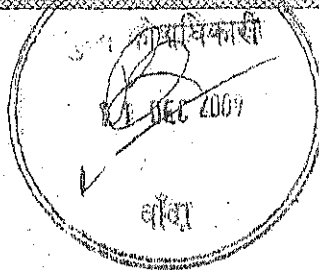
[Signature]
 (ज० पी० द्विवेदी)
 खान निरीक्षक
 वन विभाग, बांदा

[Signature]
 (रंजन कुमार)
 विलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058577



(2)

गया है जिस पदावलि में यदि संदर्भ में ऐसा ग्राह्य हो,

उत्तराधिकारी तथा अभिहस्ताकिरी भी सम्मिलित समझे जावेंगे

(एक पक्ष) और श्री सोमेश शरद्वाज मुत्र श्री ओगप्रकाश

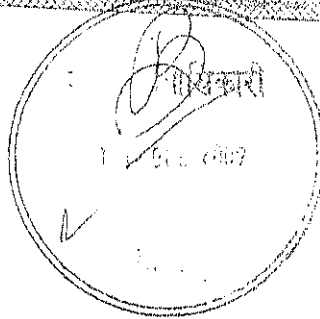
Paul Khosla

Ad
(जें पी० प्रिंटेड)
खरम निरीक्षक
समिज कार्यालय, पांडा

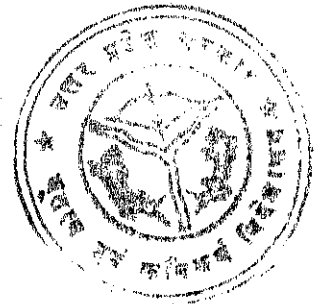
(रंजण कुमार)
बिलासपुर, बांदा



उत्तर प्रदेश UTTAR PRADESH



A 058573



(3)

भरद्वारा निवासी—अमर टाकीज, शहर बांदा, जनपद बांदा

जिसे भागे पट्टेदार कहा गया है जिस पदावलि में यदि

संदर्भ में ऐसा ग्राह्य हो, उक्त समस्त भागीदार, उनके

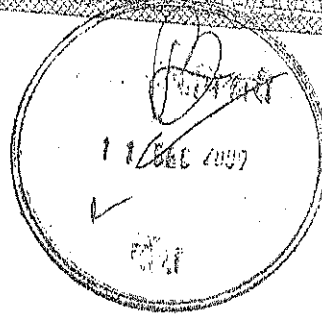
Soul R...

(जि. ए. टी. विवेकी)
अमर निरीक्षक
जनपद, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH



A 058579



अपने-अपने उसके दायद निष्पादक प्रशासक तथा विधिक
प्रतिनिधि भी सम्मिलित समझे जावेंगे। (दूसरा पक्ष)

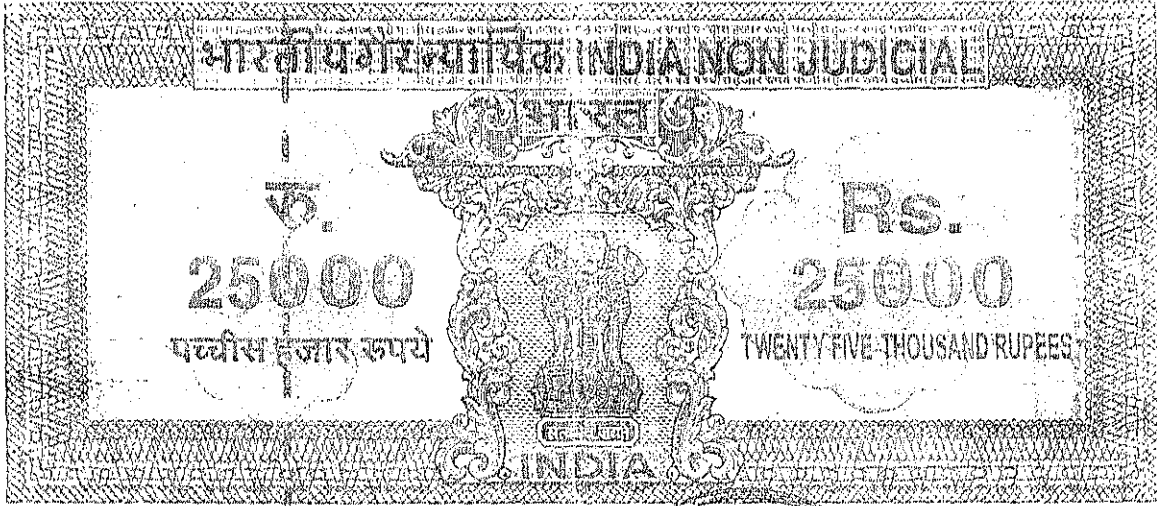
चूंकि पट्टेदार जो उ०प्र० उपखनिज (परिहार)

Saul Bhandari

(ले. ती० द्विवेदी)
अन निरीक्षक
खनिज कार्यालय, गांधी

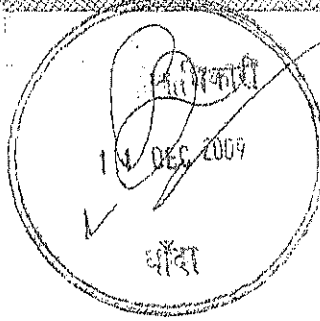
(रंजना कुमारी)
जिलाधिकारी, गांधी





उत्तर प्रदेश UTTAR PRADESH

A 058580



(5)

नियमावली 1963 (जिसे आगे उक्त नियमावली कहा गया है)

के अनुसार राज्य सरकार को निम्नलिखित अनुसूची भाग-1

में वर्णित जोन संख्या-1 खण्ड संख्या 13 ग्राम-भुरेडी,

Sund Bhandari

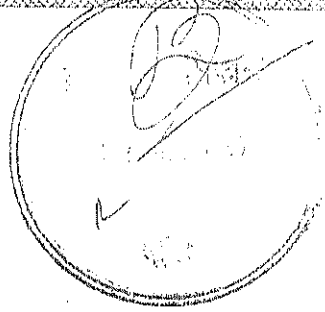
Qy
(जो पी० प्रिंटेड)
स.न निरीक्षक
जनित कार्यालय, धौदा

(रंजक कुमार)
विभागाधिकारी, धौदा



उत्तर प्रदेश UTTAR PRADESH

A 958521



(0)

कनवासा, चिलेहटा तहसील-बांदा, जिला-बांदा के निमित्त

बालू/भोरम खनन पट्टे के लिये प्रार्थनापत्र दिया है और

उसने राज्य सरकार के पास मु0 13,36,250/- रुपये की ध

Kaul Ghosh

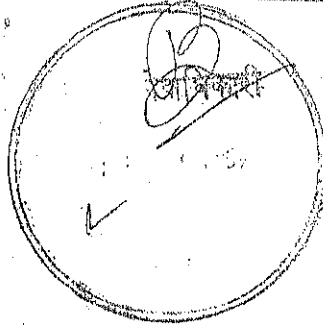
Asst
(जे० पी० हिरोदी)
जन निरीक्षक
जनिक कार्यालय, बांदा

(रंजनी कुमारे)
विकासिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058582



(7)

नाराशि प्रतिभूति के रूप में तथा 2000.00 रुपये की धनराशि

खनन पट्टे के हेतु प्रारंभिक व्ययों की पूर्ति के लिये जमा

कर दी है।

Loul Khosla

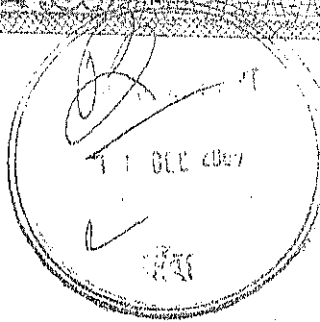
Om
(जै० पी० द्विवेदी)
प्रान निरीक्षक
खनिज कार्यालय, बांदा

(रंजण कुमार)
जिसाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058563



(8)

यह इस बात की साक्ष्य है कि उपस्थापना पत्र और

निम्नलिखित द्वारा रक्षित और उनमें दिये गये और पट्टेदार

की ओर से भुगतान किये जाने वाले पालन और सम्पादन

Handwritten signature

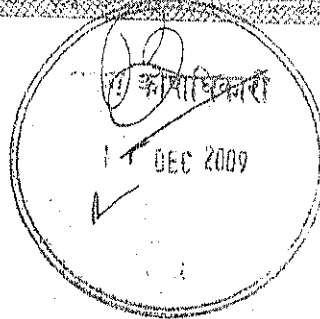
Handwritten signature
 (ले० पी० द्विवेदी)
 सचिव निरीक्षक
 कृषि कार्यालय, बाँदा

(हजल कुमार)
 जिलाधिकारी, बाँदा



उत्तर प्रदेश UTTAR PRADESH

A 058584



(9)

किये जाने वाले किरायों, स्वामित्वों प्रसंविदाओं तथा अनुवन्ध

ों के प्रतिफल में राज्य सरकार एतद् द्वारा पट्टेदार को

निम्नलिखित प्रदान और पट्टान्तरित करती हैं।

Amal Kumar

Amal Kumar
(जे. पी. व. मिल्की)
सहाय निरीक्षक
असिस्टेंट कार्यालय, बांदा

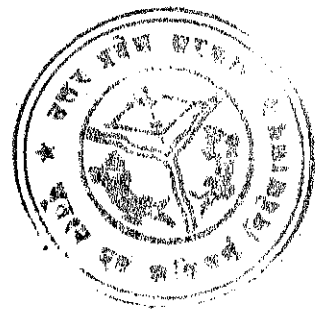
(रंजन कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058585

[Signature]
अधिकारी
11 Dec 2007



(10)

खनन पट्टा बालू/मोरम, (जिन्हें आगे अभिदिष्ट

अनुसूची में 'उक्त खनिज' कहा गया है) की समस्त खाने

तल्प, सदरसीम्स जो उक्त अनुसूची के भाग-1 में अभिदिष्ट

[Signature]

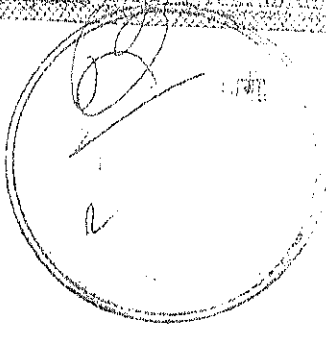
[Signature]
(जे० पी० सिंह)
आम निरीक्षक
खनिज, कार्यालय, बोध

(रंजक कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058586



(11)

भूमि में या उसके नीचे स्थित हो पड़ी हो, या हो उन स्वतन्त्रताओं या अधिकारों तथा विशेषधिकारों के साथ जिनको इसके संबंध में उन निबन्धनों तथा शर्तों के अधीन रहते हुये

Paul Rishi

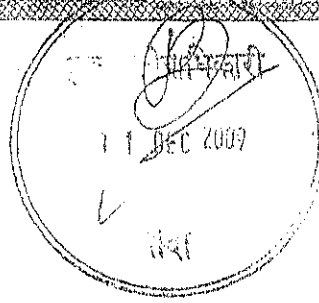
Paul
(जै० पी० हिंदी)
बदन निरीक्षण
कमिश्न कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058587



(12)

प्रयोग या उपयोग किया जायेगा, जो ऐसी स्वतन्त्रताओं,

अधिकारों तथा विशेषाधिकारों के प्रयोग तथा उपयोग करने

के बारे में हो, सिवायें इसके और इसमें से आरक्षित उक्त

नियमवली में उल्लिखित स्वतन्त्रता में, अधिकार तथा विशेषाधि

Handwritten signature

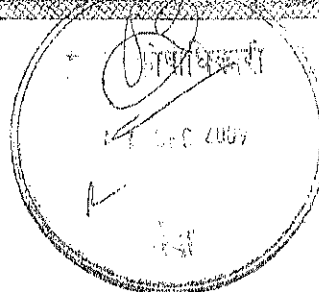
Handwritten signature
(जे० पी० द्विवेदी)
खान दिरीसफ
बिनाज कार्यालय, बांदा

(रंजना कुमार)
बिलासपुरी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058588



(13)

कार राज्य सरकार में पट्टान्तरित हो जायेंगे। दिनांक

24-12-2009 से तीन वर्ष की आगामी अवधि के लिये पट्टेदार

को एकद्वारा दिये और पट्टान्तरित ऐसे भू मूहदिधारण

Paul Bhandari

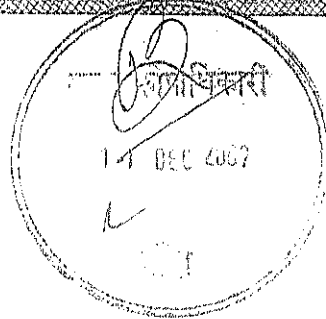
[Signature]
(जे. पी. सिंह)
कार, मिरीसका
अनि. कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058589



(14)

करण, जिनमें खनिज निकलने लगे और राज्य सरकार को

उत्तर अनुसूची के भाग दो में उल्लिखित किरायों और स्वाभित्वाँ,

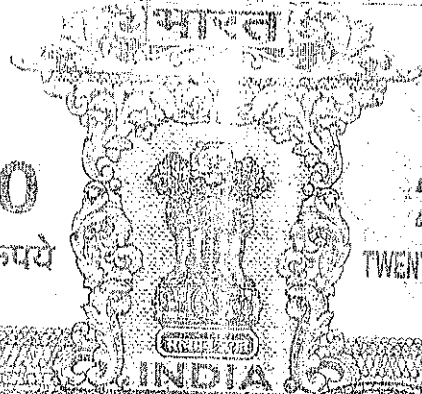
का भुगतान उसमें विनिर्दिष्ट भिन्न-भिन्न समयों पर होने

(जं. वी० सिंघेदी)
कान निर्देशक
अतिरिक्त कार्यवाहक, इ. इ.

(हंजल कुमार)
जिलाधिकारी, बांदा

भारतीय न्यायिक INDIA NON JUDICIAL

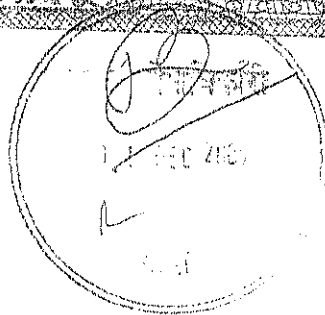
₹
25000
पच्चीस हजार रुपये



Rs.
25000
TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH

A 058590



(15)

लगे किन्तु प्रतिबन्ध यह है कि ऐसा उक्त भाग में उपबन्धों
के अधीन हो और पट्टेदार एतद्द्वारा राज्य सरकार के साथ
प्रसन्नता करता हो और राज्य सरकार एतद्द्वारा पट्टेदार के

Loul B...

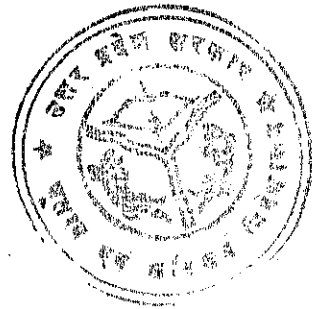
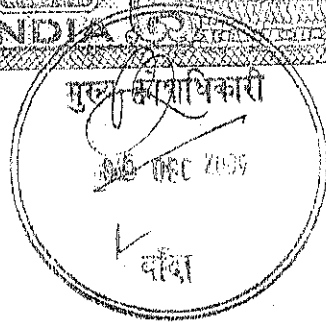
[Signature]
(जे० पी० फ़िरोज़ी)
उप निरीक्षक
समिति कार्यालय, बीदा

(रंजन कुमार)
बिलासिखरी, बीदा



उत्तर प्रदेश UTTAR PRADESH

A 058591



(16)

साथ प्रसविदा करती हैं जैसा कि उक्त नियमावली में अभिव्यक्त है

और एतद्वारा उसके साथ दिये गये पक्षों के बीच परस्पर सहमत

हुआ है और जैसा कि उक्त अनुसूची के भाग-3 में अभिव्यक्त है।

Saul Bhandari

[Signature]
(जे० पी० प्रियेदी)
साम निरीक्षक
अभिग्न कार्यालय, बाँदा

(रंजल कुशुपट्टे)
जिलाधिकारी, बाँदा



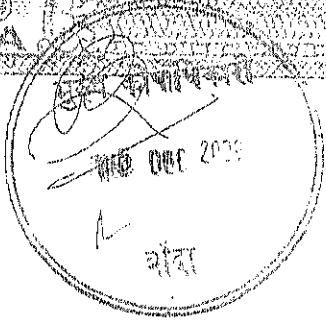
₹.
25000
पच्चीस हजार रुपये

Rs.
25000
TWENTY FIVE THOUSAND RUPEES



उत्तर प्रदेश UTTAR PRADESH

A 058592



(17)

भारत - 1

पट्टे का क्षेत्रफल और स्थान भुरेडी, कनवारा,

विलेहटा जो जिला, बाँदा वह समस्त भूखण्ड, तहसील-बाँदा,

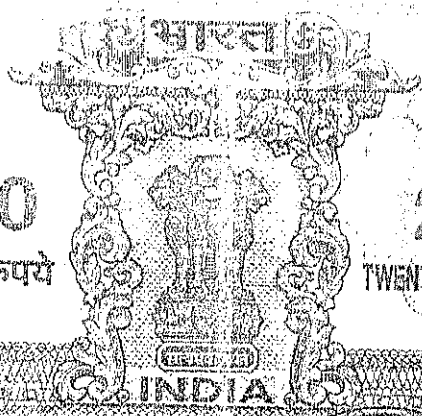
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(जो पी० वि०)
सबका निरीक्षक
खनिज अधिभार, बाँदा

(रंजम कुम्वट)
जिलाधिकारी, बाँदा

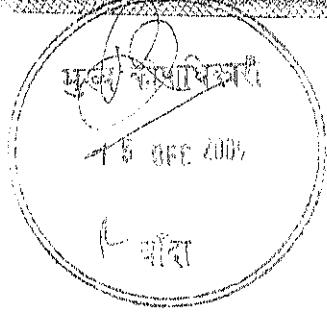
भारतीय गैर न्यायिक INDIA NON JUDICIAL

₹
25000
पच्चीस हजार रुपये



Rs.
25000
TWENTY FIVE THOUSAND RUPEES

उत्तर प्रदेश UTTAR PRADESH



A 058573



(18)

थाना-मटौंघ, के अंतर्गत (परगना) बांदा में स्थान भुरेड़ी,

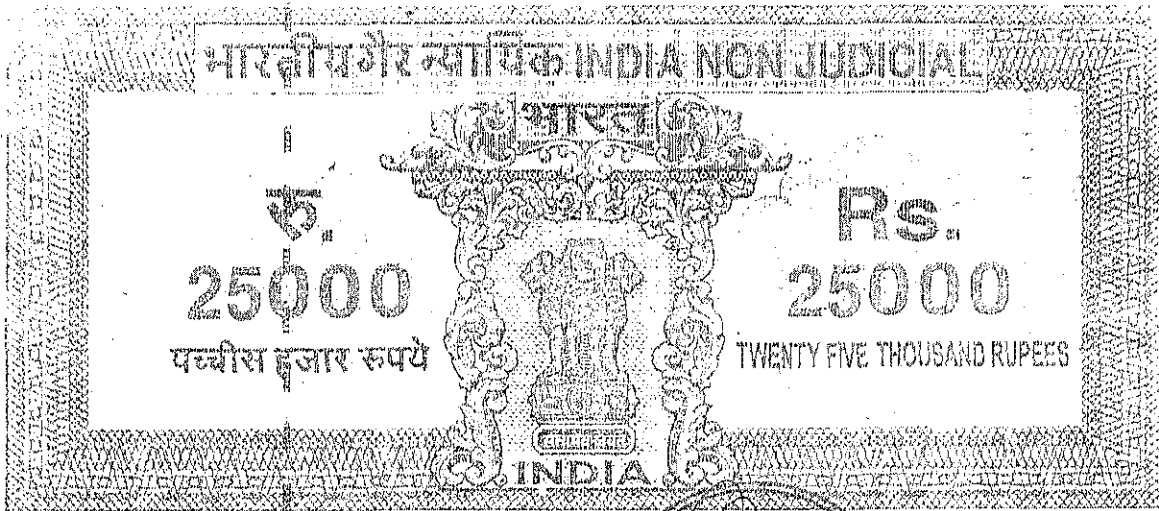
कनपूरा, विलेहटा पर (क्षेत्र अथवा क्षेत्रों का विवरण) गाटा

सं०- 1123 / 2, 1131, 1132, 1136, 1137, 1141 / 2, 1148,

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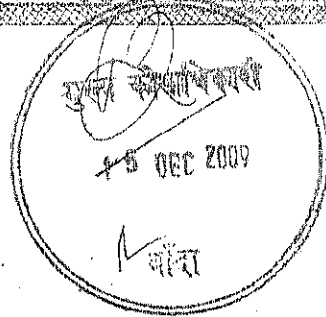
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(जो पी० सिंहदेवी)
घान निरीक्षक
कनिष्ठ कार्यालय, बांदा

(रंजण कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058594



(19)

1149, 476, 477, 478, 479, 491, 492, 515, 516, 517, 518,

519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 534,

535, 543, 544, 555, 556, 557, 558, 559, 560, 561, 562,

Handwritten signature

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(जो पी० प्रिन्सिपल)
खान निरीक्षण
अतिथि कार्यालय, बांदा

(रंजल कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON-JUDICIAL

रु.
25000

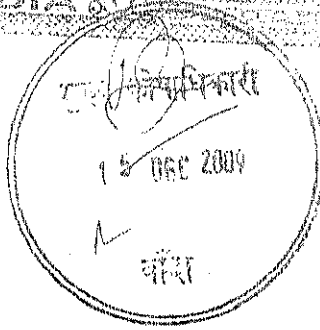
पच्चीस हजार रुपये

Rs.
25000

TWENTY FIVE THOUSAND RUPEES

INDIA

उत्तर प्रदेश UTTAR PRADESH



A 058595



(20)

563, 564, 565, 566, 567, 568, 569, 570, 619, 623,

624 / 532, 638, 639, 640, 641, 642, 643, 644, 645, 646,

647, 648 कुल योग-- 303.46 एकड़ है और जिसकी भूकर

Paul Bhandari

Paul Bhandari
(ज० प० विवेकी)
खान निरीक्षक
खमिज कार्यालय, बांधा

(रंजना कुमार)
जिलाधिकारी, बांधा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

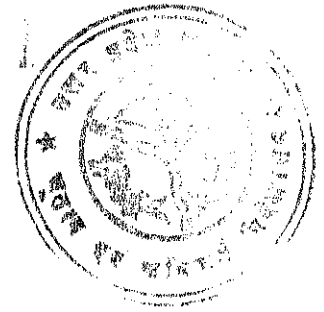
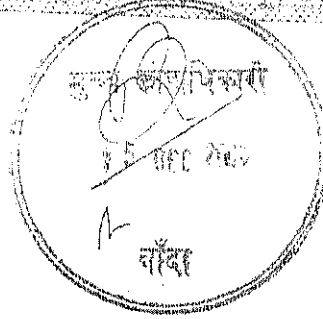
रु.
25000
पच्चीस हजार रुपये

Rs.
25000
TWENTY FIVE THOUSAND RUPEES



उत्तर प्रदेश UTTAR PRADESH

A 058558



(21)

सर्वेक्षण संख्या उपरोक्त है जो यहाँ संलग्न नक्शे में चिन्हित

है और उसे लाल रंग से रंजित किया गया है और जिसकी

सीमाएँ निम्नलिखित हैं:-

Paul Bhandari

(रंजन कुमार)
जिलाधिकारी, बाँदा

Om
(जे० एच० प्रियेदी)
घरान निरीक्षक
जनित कार्यालय, बाँदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

₹. 25000

पच्चीस हजार रुपये

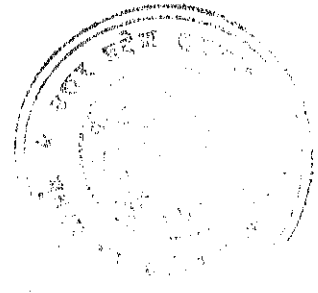
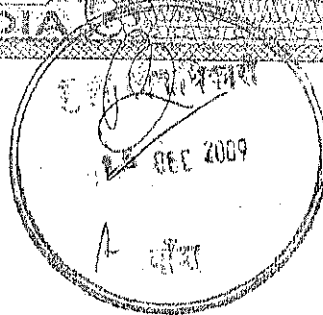
Rs. 25000

TWENTY FIVE THOUSAND RUPEES

INDIA

उत्तर प्रदेश UTTAR PRADESH

A 058597



राज्य में :- कोन नदी

परिसर में :- कोन नदी तथा पुल

पुल :- कोन नदी
कोन नदी

परिसर में :- ग्राम-मुन्डी के पास जाकर कोन नदी

Santh Bhandari

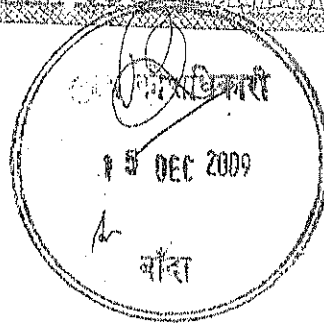
Santh
(जो पी० डिप्टी)
खान निरीक्षक
खनिज कार्यालय, बांदा

(हस्ताक्षर)
जिसाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058598



(23)

एतदपश्चात् जिसे 'उक्त भूखण्ड' कहा गया है।

शर्त-2

1. पट्टेदार पट्टे के प्रत्येक वर्ष के लिये प्रत्येक खनिज

के संबंधात् इस भाग के खण्ड (2) में विनिर्दिष्ट पट्टा धनराशि

Saul Bhudra

(जे० पी० सिन्हा)
 सहाय निरीक्षक
 खनिज कार्यालय, बोधा

(हजम कुमार)
 जिलाधिकारी, बोधा

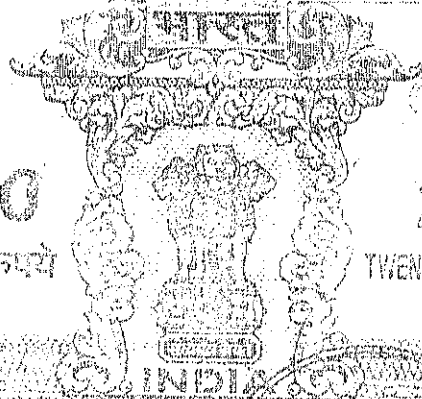
भारतीय गैर न्यायिक INDIA NON JUDICIAL

रु.
25000

पच्चीस हजार रुपये

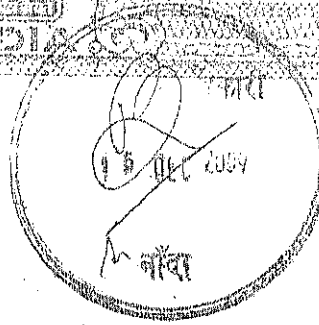
Rs.
25000

TWENTY FIVE THOUSAND RUPEES



उत्तर प्रदेश UTTAR PRADESH

A 058599



(24)

का वार्षिक भुगतान करेगा। प्रतिबन्ध यह है कि पट्टेदार
प्रत्येक खनिज के संबंध में पट्टा धनराशि या स्वामित्व जो
भी धनराशि इसमें से अधिक हो, देनदार होगा किन्तु दोनों

का नहीं।
Saul Bhatia

Saul
(जो पीठ दिवेदी)
खान निरीक्षक
खनिज कार्यालय, बाँदा

(रंजना कुमार)
जिलाधिकारी, बाँदा

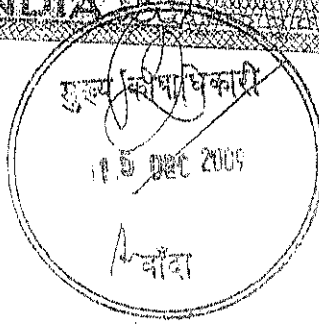
भारतीय गैर न्यायिक INDIA NON JUDICIAL

₹. 25000
पच्चीस हजार रुपये

RS. 25000
TWENTY FIVE THOUSAND RUPEES



उत्तर प्रदेश UTTAR PRADESH



A 058600



(25)

2. इस भाग के खण्ड (1) के उपबन्ध के अधीन रहते हुये पट्टे की अवधि में पट्टेदार राज्य सरकार को इस अनुसूची के भाग-1 में वर्णित और पट्टान्तरित भूमि के वार्षिक पट्टा

Paul Bhand

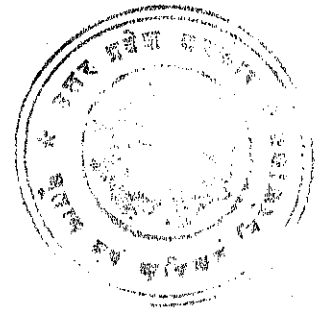
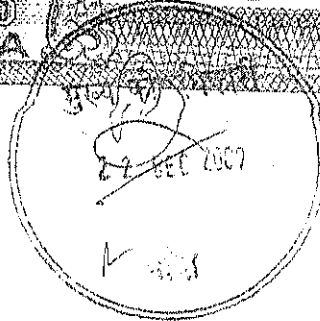
(जे० पी० धुवेली)
खान निरीक्षक
खनिज, पारुली, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058601



(26)

धनराशि निम्नलिखित दरों पर या ऐसी रीति से संशोधित

दरों का भुगतान करेगा जो पट्टेदार को राज्य सरकार द्वारा

लिखित रूप से सूचित किया जायेगा।

(ज० पी० शिवेदी)
खतम निरीक्षक
अतिरिक्त कार्यलय, बांदा

(हंजय कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

₹
25000

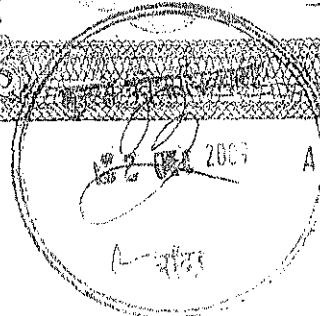
पच्चीस हजार रुपये

Rs.
25000

TWENTY FIVE THOUSAND RUPEES

INDIA

उत्तर प्रदेश UTTAR PRADESH



(27)

खनिज का नाम	पट्टे की अवधि	सपनियम 14(3) के अधीन जमा पट्टा धनराशि	प्रथम वर्ष की किश्तें		
			प्रथम	द्वितीय	तृतीय
साधारण बालु/मोरम	तीन वर्ष	25 प्रतिशत	50 प्रतिशत	25 प्रतिशत	--
			01.04.2010	01.07.2010	--
		13,36,250.00	26,72,500.00	13,36,250.00	--
द्वितीय वर्ष की किश्तें			तृतीय वर्ष की किश्तें		
प्रथम	द्वितीय	तृतीय	प्रथम	द्वितीय	तृतीय
25 प्रतिशत	25 प्रतिशत	50 प्रतिशत	25 प्रतिशत	25 प्रतिशत	50 प्रतिशत
01.10.2010	01.10.2011	01.04.2011	01.10.2011	01.01.2012	01.04.2012
14,69,875.00	14,69,875.00	29,39,750.00	16,16,863.00	16,16,863.00	32,33,725.00

पट्टाधनराशि का राज्य सरकार के प्रति भुगतान जिला बांदा के मुख्यालय के राजकीय कोषागार में निर्धारित लेखाशीर्षक अन्तर्गत जमा करेगा।

3 इस भाग के खण्ड (4) के उपबन्धों के अधीन रहते हुये पट्टेदार की अवधि में राज्य सरकार को ऐसे समानों पर ऐसी सीटि से जो राज्य सरकार विहित करें, पट्टे पर दिये हुये क्षेत्र से उसको द्वारा छुटाये गये खनिज के गन्वन्ध में उक्त नियमावली की प्रथम अनुसूची में तत्समय विनिर्दिष्ट दर पर स्वामित्व का भुगतान करेगा।

Handwritten signature

(जें० पी० दिनेशी)
खान निरीक्षक
खनिज कार्यालय, बांदा

(रंजित कुमार)
जिम्माधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058603

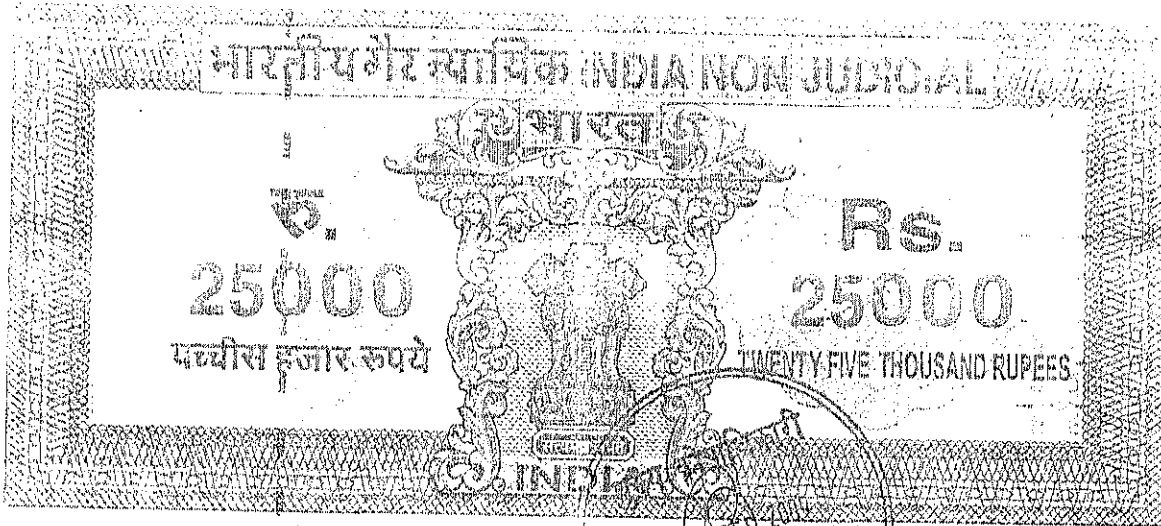
(28)

4. साधारण बालू/मोरम के पट्टेदार की आगामी वर्षों में पट्टा धनराशि पूर्ववर्ती वर्ष में भुगतान की गयी धनराशि से 10 प्रतिशत की बढ़ी हुयी दर से जमा करेगा साधारण बालू/मोरम के पट्टेदार पट्टे के आगामी तीन वर्षों से पट्टा धनराशि का

Soul Bhudra

Soul
(जे० पी० सिंह)।
बालू निरीक्षक
अनिम कार्यालय, बाँदा

(ए० जे० कुंवर)।
जिलाधिकारी, बाँदा



उत्तर प्रदेश UTTAR PRADESH

A 058604

(29)



भुगतान पूर्ववर्ती वर्ष में भुगतान की गयी धनराशि से 10 प्रतिशत की बढ़ी हुयी दर से करेगा। यदि पट्टा क्षेत्र से हटाये गये खनिज पर देय रायल्टी पट्टा धनराशि से अधिक होती है तो पट्टेदार द्वारा उस धनराशि का भुगतान करेगा जो इसमें से

Handwritten signature

(जे० पी० दिवेंदी)
खान निरीक्षक
खनिज कार्यालय, बोधा

(हंजल कुमार)
जिलाधिकारी, बोधा



उत्तर प्रदेश UTTAR PRADESH

9 058605

(30)



अधिक होगी।

5. इस भाग में उल्लिखित अपरिहार्य माटक और स्वामित्व का भुगतान बिना किसी कटौती के राज्य सरकार को जिले के कोषागार पर और ऐसी रीति से किया जायेगा जो राज्य

Saul Bhandari

Chand
(जे० पी० द्विवेदी)
खान गिरीशक
कमिज कार्यालय, बांदा

(रंजक कुमार)
जिलाधिकारी, बांदा



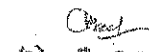
उत्तर प्रदेश UTTAR PRADESH


(31)



सरकार विहित करें।

6. उक्त स्वामित्वों के संगणन के प्रयोजन के लिये पट्टेदार
खानों से संग्रह किये गये खनिज और उसके भेजने की रीति
का सही-सही लेखा रखेगा, जिसमें वह परिवहन की प्रणाली


(जे. पी. सिंह)
धाम निरीक्षक
खनिज कार्यालय, बांदा


(रंजन कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

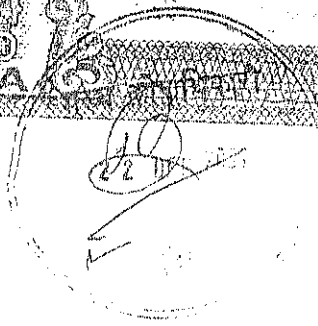
रु.
25000
पच्चीस हजार रुपये

Rs.
25000
TWENTY FIVE THOUSAND RUPEES



उत्तर प्रदेश UTTAR PRADESH

A 058607



(32)

क... को निबंधन संख्या वाहन के प्रभारी व्यक्ति, वाहन द्वारा
परिवहन किये गये खनिज का विवरण त परिणाम का उल्लेख
करेगा, जो राज्य सरकार सामान्य या विशेष आदेश द्वारा
विनिर्दिष्ट करें। नियम-26 के अधीन संतुष्ट अधिकारी र...

Sanil Bhus...

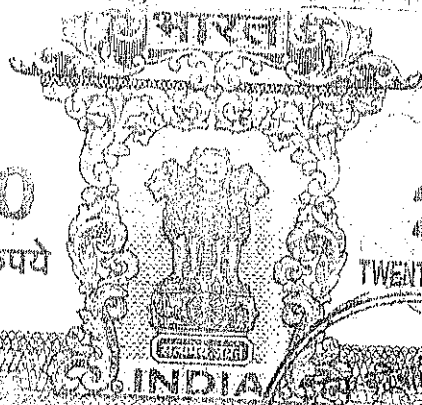
(ले.प्र.पं. वि.पं.)
रतन मिरीसक
अभिज कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा

भारतीय गैर न्यायिक INDIA NON JUDICIAL

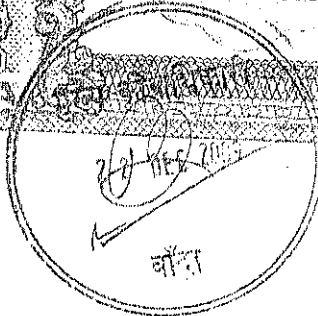
रु.
25000
पच्चीस हजार रुपये

Rs.
25000
TWENTY FIVE THOUSAND RUPEES



उत्तर प्रदेश UTTAR PRADESH

A 058608



(33)

ऐसे अन्य अधिकारी जिन्हें राज्य सरकार नियमावली के अधीन समय-समय पर प्राधिकृत करें, स्टॉक में रखे गये और निर्यात किये जाने वाले या प्रपत्र एम0एम0-11 में उल्लिखित खनिज का लेखा उसके भार या परिमाण की

Sant Bhardwaj

Sant
(जे० पी० बिहारी)
खान निरीक्षक
खनिज कार्यालय, बौदा

(रंजक कुमार)
जिलाधिकारी, बौदा



उत्तर प्रदेश UTTAR PRADESH

A 058609

(34)

जांच कर सकता है। पट्टेदार प्रतिवर्ष जिलाधिकारी और भूतत्व एवं खनिकर्म निदेशालय के क्षेत्रीय कार्यालय को पूर्ववर्ती तिमाही के 15 दिनों के भीतर जुलाई, अक्टूबर, जनवरी और अप्रैल में प्रपत्र एम0एम0-12 में तिमाही विवरणी

(जे० पी० सिंह)

खान निरीक्षक,
खनिज कार्यालय, बलिया

(रंजम कुमार)
जिलाधिकारी, बांश



उत्तर प्रदेश UTTAR PRADESH

A 058670

(35)

प्रस्तुत करेगा और यदि विवरणी नियम समय के भीतर प्रस्तुत नहीं की जाती तो पट्टेदार चूक के प्रत्येक अवसर पर मु० 400.00 रुपये की धनराशि का भुगतान करेगा।

7. पट्टेदार जिलाधिकारी के कार्यालय प्रपत्र एम०एम०-11

Saul Bhandari

[Signature]
(जे० पी० शिवेदी)
खान निरीक्षक
खनिज कार्यालय, बोदा

(रंजना कुमारी)
जिलाधिकारी, बोदा



उत्तर प्रदेश UTTAR PRADESH

A 058611

(38)



की पुष्टिका जैसा की नियमावली के नियम 70(1) में अपेक्षित

है भुगतान करने पर प्राप्त करेगा।

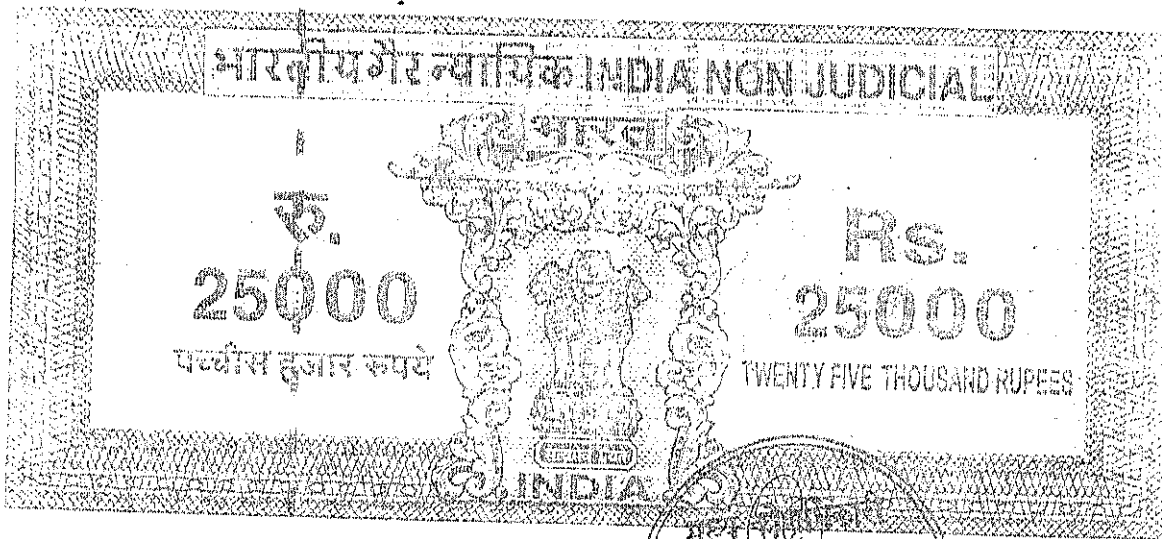
8. यदि, पट्टेदार द्वारा इस उपस्थापना पत्र के निबंधनों

और शर्तों के अधीन किसी भाटक, स्वामित्व या राज्य सरकार

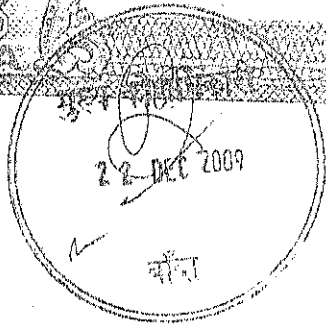
Saul Bhandari

Saul
(जे० पी० फ़िलौडी)
छान निरीक्षक
अतिरिक्त कार्यालय, बोदा

(रंजण कुमार)
जिम्मेदार अधिकारी, बोदा

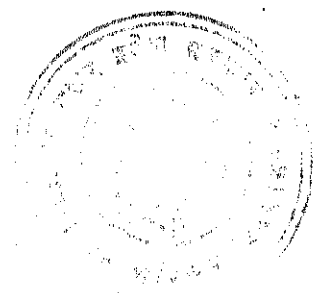


उत्तर प्रदेश UTTAR PRADESH



A 058612

(57)

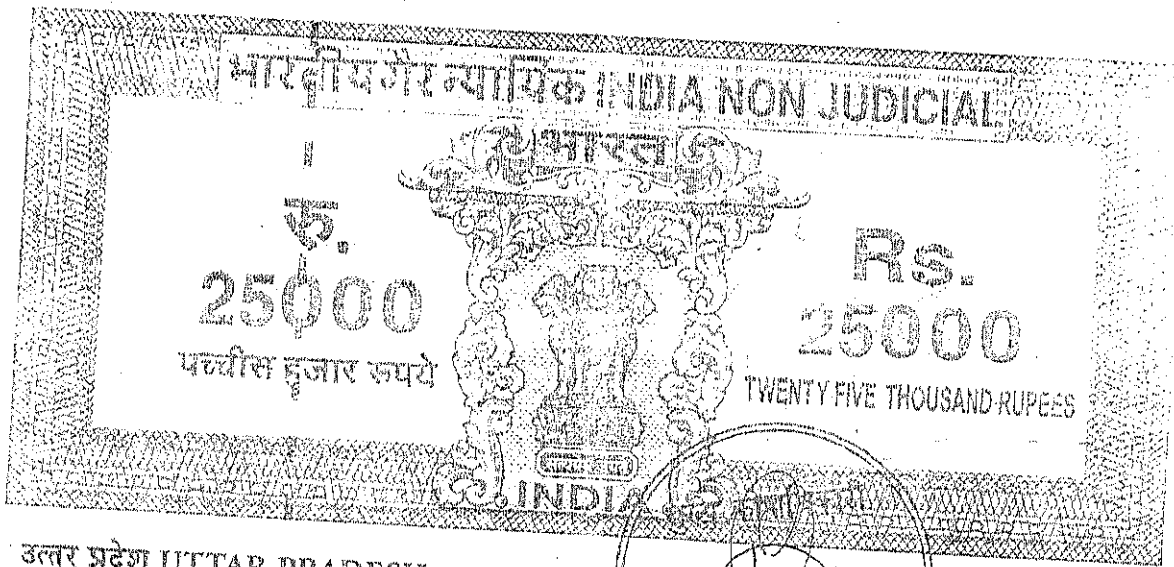


को देय किसी अन्य धनराशि का भुगतान विहित समय के भीतर नहीं किया जाता है तो वह ऐसे अधिकारी के प्रमाणपत्र पर जिसे राज्य सरकार सामान्य या विशेष आदेश द्वारा विनिर्दिष्ट करें, उसी प्रकार से वसूली की जावेगी, जिस

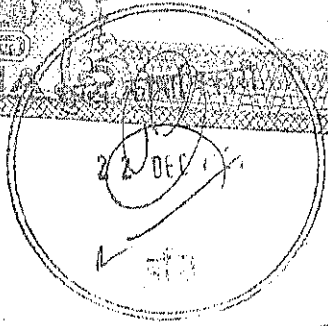
Sudhakar

[Signature]
 (जे० पी० प्रियदर्शी)
 जल निरीक्षक
 खनिज कार्यालय, बाँदा

(रंजण कुमार)
 जिलाधिकारी, बाँदा



उत्तर प्रदेश UTTAR PRADESH



A 058673



(38)

प्रकार से मालगुजारी का बकाया वसूल किया जाता है।

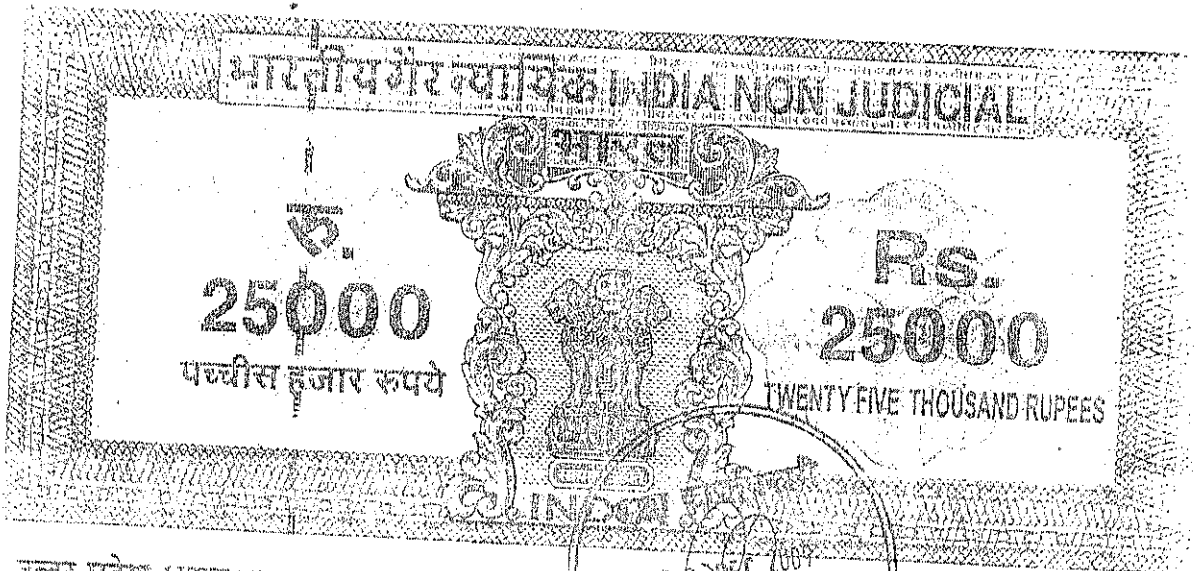
शर्त-3

1. यदि पट्टेदार उ०प्र० उपखनिज परिहार नियमावली 1963 के किसी नियम या इस पट्टे की किसी प्रसंविदा और शर्त

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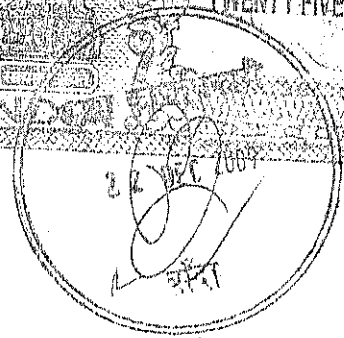
(Handwritten signature)
 (जे० पी० द्विवेदी)
 धरम निरीक्षक
 खनिज कार्यालय, बदायुँ

(हंजय कश्यप)
 जिलाधिकारी, बदायुँ



उत्तर प्रदेश UTTAR PRADESH

A 058614



(39)

को भंग करे तो राज्य सरकार पट्टा समाप्त कर सकती है
और प्रतिभूति जमा को पूर्णतः या अंशतः जब्त कर सकती हैं,
किन्तु प्रतिबन्ध यह है कि पट्टा समाप्त किये जाने के पूर्व
पट्टेदार को उक्त शर्त को भंग करने का स्पष्टीकरण देने के

Sanjiv Bhandari

अ.प्र.
(ज.प्र. पी.ओ. दिवस)
स.प्र. नि.जी.स.क.
स.प्र. नि.जी.स.क.

(र.ज.क.कुमार)
निवासीकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058676



(41)

दायर कर सकता है।

2. पट्टेदार इस उपस्थापना पत्र के आधार पर देय किराये

और स्थाभित्वों का पहले भुगतान और उन्मोचन कर चुकने

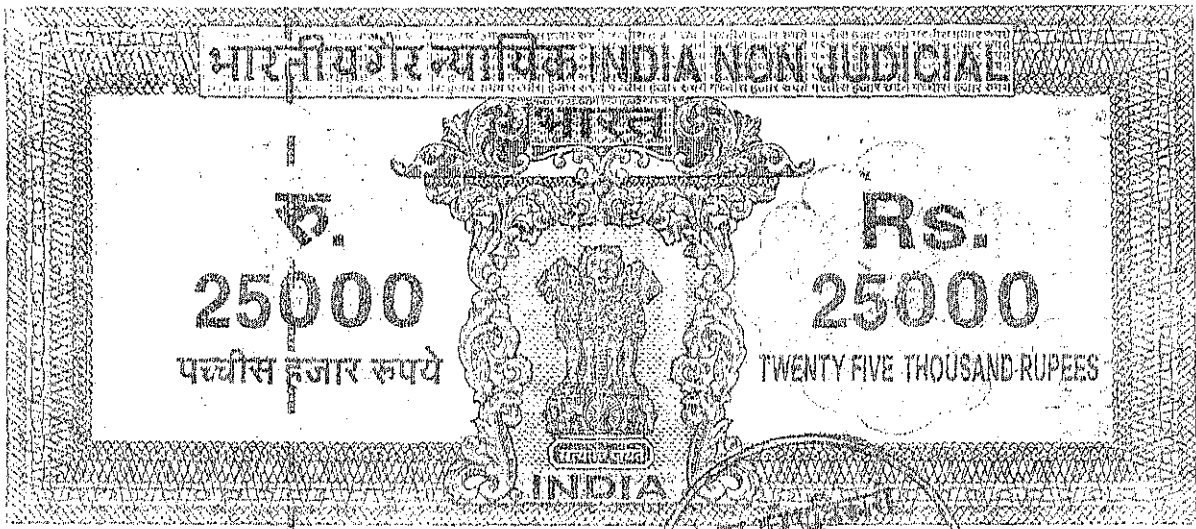
पर उक्त अवधि की समाप्ति पर या उसके शीघ्रतर समाप्त

पर या तत्पश्चात् तीन कलेंडर मास के भीतर (जब तक

Soul Bledy

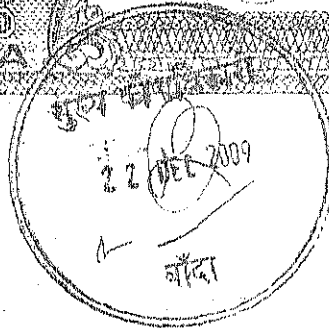
(जे० पी० द्विवेदी)
खान निरीक्षक
खनिज कार्यालय, बोधा

(रंजन कुमार)
जिलाधिकारी, बोधा



उत्तर प्रदेश UTTAR PRADESH

A 058617



(42)

पट्टा इस भाग के खण्ड (1) के अधीन समाप्त न कर दिया जाये, और उस दशा में किसी समय ऐसे समाप्ति के पश्चात् कम से कम एक कलेंडर मास में) और अधिक से अधिक तीन कलेंडर मास में अपने लाभ के लिये ऐसे या किसी

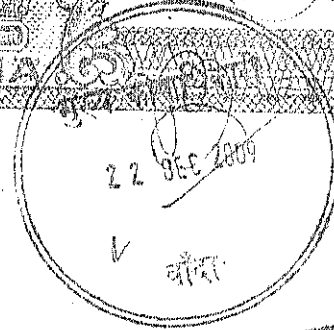
Santosh Chandra
 (जो पी. विवेक)
 जून मिनिसोटा
 सैनिय फार्मास्युटिकल्स

(रंजन कुमार)
 जिलाधिकारी, बदा



उत्तर प्रदेश UTTAR PRADESH

A 058618



(43)

इंजन, मशीन, संयंत्र भवन, संरचनाओं और अन्य निर्माण
कार्य और निर्माण और अस्थायी आवास स्थानों को उखाड़
सकता है और हटा सकता है, जो उक्त भूमि में या उस पर
पट्टेदार राज्य सरकार को देने के लिये बाध्य नहीं है और

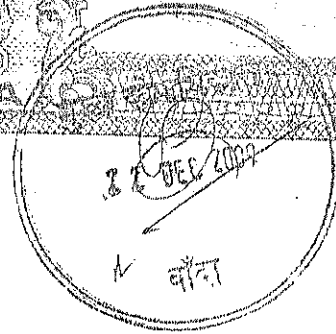
Sach Blundy

Prasad
(जे० पी० द्विवेदी)
आम निरीक्षक
जनक कार्यालय, बाँदा

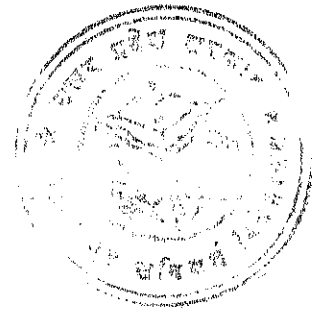
(रंजन कुमार)
जिलाधिकारी, बाँदा



उत्तर प्रदेश UTTAR PRADESH



A 058619



(64)

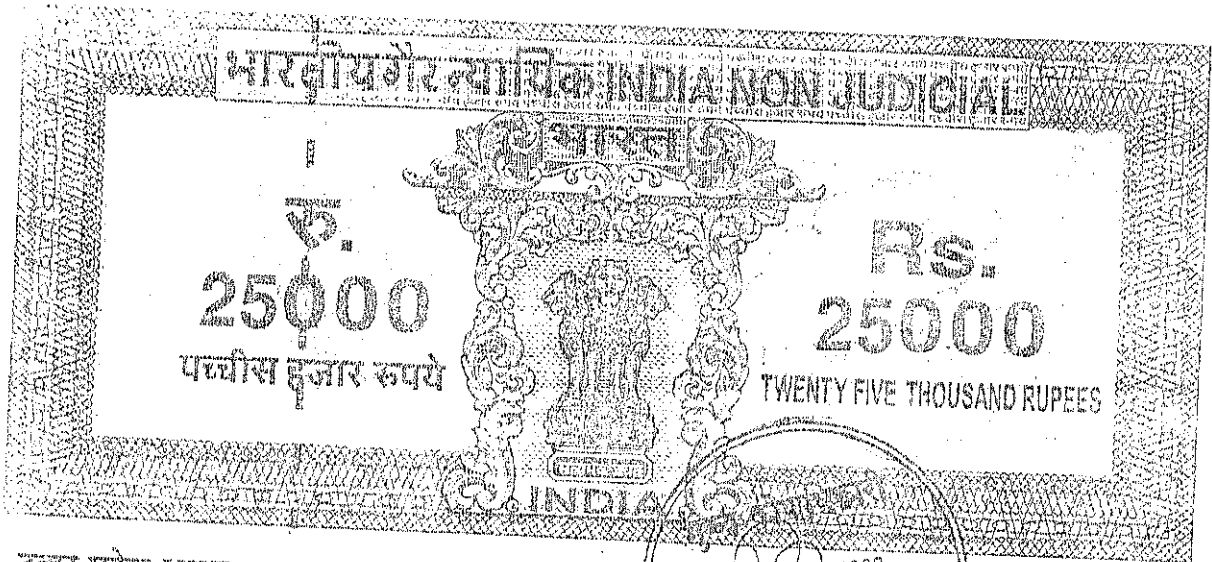
राज्य सरकार जिन्हें खरीदने के लिये इच्छुक न हों।

3. यदि उक्त अवधि की समाप्ति या उसके शीघ्रतर समाप्ति के पश्चात् तीन कलेंडर मास के अंत तक उक्त भूमि या उस पर कोई इंजन, मशीन संयंत्र भवन, संरचनाओं और

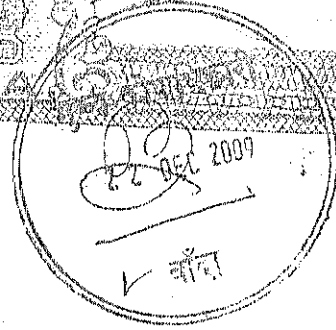
Saul Bhandari

Saul Bhandari
(जे० पी० धियेयी)
साम निरीक्षक
सचिवालय कार्यालय, बौदा

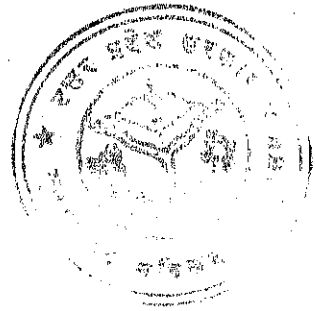
Saul Bhandari
(हंजल कुमार)
जिलाधिकारी, बौदा



उत्तर प्रदेश UTTAR PRADESH



A 058620



(45)

अन्य निर्माण कार्य, परिनिर्माण और अस्थायी आवास स्थान
या अन्य सम्पत्ति रहे तो उनके संबंध यदि व ऐसे लिखित
नोटिस देने के पश्चात् जिसमें जिलाधिकारी द्वारा पट्टेदार
से उन्हें हटाने की अपेक्षा की गयी है, एक कलेंडर मास के

Paul Blumberg

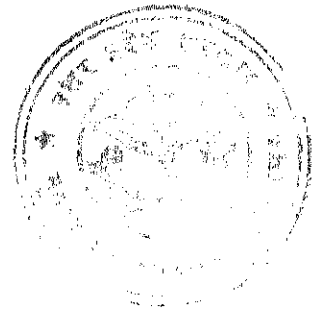
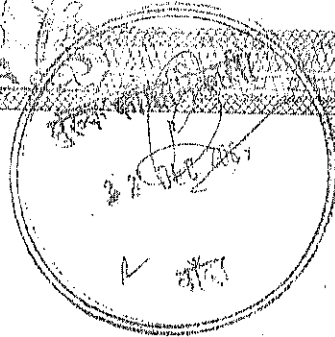
(जे० पी० शिखरी)
खान गिरीश्वर
समिप कार्यालय, बाँदा

(रंजित कुमार)
जिलाधिकारी, बाँदा



उत्तर प्रदेश UTTAR PRADESH

A 058621



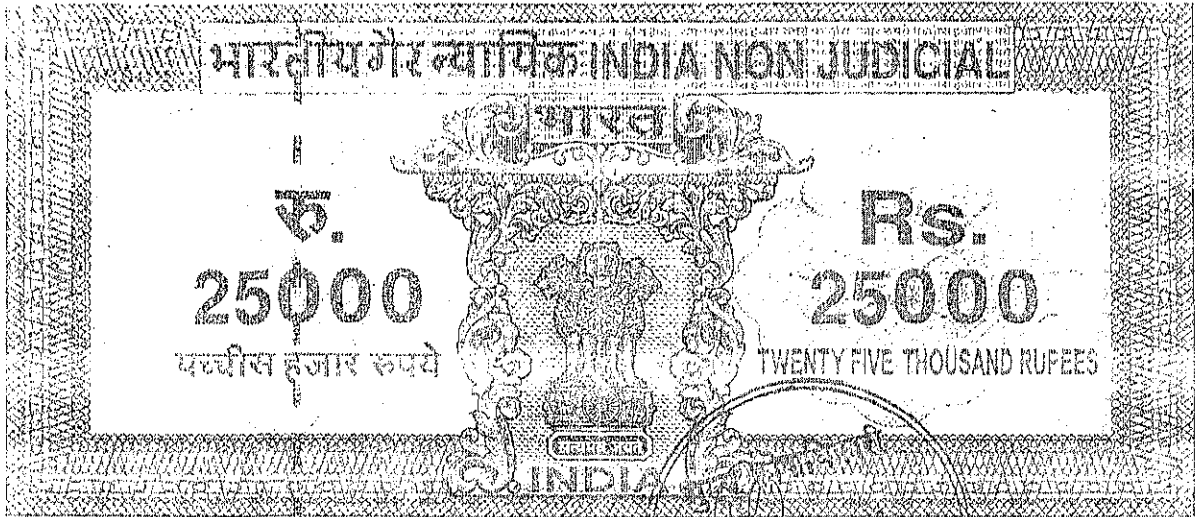
(46)

भीतर पट्टेदार द्वारा न हटाया जाये यह समझा जायेगा कि वे राज्य सरकार की सम्पत्ति हो गयी है और किसी प्रकार का भुगतान किये बिना या उसके संबंध में पट्टेदार को कोई हिसाब दिये बिना उसकी बिक्री कर के निस्तारण ऐसे रीति

Santh...

(जो पी० सिंहजी)
 धरन निरीक्षण
 खनिज कार्यालय, बांदा

(रंजक कुमार)
 जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

A 058622

(47)

के किया जा सकता है जो राज्य सरकार उचित समझें।

4. यदि राज्य सरकार इस प्रकार निर्देश दे तो पट्टेदार

इस उक्त स्थापना पत्र द्वारा संरक्षित स्वामित्वों और अपरिहार्य

भाटक या भुगतान स्वामित्व की वसूली करने वाले ठेकेदार

[Handwritten Signature]

(जे० पी० शिवेश्वरी)

खरन निरीक्षक

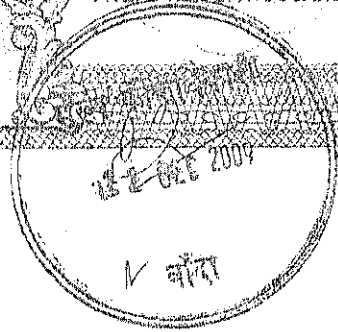
संलग्न कार्यालय, बाँदा

(रंजन कुमार)

जिलाधिकारी, बाँदा



उत्तर प्रदेश UTTAR PRADESH



A 058623



(40)

को राज्य सरकार द्वारा नियमित रीति से ऐसे अवधियों में करेगा जो विनिर्दिष्ट की जाये।

5. इस उपस्थापन पत्र द्वारा पट्टे को दिये जाने के लिये

अपेक्षित प्रत्येक नोटिस उक्त भूमि पर रखने वाले ऐसे व्यक्ति

Santh Bhandari

Santh
(जै० पी० दिवेदी)
खान निरीक्षण
अनिज कार्यालय, बंदा

(रंजण कुमार)
जिलाधिकारी, बंदा

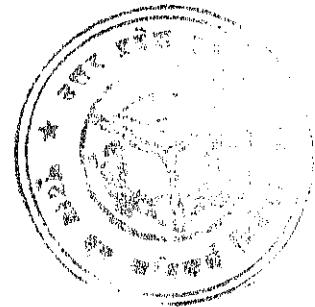


उत्तर प्रदेश UTTAR PRADESH

22 DEC 1951

A 058624

(49)

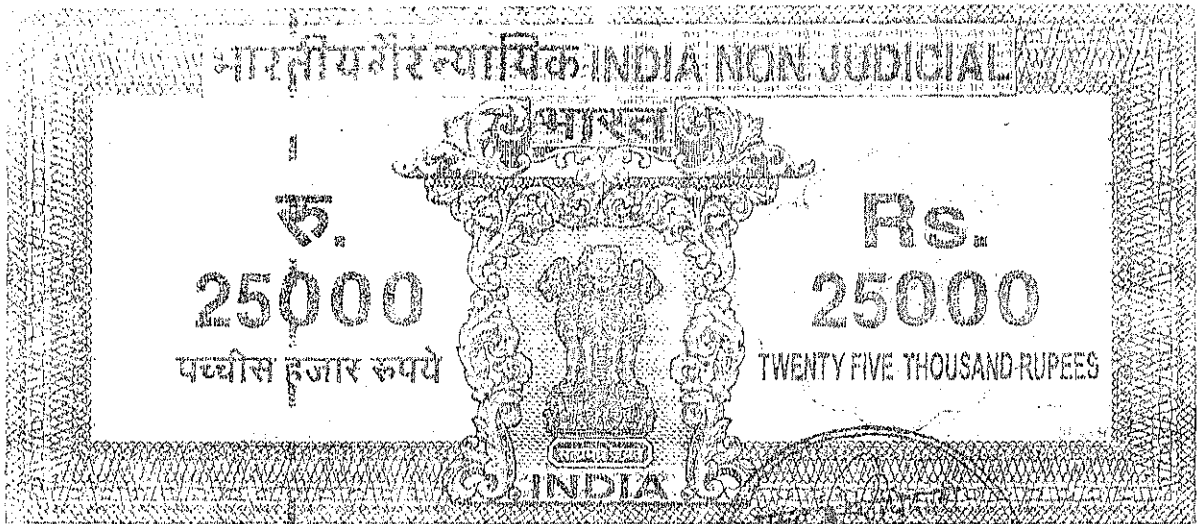


को लिखित रूप से दिया जायेगा। जिसे पट्टेदार ऐसी नोटिस प्राप्त करने के लिये नियुक्ति करें और यदि इस प्रकार कोई नियुक्ति नहीं की गयी हो, ऐसी प्रत्येक नोटिस पट्टेदार को रजिस्ट्रीकृत डाक द्वारा पट्टे से उसके अभिलिखित

Soul B...

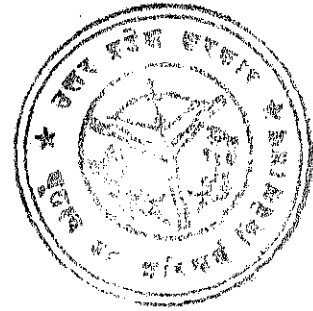
Q...
(जे० पी० शिंदेजी)
छात्र निरीक्षक
उच्च न्यायालय, वांदा

(टंजन युग्मट)
जिलाधिकारी, वांदा



उत्तर प्रदेश UTTAR PRADESH

A 058625



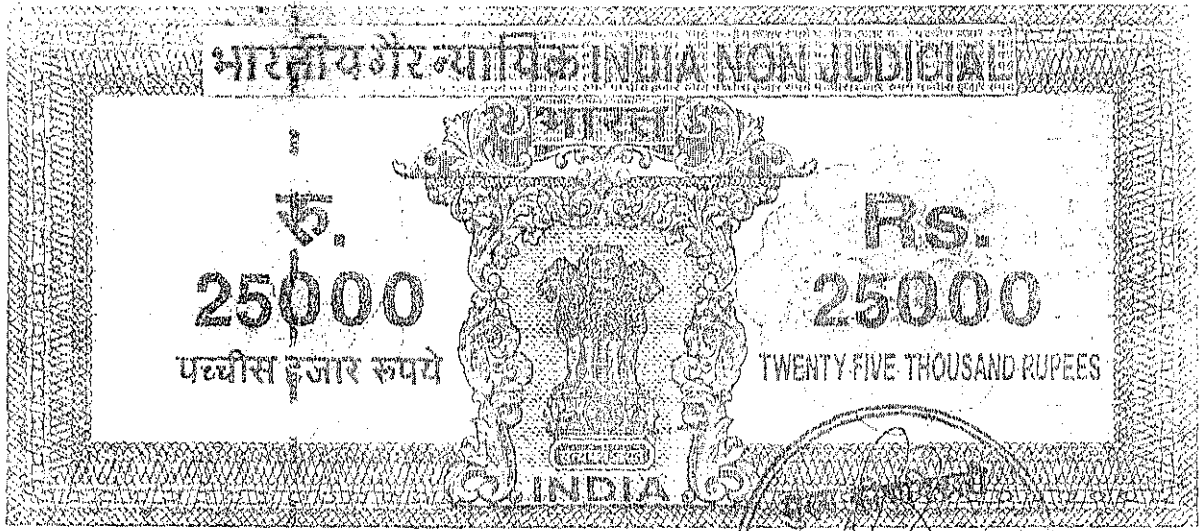
(50)

पते पर या भारत में ऐसे अन्य पते पर भेजी जायेगी जिसे
 पट्टेदार समय-समय पर लिखित रूप से राज्य सरकार को
 नोटिसों को प्राप्त करने के लिये दे और प्रत्येक ऐसी तामील
 पट्टेदार पर उच्च और वैध तामील समझी जायेगी और

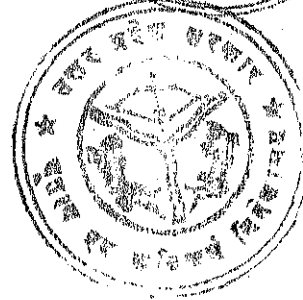
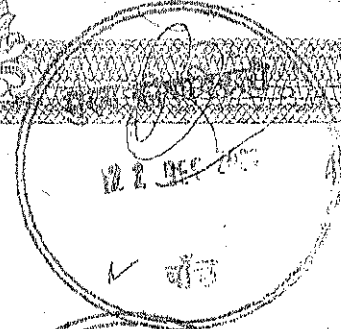
Saul Bhandari

(जैम पी. वि. वि.)
 खान निरीक्षण
 कानपुर, उ. प्र.

(रंजन कुमार)
 जिलाधिकारी, गाँवा



उत्तर प्रदेश UTTAR PRADESH



(51)

उसके संबंध में उसके द्वारा न तो आपत्ति की जायेगी और
न उसे चुनौती दी जायेगी।

6. यदि पट्टाधारक के माफिया होने अथवा माफिया या
किसी असामाजिक तत्वों या संगठित अपराध से सक्रिय रूप

Sanil Bhandari

Sanil
(जे० पी० द्विवेदी)
खान निरीक्षक
मनिम कार्यालय, बांदा

(रंजन कुमार)
जिलाधिकारी, बांदा



उत्तर प्रदेश UTTAR PRADESH

(52)

से संलिप्त होने का तथ्य राज्य सरकार अथवा संबंधित
जिलाधिकारी के संज्ञान में आता है तो उन्हें सुनवायी का
अवसर प्रदान करने के पश्चात् यथास्थिति पट्टा समय पूर्व

समाप्त किया जा सकता है।

(जे० पी० सिंह)
बाम निरीक्षक
ऑफिस कार्यालय, बोंदा

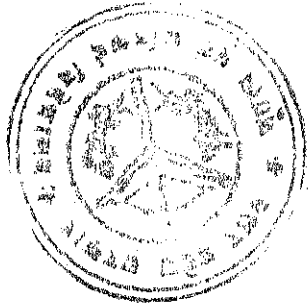
(रंजक कुमार)
जिलाधिकारी, बोंदा

(Date Dismissed)
Date Dismissed

(Date Dismissed)
Date Dismissed

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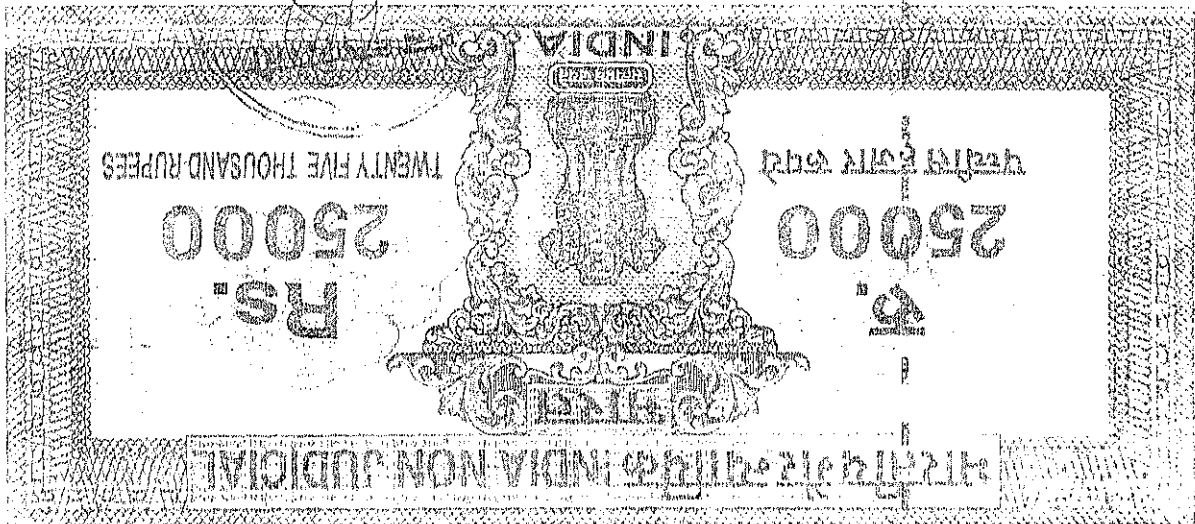
7. ...
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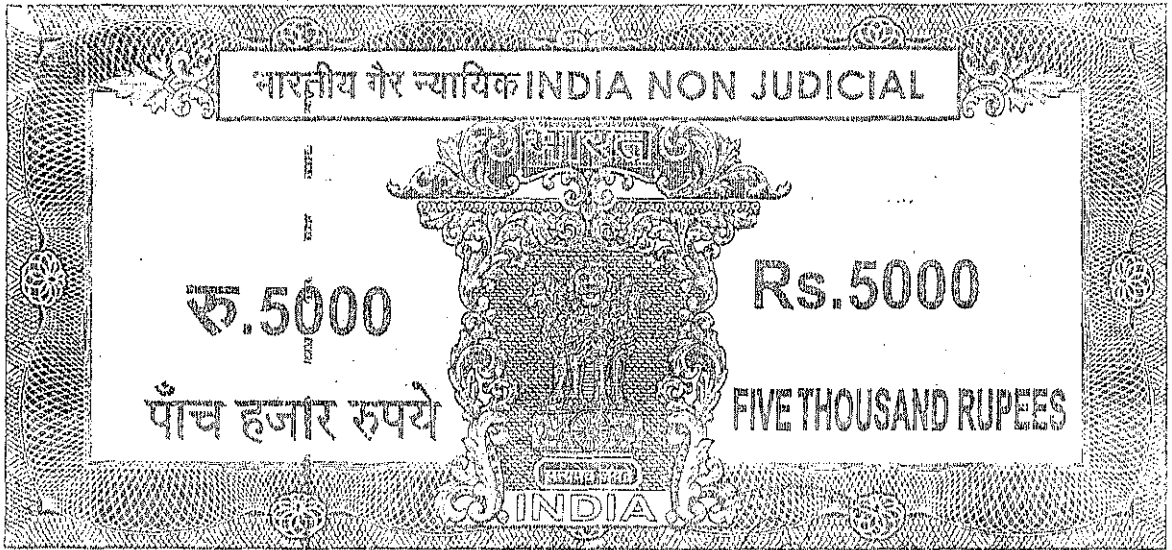


(59)

A 058628

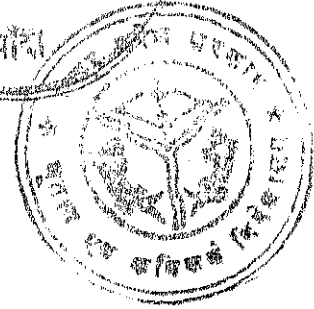
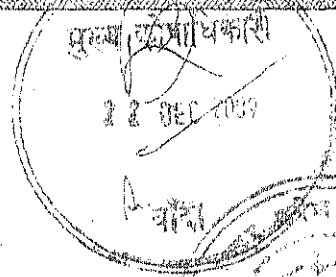
भारत में उत्तर प्रदेश





उत्तर प्रदेश UTTAR PRADESH

D 509480



(54)

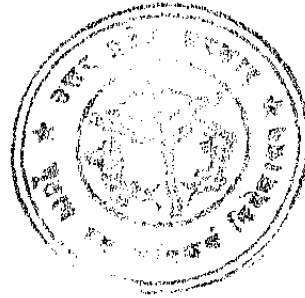
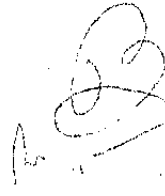
कारी या जिलाधिकारी द्वारा मशीनों के प्रयोग को प्रतिबन्धित किया जा सकेगा, जो पट्टाधारक को मान्य एवं बाध्यकारी होगा। इसके अतिरिक्त मशीनों के प्रयोग के संदर्भ में समय-समय पर शासन एवं निदेशक, भूतत्व एवं खनिकर्म

Sanjiv Kumar

Sanjiv Kumar
(ज० पी० द्विवेदी)
सदर निरीक्षक
खनिज कार्यालय, बारा

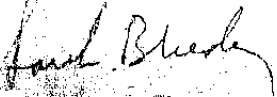
(रंजक कुमार)
जिलाधिकारी, बारा

0453-2



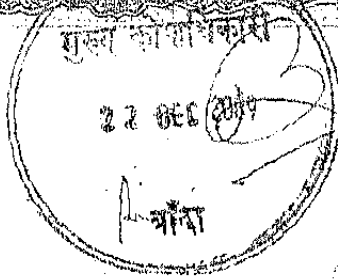
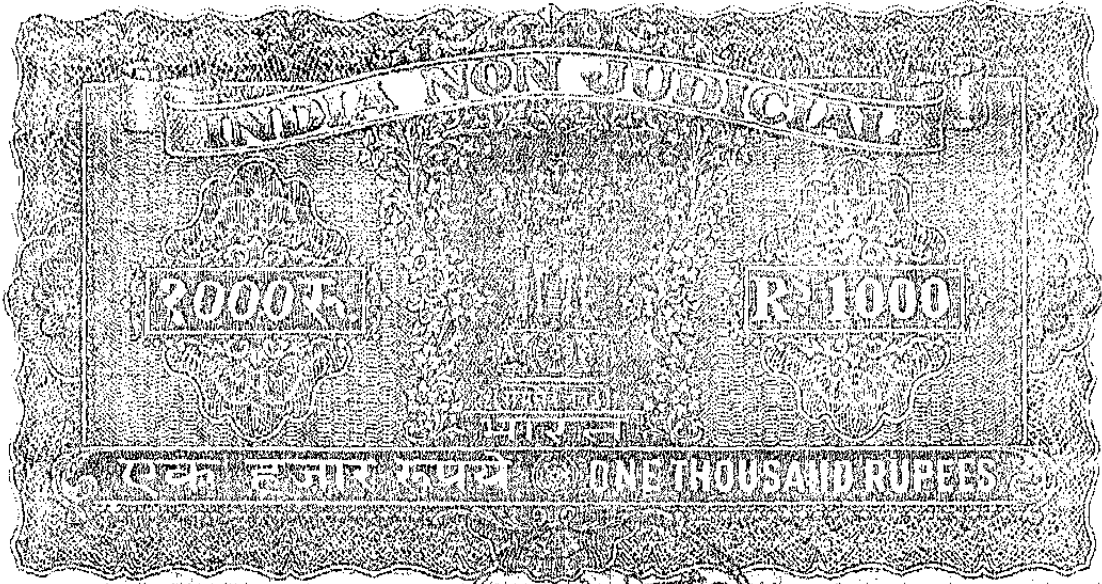
(55)

द्वारा निर्देश दिये जायेंगे, वे पट्टाधारकों को मान्य होंगे।
यह भी उल्लिखित किया जायेगा कि यदि ऐसे आदेश या
किसी शर्त के उल्लंघन का प्रकरण प्रकाश में आता है तब
पट्टाधारक को ऐसे उल्लंघन की नोटिस देकर तथा उस पर



(जि० पी० दिनेशी)
खान मिराभक
अमित कार्यालय, राँधा

(रंजाल कुराट)
जिलाधिकारी, नाँया



045383



(56)

उसका पक्ष सुनने के उपरान्त खनन घट्टा निरस्त किया जा सकेगा।

8. स्टाम्प शुल्क के प्रयोजन के लिये पट्टान्तरित से कुल तीन वर्षों का स्वामित्व मु० 1,90,42,000.00 रुपये हैं इसके साक्ष्य के रूप में यह उपस्थापना पत्र एतदधीन आयी हुयी रीति से ऊपर

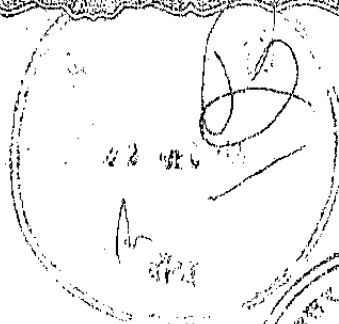
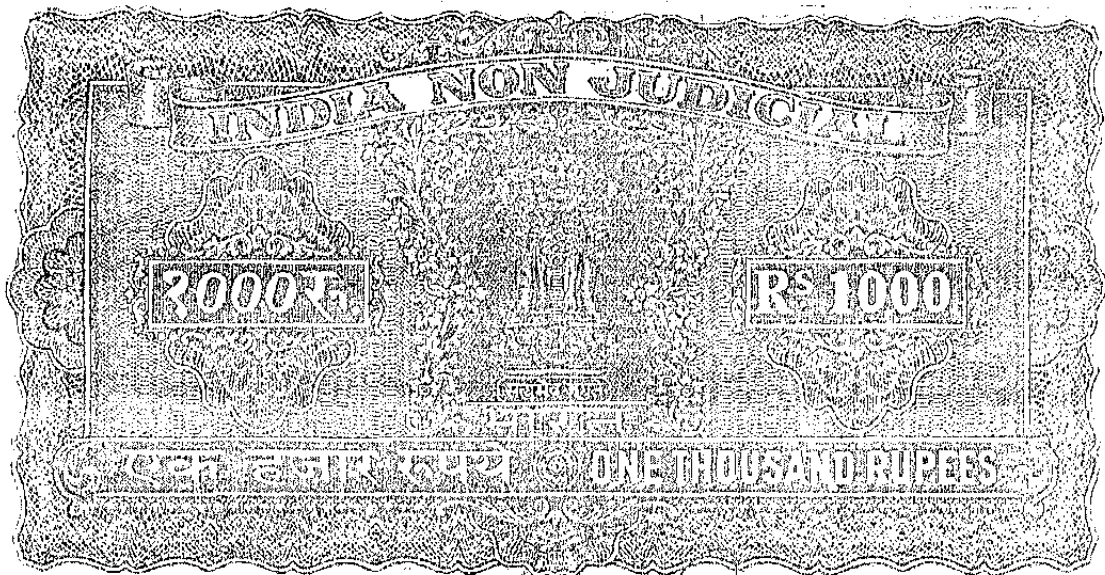
उल्लिखित दिन और वर्ष को निष्पादित किया गया है।

Sachin Bhandari

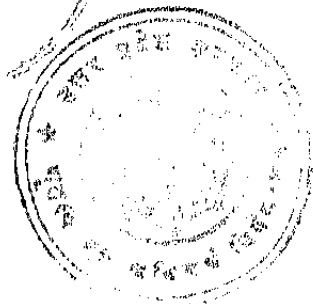
(जो० पी० विद्यवादी)
प्रथम निर्वाचित
अभिनेता हैं। आँदा

(रंजण कुमार)
विभागाध्यक्ष, आँदा

1000Rs.



U45314



(57)

उत्तर प्रदेश के राज्यपाल के लिये उनकी ओर से--

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- 2.

3. *(Signature)*
कृतिम सिंघान, कविश

(Signature)
(ले० पी० सिंहदेवी)
आम निरीक्षण
कारिग कार्यालय, बांदा

(Signature)
(रंजना कुमार)
जिलाधिकारी, बांदा

की उपस्थिति में जिला मजिस्ट्रेट, बांदा द्वारा हस्ताक्षरित

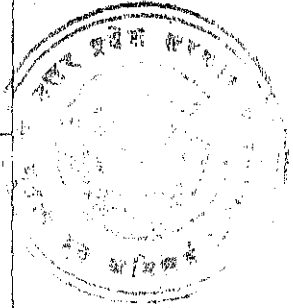
1. *(Signature)* श्री प्रकाश चंद्र, आम लखुआ, मक, बिलकूट
2. *(Signature)* श्री जयप्रकाश सिंह, जयपुर, बांदा

की उपस्थिति में मस्टेदार द्वारा हस्ताक्षरित

(Signature)
Sal Bhandal

निष्पादित प्रलेख श्री. सोमेश्वर प्रसाद नविस्ते श्री. सोमेश्वर प्रसाद
बहक श्री. सोमेश्वर प्रसाद के प्रस्तुतकर्ता/
विकेता/केता श्री. सोमेश्वर प्रसाद पुत्र श्री. सोमेश्वर प्रसाद
निवासी अ. म. उ. प्रसाद जिला के
समाये गये दोनों हाथों के फिंगर प्रिन्ट्स का विवरण-

	बायाँ हाथ		दायाँ हाथ
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2	निशान तर्जनी अँगुली	2	निशान तर्जनी अँगुली
3	निशान मध्यमा अँगुली	3	निशान मध्यमा अँगुली
4	निशान अनामिका अँगुली	4	निशान अनामिका अँगुली
5	निशान कनिष्ठका अँगुली	5	निशान कनिष्ठका अँगुली



उक्त प्रपत्र निष्पादित-प्रलेख का अनिवार्य अंग माना/समझा जायेगा।

निष्पादक

निष्पादक

Sub. Officer

ANNEXURE-V

COPY OF ENVIRONMENT CLEARANCE/TERMS OF REFERENCE



By Speed Post

NO. 11015/245/2012-IA.II (M)

Government of India

Ministry of Environment, Forests & Climate Change

Impact Assessment Division

3rd Floor, Vayu Wing,
Indira Paryavaran Bhawan,
Jorbagh Road, Aliganj,
New Delhi-110 003

Dated: 19th August, 2014

To,

M/s Sri Somesh Bharadwaj
S/o Sri Omprakash Bharadwaj,
R/o Amr Talikes, Tehsil Banda,
District Banda, UP

Subject: Kanwara Sand/Moram Mining Project of M/s Sri Somesh Bharadwaj for renewal of mining lease of Sand/Moram extraction of 7 lacs TPA (122.81 ha) at village Kanwara, Bhuredi & Chilkhata, District Banda, Uttar Pradesh -TOR.

The Proposal was received in the Ministry on 17.02.2012. The Proposal is to determine the Terms of Reference for which the proponent had submitted information in the prescribed format (Form-1) along with Pre-feasibility report.

2. The Project is for sand/moram mining on river Ken. Original lease period was 24.12.2009 to 23.12.2012. Proponent applied for renewal of mine lease on 15.5.2012. This is a fresh application for renewal of mine lease period located at Plot/Survey/Khasra No. Khand No. 13, Zone I, Village Kanwara, Bhuredi, Chilkhata, Tehsil Banda, District Banda, Uttar Pradesh between Latitude: 25° 27'11.43" N to 25° 30'30.90" N and Longitude: 80° 18'40.03" E to 80° 17'30.31" E. It is within 10 km radius from the interstate Boundary between Madhya Pradesh-Uttar Pradesh. There will be no change in the land use. Mining will be by manual opencast method, along the centre of the river bed keeping both the shores unaffected. There is no vegetation or building. The mining activity will be confined to the river bed mining. Sand/Moram will be loaded directly into trucks, dumper etc. for this purpose local people will be hired, and hence no temporary sites for housing will be required. No waste/effluent will be generated at the mine site. About 5.01 KLD will be required for drinking and dust suppression purpose. This water will be supplied from the near-by village. Very insignificant quantity of domestic waste will be generated by the labours at site. Ganckha, Chatkan and dense babul Reserve Forests are located within 10 km radius.

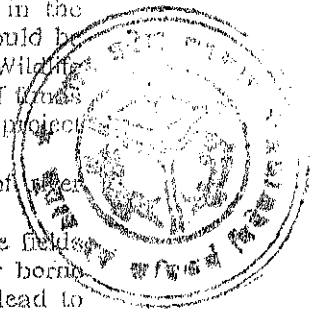
3. It was noted that it is a violation case as the mine have been in operation without obtaining requisite prior environmental clearance. However, project proponent has informed that this is not a violation case as the mine was closed since 30.6.2011. As per the order of Hon'ble High Court of Allahabad passed in writ Petition No. 9416(MB) of 2010, Md. Kausar Jah

Union of Indian & Others on 29.4.2011, mining of minor minerals was permitted upto 30.6.2011. The project proponent in this regard has submitted a letter dated 15.12.2012 issued by Mining officer Banda mentioning that the mine has been stopped since 01.07.2011.

4. The proposal was placed before Expert Appraisal Committee in its meeting held during November 21st -23rd, 2012, the Committee prescribed the following TORs for undertaking detailed EIA study:

1. Year-wise production details since 2006 after the EIA Notification, 2006 coming into force may be furnished.
2. A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
3. All documents (including approved mine plan/eco friendly mine plan), EIA report and public hearing should be comparable with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology.
4. The terms and conditions imposed, if any, by the Competent Authority in the State Government while granting mining lease / permit / contract should be built into the mine plan (eco friendly mine plan) as well as the EIA report. It may inter-alia include; area of working (length and breadth of the river stretch), mode of working, working shift, transportation of mineral, restriction, if any imposed for working etc.
5. All corner coordinates of the mine lease area superimposed on High Resolution Imagery/topo sheet should be provided.
6. Involvement of forestland, if any, in the project and status of forestry clearance should be given.
7. The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA, such as waste generation etc should be for the life of the mine / lease period.
8. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
9. Does the Environment Policy prescribe for standards operating process/ procedures to bring into focus any instances of deviation / violation of the environmental or forest laws / conditions? If so, it may be detailed in the EIA.
10. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions? Details of this system may be given.
11. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
12. A study should also be carried out to decide on the quantum of mineral which can be removed on sustainable basis taking into account the replenishment potential of the area and details furnished.

13. Land use of the study area should be described delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features.
14. Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post-operational phases.
15. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigation measures required should be worked out with cost implications and depicted in the EIA report.
16. The vegetation in the RF / PF in the study area, if any, should be indicated.
17. A study shall be got done to ascertain the impact of the mining project on wildlife of the area including aquatic life.
18. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed) within 10 km of the mine lease, if any, should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance from the Chief Wildlife Warden for operating the mine within 10 km of the National Park/Sanctuary, if any, should also be obtained and furnished.
19. A detailed biological study for the study area (core zone and buffer zone (10 km radius of the periphery of the mine lease)) including the aquatic fauna in the riverine system shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zones should be furnished based on primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
20. Impact of the project on land use including change of water course, if any, should be given.
21. Impact on topography, drainage, agricultural fields, cattle fields, grazing grounds, wildlife, water logging leading to water borne diseases, if any. It may also be shown whether it will lead to change of watercourse of the river. Modelling exercise should also be carried out through an expert agency to show the change in river flow dynamics, if any.
22. Collection of one season (non-monsoon) primary Baseline data on ambient air quality (PM₁₀, SO₂ and NO_x), water quality, noise level, soil, flora and fauna. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. Collected baseline AAQ data should be tabulated date wise to form part of EIA and EMP report. The mineralogical composition of PM₁₀ particularly for free



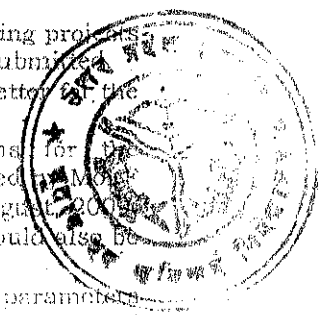
Silica, should be given. There should be at least one AAQ monitoring station within 500 m of the mine lease in the pre-dominant downwind direction.

23. Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map. The impact of other mines in the study area, as also stone crusher and other industries nearby, if any, should also be taken into account.
24. The water requirement for the project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
25. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be obtained where required and copy furnished.
26. Impact of the project on the water quality should be assessed and necessary safeguard measures, if any required, should be provided.
27. Information on site elevation, working depth, groundwater table should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
28. Quantity of solid waste generation, if any, should be estimated and details for its disposal and management should be provided.
29. Impact on local transport infrastructure due to the project should be evaluated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) and whether it is capable of handling the increased load should be estimated. Arrangement for improving the infrastructure, if contemplated including action to be taken by other agencies such as State Government, if any, should be covered.
30. Details of the rest shelters and other facilities to be provided to the mine workers should be furnished.
31. Phase-wise plan of greenbelt development, plantation and compensatory afforestation, clearly indicating the area to be covered under plantation and the species to be planted should be provided.
32. Occupational health impacts of the project activity should be anticipated and reported and proposed preventive measures indicated. These along with details of pre-placement medical examination and periodical medical examination schedules and medical facilities proposed to be provided should be incorporated in the EMP.
33. Measures of socio economic influence to the local community, proposed to be provided by project proponent should be spelt out. As far as possible, quantitative dimensions should be given.

34. Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts, with specific safeguard measures to control PM10 as well as pollution due to transportation, should be given. It should also address the impact due to stone crushers nearby, if any.
35. Public Hearing points raised and commitment of the Project Proponent (PP) on the same, along with time bound Action Plan to implement the same, should be provided and also incorporated in the final EIA/EMP Report of the Project.
36. Details of litigation pending against the Project, if any, with direction /order passed by any Court of Law against the project should be given.
37. The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.

5. Besides the above, the below mentioned general points will also to be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index, page numbers and continuous page numbering.
- c) Where data are presented in the report especially in Tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 1st August, 2006 which are available on the website of this Ministry should also be followed.
- h) Changes, if any, made in the basic scope and project parameters (as submitted in Form-I and the ICR for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.



6. The EIA report should also include surface plan of the area indicating contours of main topographic features, drainage and mining area

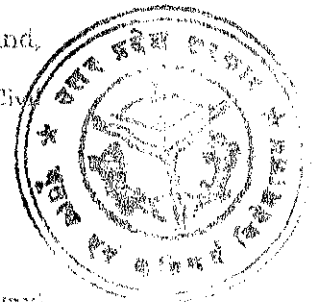
7. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

8. After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the Public Hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

(Dr. V.P. Upadhyay)
Scientist 'F'

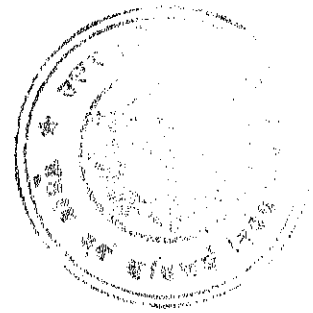
Copy to:

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Secretary, Directorate of Geology, Government of Uttar Pradesh, Khanj Bhawan, 27/8, Ram Mohan Rai Marg, Lucknow - 226001.
3. The Secretary, Department of Environment, Government of Uttar Pradesh, Sachivalaya, Babu Bhawan, Adjacent to Vidyan Sabha, Lucknow - 226001.
4. The Chief Wildlife Warden, Government of Uttar Pradesh, 17, Rama Pratap Marg, Lucknow, U.P.
5. The Additional Principal Chief Conservator of Forests, Central Region, Ministry of Environment and Forests, Kendriya Bhawan, 5th Floor, Sector 'H', Aliganj, Lucknow - 226020.
6. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi 110032.
7. The Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi 110001.
8. The Chairman, PICUP Bhawan, 3rd Floor, B-Block, Vibhuti Khand, Ganti Nagar Lucknow - 226 010.
9. The Controller General, India Bureau of Mines, Indira Bhawan, Civil Lines, Nagpur - 440001.
10. The District Collector, Banda District, Uttar Pradesh.
11. Guard File.



(Dr. V.P. Upadhyay)
Scientist 'F'

ANNEXURE-VI
KHASARA MAP OF THE AREA



ROSS ST. 15' STREET 50.5' 94' 00"

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To

Date:

Executive Engineer

Chitrakoot Dham Mandal Jal Sansthan Banda

U.P.

Subject: Regarding Environment Clearance for Kanvara Sand/Moram Mining project (Area 122.81 ha), District- Banda U.P.

Dear Sir,

This is to inform you that we have allocated a contract of mining project (Sand/Moram) at Banda. WE are here by informing you that village Kanvara, Bhurendi & Chilehata falls under this project. Please inform us before the situation of flood arise in that area so that we procure our labor and other assets which are being used for mining.



Shri. Somesh Bharadwaj

Amar Takeej Road, Banda

Mo. 9454827007

Owner



The Mines officer,
Banda,
U.P

Date: 9/2/16

To,
Shri Somesh Bharadwaj
Amar Talkies,
Tehsil- Banda,
District - Banda (U.P)

Proposal No. – IA/UP/MIN/24282/2012

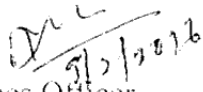
Subject: Regarding Mining Plan in respect of Kanvara Sand/ Morum Mining Project of Village – Kanvara, Bhuredi & Chilehata, District- Banda, State-Uttar Pradesh.

This has reference to grant of Environmental Clearance in respect of Sand/ Moram Mining from kanvara, Bhuredi & Chilehata having total area of 122.81 hectares granted in favor of Shri Somesh Bharadwaj vide lease deed dated 24-12-2009

It has been clarified that mining plan submitted for public hearing and the final mining plan approved on 22-12-2015 has no material changes, except for some typographical and language.

खान अधिकारी

बाँदा


Mines Officer,
Banda
Uttar Pradesh

BUDGET FOR OCCUPATIONAL HEALTH

S.No.	Activities	Budget (Amount/annum)
1	Water sprinkling for dust emission	Rs. 2,00,000
2	Regular Medical checkup of workers	Rs. 2,00,000
3	Medical facility for emergency (Ambulance)	Rs. 5,00,000
4	Distribution of Safety Equipments (Hand Gloves, masks & shoes)	Rs. 1,00,000
5	First Aid (fully equipped)	Rs. 1,00,000
Total		Rs. 11,00,000

BUDGET FOR PUBLIC HEALTH

S.No.	Activities	Budget (Amount/annum)
1	Free health checkups	Rs. 5,00,000
2	Health camps & Awareness programs	Rs. 2,00,000
5	Sanitation & drinking water facilities	Rs. 5,00,000
Total		Rs. 12,00,000

Note:-

- Ø **Safety Equipments** such as Hand Gloves, Ear-muffs, Masks, Shoes etc and fully equipped **First Aid Box with anti –venom facility** will be provided at the project site.

- Ø We also have Tie-up with near-by hospital for **Emergency Assistance** which has been done with **District Hospital Banda** (shown in **Disaster Management Plan in Section-Medical Examination Schedule**, Page no. 367) for the safety of the workers.

Project Name: Kanvara Sand/Moram Mine, U.P

- Ø We also have Tie up with **Chitrakoot Dham Mandal jal Sansthan, Banda** who will inform us before the situation of flood arise in that area so that we procure our labors.(**Flood Letter Receiving** send to **Chitrakoot Dham Mandal jal Sansthan, Banda** is attached as **Annexure XIII, Page no. 362**)

DISASTER MANAGEMENT PLAN

River Bed Mining has impending dangers or risk which need be addressed for which a disaster management plan has been formulated with a n a im of t aking p recautionary s teps t o avert disasters and also to take such action after the disaster which limits the damage to the minimum. As p e r p roposal m ade under t he m ining pl an, dur ing p roposed working, t he a rea will be developed by means of Manual opencast mining method.

- ***Possible Risks Due To Inundation & Its Control***

Mining will be done during the non-monsoon periods; therefore problem of inundation is not likely to happen. However, sudden uninformed release of water from upstream reservoirs, if any, or during dam bursts cannot be ruled out

- ***Dewatering***

Depth of mine is limited to 3m depth or ground water level, whichever comes first. Hence no dewatering is required.

- ***Possible Risks Due To Failure of Pit Slope & Its Control***

Pit will be created of limited depth only i.e. 3m with bench heights not exceeding 1m and a slope of 45⁰. Thus the chance of failure of pit slope does not exist.

- ***Possible Risks Due To Failure of Waste Dump & Its Control***

No waste dump is created therefore the question of failure of waste dump does not exist.

- ***Possible Risks Due To Explosion, Fire & Its Control***

The operation does not need blasting and electricity and hence does not anticipate any fire disaster.

- ***Measures to Prevent Accidents Due to Trucks/Dumpers***

- i. All transportation within applied mining lease working shall be carried out directly under the supervision and control of the management.
- ii. The vehicles will be maintained in good condition and checked thoroughly and vehicles without fitness certificate or PUC Certificate will not be allowed. In case of doubt, vehicles will be inspected by a competent person authorized for the purpose by the management.
- iii. Road signs will be provided along the evacuation route showing maximum speed limit, school sites, market places, hospital sites or any other sites where crowds are anticipated en route and at each and every turning point up to the main road (wherever required).
- iv. To avoid danger while reversing the equipment's/ vehicles especially at the working place / loading points, stoppers shall be posted to properly guide reversing/spotting operating, otherwise no person shall be allowed within 10 m radius of machine except operators.
- v. A statutory provision of the fences around deposits, warning signs near quick sand conditions, constant education, training etc. about risk and hazards expected from the project shall be provided for reducing the incidents of such accidents.

- ✓ **Other Possible Measures to Avoid Risks/ Disaster Due to River Bed Mining.**

- i. Unwanted material including mineral or spoilage (if any) shall not be stacked on the banks as it will hinder the flow of water in monsoon season causing water logging and damaging evacuation routes and nearby structures.
- ii. Mining of minerals / working shall be started from the center line of lease area starting from dip to rise to avoid ponding and then laterally in 3 numbers of 1 meter high benches to avoid side collapsing.
- iii. River banks will not be excavated to form access ramps.
- iv. Only excavated and unsalable river gravel shall be used to deposit against the river bank to form access ramps with allowable slope.

Maintenance and monitoring of housekeeping:

The area will be monitored every week by competent person and if maintenance is needed will be done as per requirement.

✓ **Occupational Health Hazards:**

Dry-pit mining by open cast method involves dust generation by excavation, loading and transportation of mineral. At site, during excavation and loading activity, dust is main pollutant which affects the health of workers whereas environmental and climatic conditions also generate the health problems.

Addressing the occupational health hazard means gaining an understanding of the source (its location and magnitude or concentration), identifying an exposure pathway (e.g. a means to get it in contact with someone), and determination of likely a receptor (someone receiving the stuff that is migrating).

Occupational hazard due to sand mining mainly comes under the physical hazards.

- ***Physical Hazards due to Mining Operations:***

Following health related hazards were indentified due to riverbed sand mining operations to the workers:-

1. **Light:** - The workers may be exposed to the risk of poor illumination during evening hours or excessive brightness during day times. The effects are eye strain, headache, eye pain and lachrymation, congestion around the cornea and eye fatigue.

2. **Heat and Humidity:** - The most common physical hazard is heat as working is done in open sun light without any shed. The direct effects of excessive heat exposure in summer season areas are burns, heat exhaustion, heat stroke and heat cramps; the indirect effects are decreased efficiency, increased fatigue and enhanced accident rates. Heat and humidity are encountered in hot and humid condition when temperatures and air temperatures may exceed 48⁰C in the river bed mining area.

3. **Eye Irritation:** - During the high windy days in summer the sandstorms could be the problems for eyes like itching and watering of eyes.

4. **Respiratory Problems:** - Large amounts of dust in air with possibility to have free crystalline quartz can be a health hazard, exacerbating respiratory disorders such as asthma and irritating the lungs and bronchial passages. However, as the sand at river beds are having high moisture, the emission from excavation and loading are not significant and in case of dry sand, this can be easily controlled by water sprinkling.

5. **Noise Induced Hearing Loss:** - Vehicles and Machinery is the main source of noise pollution at the mine site, though they are not significant
6. Insect and snake bites are possible as their habitations below boulders may be disturbed during mining.
7. Approaching areas having quick sand conditions unknowingly.

✓ **Medical Examination Schedule:**

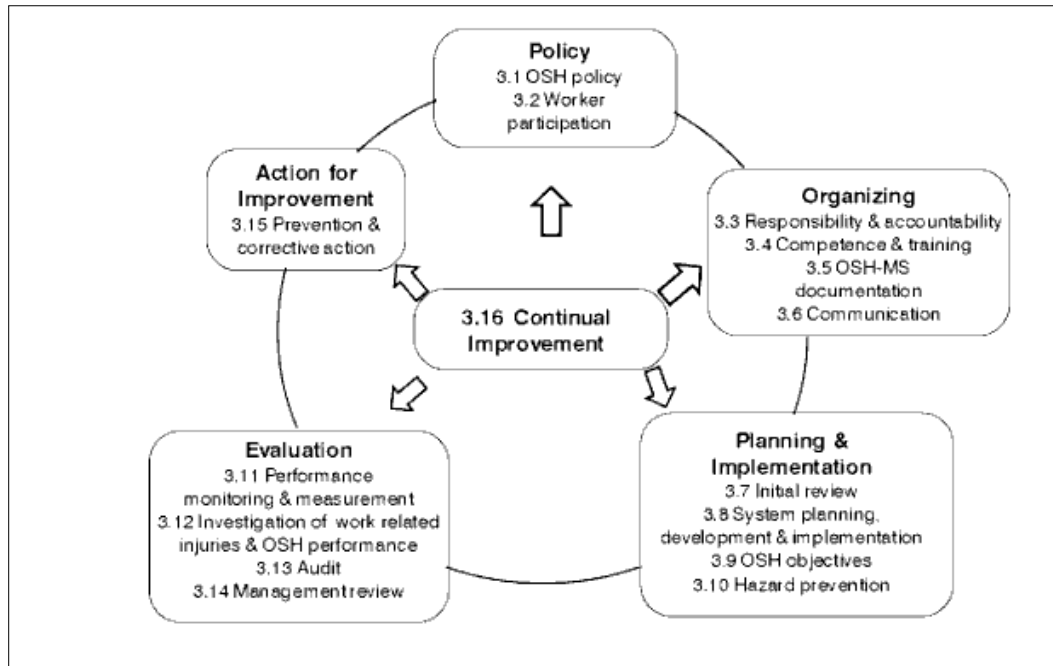
To minimize the health impacts PPE like dust masks, ear plugs/ muffs, goggles for protection against sunlight and other equipments will be provided for use by the work personnel. Rest shelters shall be available at site to take rest during excessive heat with drinking water facilities to reduce impacts due to exposure to heat and body water loss. All workers will be subjected to Initial Medical Examination as per Mines Rule 1955 at the time of appointment. Periodical Medical Examination will be conducted at least once in a year. Immediate action will be taken if any worker is found to exhibit signs of heat stroke or dehydration or snake bites etc. by shifting him to a nearby hospital and signing a contract with them.

Medical camps will be organized. Periodical medical examination will also be scheduled. We also have Tie-up with near-by hospital for **Emergency Assistance** which has been done with **District Hospital Banda** for the safety of the workers.

Safety in the workplace is critical to the success of running a business, no matter what size it is. As a small business owner one has certain rights and responsibilities regarding health and safety in the workplace. Even without any employees, one must ensure that the business doesn't create health and safety problems for the customers and the general public.

All safety gears will be provided to workers and care will be taken by the management that these are used properly by them. All safety norms will be followed.

The management, however small it may be, will form a policy and methods to execute them as below:



Major Hazards:

Flash Floods:

As the project site is itself a river bed which is prone to face flash floods in case of excessive rains upstream, opening of dam gates, dam burst etc., if the workers remain uninformed, they may be severely affected leading to wash away in the stream.

Quick Sand Conditions:

There may be possibilities of areas having quick sand conditions near the site where workers or domestic cattle may reach accidentally and get trapped.

Insect and Snake Bites:

During working, there may be possibilities of insect and snake bites.

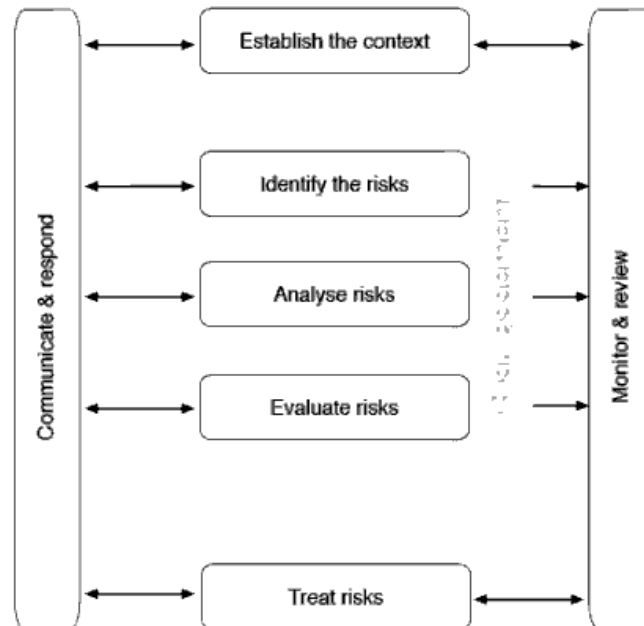
Fire and Explosions:

The mining machineries use diesel and these may be stored at site. The fuel oil storage areas may face fire and explosion problems if the Hazardous Materials Act is not complied with.

Fall in pits:

The entire work area is unprotected river bed. The levels are not uniform having pits and slopes. There are every possibility of workers, visitors and stray cattle to fall in pits. Complete fencing of pits is also not practicable.

The entire OHS system will be designed as follows:



Personal Protective Equipment (PPE)

General Provisions

As a supplementary protection against exposure to hazardous conditions in the RBM projects where the safety of workers cannot be ensured by other means, such as eliminating the hazard, controlling the risk at source or minimizing the risk, suitable and sufficient PPE, having regard to the type of work and risks, and in consultation with workers and their representatives, shall be procured and used by the workers and provided and maintained by the employer, without cost to the workers. PE)

- PPE shall be examined periodically to ensure that it is in good condition.
- Different PPE & their components shall be compatible with each other when worn together.
- It shall be ensured that the procured PPEs are ergonomically designed and, to the extent practicable, should not restrict the user's mobility or field of vision, hearing or other sensory functions.

- Employer shall ensure that the workers who are required to wear PPE are fully informed of the requirements and of the reasons for them, and are given adequate training in the selection, wearing, maintenance and storage of this equipment.
- When workers have been informed accordingly, they shall use the equipment provided throughout the time they may be exposed to the risk that requires the use of PPE for protection.
- The PPE shall not be used for longer than the time indicated by the manufacturer.
- Workers shall make proper use of the PPE provided, and maintain it in good condition, consistent with their training and be provided with the proper means for doing so.
- PPE procured shall not contain hazardous substances, such as asbestos.

Head Protection

- Helmets intended for use in industry shall be subjected to a test for resistance to falling objects while loading.
- Any helmet that has been submitted to a heavy blow, even if there are no evident signs of damage, shall be discarded.
- Helmets for persons working overhead shall be so procured that they shall be provided with chin straps.
- In addition to safety, consideration shall also be given to the physiological aspects of comfort for the wearer.
- The helmets shall be so procured that they shall be as light as possible, the harness should be flexible and should not irritate or injure the wearer and a sweatband should be incorporated.
- All protective headgear shall be cleaned and checked regularly.

Face & Eye Protection

- Face shields or eye protectors shall be used to protect against flying particles and dust storms.
- Goggles, helmets or shields that give maximum eye protection shall be worn by operators and their helpers.
- The protectors shall be fitted and adjusted by a person who has received training in this task.

Respiratory Protective Equipment

- When effective engineering controls are not feasible, or while they are being implemented or evaluated, masks, appropriate to the hazard and risk in question, shall be used to protect the health of the worker working in dusty conditions.

Hearing Protection

Noise pollution is not a major issue in the project. However, the following measures shall be taken if anybody is to work in a noisy area:

- When effective engineering controls are not feasible or while they are being implemented or evaluated, hearing protection shall be used to protect the health of workers.
- Hearing loss of speech frequencies may occur with elevated long-term exposure to noise. The use of hearing protectors gives the best results to users who are well informed of the risks and trained in their use. If earplugs are used, special attention shall be paid to the proper fitting technique.
- Hearing protectors shall be so procured that they are comfortable, and the users shall be trained to use them properly. Special attention shall be paid to possible increased risk of accidents due to the use of hearing protectors. Earmuffs reduce the capacity to locate sound sources and prevent warning signals from being heard. This is especially true for workers with considerable hearing loss.

Protection from Falls

- In RBM projects, workers are exposed to working at uneven sites with pits and slopes not properly designed.
- Devices like fencings and warning signboards shall be provided to prevent workers from falling to the extent possible.
- Appropriate and timely rescue shall be provided when using fall-arrest equipment to prevent suspension trauma.

Plan of evaluation of health of workers

- By pre designed format during pre placement and periodical examinations.
- Proper schedule will be devised and followed with help of occupational health experts and doctors.

Schedule of medical check-up during operational phase

- Comprehensive Pre-employment medical checkup for all employees
- General check up of all employees once every year.
- Local hospitals and Govt. health monitoring system will be engaged.
- Dispensary and ESI facility will be provided to all workers as applicable
- All safety gears will be provided to workers and care will be taken by the management that these are used properly by them. All safety norms will be followed

Disaster Management Plan

✓ *Introduction*

Even with all precautions, disasters may take place. As such, an Emergency Plan has been formulated to take care of any disaster in the project and surrounding areas and is detailed as under:

In order to prevent occurrence of any disaster, the project will be provided with various safety measures as described. However, in case of failure of safety measures or due to natural calamity or sabotage, disaster may happen. Therefore, it is necessary to provide disaster control facilities to minimize losses due to disaster. Normally, in the project, no major disaster affecting nearby population areas are foreseen. However, accidents inside the project affecting workplace in vicinity cannot be ruled out.

Ø *Definition of disasters*

A situation will be called a 'Disaster' if it entails any one or more of the following factors:

- Risks of loss of human lives - ten or more in one single situation.
- Loss of property as a consequence of the incident is over Rs.1 Crore and/or bears a potential to the above.
- A situation which goes beyond the control of the available resource of the project.
- A situation apparently may not have much loss but its long-term severity can affect loss of life, production and property.

The types of possible disaster are given below:

Ø **Type of disasters**

- i) Disaster due to failure of safety measures on account of:
 - Fire and explosion
 - Toxic gas release
 - Pressure wave transmission due to blasting or explosion
 - Collapse of mine wall and dump slope
 - Accidents due to mining equipment and trucks/dumpers
- ii) Disaster due to natural calamity on account of:
 - Flood
 - Earth quake / cyclone / Storm / Cloud burst / Lightning
- iii) Disaster due to external factors on account of:
 - Food poisoning / Water poisoning
 - Sabotage
 - Quick sand conditions

✓ **Objectives**

Objectives of the disaster control/management plan for the proposed project are:

1. To identify type of major disasters this may occur in the project.
2. To collect data on type of disasters this has happened already in other RBM projects.
3. An action plan to handle disaster.

1. Identification of Hazardous Process/Area

Level of Accident

If there is any disaster in any part of the project /work place due to any reason, the area which may be affected can be classified in the following four classes.

1. Level I - Operator level
2. Level II - Local/community level
3. Level III - Regional/ national level
4. Level IV - International level

Level I class of accidents have been considered for the project.

Level I

Under this level, disasters may happen due to fire and explosion, accidents due to traffic, falls on uneven areas and pits, toxic gas release, pressure wave transmission due to blasting or explosion, flash floods, inundation, cyclones, cloud burst, quick sand conditions and earthquake. This level has probability of occurrence affecting persons inside the project site-may be workers or any visitor including stray animals who have strayed into the site as the site has no protective boundary of its own due to its nature unlike an industrial plant. Moreover, as the project has no source of fire, explosion, toxic gas release or pressure wave transmission due to blasting, the effect will not reach nearby community.

✓ Major Hazards and their Control:

Flash Floods:

As the project site is itself a river bed which is prone to face flash floods in case of excessive rains upstream, opening of dam gates, dam burst etc., if the workers remain uninformed, they may be severely affected leading to wash away in the stream.

Inundation

Mining will be done during the non-monsoon periods; therefore problem of inundation is not likely to happen. However, sudden uninformed release of water from upstream reservoirs, if any, or during dam bursts cannot be ruled out

Alarm System – an effective control system:

In case of RBM projects, where maximum chances of disaster are due to flash floods and inundation due to anthropogenic or natural activities upstream, a proper communication and alarm system is the first requirement. The alarm system can be activated only if the Safety Officer is communicated the same from upstream sources on time. There is a time lag between the occurrence of the situation at source and it's reaching the site, which are some distance away. If the source is due to anthropogenic reasons, the information must be communicated to downstream areas so that they can take preventive measures on time. In case the source is due to natural disasters, then also its effect will take some time to reach the project site and there is sufficient time to take preventive actions. To develop and operate such a communication system

is the responsibility of the state government. The responsibility of the project is to develop links with state government, specially the irrigation department, so that they can receive such communications on time and translate into actions. The project shall develop its own communication and alarm system which will work as follows:

On receiving the message of 'Disaster' from upstream sources, the Safety Executive, will instruct Commanding Officer **Security services** to sound SIREN WAILING TYPE FOR 5 MINUTES. On receiving the message of "Emergency Over" from Safety Executive All Clear Signal by Sounding Siren straight for two minutes will be given. The features of the alarm system will be explained to one and all to avoid panic or misunderstanding during disaster.

Quick Sand Conditions:

There may be possibilities of areas having quick sand conditions near the site where workers or domestic cattle may reach accidentally and get trapped. A proper identification of the area will be done and sign boards will be placed at vulnerable places to warn people from reaching quick sand areas.

Insect and Snake Bites:

The area of RBM is river beds having good habitation of benthic organisms, insects and snakes. During working, they may feel disturbed and there are possibilities of insect and snake bites. Anti venom injections will be kept at site and at contracted hospitals nearby and this will be administered only by a qualified doctor as mentioned in the Disaster Control Team responsibilities.

Fire and Explosions:

The mining machineries use diesel and these may be stored at site. The fuel oil storage areas may face fire and explosion problems if the Hazardous Materials Act is not complied with. Fire protection facilities will be provided as mentioned under Disaster Control Team responsibilities to handle fire and explosion.

Fall in pits:

The entire work area is unprotected river bed. The levels are not uniform having pits and slopes. There are every possibility of workers, visitors and stray cattle to fall in pits. Fencing will be provided wherever is practicable as complete fencing of pits is not practicable.

Failure of Pit Slope

Pit will be created of limited depth only upto 3m with bench heights not exceeding 1m and a slope of 45°. Thus the chance disaster during collapse of pits or failure of pit slope does not exist.

Failure of Waste Dump

No waste dump is created therefore the question of failure of waste dump does not exist.

Explosion, Fire

The operation does not need blasting and electricity and hence any fire or explosion disaster is not anticipated.

Accidents from Trucks/Dumpers

Movement of trucks and dumpers inside the lease area accident during loading and transportation of sand/ boulders may cause accidents.

I. Disaster Preventive Measures

It is not easy to control a disaster in absence of a contingency plans. For effective control of disaster, adequate manpower, technical know-how, alertness and internal help are necessary. In the proposed project, following prevention measures will be taken to prevent disaster.

Measures to Prevent Accidents Due to Trucks/Dumpers:

- All transportation within applied mining lease working shall be carried out directly under the supervision and control of the management.
- The vehicles will be maintained in good condition and checked thoroughly and vehicles without fitness certificate or PUC Certificate will not be allowed. In case of doubt, vehicles will be inspected by a competent person authorized for the purpose by the management.
- Road signs will be provided along the evacuation routes showing maximum speed limit, school sites, market places, hospital sites or any other sites where crowds are anticipated en route and at each and every turning point up to the main road (wherever required).
- To avoid danger while reversing the equipment's/ vehicles especially at the working place / loading points, stoppers shall be posted to properly guide reversing/ spotting operation, otherwise no person shall be allowed within 10 m radius of machine except operators.

- A statutory provision of the fences around deposits, warning signs near checks and conditions, constant education, training etc. about risk and hazards expected from the project shall be provided for reducing the incidents of such accidents.

*i. **Project layout:***

- Provision of adequate access ways for the movement of equipment and personnel are kept.
- Minimum two numbers of escape routes for escape during disaster to be provided.
- Siting of fuel oil storage for mining machineries, if any, shall be in protected fenced area inside tank bund located on the shore and not in river bed.

*ii. **Fire Fighting***

The proposed project will be provided with a Foam generator at the fuel oil storage site.

However, prior to installation of fire station & safety equipment, an experienced and qualified Fire Officer as per Factories Act will be engaged to carry out in-depth study and advise on the selection of equipment.

*iii. **Safety***

The proposed project will have a Safety Executive who will be an experienced and qualified staff whose main job will be to bring about safety consciousness amongst the work force in the project. The Safety Executive will conduct regular safety awareness courses/drills by organizing training of the personnel among the various working levels.

Safety awareness will also be created by the various posters highlighting the safe working practices in working area, public places and roads etc. Report will be given to Management for corrective measures to improve the safety conditions.

*iv. **Training***

Management will arrange training on safety accident prevention, first aid, hazard control, housekeeping and environmental management. Special emphasis with mock drills in disaster control will also be planned.

v. **Communication**

In the proposed project, there will be up-to-date communication facilities with telecommunication and mobile phones, walkie-talkies, loud speakers to warn workers in case of an accident.

Other Possible Measures to Avoid Risks/ Disaster Due to River Bed Mining.

- Unwanted material including mineral or spillage (if any) shall not be stacked on the banks as it will hinder the flow of water in monsoon season causing water logging and damaging evacuation routes and nearby structures.
- Mining of minerals / working shall be started from the center line of lease area starting from dip to rise to avoid ponding and then laterally in 3 numbers of 1 meter high benches to avoid side collapsing.
- River banks will not be excavated to form access ramps. Only excavated and unsalable river gravel shall be used to form access ramps with allowable slope.
- Maintenance and monitoring of housekeeping: The area will be monitored every week by competent person and if maintenance is needed will be done as per requirement.

II. Contingency Plan and formation of Disaster Control Team

The contingency plan has been prepared from the experiences of accidents that have occurred in various other river side projects. The contingency plan being a dynamic plan will need periodical reviews and modifications with new experiences. Even with all precautionary measures taken to avoid disaster, disaster may occur. To tackle situations during and after disaster, a well-defined contingency plan and persons responsible to execute it is a must. The management will form a Disaster Control Team which will be headed by a Safety Executive, who is a senior full time employee of the company well qualified in Risk Management and Safety. The Safety Executive will be made responsible to handle disaster. On getting information about any accident, the officer will perform the following tasks:

- verify from the affected project site
- Inform the Management or other nominated coordinators immediately.
- To be responsible for planning and provisions of assistance from local authorities.

- To keep higher authorities informed about the situation.
- The decision of the Safety Executive on any matter to meet the objective of disaster control plan will be final.
- To identify persons from within the organization or outside local persons and form a Disaster Control Team.
- To convey message to his Disaster Control Team after consulting Management.
- Disaster Control Team will report to the Safety Executive and will consists of members from Casualty services, Rescue services, Fire fighting services, Traffic control, Training services, Depot and Transport services, Supply Services, Salvage service, Welfare services, Security services and Public Relation Service.
- All the services will be headed by respective Commanding Officers.
- To consult between themselves on matters related to more than one service and to decide on the action to be taken.

Activities on Warning and Alert (As proposed in SDMP)

On the receipt of a warning or alert received from any such agency which is competent to issue such a warning, or on the basis of reports from District Magistrate/SP on the occurrence of a disaster, all community preparedness including counter-disaster measures will be put into operation.

- On the basis of reports from the possible disaster site.
- On the receipt of warning or alert from EOC.

Coordination

Coordination involves the bringing together of agencies and elements to ensure effective response to emergencies. The district level will ensure co-ordination of resources to support operations which cannot be resourced locally, or which extend over more than one location. The highest level of operational co-ordination and support takes place at the State level. It is at this level that resource support from other States, Central Government and/or other agencies is assessed and requested. The response plan has been subdivided into the following sections:

A) Response Activities

b) Emergency Support Functions

a) Response Activities

Warning

Most of the disasters except earthquake and fires can be predicted and the community likely to be affected forewarned about any impending disaster through a proper warning mechanism.

Disasters for which warning is not possible include earthquakes, landslide, dam bursts, thunder and lightning and all accident related disasters. Floods, droughts, epidemics, industrial and chemical disasters are some of the disasters for which adequate warning could be given.

Warning to people through the Govt. field functionaries will be disseminated. Further, the List of Agencies competent for issuing warning or alert as proposed in SDMP are as given below:-

Disaster	Agencies
Earthquakes	Indian Meteorological Department Bhabha Atomic Research Centre Research Centre, Geological Survey of India, NGRI,
Floods	Indian Meteorological Department, Irrigation Department, Central Water Commission.
Adverse Climatic Conditions	Indian Meteorological Department
Industrial & Chemical Accidents	Police, Transport, Power Department of Industries
Fires (Urban & Forest)	Fire Brigade, Police, Forest Department

Evacuation

Evacuation is the planned relocation of persons from dangerous or potentially dangerous areas to safer areas and eventual return. Evacuated people are taken or directed to a place of relative safety, usually to an identified shelter or an emergency relief centre as per the Village/Block disaster management plans. The existing control rooms will act as the main hub for response activities and for overall coordination.

For effective evacuation ensure the following:

- Shelter sites will be identified within close proximity (one hour walk and or within 5 km) of dwellings.
- Alternate routes will be planned well in advance.
- For appropriate security and law and order, evacuation will be carried out with assistance from police, fire brigade

b) Emergency Support Functions

The emergency support functions deals with the first response whenever a disaster strikes. The ESFs will come into operation on either receipt of warning of an expected calamity or in the event of a sudden emergency. The lead agencies involved in the management of these disasters are Search and Rescue, Health and Medical Care (Mobile hospitals), Communication, Food & Civil supplies, PWD, Transport, Jal Sansthan, Power, Police, Fire etc. These lead agencies could be supported by a number of other department/agencies.

- **Early Warning**
- **Evacuation**
- **Search and Rescue**
- **Medical aid**
- **Shelter Management**
- **Emergency Relief**
- **Water Supply and Sanitation**
- **Infrastructure Restoration**

III. The responsibility of the members of the Disaster Control Team

i. Alarm System

In case of RBM projects, where maximum chances of disaster are due to flash floods and inundation due to anthropogenic or natural activities upstream, a proper communication and alarm system is the first requirement. The alarm system can be activated only if the Safety Officer is communicated the same from upstream sources on time. There is a time lag between the occurrence of the situation at source and it's reaching the site, which are some distance away. If the source is due to anthropogenic reasons, the information must be communicated to downstream areas so that they can take preventive measures on time. In case the source is due to natural disasters, then also its effect will take some time to reach the project site and there is sufficient time to take preventive actions. To develop and operate such a communication system,

it will be done in consultation with the state government. The responsibility of the project is to have facilities to receive such communications and translate into actions. The project shall develop its own communication and alarm system which will work as follows:

On receiving the message of 'Disaster' from upstream sources, the Safety Executive, will instruct Commanding Officer **Security services** to sound SIREN WAILING TYPE FOR 5 MINUTES. On receiving the message of "Emergency Over" from Safety Executive All Clear Signal by Sounding Siren straight for two minutes will be given. The features of the alarm system will be explained to one and all to avoid panic or misunderstanding during disaster.

ii. Casualty services

Casualty Services will be manned by a local Medical Officer or an appointed Medical Officer nominated as a member of Disaster Control Team. His functions will include:

- First aid service by first aid parties on the spot.
- Ambulance service for transport of casualties from the spot to nearest hospital.

Procedure for treatment

On getting a signal from the Safety Executive or information on telephone or hearing siren, the Member of the Casualty service and first aid personnel will report to Safety Executive. The Ambulance with the driver will report to site. First aid parties will render first aid to casualties at the place of occurrence and those requiring further treatment would be transported to the nearest hospital by ambulance. In case of extra help being required from outside Safety Executive will initiate for help in:

- Evacuating the casualties
- Essential assistance in first aid.
- Extra medical helps from neighboring hospital.

First Aid

It is necessary to give first aid to the persons injured in disaster. First aid post will be set up. At the post 1 first aid personnel shall be kept.

Equipment

Each member of the first aid will be provided with the personal equipments like Helmet, Water bottle, Torch, First aid box with Anti Venom.

Ü **Rescue services**

The responsibility of effective working of Rescue Services shall be with Member of the Casualty service as follows:

Rescue services

- To hand over injured persons to first aid parties
- To extricate persons from the debris and save human lives

Each rescue party will be provided with the following equipment:

- PETRONAS lamp, Torches
- Axes/hand saw
- Ropes
- Ladders
- Blankets
- Rubber shoes

Repair services

- To take up repair of damaged buildings, roads and culverts.
- To maintain essential public utility services
- To take up quick repairs of the damaged machinery.

Ü **Fire fighting services**

The functions of the fire fighting group will be:

- To enforce all regulations for prevention of fire.
- To co-ordinate fire fighting activities
- To request neighboring industries and District Authority for rendering services of their fire fighting crew under mutual aid schemes, if necessary.

Ü **Traffic control**

The free movement of the fire vehicles and ambulance at the scene of fire/emergency is very important and therefore the security personnel on duty must ensure that all the roads at the scene of fire/emergency are kept clear and fire/emergency must not park their vehicles within 100

meters of fire, at road junction and at access roads. The ignition key should be left in the vehicles.

Ü **Training services**

The responsibilities of the training department in the context of disaster management shall be as given below.

- The faculty will consist of Safety Executive and all members of the Disaster Control Team
- To arrange training of volunteers/employees nominated by Safety Executive.
- To arrange refresher training courses once in a year.
- To arrange mock drills, twice in a year.
- To make a list of employees trained in various specialized disasters so that they can be easily contacted to handle a particular type of disaster. The person concerned will immediately report to Safety Executive.

Ü **Transport services**

The responsibilities of the transport department in the context of disaster management shall be as follows:

- Arranging vehicles from market and dispatch of vehicle to the place of incident as per orders from the Safety Executive.
- To return the vehicle as soon as the work is completed.
- The vehicles should be available at a short notice

Fuel: The **Transport services** will contact **Supply Services** for arrangement of fuel for vehicles during fuel crisis and stop supplying fuel to vehicles other than those, which are in use for disaster control.

Ü **Supply Services**

A senior person will head supply service from stores department. The responsibilities include:

- Planning, organizing and procuring, of necessary equipment/materials.
- Storage of equipment/materials at accessible location and quick distribution on demand.
- To obtain the requirement of equipment/ materials from Commanding Officers of various

services for their respective services.

Ü **Salvage service**

Their responsibilities will be:

- To salvage properties from debris
- To take care of such properties
- To co-ordinate patrolling with the help of police and security personnel for the safeguard of valuable properties till the same are removed to a safe place.

Ü **Welfare services**

Management of proposed project will nominate one person from administration side as the Commanding Officer of welfare services.

Emergency camps will be set up only in exceptional cases on a available area. For this purpose necessary materials will be brought from nearby market. The function of the welfare officer will include:

- To provide shelters to affected persons.
- To arrange enough stock of essential commodities
- To arrange clothing and medicines to affected persons.
- To arrange drinking water, if supply is disrupted, with the help of District Authorities.

Ü **Security services**

Chief Security Officer will be Commanding Officer, Security Services. Security services will be primarily responsible for the security of the project. His functions will include:

- To control the vehicular traffic inside the project.
- To help local police in patrolling the area of project and outside the battery area, if necessary.
- To assist various services in removing people from inundated areas, areas which have faced disaster and fighting fires.
- To assist in transporting injured persons.
- One jeep and one motor cycle will always be kept as reserve to cope with emergency

demand and immediate mobility of security personnel.

Ü **Public Relation Service**

A senior officer from the organization will look after Public Relation Services as PRO. His responsibilities are:

- To consult Management before communication, if required with outside agencies.
- PRO will be the official spokesman for the proposed project with outside agencies.
- PRO will arrange for photography and filming of the whole disaster as photography and filming of such incidents are of immense value for the purpose of investigation, training and education.

IV. Fire and Explosion

Chances of fire and explosion from the project are insignificant. However, following contingency plans have been made:

- Safety Executive along with Commanding Officers takes overall charge of the situation
- Safety Executive will assess the situation for possible after effects of the fire in the project and the surrounding areas likely to get affected
- Safety Executive will inform local authorities to send fire tenders, if necessary
- Safety Executive will inform the nearby people of likely affected areas through communication system to leave the area and move to other areas earmarked, if necessary
- Safety Executive will inform coordinator, external services to inform the District authorities of the disaster and request them for help.
- To evacuate people from the affected areas outside the project.
- To control the traffic and maintain law and order.
- To arrange medical aid for the affected people.
- Safety Executive will arrange inspection of affected areas to get firsthand knowledge of damages occurred.

V. Food poisoning

In case of food poisoning the following actions will be taken:

- SAFETY EXECUTIVE will contact District Authorities and seek their help, if necessary.
- Security Personnel and employees will help in transporting the affected people to nearby health centre's/ hospitals

VI. Disaster due to Natural Calamity and External Factors

Most of the measures and processes shall be same as given under in-house disaster except that the Safety Executive will contact the State/ District authorities for necessary instructions to coordinate with them.

VII. Cloud burst/lightning

Cloud burst/lightning may lead to a situation which can lead to minor to major emergency in RBM projects due to flash flood and submergence. In such emergency, actions indicated under Disaster due to Natural Calamity and External Factors will be initiated

✓ Conclusion:

In view of the imperative need to meet the gigantic challenge posed by natural hazards, the successes achieved, the experience garnered and the onerous task ahead to secure safety and Disaster-free functioning of the project, whether small or big, in the larger interests of the society and the people envisages a n e ntire gamut of i ssues c onnected w ith m ainstreaming di saster management concerns in the developmental efforts at all levels and across a spectrum of sectors. The main themes to be addressed are

- Ensuring proper siting of the project considering hazard parameters.
- Making mining processes inherently safe.
- Development of on -site a nd of f-site D M pl ans in association with the D istrict Administration.
- Conducting mock-drills at regular intervals to determine the efficacy of the DM plans.
- Preparation of inventory of corporate resources and uploading them on the IDRN – India Disaster Resource Network.

- Large-scale association with awareness generation initiatives aimed at building the knowledge, attitude and skills of the common people for a safer habitat.
- Mainstreaming private sector participation in disaster management.
- Establishing linkages between private sector and the community.
- Networking knowledge on best practices and tools for effective disaster management.
- Development and implementation of appropriate risk transfer mechanisms.

✓ **Contact Personnel:**

The DMP will be circulated to each and every member of the project with all contact details. However, only the Safety Executive is allowed to call Commanding Officers. All the Commanding Officers are provided with phone numbers of persons from within the organization and outside, whom they need to contact in case of a disaster. All the employees are strictly advised not to contact Commanding Officers of various services in case of Disaster as it will create confusion and may be misused to create panic.

The Safety Executive will be the overall incharge, who is the District Magistrate Ms. Sheetal Verma. Also Additional District Magistrate and Sub Divisional Magistrate have been nominated who will be responsible for entire work related disaster management. The Designation & Contact Nos of the District Magistrate, Additional District Magistrate and Sub Divisional Magistrate have been given below. The below contact details along with the details of the commanding officers will be displayed at the site.

S.NO	Designation	Mobile No. / Phone No.
1.	District Magistrate, Banda	9454417531
2.	Additional District Magistrate	05192-224624
3.	Sub Divisional Magistrate	9415215928

In addition, all the rules and procedures given in State Disaster Management Action Plan (SDMP) for the State of Uttar Pradesh prepared by Disaster Mitigation & Management Centre, Uttar Pradesh Secretariat, Banda will be strictly followed:

Few emergency support functions as proposed in SDMP:

Emergency Support Functions

S. No	Emergency Support Function	Primary agencies	Support Agencies
1.	Search & Rescue, Evacuation, Fire Fighting	Police ,Medical, Fire Services	Water supply, Power corp. Quick Response Teams & teams ex Identified Units.
2.	Law & Order	Police	
3.	Medical Response & Trauma Counselling.	Hospitals, Red Cross, NGOS	Police, Transport, Jal Sansthan
4.	Communication	Relief Commissioner	BSNL ,Private Telecom Service Providers, Mobile Phone Operators.
5.	Relief. A. Food B. Shelter	Revenue Department, Food & Civil Supplies	Transport, NGOs, Corporate Sector, CBO
6.	Equipment Support, Debris and Road Clearance & Sanitation.	PWD/Army/BRO	Transport
7.	Water supply	Water Works Deptt	NGOs.
8.	Electricity	Power Corporation	Service Providers, Transport
9	Transport.	RTO	Municipal Corporation
10.	Help Lines.	Department of Disaster Management/Revenue Department/ Public Relation Officer/Industrial units	Department. of Information & Publicity, AIR, Doordarshan, Private TV Channels, UNI, Press, PTI,

**PROFORMA FOR ENVIRONMENTAL APPRAISAL OF MINING PROJECTS
(MINING SECTOR PROJECTS)**

Note 1: All information to be given in the form of Annex/s should be properly numbered and form part of reply to this proforma.

Note 2: Please enter ✓ in appropriate box where answer is Yes / No

Note 3: No abbreviation to be used - **Not available** or **Not applicable** should be clearly mentioned.

Note 4: **Core zone** is the mining lease area.

Buffer zone in case of ML area up to 25 ha is to be considered as **5 km** all around the periphery of the core zone and for ML area above 25 ha an area **10 km** all around the periphery of the core zone.

Note 5: Adopt **Scoping process** in carrying out EIA study.

1.	General information	
a	Name of the project	Kanvara Sand/Moram Mining Project
I	Name of the proponent	Shri Somesh Bharadwaj
ii	Mailing Address	
	E-mail	-
	Telephone	-
	Fax No.	-
b	Objective of the project	River bed mining for sand/moram
c	Location of mine	
	Village	Kanvara, Bhuredi & Chilehata
	Tehsil	Banda
	District	Banda
	State	Uttar Pradesh

d	Does the proposal relate to	Yes	No
i	New mine	√	-
ii	Expansion	-	√
iii	Increase in ML area	-	√
iv	Increase in annual production	-	√
v	Renewal of ML	√	-
vi	Modernization	-	√
e	Site Information		
i	Geographical Location		
	Latitude	25° 29'11.48" N to 25° 30'30.90" N	
	Longitude	80° 18'40.03" E to 80°17'30.31" E	
	Survey of India Topo sheet number	63C07	
	Elevation above Mean Sea Level	Highest:103 m AMSL Lowest: 104 m AMSL	
	Total mining lease area (in ha.)	122.81	
ii	Dominant nature of terrain	Yes	No
	Flat	-	√
	Undulated	√	-
	Hilly	-	√
2.	Land usage of the mining lease area (in ha.)		
a	Agricultural	-	
b	Forest	-	
c	Waste land	-	
d	Grazing	-	
e	Surface water bodies	-	
f	Others (River Bed)	122.81	
	Total	122.81	
3.	Indicate the seismic zone in which ML area falls. In case of zone IV & V, details of earth quakes in last 10 years.	Seismic Zone – II	
a	Severity (Richter Scale)		
b	Impact i.e. Damage to	Yes	No
	Life	-	√
	Property	-	√
	Existing mine	-	√

4. Break-up of mining lease area (in ha.) as per approved conceptual plan:

Purpose	Mining Lease Area				Total	Area acquired				Area to be acquired			
	Government		Private			Government		Private		Government		Private	
	Forest	Others	Agri	Others		Forest	Others	Agri	Others	Forest	Others	Agri	Others
1. Area to be excavated	-	80.42	-	-	80.42						80.42		
2. Storage for top soil	-	-	-	-	-						-		
3. Overburden / Dumps	-	-	-	-	-						-		
4. Mineral storage	-	-	-	-	-						-		
5. Infrastructure (Workshop, Administrative Building)	-	-	-	-	-						-		
6. Roads	-	-	-	-	-						-		
7. Railways	-	-	-	-	-						-		
8. Green Belt	-	-	-	-	-						-		
9. Tailings pond	-	-	-	-	-						-		
10. Effluent treatment plant	-	-	-	-	-						-		
11. Coal handling plant / mineral separation plant	-	-	-	-	-						-		
12. Township area	-	-	-	-	-						-		
13. Other (Safety zone including road)	-	42.39	-	-	42.39						42.39		
TOTAL	-	122.81	-	-	122.81						122.81		

5	Township (outside mining lease)		Not Applicable		
a	Total area (in ha)		-		
b	No. of dwelling units		-		
c	Distance from mine site		-		
6	Distance of water bodies (in km)				
	Distance from	River Bank *	Other Water bodies * Sea / creek / lake / nalla etc. (specify)		
	Mining lease boundary	It is a river bed mining	-		
	Ancillary facilities	-	-		
[* From highest flood line / high tide line]					
7	For projects falling within the Coastal Regulation Zone (CRZ)				
	Whether the mineral to be mined is of rare Nature and not available outside CRZ?	Yes	-	No	√
if yes, annex a scaled location map showing low tide line (LTL), high tide line (HTL) duly demarcated by one of the authorized agencies* [*Director, Space Application Centre, Ahmedabad: Centre for Earth Sciences Studies, Thiruvananthapuram: Institute of Remote Sensing, Anna University, Chennai: Institute of Wetland Management & Ecological Designs, KolKata: Naval Hydrographers's Office, Dehradun: National Institute of Oceanography, Panjim, Goa: and National Institute of Ocean Technology, Chennai], boundary of mining lease area, distance of ML area from LTL and HTL CRZ boundary and CRZ classification of the project area as per the approved Coastal Zone Management Plan, and settlements, sand dunes, mangroves, forest land/patches, turtles breeding and nesting sites etc., if any, in the project area.					
8	Indicate aerial distance from the periphery of core zone / area from the periphery of the buffer zone to the boundary of following (up to 10 km):				
S. No.	Area	Name	Aerial distance from (in km.approx)		
			Core Zone	Buffer Zone	
1.	National Park / Sanctuary	Nil	-	-	
2.	Biosphere Reserve / Tiger Reserve / Elephant Reserve / any other Reserve	Nil	-	-	

3.	Forest (RF / PF / unclassified)	Gancha RF Chatkan RF RF(with dense babul)		About 9 km in S direction. About 8 km in N direction. About 8.5 km in NNW direction.
4.	Habitat for migratory birds	Nil	-	-
5.	Corridor for animals of schedule I & II of the Wildlife (Protection) Act, 1972	Nil	-	-
6.	Archaeological sites * Notified * Others	Nil	-	-
7.	Defence Installation	Nil	-	-
8.	Industries / Thermal Power Plants	Nil	-	-
9.	Other Mines	Kanwara sand/moram mine	-	2 km in north
10.	Airport	Nil	-	-
11.	Railway Lines	Banda Junction	-	5 km in NE
12.	National / State Highways	NH-76	-	3km in North

[* Buffer zone in case of ML area up to 25 ha. is to be considered as **5 km** all around the periphery of the core zone and for ML area above 25 ha. an area **10 km** all around the periphery of the core zone].

9. Description of flora & fauna separately in the core and buffer zones.*

[* Consult the Wildlife (Protection) Act, 1972 as amended subsequently and list species with (1) Common name (2) Scientific name and (3) under which schedule of the Wildlife (Protection) Act the identified species fall. Get the list authenticated by an Expert in the field / credible scientific institute / University / Chief Wildlife Warden Office. **Information to be based on field survey**

List of Flora & Fauna is given in Chapter III of Final EIA report.

10	Details of mineral reserves (as per approved Mining Plan)	Quantity (in tonnes)	
a	Proved	66,34,348.2 Tones	
b	Indicated	-	
c	Inferred	-	
d	Mineable reserves	56,33,935.2 Tones	
11	Major geological formation / disturbances in the mining lease area	Yes	No

a	Geological maps submitted	-	√
b	Geological sections submitted	-	√
c	Contour map submitted	-	√
d	Whether the presence, if any, noted of		
I	Faults	-	√
Ii	Dykes	-	√
Iii	Shear Zone	-	√
Iv	Folds	-	√
V	Other weak zones	-	√
e	Source of data (Indicate)	-	
12	Production of mineral(s) and life of mine		
a	Rated capacity of mine mineral wise (Tonnes / annum)	7 lakh TPA	
b	Life of mine at proposed capacity (Years)	-	
c	Lease period (Years)	-	
d	Date of expiry of lease (D /M /Y)	-	
e	Indicate in case of existing mines	-	
i	Date of opening of mine	-	
ii	Production in the last 5 years 1 st year 5 th year from year..... to year in million tonnes.	-	
iii	Projected production for the next 6 th to 10 th year 5 years from year to yearin million tonnes.	-	
iv	Whether mining was suspended after opening of the mine?	-	
v	If yes, details thereof including last production Figure and reason for the same.	-	
f	Whether plans & sections provided?	-	
13	Type and method of mining operations		
TYPE		METHOD	
Opencast	√	Manual	√
Underground	-	Semi-Mechanized	-
Both	-	-	-
14	Details of ancillary operations for mineral processing		
a	Existing	Not applicable	
b	Additional	Not applicable	
15	Mine details		
a	Opencast mine		
i	Stripping ratio (mineral in tonnes to over burden in m ³)	-	
ii	Ultimate working depth (in m bgl)	3 m bgl or above ground	

		water level whichever comes first.
iii	Indicate present working depth in case of existing mine (in m bgl)	-
iv	Thickness of top soil (in m.)	-
a	Minimum	-
b	Maximum	-
c	Average	-
v	Thickness of overburden (in m.)	-
a	Minimum	-
b	Maximum	-
c	Average	-
vi	Mining Plan	
a	Height and width of the bench in overburden / waste.	-
b	Height & width of the bench in ore body / coal seam.	-
c	Proposed inclination / slope of the sides of the opencast mine (separately for overburden, coal / ore and overall slope of the pit sides) both while operating the mine as well as at the time of Closure of the mine.	-
d	Whether transverse sections across the open Cast mine at the end of fifth year and at the end of the life of the mine have been submitted?	-
vii	Type of blasting, if any, to be adopted	-
b	Underground mine-	<u>Not Applicable</u>
i	Seam / Ore body	
	Min. Depth (m)	-
	Max. Depth (m)	-
	Avg. thickness (m)	-
	Rate of dip	-
	Direction of dip in degree	-
ii	Mode of entry into the mine	
	Shaft	-
	Adit	-
	Incline	-
iii	Details of machinery	
	On surface	-
	At Face	-

	For transportation	-	
	Others	-	
iv	Method of stopping (metalliferrous mines)		
	Open	-	
	Filled	-	
	Shrinkage	-	
	Caving	-	
	Combination of above	-	
	Others (Specify)	-	
v	Extraction method		
	Caving	-	
	Stowing	-	
	Partial extraction	-	
vi	Subsidence		
	Predicted max. subsidence (in m)	-	
	Max. value of tensile strain (in mm/m)	-	
	Max. slope change (in mm/m)	-	
	Whether identified possible subsidence area(s) superimposed on Surface Plan has been submitted?	-	
	Major impacts on surface features like natural drainage pattern, houses, buildings, water bodies, roads, forest, etc.	-	
	Salient features of subsidence Management (monitoring and control).	-	
16	Surface drainage pattern at mine site	Yes	No
a	Whether the pre-mining surface drainage plan submitted?	-	√
b	Do you propose any modification / diversion in the existing natural drainage pattern at any stage? If yes, when. Provide location map indicating contours, dimensions of water body to be diverted, direction of flow of water and proposed route / changes, if any i.e. realignment of river / nallah / any other water body falling within core zone and its impact	-	√
17	Embankment and / or weir construction		
a	Do you propose, at any stage, construction of		
i	Embankment for protection against flood?	No	
ii	Weir for water storage for the mine?	No	
b	If so, provide details thereof.		
c	Impact of embankment on HFL and settlement	-	

	Around.		
d	Impact of weir on downstream users of water		-
18	Vehicular traffic density (outside the ML area)		
		Type of vehicles	No. of vehicles (in PCU per day)
a	Existing	Car, Jeep, Truck	Village Bhuredi= 80 Village Bodhi Purwa= 128
b	After the proposed activity	Car, Jeep, Truck	Village Bhuredi= 710 Village Bodhi Purwa= 758
c	Whether the existing road network is adequate?		Yes
	If no, provide details of alternative proposal?		-
19	Loading, transportation and unloading of mineral and waste rocks on surface	Yes	No
a	Manual	-	√
b	Tubs, mine cars, etc.	-	√
c	Scraper, shovels, dumpers / trucks	√	-
d	Conveyors (belt, chain, etc.)	-	√
e	Others (excavators)	√	-
20	Mineral(s) transportation outside the ML area		
		Qty. (in TPD)	Percentage (%)
			Length (in km)
a	Road	2800	100
b	Rail	-	-
c	Conveyors	-	-
d	Rope way	-	-
e	Water ways	-	-
f	Pipeline	-	-
g	Others (Specify)	-	-
Total		2800	100

21. Baseline Meteorological and Air Quality data

(a) Micro-meteorological data

[Continuous monitoring through autographic instrument for one full season other than monsoon]

(i) Wind rose pattern for one full season (16 points of compass i.e. N, NNE, NE, ---) based on 24-hourly data. For coastal area also furnish day-time and night time data.

- Day time
- Night time
- 24 – hours period

(ii) Site specific monitored data

Month	Wind Speed (km/h)			Temperature (oC)			Relative Humidity (%)			Rain Fall * (mm)			Cloud Cover* * (Octas of sky)
	Mean	Max.	% of calm	Mean (Dry Bulb)	Highest	Lowest	Mean	Highest	Lowest	Total	24-hours Highest	No. of rainy days	Mean
October,14	4.2	6.6	24	29.8	35.7	24.4	44.2	56.8	29.9	60.4	26.5	3	4
November, 14	4.6	6.6	22	25.2	32.1	19.2	28.4	40.4	9.0	0.0	0	0	0
December, 14	5.6	7.5	18	18.8	26.2	13.3	37.7	53.8	13.0	1.73	1.2	3	3

* 24-hour's rainfall should be reported from 08:30 hrs. IST of previous day to 08:30 hrs. IST of the day.

* Rainy day is considered when 24 hrs. Rainfall is ≥ 2.5 mm.

** Visual observations of cloud cover should be recorded four times a day at regular intervals.

(iii) Indicate name and distance of the nearest IMD meteorological station from which climatological data have been obtained for reporting in the EIA report, if any. **Banda**

(b) Ambient air quality data* (RPM, SPM, SO₂, and NO_x)

[*Monitoring should be carried out covering one full season except monsoon – same season as in 21 (a) (i)]

[*Frequency of sampling: Sampling to be done twice a week for the entire season 24 hourly for SPM & RPM. For gaseous pollutants 24-hourly data be given irrespective of the sampling period.]

(i) Season and period for which monitoring has been carried out. **Post Monsoon (Oct- Nov, 2014)**

(ii) No. of samples collected at each monitoring station: **24**

Name of monitoring equipment used			PM _{2.5} (µg/m ³)			PM ₁₀ (µg/m ³)			SO ₂ (µg/m ³)			No _x (µg/m ³)			Pb**		
			Enviro tech FPS – APM 5.50			RDS 460 BL			APM 411 attachment with RDS 460 BL			APM 411 attachment with RDS 460 BL			-		
Equipment sensitivity			< 0.5 µg/m ³ from 0.000 mg to 0.100 mg/ m ³			< 0.5 µg/m ³ from 0.000 mg to 0.100 mg/ m ³			< 0.5 µg/m ³ from 0.000 mg to 0.100 mg/ m ³			< 0.5 µg/m ³ from 0.000 mg to 0.100 mg/ m ³			-		
Permissible AAQ standard (CPCB) R I S			60 µg/m ³			100 µg/m ³			80 µg/m ³			80 µg/m ³			-		
			60 µg/m ³			100 µg/m ³			80 µg/m ³			80 µg/m ³			-		
			60 µg/m ³			100 µg/m ³			80 µg/m ³			80 µg/m ³			-		
Monitoring Location	No. of Samples Drawn	Category* (R, I, S)	Min.	Max.	98% tile	Min.	Max.	98% tile	Min.	Max.	98% tile	Min.	Max.	98% tile	Min.	Max.	98% tile
Core zone CA ₁	24	I	39.5	56.8	55.6	81.4	108.6	106.6	7.3	13.4	12.8	19.0	29.6	28.7	-	-	-
Buffer zone BA ₁	24	R	40.1	53.9	52.2	79.3	93.4	92.6	7.3	13.8	12.6	20.6	31.5	30.2	-	-	-
BA ₂	24	R	35.3	42.6	41.6	69.2	89.2	88.2	6.5	11.4	10.5	15.8	26.4	25.2	-	-	-
BA ₃	24	R	36.0	48.7	47.8	75.4	85.7	84.7	6.2	12.5	11.9	18.2	27.4	26.7	-	-	-
BA ₄	24	R	45.2	67.2	66.4	87.5	130.2	129.0	9.2	15.2	14.6	22.5	34.7	33.1	-	-	-

*R = Residential; I = Industrial; S = Sensitive

**Pb for mineral specific sites only.

Annex a location map indicating location of AAQ stations, their direction and distance with respect to project site.
(AAQ station location map is attached in Chapter III)

22. Stack and emission details, if any*

Not Applicable

S. No.	Process / unit of operation (e.g. DG Set, Boiler)	Height of stack (m)	Internal top dia. (m)	Flue gas exit velocity (m/sec)	Emission rate (kg/hr)				Heat emission rate from top of stack (K.cal/hr)	Exhaust / Flue gas			
					SPM	SO ₂	NO _x	CO		Temp °C	Density	Specific Heat	Volumetric flow rate (m ³ /hr.)

23. Details of fugitive emissions during mining operations*

The ground level concentration (GLC) decreases from 17.93 µg/m³ at 50 m from the centre line of the road to 2.34 µg/m³ at 500 m from the centre line of the road.

24. Air Quality Impact Prediction (AQIP)*

Details given in **Chapter IV**

- (a) Details of model(s) used for AQIP including grid size, terrain features, and input meteorological data
- (b) Maximum incremental GLC values of pollutants based on prediction exercise

S. No.	Pollutants	Incremental Value	Ambient Air Quality	Resultant Air Quality
1.	SPM			
2**.	SO ₂			
3**.	NO _x			

[* Question Number 22, 23 & 24 need not be filled-in for mines having ML area of **25 ha. or less.**]

[**Information on item no. 2 & 3 to be provided in cases with captive power generation of 500 KVA and above]

25. Water requirement (m³/day)

Purpose	Avg. Demand	Peak Demand
A. Mine site		
1. Mine operation	-	-
2. Land reclamation	-	-
3. Dust suppression	3.21 KLD	3.21 KLD
4. Drinking	1 KLD	1 KLD
5. Green Belt	-	-
6. Beneficiation	-	-
7. Washeries	-	-
8. Fire Service	-	-
9. Others (additional domestic purpose)	1.7 KLD	1.7 KLD
B. Township		
1. Green Belt	-	-
2. Domestic	-	-
C. Other (specify)	-	-
Total	5.91 KLD	5.91 KLD

26. Source of water supply*

S. No.	Source	m ³ /day
1	River (name)	-
2	Ground water	5.91 KLD from nearby village
3	Mine water (sump / pit)	-
4	Other surface water bodies (specify)	-

[*Annex a copy of sanction letter / permission from the concerned authority (Central Ground Water Authority in case of ground water abstraction is from notified area / State Ground Water Board in case of non-notified area / State Irrigation Department for surface water pumping) for drawing water.]

27	Lean season flow in case of pumping from river / nalla (cumecs)	Not applicable
28	Ground water potential of the study area	
28.1	Ground water availability	
a	Range of water table (m bgl)	-

i	Pre-monsoon (April/May)	-
	Core Zone	10 m
	Buffer zone	9-30 m
ii	Post-monsoon (November)	-
	Core Zone	8 m
	Buffer zone	6.05-27.5 m
b	Total annual replenishable recharge (million m ³ /year)	-
c	By ground water table fluctuation method	-
d	By rainfall infiltration factor method	-
e	Annual draft excluding estimated draft through mine discharge (million m ³ / year)	-
f	Estimated draft through mine discharge (million m ³ / year)	-
g	Net annual ground water availability (million m ³ / year)	-
h	Stage of ground water development (%)	-

28.2. Water demand - Competing users of the water source

S. No.	Usage	Present Consumption (m ³ /day)		Additional proposed as per local plan (m ³ /day)		Total (m ³ /day)	
		Surface	Ground	Surface	Ground	Surface	Ground
1	Domestic			-	2.7	-	2.7
2	Irrigation			-	-	-	-
3	Industry			-	-	-	-
4	Mining			-	-	-	-
5	Others (Dust suppression)			-	3.21	-	3.21
Total				-	5.91	-	5.91

29. Water quality*

(a) Annex physio -chemical analysis of water at intake point **

Details are given in Chapter III

(b) In case of existing mine, annex report on quality of water discharge i.e. complete physio - chemical analysis**

[*For non-discharging mines at least four ground water samples to be taken preferably from downstream direction of the mine in pre-monsoon and post-monsoon periods and analysed. For discharging mines six samples are to be analysed]

**All parameters as per BIS 10500. Indicate name of Methodology, Equipment used for analysis, and Detection Level (DL) for each parameter.

*** Wherever any analytical parameter is below detection level, “BDL” (Below Detection Level) should be written instead of ‘NIL’.

30.	Impact on ground water regime / stream / lake / springs due to mine dewatering *	
a	Radius of influence (in m) [To be estimated based on analysis of pumping test data and application of empirical formula]	-
b	Whether saline water ingress will take place? (applicable to coastal areas)	-
c	Impact on stream / lake / springs	-
<p>[* Provide a comprehensive hydro-geological assessment report if the average mine dewatering is more than 100 m³/day and or going below water table in non-monsoon period. The report should be based on preferably latest one year pre-monsoon and post-monsoon baseline data covering information on ground water situation, aquifer characteristics, water level conditions (April – May and November), estimate of ground water resources, predicted impact of the project on ground water regime and detailed remedial / conservation measures such as artificial recharge of ground water etc. The report should be based on actual field inventory out of existing wells, at least 30 observation wells in the buffer zone with supplementary information from secondary sources (mention name). For estimation** of ground water resource (refer question no. 28 above) be designated study area of the buffer zone may be sub-divided into command and non-command areas, watershed-wise (in case of hard rock / consolidated formations) / block-wise / mandal-wise in case of alluvial / unconsolidated formations)]</p> <p>**For estimating ground water resources in the area follow the Ground Water Estimation Committee recommendations of 1997]</p>		
31.	Waste Water Management	Not Applicable
a	Daily average discharge (m ³ /day) from different sources	
i	Mine water discharge during	
	Lean period	
	Monsoon period	
ii	Workshop	
iii	Domestic (mine site)	

iv	Beneficiation / Washeries		
v	Coal Handling Plant		
vi	Tailings pond		
vii	Others (Specify)		
	Total		
b	Waste water treatment plant; flow sheet for treatment process attached.		
c	Quantity of water recycled / reused / to be recycled in		
i	Percentage		
ii	m ³ /day		
d	Point of final discharge		
	Final Point	Quantity discharged (in m ³ /day)	
1	Surface		
i	Agricultural land		
ii	Waste land		
iii	Forest land		
iv	Green belt		
2	River / nallah		
3	Lake		
4	Sea		
5	Others (specify)		
	Total		
e	Users of discharge water	Yes	No
i	Human		
ii	Livestock		
iii	Irrigation		
iv	Industry		
v	Others (specify)		
F	Details of the river / nalla, if final effluent is / will be discharged (cumecs)		
i	Average flow rate		
ii	Lean season flow rate		
iii	Aquatic life		
iv	Analysis of river water 100 meters upstream and 100 meters downstream of discharge point submitted.		
g	Township		
a	Waste water generation from township (m ³ /day)		

b	Are you planning to provide sewage treatment plant?										
c	Usage of treated water										
32.	Attach water balance statement in the form of a flow diagram indicating source (s), consumption (Section-wise) and output.										
	<table border="1"> <thead> <tr> <th>Purpose</th> <th>Demand(KLD)</th> </tr> </thead> <tbody> <tr> <td>Domestic</td> <td>2.7</td> </tr> <tr> <td>Dust suppression</td> <td>3.21</td> </tr> <tr> <td>Total</td> <td>5.91</td> </tr> </tbody> </table>		Purpose	Demand(KLD)	Domestic	2.7	Dust suppression	3.21	Total	5.91	
Purpose	Demand(KLD)										
Domestic	2.7										
Dust suppression	3.21										
Total	5.91										
33	Ambient noise level leq dB(A)	Details given in Section III									
34	Solid Waste	Not Applicable									
a	Top soil and Solid waste quantity and quality										
	Name (Lump/fines/slurry/Sludge/others)	Composition	Quantity (m ³ /month)								
	Method of disposal										
	Mining activity*										
	a. Top Soil										
	b. Over burden										
	c. Others (specify)										
	Effluent Treatment Plant (sludge)										
	Total										
[* Annex layout plan indicating the dump sites.]											
b (i)	Does waste (s) contain any hazardous/toxic substance/radioactive materials or heavy metals?										
(ii)	If yes, whether details and precautionary measures provided?										
c	Recovery and recycling possibilities.										
d	Possible user(s) of the solid waste.										
e (i)	Is the solid waste suitable for backfilling?										
(ii)	If yes, when do you propose to start backfilling?										
Solid waste (s)	Already accumulated (A)	To be generated (B)	% of A & B to be backfilled								
			A B								

Over burden						
Others (specify)						
	<u>Land reclamation Plan</u>			Not Applicable		
f	In case waste is to be dumped on the ground, indicate					
i	Associated environmental problems					
ii	Number & type of waste dumps					
	No. of external dumps					
	Max. projected height of dumps (in m)					
	No. of terraces and height of each stage					
	Overall slope of the dump (degree)					
	Proposed reclamation measures					
iii	Section of the waste dump in relation to the adjacent ground profile attached					
35	Fuel / Energy requirements* [*To be furnished for mines having ML area more than 25 ha. or captive power generation of 500KVA and above]			Not Applicable		
a	Total power requirement			(in MW)		
S. No.		Mine Site	Township	Others (specify)	Total	
1	Present					
2	Proposed / additional					
	Total					
b	Source of power			(in MW)		
S. No.		SEB/Grid*	Captive power plant	DG Sets		
1	Present					
2	Proposed / additional					
	Total					
[* Annex a copy of the sanction letter from the concerned authority]						
c	Details of fuels					
S.No.	Fuel	Daily Consumption (TPD)		Calorific value (Kcals/kg)	% Ash	% Sulphur
		Existing	Proposed			
1	HSD					
2	LSHS					
3	Other					

	(specify)				
36	Storage of inflammable / explosive materials			Not Applicable	
S. No.	Name	Number of Storages	Consumption (in TPD)	Maximum Quantity at any point of time	
1	Fuels				
2	Explosives				
37	Human Settlement				
		Core Zone		Buffer Zone	
Population*		-		Details given in Chapter VI	
No. of villages		-			
Number of households village-wise		-			
[* As per 2001 census record or actual survey]					
38.	Rehabilitation & Resettlement (R&R) Plan* [*Provide a comprehensive rehabilitation plan, if more than 1000 people are likely to be displaced, other-wise a summary plan]			Not Applicable	
a	Villages falling within the study area				
		Villages			
		Number	Name		
Core zone					
500 m from the blasting site (s)					
Buffer zone					
Township site					
b	Details of village(s) in the core zone				
S. No.	Village name	Population*		Average Annual Income	
		Tribal	Others		
1					
[*As per 2001 census / actual survey]					
c	Population to be displaced and / or Land Oustees				
Name of village(s) falling within		Number of oustees			

	Land (only)	Homestead (only)	Land and Homestead (both)			
<u>Mining Lease</u>						
1.						
<u>Township Site</u>						
1.						
d	Whether R&R package has been finalized? If yes, salient features of R&R plan for oustees.				Not Applicable	
i	Site details where the people are proposed to be resettled & facilities existing / to be created.					
ii	Funds earmarked for compensation package					
iii	Agency /Authority responsible for their Resettlement.					
iv	Time of commencement of resettlement of Project Affected People (PAP).					
v	Period by which resettlement of PAP will be over.					
39	Lease -wise plantation details				Not Applicable	
a	Lease area (in ha.)				Existing	Proposed
	i. Area broken up				-	-
	ii. To be broken up				-	-
	iii. Area not to be broken-up				-	-
b	Township area (in ha.)				-	
c	Area afforested and proposed (in ha.)				-	
		Peripheral	Dumps	Roads	Township	Others
i	Existing					
ii	Proposed					
d	No. and type of trees planted and proposed					
i	Existing					
	When plantation was started?				Month / Year	
	No. of plant species planted				Number saplings (per ha.)	
	-				-	
	Survival rate %				Avg. height	
ii	Proposed					
	No. of plant species to be planted				Number of saplings (per ha.)	

	-	-
40	Environmental health and safety	
a	What major health and safety hazards are anticipated?	None
	What provisions have been made/proposed to be made to conform to health and safety requirements?	As per Mines Act/ Rules
b	In case of an existing mine	
i	Comprehensive report on health status of the workers as under the Mines Act annexed	As per Mines Act/ Rules
ii	Mineralogical composition of RPM (dust)	
	• Free silica	Not applicable
	• Chromium* (Total as well as Hexavalent)	Not applicable
	• Lead** [* Only for Chromite mines] [**Only for Base Metal mines]	Not applicable
	Information on radiation protection measures, if applicable	Not applicable

41. Environmental Management Plan

Salient features of environmental protection measures

S. No.	Environmental issues*	Already practiced, if applicable	Proposed
1	Air pollution	-	§ Regular water sprinkling for dust suppression. § Plantation activities along the roads to reduce the impact of dust in the nearby villages
2	Water pollution	-	§ Mining will be done not beyond the ground water depth, to avoid Ground water pollution. § Mining will not touch the water stream at any point of time. Hence no surface water pollution is expected
3.	Water conservation	-	No
4.	Noise pollution	-	§ Well maintained vehicles will be

			used for transportation in order to reduce noise during movement of vehicles
5.	Solid waste / Tailings	-	Negligible amount of solid waste will be generated by workers, which will be disposed off through municipal way.
6.	Land degradation	-	No land degradation is expected
7.	Erosion & Sediment	-	The sediment excavated is replenished naturally.
8.	Top soil	-	No top soil is involved.
9.	Ground vibration	-	-
10.	Wildlife conservation	-	The wildlife within the study area will not be disturbed at all. And proper instruction will be given to the workers not to chase/hunt wild life.
11.	Forest protection	-	No forest land is involved in the lease area.
12.	Others	-	Short awareness program for labours to make them aware of way of working and various precautions to be taken will be conducted.

[* As applicable]

42	Compliance with environmental safeguards (For existing units)	Yes	No
	Status of the compliance of conditions of Environmental clearance issued by MoEF, if any, enclosed.	-	√
	Status of the compliance of 'Consent to Operate' issued by SPCB, if any, enclosed.	-	√
	Latest 'environmental statement' enclosed.	-	√
43	Scoping of EIA		
	Whether environmental impact assessment of the project has been carried out by following scoping process?	Yes	
	If yes, a copy of scoping of EIA annexed.	Details given in Chapter I	
44	Mine closure		
a	Have you planned mine closure?	No	
b	Submitted a conceptual mine closure plan.	No	

c	If yes, indicate estimated amount for implementing the same (in Rs. lakhs)	No
45	Capital cost of the project (in Rs.) (Based on latest estimate)	60 lakh

46. Cost of environmental protection measures

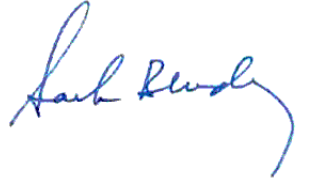
(in Rs. Lakh)

S. No.		Capital cost		Annual recurring cost	
		Existing	Proposed	Existing	Proposed
1	Pollution Control (Separately provide break-up)	-	2.0	-	4.0
2	Pollution Monitoring (Separately provide break-up)	-	2.0	-	4.0
3	Occupational Health	-	2.0	-	3
4	Green Belt <ul style="list-style-type: none"> • Mine • Township 	-	1.0	-	2.0
5	Reclamation / Rehabilitation of mined out area	-	2.0	-	3.0
6	Others (Man power cost for environmental cell)	-	1.0	-	0.5
Total		-	10.0	-	16.5

47	Amount earmarked for socio-economic welfare measures for the nearby villages other than R&R plans.	--
48	Public Hearing (Public hearing details will be added in Final EIA report)	
a	Date of Advertisement	09-06-2015
b	Newspapers in which the advertisement appeared	Times of India (English) & Hindustan(Hindi)
c	Date of public hearing (DD/MM/YYYY)	01-08-2015
d	Public Hearing Panel chaired by & members present	Shri D.S Pandey, Shri Virender Singh, Shri H.D Yadav Regional Officer, Uttar Pradesh Pollution Control Board, Banda
e	No. of people attended the public hearing meeting and number of people from the lease area.	-
f	Summary/details of public hearing in tabular form.	Attached as annexure VII

49	Whether the following approvals* (wherever applicable) have been obtained?	YES	NO
a	Site clearance from MoEF	-	√
b	Consent for Establishment' from the State Pollution Control Board	-	√
c	NOC from Atomic Mineral Division	-	√
d	Mining plan approval from IBM / Ministry of Coal	-	√
e	In case of existing mines, mining scheme approval from IBM	-	√
f	Forestry clearance under FCA, 1980	-	√
g	NOC from Chief Controller of Explosives	-	√
h	Commitment regarding availability / pumping of water from the concerned Authorities	-	√
i	In case of ML area falling in notified areas of the Central Ground Water Authority, NOC from them.	-	√
[* Annex copies of approvals and number them]			
50	Was / is there any court case relating to the project or related activities? If so, provide details present status.	NO	

Verification: The data and information given in this proforma are true to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "Sark Ruddy", with a small dot at the end of the signature.

Date:

Signature of the applicant* with
full name & address

Place:

[* Owner or his authorized signatory]

Given under the seal of organisation on
behalf of whom the applicant is signing

REPLENISHMENT STUDY

1) DETAILS OF REPLENISHMENT STUDY

1.1) ORIGIN & CONTROL OF MINERALIZATION (ANNUAL REPLENISHMENT OF MINERAL IN RIVER BED AREA vis-a-vis SEDIMENTATION)

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). The term is commonly used as a synonym for sedimentary petrology and sedimentology. Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits laid down in different geographic and geomorphic environments.

The factors which affect the "Computation of Sediment";

1.a) Geomorphology & Drainage Pattern : The following geomorphic units play an important role :

- Structural Plain
- Structural Hill
- Structural Ridge
- Denudation Ridge & Valley
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- Highly Dissected pediment
- Un dissected pediment

b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)

c) Drainage System/Pattern of the area (Drainage Density =Km/sq.km of Ken River)

d) Rainfall & Climate: Year wise Rainfall data for previous 10 years of Ken River

e) As per Dandy & Bolton study "Sediment Yield" can be related to

i) Catchment Area and

ii) Mean Annual Run-off

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological-cycle in a river basin.

Sand mining has become a widely spread activity and does not require a huge set up or technology, the number of ventures has increased extensively and it has become a footloose industry in itself but the backward-forward linkages are becoming, stronger as many are getting employed as well as the construction activity / industry requires this mineral at consistent rates. In the state of Punjab, sand has been declared as an essential commodity so as to control its extraction and sale price. Riverine environmental systems are unique in themselves and provide environmental services, natural resources to meet variety of needs of urban and rural communities. The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only liner elements / minerals like sand are found in abundance. The Ken river has its origin from the Ahirgawan village on the north-west slopes of the Kaimur hills in the Jabalpur district of Madhya Pradesh at an elevation of about 550 meters above mean sea level. The Ken is an interstate river between Uttar Pradesh and Madhya Pradesh.

Rising from the north-west slopes of the Kaimur hills in Jabalpur district at an elevation of about 500 m above the mean sea level, the average annual flow of the river is 11 300 MCM. It is 427 km long up to its point of confluence with the Yamuna near village Chilla in the Banda district of UP. The river Basin lies between north latitudes 23°20' and 25°20' and east longitudes 78°30' and 80°36'. The Ken basin covers the area of Jabalpur, Sagar, Damoh, Panna, Satna, Chhatarpur and Raisen districts of MP and

Hamirpur and Banda districts of UP. It is bounded by Vindhya ranges in south, Betwa basin is the west, free catchment of the Yamuna in east and the river Yamuna towards the north. The catchment area of Ken Basin is 28 224sq km.

Source: www.nwda.gov.in/writtereadata/linkimages/9361064102.pdf

Tributaries Chandrawal, Urmil, Shiam, Shihu, Karoran, Kel, Bichhui, Gawain, Siamri, Banne, Khuraran, Kutni, Lohruk, Kusar, Kail, Sonar (Bewas, Bamner, Kopra), Vyarma, Aloni, Vearma.

Itinerary of Ken River:

The Ken river has its origin from the Ahirgawan village on the north-west slopes of the Kaimur hills in the Jabalpur district of Madhya Pradesh at an elevation of about 550 meters above mean sea level. The average annual flow of the river is 11300 MCM (million cubic meter). It is 427 km long up to its point of confluence with the Yamuna near village Chilla in the Banda district of UP. The Ken basin covers the area of Jabalpur, Sagar, Damoh, Panna, Satna, Chhatarpur and Raisen districts of MP and Hamirpur and Banda districts of UP. The river is the last tributary of Yamuna before the Yamuna joins the Ganga. The river basin lies between the latitudes of 23°20' and 25°20' N and the longitudes of 78°30' and 80°36'E.

Itinerary of Drainage area of Ken River:

The Ken river has its origin from the Ahirgawan village on the north-west slopes of the Kaimur hills in the Jabalpur district of Madhya Pradesh at an elevation of about 550 meters above mean sea level. The river is the last tributary of Yamuna before the Yamuna joins the Ganga. The river basin lies between the latitudes of 23°20' and 25°20' N and the longitudes of 78°30' and 80°36'E. The total catchment area of the basin is 28224 sqkm, out of which 24638 sqkm lies in Madhya Pradesh and the remaining 3586 sqkm in Uttar Pradesh. The basin covers the areas of Jabalpur, Sagar, Damoh, Panna, Satna, Chhatarpur and Raisen districts of Madhya Pradesh and Hamirpur and Banda districts of Uttar Pradesh.

Dandy & Bolton formula for calculation or Sediment Yield:

Dandy bolton formula is often used to check whether the sedimentation yield exceeds the replenishment rate but the whole question is whether there is adequate monitoring of the river basin, the answer is no as hydrological stations are sparsely spread. The formula uses catchment area and mean annual runoff as key determinants to give a yield value. It does not differentiate in basin wide smaller streams and their characteristics. CWC (Central water commission) distinguishes river basins as classified and non-classified, as per the latest hydrological data for unclassified River 'basins; there are 122 GDS' (Gauge, Discharge, Sediment & Water Quality) sites in 12 such basins, the number was 147 in 2005. This brings in context the whole issue of scientific mining, thereby indicating that the monitoring of sediment yield in rivers / streams within the river basins is essential to arrive at extraction rates and express and conduct environmental studies based on these basin wide characteristics which should become part of the 'Terms or Reference'.

Sediment Yield versus Drainage Area

Dandy and Bolton studied sedimentation data from about, 1500 reservoirs, ponds, and sediment detention basins. In developing their formulate,".they used from about 800 of these reservoirs with drainage areas greater than or equal to mi^2 . The smaller watersheds-those or drainage area less than $1 mi^2$ were excluded because of their large variability of sediments yield, reflecting the diverse effects of soils, local terrain, vegetation, land use, and agricultural practices.

For drainage areas between 1 and 30,000 mi^2 , Dandy and Bolton found that the annual sediment yield per unit area was inversely related to the 0.16 power of the drainage area: In which S-- sediment yield in tons per square mile per year; SR = Reference sediment yield corresponding to a $1 mi^2$ drainage area, equal to 1645 tons per year; A = drainage area in square miles; and AR reference drainage area ($1mi^2$)

SEDIMENTS YIELD VERSUS MEAN ANNUAL RUNOFF

Dandy and Bolton studied sedimentation data from 505 reservoirs having mean annual runoff data. Annual sediment yield per unit area was shown to increase sharply as mean annual runoff Q increased from 0 to 2 in. Thereafter, for mean annual runoff from 2 to 50 in. annual sediment yield per unit area decreased exponentially.

This led to the following equations.

For $Q < 2$ in.:

For $Q > 2$ in.:

In which Q_R = reference mean annual runoff $Q_R = 2$ in.

Sediment Production.

For $SR = 1645$ tons/mi²/y, $Q_R = 2$ in., and $AR = 1$ mi², Eq. reduces to the followings:

For $Q < 2$ in.: $S = 1280 Q^{0.46} (1.43 - 0.26 \log A)$

For $Q > 2$ in.: $S = 1965 e^{-0.055Q} (1.43 - 0.26 \log A)$

Equations 5-12 and 5-13 are based on average values of grouped data; therefore, they should be used with caution. In Certain cases, local factors such as soils, geology, topography, land use, and vegetation may have greater influence on sediment yield than either mean annual runoff or drainage-area. Nevertheless, these equations provide a first approximation to be regional assessment of sediment yield for watershed planning purposes.

Calculation of Sediment Yield of River Ken (Tributary of Yamuna):

There are 2 rivers mainly contribute to Ken basin for its sand deposition are Sonar and Bearma River with the Catchment Area of 1778 sq km & 5803 sq km respectively.

Our site lies in 3 villages:

- a) Kanwara
- b) Bhuredi
- c) Chileta

- Production : 7 Lakhs TPA
- Mineable Area :80.42 ha, Total area: 122.81 ha
- Normal Annual Rainfall : 902 mm or 35.51 inches

Q (in inches)	A (in sq mile)	S T/milesq/annum
35.51	1385	170.81

$$S = 1965 e^{-0.055Q} [1.43 - 0.26 (\log A)]$$

With above formula the value of **S =170.81T/mile square/annum**

Therefore the Total Sediment Yield for drainage basin of 1385 square mile will be =1385 x 170.81= **2, 36,558 lac T/annum**

Dandy & Bolton formula also says that actual sediments yield from individual drainage basins may vary 10 fold or even 100 fold from computed yield. Since itinerary of river Ken indicates that its basin comprises of sedimentary rocks with good average rainfall therefore there are fair chances of yield of sediments to be 50 fold of computed results, given the previous experiences of the river bed mining in the area, **Hence A ctual Sediment Yield will be : 2,36,558 lac T x 50 fold =1,18,27,900 T / Annum.**

It gives us a rough idea about replenishment as it is a empirical study, because it compasses lots o f parameters an d g ives a empirical ap proximation t heoretically whereas p ractically we will have P illars & we mark t he site and accordingly we figure it out that how much is getting replenished every year in to the mine site, it will give a practical approximation.

The equations express the general relationships between sediment yield runoff and drainage area.

Sediment yield of a sediment basin has direct impact of local terrain, climate, vegetation, soils, agricultural practices & land use pattern of catchment area of the sediment basin afore said factors varies from basin to basin therefore, Dandy & Bolton has category stated that use of the equation to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation development. Actual sediment yield Corm individual drainage basins may vary 10 fold or even 100-fold from computed yields.

2) MANUAL MINING

Manual mining is feasible with the help of 350 labours per day. Calculation is as follows:

During Mine operation

Transportation scenario from the site through village Kanvara, Bhuredi & Chilehata

Total Capacity of mine : 7 lakh tonnes per annum

No. of working days : 250 days

Transportation/ day : 2,800 tonnes

Tonnes / hour (working hours=8 hours) : $2800/8= 350$ TPH (350000 kg)

Optimum Capacity of a Worker in one trip = 50 kg

Reference: ICMR Bulletin, ISSN 0377-4910, Vol. 3. No. 8 (August, 2000)

No. of workers for 1 trip = $350000/50$

= 7000 labours/ hr

Considering 20 trips in 1 hr (3 min/ trip in 1 hr) = $7000/ 20$

= 350 labours

Ø Therefore manual mining is feasible in achieving the production of 7 Lakh TPA (Tones Per Annum) or 2800 TPD (Tones Per Day) with the help of **350 Labours**.

Date:

To,
The Director (IA-II),
Ministry of Environment, Forests & Climate Change,
Indira Paryavaran Bhawan,
Lodhi Road, Jor Bagh,
New Delhi-110003.

Sub: Regarding Environmental Clearance of Kanvara Sand/ Moram Mining at Village: Kanvara, Bhuredi & Chilehata, District- Banda, State: Uttar Pradesh.

Dear Sir,

This is to bring in your kind information that Final EC presentation for the above mentioned project was included in 3rd EAC Meeting (copy enclosed) of MoEF & CC (Non Coal Mine) dated 23-02-2016. As per the observation raised during the meeting, I am herewith submitting the reply raised by the Honorable Committee. We are ready with all the documents, once EDS (Essential details Short) will be generated, we will upload the reply on to the website immediately.

Proposal was submitted long back dated 17-07- 2012. we are incurring heavy losses. Local people depending on this project for employment are losing their livelihood.

So I request you to kindly consider our case for its appraisal in the upcoming agenda . We will be highly thankful for your kind act.

**Thanking you,
Yours sincerely,**



Somesh Bharadwaj
(Authorized Signatory)

Encl.: Reply & Copy of updated FEIA Report

SHORTCOMING REPLY
OF
KANVARA SAND/MORUM MINING PROJECT

**Village: Kanvara, Bhuredi & Chilehata, Tehsil: Banda, District:
Banda, State: Uttar Pradesh**

Area: 122.81 ha, Proposed Capacity-7 Lakh TPA

APPLICANT

Shri Somesh Bharadwaj
S/o -Shri Omprakash Bharadwaj
Amar Talkies
Tehsil: Banda, District: Banda (UP)

Prepared By

**GRASS ROOTS RESEARCH & CREATION INDIA (P)
LTD.**

(An ISO 9001:2008 Certified Co.: Accredited by QCI / NABET: Approved by MoEF, GoI)

F-374-375, Sector-63, Noida, U.P.

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Website: <http://www.grc-india.com>

GRC INDIA TRAINING & ANALYTICAL LABORATORY

(Accredited by NABL, Recognized by MoEF & CC, GoI)

A unit of GRC India

March, 2016

The EC Presentation of 3rd reconstituted Expert Appraisal Committee (Non-Coal Mining) held on 23rd February 2016. During presentation & discussion the committee sought the information on following points.

1. The revised EIA Report along with mine plan shall be uploaded on MOEFCC website.

Reply: The Revised EIA Report along with mine plan has attached and uploaded on the MOEFCC Website.

2. A Detailed Replenishment Study shall be submitted.

Reply: A Detailed Replenishment Study is attached as **Annexure I** & also incorporated in Revised Final EIA Report as per the recommendation of the **Honorable Committee**.

3. The feasibility of manual mining in achieving the production of 7 Lakh TPA & its environmental implications.

Reply: **Manual mining** is feasible with the help of **350 labours** per day. Calculation is as follows:

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Tributaries Chandrawal, Urmil, Shiam, Shihu, Karoran, Kel, Bichhui, Gawain, Siamri, Banne, Khuraran, Kutni, Lohruk, Kusar, Kail, Sonar (Bewas, Bamner, Kopra), Vyarma, Aloni, Vearma.

Itinerary of Ken River:

The Ken river has its origin from the Ahirgawan village on the north-west slopes of the Kaimur hills in the Jabalpur district of Madhya Pradesh at an elevation of about 550 meters above mean sea level. The average annual flow of the river is 11300 MCM (million cubic meter). It is 427 km long up to its point of confluence with the Yamuna near village Chilla in the Banda district of UP. The Ken basin covers the area of Jabalpur, Sagar, Damoh, Panna, Satna, Chhatarpur and Raisen districts of MP and Hamirpur and Banda districts of UP. The river is the last tributary of Yamuna before the Yamuna joins the Ganga. The river basin lies between the latitudes of 23°20' and 25°20' N and the longitudes of 78°30' and 80°36'E.

Itinerary of Drainage area of Ken River:

The Ken river has its origin from the Ahirgawan village on the north-west slopes of the Kaimur hills in the Jabalpur district of Madhya Pradesh at an elevation of about 550 meters above mean sea level. The river is the last tributary of Yamuna before the Yamuna joins the Ganga. The river basin lies between the latitudes of 23°20' and 25°20' N and the longitudes of 78°30' and 80°36'E. The total catchment area of the basin is 28224 sqkm, out of which 24638 sqkm lies in Madhya Pradesh and the remaining 3586 sqkm in Uttar Pradesh. The basin covers the areas of Jabalpur, Sagar, Damoh, Panna, Satna, Chhatarpur and Raisen districts of Madhya Pradesh and Hamirpur and Banda districts of Uttar Pradesh.

Dandy & Bolton formula for calculation or Sediment Yield:

Dandy bolton formula is often used to check whether the sedimentation yield exceeds the replenishment rate but the whole question is whether there is adequate monitoring of the river basin, the answer is no as hydrological stations are sparsely spread. The formula uses catchment area and mean annual runoff as key determinants to give a yield value. It does not differentiate in basin wide smaller streams and their characteristics. CWC (Central water commission) distinguishes river basins as classified and non-classified, as per the latest hydrological data for unclassified River 'basins; there are 122 GDS' (Gauge, Discharge, Sediment & Water Quality) sites in 12 such basins, the number was 147 in 2005. This brings in context the whole issue of scientific mining, thereby indicating that the monitoring of sediment yield in rivers / streams within the river basins is essential to arrive at extraction rates and express and conduct environmental studies based on these basin wide characteristics which should become part of the 'Terms or Reference'.

Sediment Yield versus Drainage Area

Dandy and Bolton studied sedimentation data from about, 1500 reservoirs, ponds, and sediment detention basins. In developing their formulate,".they used from about 800 of these reservoirs with drainage areas greater than or equal to mi^2 . The smaller watersheds-those or drainage area less than $1 mi^2$ were excluded because of their large variability of sediments yield, reflecting the diverse effects of soils, local terrain, vegetation, land use, and agricultural practices.

For drainage areas between 1 and 30,000 mi^2 , Dandy and Bolton found that the annual sediment yield per unit area was inversely related to the 0.16 power of the drainage area: In which S-- sediment yield in tons per square mile per year; SR = Reference sediment yield corresponding to a $1 mi^2$ drainage area, equal to 1645 tons per year; A = drainage area in square miles; and AR reference drainage area ($1mi^2$)

SEDIMENTS YIELD VERSUS MEAN ANNUAL RUNOFF

Dandy and Bolton studied sedimentation data from 505 reservoirs having mean annual runoff data. Annual sediment yield per unit area was shown to increase sharply as mean annual runoff Q increased from 0 to 2 in. Thereafter, for mean annual runoff from 2 to 50 in. annual sediment yield per unit area decreased exponentially.

This led to the following equations.

For $Q < 2$ in.:

For $Q > 2$ in.:

In which Q_R = reference mean annual runoff $Q_R = 2$ in.

Sediment Production.

For $SR = 1645$ tons/mi²/y, $Q_R = 2$ in., and $AR = 1$ mi², Eq. reduces to the followings:

For $Q < 2$ in.: $S = 1280 Q^{0.46} (1.43 - 0.26 \log A)$

For $Q > 2$ in.: $S = 1965 e^{-0.055Q} (1.43 - 0.26 \log A)$

Equations 5-12 and 5-13 are based on average values of grouped data; therefore, they should be used with caution. In Certain cases, local factors such as soils, geology, topography, land use, and vegetation may have greater influence on sediment yield than either mean annual runoff or drainage-area. Nevertheless, these equations provide a first approximation to be regional assessment of sediment yield for watershed planning purposes.

Calculation of Sediment Yield of River Ken (Tributary of Yamuna):

There are 2 rivers mainly contribute to Ken basin for its sand deposition are Sonar and Bearma River with the Catchment Area of 1778 sq km & 5803 sq km respectively.

Our site lies in 3 villages:

- a) Kanwara
- b) Bhuredi
- c) Chileta

- Production : 7 Lakhs TPA
- Mineable Area :80.42 ha, Total area: 122.81 ha
- Normal Annual Rainfall : 902 mm or 35.51 inches

Q (in inches)	A (in sq mile)	S T/milesq/annum
35.51	1385	170.81

$$S = 1965 e^{-0.055Q} [1.43 - 0.26 (\log A)]$$

With above formula the value of **S =170.81T/mile square/annum**

Therefore the Total Sediment Yield for drainage basin of 1385 square mile will be =1385 x 170.81= **2, 36,558 lac T/annum**

Dandy & Bolton formula also says that actual sediments yield from individual drainage basins may vary 10 fold or even 100 fold from computed yield. Since itinerary of river Ken indicates that its basin comprises of sedimentary rocks with good average rainfall therefore there are fair chances of yield of sediments to be 50 fold of computed results, given the previous experiences of the river bed mining in the area, **Hence Actual Sediment Yield will be : 2,36,558 lac T x 50 fold =1,18,27,900 T / Annum.**

It gives us a rough idea about replenishment as it is a empirical study, because it compasses lots of parameters and gives a empirical approximation theoretically whereas practically we will have Pillars & we mark the site and accordingly we figure it out that how much is getting replenished every year in to the mine site, it will give a practical approximation.

The equations express the general relationships between sediment yield runoff and drainage area.

Sediment yield of a sediment basin has direct impact of local terrain, climate, vegetation, soils, agricultural practices & land use pattern of catchment area of the sediment basin afore said factors varies from basin to basin therefore, Dandy & Bolton has category stated that use of the equation to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation development. Actual sediment yield Corm individual drainage basins may vary 10 fold or even 100-fold from computed yields.

2) MANUAL MINING

Manual mining is feasible with the help of 350 labours per day. Calculation is as follows:

During Mine operation

Transportation scenario from the site through village Kanvara, Bhuredi & Chilehata

Total Capacity of mine	: 7 lakh tonnes per annum
No. of working days	: 250 days
Transportation/ day	: 2,800 tonnes
Tonnes / hour (working hours=8 hours)	: $2800/8= 350$ TPH (350000 kg)
Optimum Capacity of a Worker in one trip = 50 kg	

Reference: ICMR Bulletin, ISSN 0377-4910, Vol. 3. No. 8 (August, 2000)

No. of workers for 1 trip = $350000/50$
= 7000 labours/ hr

Considering 20 trips in 1 hr (3 min/ trip in 1 hr) = $7000/ 20$
= 350 labours