ADS
(ADDITIONAL DETAIL SOUGHT)
REPLY

FOR

Proposed Limestone Mine
(ML Area: 582.962 ha)
with Limestone Production Capacity of 3.9 Million TPA
and waste/topsoil 225000 CuM per annum (Maximum)
with installation of Crusher of 1000 TPH Capacity

At

Villages Bidiyadih, Bhurkunda, Godadih & Bohardih,
Tehsil Masturi, District Bilaspur, Chhattisgarh

PROJECT PROPONENT

ACC

M/s. ACC Limited

(Jamul Cement Works)

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INDEX

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JL/ENV/19/99
Sept 27, 2019

The Director (Non-Coal Mining) - IA Division
Ministry of Environment, Forest and Climate Change,
Indira Paryavaran Bhawan, Jor Bagh Road,
Aliganj, New Delhi- 110003

Subject: Proposed Limestone Mine (ML Area: 582.962 ha) with Limestone Production Capacity of 3.9 Million TPA and waste / topsoil 225000 CuM per annum (Maximum) with installation of Crusher 1000 TPH at Villages- Bidiyadih, Bhurkunda, Godadih & Bohardih, Tehsil Masturi, District Bilaspur, Chhattisgarh by M/s ACC Limited **Reg. Submission of Additional Details Sought (ADS)**

Ref: 1. MoEF&CC File No. J-11015/45/2018-IA-II (M) and Proposal No. IA/CG/MIN/109258/2018;
2. Additional Details Sought (ADS) by MoEFCC on 26.08.2019.

Dear Sir,

This is in reference to the aforesaid subject and above cited reference matter; we would like to inform you that our said project was considered for Environment Clearance before 7th EAC (Non Coal Mining) held on 30.07.2019 (Item No 2.1). Subsequently, Additional Details Sought (ADS) by MOEFCC vide their letter dtd. 26.08.2019.

Therefore, in compliance to the ADS issued by MoEFCC, we hereby submit the reply to the ADS points with required documents as support Annexure for your kind consideration. You are requested to kindly consider our project in upcoming EAC (Non Coal Mining) meeting and grant us Environment Clearance at the earliest.

Thanking you,

Yours truly,
For ACC Limited

Vaibhav Dixit
Director Plant
Jamul Cement Works

Encl: As above

Point No. 1 **PP submitted that the limestone production is 3.9 Million TPA and waste and topsoil of production 225000 CuM per annum (Maximum) along with installation of mobile crusher(s) of 1000 TPH capacity in the mine lease area. The Committee asked the PP to submit the total excavation details in same unit (MTPA) including mineral, overburden (OB), interburden (IB), side burden (SB) and waste/topsoil production and etc. The Committee also informed the consultant that the presentation should be in the same unit and should not mix the units for representation.**

Reply Details of total excavation are as under:

S. No	Particulars	Total Excavation Details (Million TPA)
1.	Limestone	3.90
2.	OB/SB/IB	0.27
3.	Top Soil	0.07
	Total	4.24

Point No. 2 **PP submitted that the total mine lease area is 582.962 ha, out of which 77.795 ha is a government land and 505.167 ha is private agricultural land. PP submitted the land acquisition detail which revealed that 82.247 ha agriculture land is acquired and the land yet to be acquired is 422.62 ha. PP needs to submit the timeline for land acquisition and plans for mining activities, if the part of land is not acquired by PP.**

Reply As per approved Mining Plan for 2019-20 to 2023-24 years, there will be no production or development during year 2019-20 and during the year 2020-21, only development is proposed. In the 2021-22 and 2022-23 years, mining is proposed in government land only and in 2023-24 year, mining will be carried out partially in government land and partially in private land. However, entire land falling in a block will be procured prior to commencement of mining as per approved Mining Plan. The status of land procurement and proposed plan is as follows :

S. No.	Year	Mining Lease (Ha)	Plant Area (Ha)
	Already procured	82	--
1	2019-20 to 2022-23	43	89.0000
2	2022-23 to 2024-25	200	16.0269
3	2024-25 to 2027-28	149	--
4	2027-28 to 2030-31	108	--
	TOTAL	582	105.0269
Note: By 2030-31 100% Mine lease land will be procured.			

Year wise Plan for Mining Activity is given below:

S. No	Block	Period	Area of Pit (Ha)	Resource (Mio T)
1.	J	From 1st to 6th year	79.5	19.4
2.	H2	From 7th to 10th year	39.5	13.21

3.	H1	From 8th to 14th year	41	14.42
4.	B	From 15t to 17th year	26	11.85
5.	A	From 18th to 19th year	22.2	9.51
6.	C1	From 19th to 20th year	7.5	3.41
7.	E	From 20th to 21st year	15.5	2.86
8.	D	From 22nd to 24th year	39	10.92
9.	C2	From 25th to 28th year	19	13.5
10.	C3	From 29th to 31st year	16.5	12.6
11.	I	in 40th year	54.3	33.4
	TOTAL		**360**	**145.08**

Point No. 3 **PP submitted that the M/s. ACC Limited is proposing to put up a new cement plant (clinkerization) of 2.72 MTPA capacity outside mine lease over an area of ~105 ha. PP further submitted that the distance between the plant and mine lease area is ~500 m. The Committee asked the PP to submit land break up details for 105 ha cement plant.**

Reply The total land required for proposed cement plant will be 105.0269 ha of which 67.3793 ha land is Govt land, 36.5156 ha land is Pvt agriculture land and rest 1.132 ha land is of ACC Ltd. Detailed breakup of land is given below:

Particular	Bohardih		Godadih		Loharsi	
	Irrigation	Non-Irrigation	Irrigation	Non-Irrigation	Irrigation	Non-Irrigation
Govt (Ha)	0	5.0000	0	24.2960	0	38.0833
Pvt (Ha)	9.3750	0	25.1830	0.8500	0.1700	0.9376
ACC Ltd (Ha)	0	0	0	1.1320	0	0
Total	9.3750	5.0000	25.1830	26.2780	0.1700	39.0209

Point No. 4 **PP should perform the cumulative effect of mine lease area and cement plant in the EIA studies and submit a separate report for the same.**

Reply Cumulative impact studies of mining and proposed cement plant are made and prediction of incremental ground level concentrations (GLC's) have been made by AERMOD version 8.2.0 model as per CPCB guidelines. The details are enclosed vide ***Annexure-I.***

Point No. 5 **PP has submitted the average annual rainfall in the region is around 1167 mm. PP needs to submit the methodologies used for calculation and references used for validation of the results. Furthermore, PP needs to submit the water balance budget and it should also mention total water requirement for mining activities and cement plant and the source for the same. In addition, the PP should mention how much**

water is harvested, utilized, drawn and conserved.

Reply A detailed note on rainfall, water balance budget for plant and mines as well as water harvesting is given vide ***Annexure-II.***

Point No. 6 **PP submitted the land use/land cover status of the study area has been assessed using satellite data but analysis is not adequate and therefore, PP needs to revise the plans and submit the same.**

Reply A revised Land use/land cover status of the study area is enclosed as ***Annexure-III.***

Point No. 7 **PP presented that the perennial river such as Lilagarh River (250 m in the east direction) that flows from north to south, Sheonath River (~ 6.5 km in SSW direction) that flows from WNW to ESE and Kurang Left Bank Canal (Adjacent in West direction). PP need to submit the details of precautionary measures considered in the proposal to avoid water ingress (surface or sub-surface) in the mine area during the period of mine operation, including proposal for plantation, if any and associated budgetary provisions.**

Reply A detailed note on the precautionary measures considered in the proposal to avoid water ingress (surface or sub-surface) in the mine area during the period of mine operation, including proposal for plantation etc and associated budgetary provisions is given vide ***Annexure-IV.***

Point No. 8 **PP submitted that the two nallah flowing easterly divides the mining lease area into blocks and further mentioned that the lease has been granted excluding that part of the area. PP needs to submit the conceptual plans for protection of these nallah including plantation or forest development along the rivers and their budgetary provisions.**

Reply Seasonal nallahs are not the part of mine lease area as the State Government has granted the lease after excluding that part. These nallahs will not be disturbed during any stage of mining activities. Following precautionary measures are proposed:

- ✓ Safety barrier of 50 m along nallah is proposed in which no mining activity will be carried out.
- ✓ Additional 7.5 m safety barrier will be left within the lease boundary and protective bunds inside this safety barrier will be prepared and dense plantation will be done.
- ✓ Wherever required, protective bunds along the length of nallahs on both the sides will be prepared and plantation will be done on bunds for its stabilization.
- ✓ Check dams will be constructed to prevent sedimentation / siltation of natural water courses with prior permission from Concerned Authority.
- ✓ Garland drains/storm water drains along with siltation ponds at regular intervals will be constructed through proper plan.
- ✓ Where-ever crossing seasonal nallah culvert / bridge will be constructed for the vehicle transporting limestone without affecting the natural course of nallah.

The overburden will be used to make bunds along the periphery of mining lease boundary along the nallahs. These bunds will be of 5 m height and 7.5 m width. Total length of the nallahs is around 18kms (both sides). Green belt/plantation will be developed all along the mining lease boundary in a safety barrier of 7.5m which shall act an additional protective barrier for nallah within lease besides 50 m of barrier located outside the lease boundary. Therefore, width of protective barrier will be around 57.5 m on either side of nallah. A budget of around Rs one crore has been earmarked for plantation and bunds. Conceptual Plan is enclosed in ***Annexure-V*** and nallah protection drawings are given vide ***Annexure- VI.***

Point No. 9 **PP presented the KML file and the Committee observed there is multiple water reservoirs (ponds) present in the mining lease area which provides water facility to the village people. PP requires to submit the details of precautionary measurement for conservation and management of water bodies, and their budgets plans. In addition, PP should also submit the details that how the villagers will access the reservoirs (ponds). Alternatively, if PP propose to facilitate alternative sources of water to villagers, PP needs to submit the details (timeline for implementation of such system, capacity, availability during the year, etc), and budget provisions for such proposed water facility**

Reply The study area has multiple water ponds while there is only one pond which slightly falls inside the mining lease between block H1 and C1. Mining in H1 block shall be commenced after 10 years whereas in C1 block after 20 years. Further, no pond will be disturbed and any access of villagers to this pond will remain unaltered. However, following precautionary measures are proposed :

- ✓ Safety barrier of 50 m around pond is proposed in which no mining activity will be carried out.
- ✓ Additional 7.5 m safety barrier will be left within the lease boundary and protective bunds inside this safety barrier will be prepared and dense plantation will be undertaken on bunds.
- ✓ Alternative means of mineral extraction viz. rock breaker/vibro ripper etc will be used for mining beyond 50 meter and upto 100 meter of ponds or its any access route.
- ✓ Controlled blasting will be carried out within 300 meter of pond or its any access route.
- ✓ Pond protection plan is enclosed as **Annexure VII.**

Point No. 10 **PP submitted that village road is passing through mine lease area which is connecting three villages and also used for other transport purposes. PP needs to submit details of precautionary measurement for safeguarding the transport infrastructure from any impact of mining. In case, PP proposed for alternate option, detail plan, timeline for implementation, necessary approval from competent authority, concurrence of proposal from local representatives along with budgetary provision and safety procedure for the alternate option is required to be submitted.**

Reply There is one tar/revenue road passing nearby lease area and between mining blocks and it falls outside the mining lease area. ACC will not disturb this road which is used by villagers for access and for transport purpose. The following precautionary measures are proposed :

- ✓ Mining activity will not be carried out in 50 m safety barrier zone on either side of roads.

- ✓ Wherever barrier zone forms ML periphery, additional 7.5 m safety barrier will be left within the lease boundary and protective bunds inside this safety barrier will be prepared and dense plantation will be undertaken on these bunds.
- ✓ Alternative means of mineral extraction viz. rock breaker/vibro ripper etc will be used for mining beyond 50 meter and upto 100 meter of roads and habitation.
- ✓ Controlled blasting will be carried out within 300 meter leftover safety zone of roads.
- ✓ Village roads will not be used for mineral transport. Wherever road crossing for transport is involved, proper gate and signaling system will be installed and necessary security will be deployed as safety measures.

As per conceptual plan village road shall not be disturbed during entire life of the mine. Additionally, all the relevant signages, indication of blasting timing etc shall be placed at fixed interval for alertness of mining activity for the public at large. Safe operating procedures shall be followed.

Point No. 11 **PP submitted that the total mine lease area is divided into 10 blocks. PP needs to submit the time line for blocks such as which one is going start first and when followed by the same details for other blocks as well.**

Reply Mining will be carried out in total eleven blocks (pits), varying in size from 7.5 ha to 79.5 ha which have been planned with cumulative mining area at conceptual stage to be around 360 ha. Rest of the area will be covered under safety zone, afforestation etc. Depending on the geology and life of each pits a sequence of the pit operation has been planned for scientific mining. The proposed sequences of working of the pit operations as conceptualized are given table below :

Block	Area (Ha)	Resource (Mio T)	Sequence of Block operation	Estimated Life of Block (Years)
J	79.5	19.4	1	6
H2	39.5	13.21	2	4
H1	41	14.42	3	4
B	26	11.85	4	3
A	22.2	9.51	5	2
C1	7.5	3.41	6	1
E	15.5	2.86	7	1
D	39	10.92	8	3
C2	19	13.5	9	4
C3	16.5	12.6	10	3
I	54.3	33.4	Continuous	9
TOTAL	**360**	**145.08**		**40**

Life of mine will vary based on reserves as per future exploration and exploitation.

Point No. 12 **PP presented point-wise compliance of stipulated TOR; however, the Committee felt that few of the points have been responded in very generic terms. The units used for submitting quantity of material is not uniform, and presentation doesn't have coherence with the proposed activities in detail, but is very generic. PP needs to submit the compliance of TOR in more specific way, especially the compliance to TOR condition no.5, 6, 7 8, 10 and 11.**

Reply Compliance of ToR point no 5, 6, 7, 8, 10 & 11 is given as per under:

ToR Point	ToR Point	Compliance
5.	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.	All the documents including approved Mining Plan, EIA and Public Hearing are in the name of lessee i.e, M/s. ACC Limited and are compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc.
6.	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	Map showing mining lease area with geographical corner coordinates, geomorphology and geology of the area, superimposed on toposheet has been prepared and enclosed as ***Annexure-VIII***. Land use /land cover map of study area based on satellite imagery is enclosed as ***Annexure III***. Geomorphology- The area forms a flat plain with minor undulations and a very gentle slope from west to east in the buffer zone. The elevation within the area varies from 263 m amsl in extreme west to 238 m amsl in eastern direction. The area falls in Mahanadi River basin and Sheonath River sub-basin. It is the major river of buffer zone flowing at a distance of 6.5 km in SSW direction. A small Lilaghar nadi also flows near to mine lease area at around 0.5 km in east direction. The drainage pattern of the core zone shows two second order streams/nallah passing through the lease area. The catchment areas of these streams originating outside the lease area are small and these streams carry limited surface runoff during the rains. Geology- The area forms a part of the extensive

		Chhattisgarh basin, which comprises, conglomerate, sandstone, and quartzites of the Chandrapur Series, resting unconformably on the older gneisses and overlain unconformably by shales, limestones and dolomites of the Raipur Series.
7.	Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams & river and soil characteristics.	Map showing geomorphology of land forms of the area, soil type, important water bodies, stream, rivers and existing mineral has been prepared and enclosed as ***Annexure-VIII***. The area forms a part of Chhattisgarh Basin and comprise of limestone, shale and dolomite of Raipur formation. Extensive exploration has been carried out by GSI in the past, thus proving the occurrence of cement grade limestone. Based on the GSI study, a few mining leases have been granted in this limestone belt. The entire area forms a flat plain with minor undulations and a very gentle slope from west to east in the buffer zone. Lilagarh and Sheonath rivers are at a distance of ~0.5 km and ~6.5 km respectively. A proposed canal is passing through the lease area. Kurang Left Bank Canal is adjacent to lease area in west direction. Two seasonal nallahs flowing easterly, divide the ML area into blocks. Various small village ponds also exist in the study area. Two second order streams/nallahs pass through the lease area. One irrigation canal entering in the south-eastern block of lease area is a proposed structure/under construction. These streams/nallahs divide the mine lease area into blocks. These streams will not be disturbed and will be allowed to flow their natural course. Soil is black and brown in colour, neutral to slightly alkaline in nature and silt, silty and clay loam in texture.
8.	Details about the land proposed for mining activities should be given with information as to whether mining confirms to the land use policy of the state; land diversion for mining should have approval from state land use board or the concerned authority.	Mining lease area is granted & executed in favour of M/s. ACC Limited for captive mining purpose for Cement Manufacturing. There is no stipulation for diversion of land allotted for mining purpose. If at any stage, approval for land diversion is required, company will follow the land use policy of the state. Mining will start after necessary approval from

		concerned state government agency.
10.	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 study area comprises of 10 km radius area around the mining lease from lease periphery. Map showing the same is given as ***Annexure-IX***. Estimated life of mine based on proposed production rate of 3.9 MTPA as well as total Reserves and Resources (182.74 Million Tones) would be around 40 years. Further, the reserves and the life of mine may enhance based on the future exploration and mineral exploitation. 1.278 Million Tonnes of Soil and 5.112 million tonnes of OB will be generated up to the life of the mine which will be used for green belt development along the mine lease boundary and backfilling in mined out blocks as per conceptual plan.
11.	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given	There is no National Park, Wildlife Sanctuary, Biosphere Reserves, Reserve Forest, Protected Forest, Tiger Reserves, and Wildlife Corridors etc. within 10 km radius of the mining lease area. Land use / land cover map of the study area showing present land use pattern & also, delineating forest area, agriculture land, water bodies, human settlements and other ecological features is enclosed as **Annexure-III.** Land use plan of the mine lease area in pre- operational, operational and post operational phases has been prepared and a conceptual plan showing impact of change of land use due to mining is enclosed as ***Annexure V.*** At the conceptual stage, total excavated area will be 360 ha, out of which 54 ha area will be backfilled and remaining 306 ha area will be converted to water bodies.

Point No. 13 **PP presented that stage wise land use pattern for core zone of the mine lease area and mentioned that external waste dump area is 2.0 ha during the mine plan period. PP needs to submit specific reasons for the same. Furthermore, PP mentioned in the conceptual stage that out of total lease area, 360 ha is total excavated area and out of this 54 ha will be backfilled and 306 ha will be converted as water reservoir. PP should submit the timeline details for the same.**

Reply As per approved Mining Plan, it was proposed to use 2.0 ha for waste dumps inside mining lease which will be temporary in nature, as at conceptual stage there will be no dumps and all OB/waste will be used for backfilling of 54 ha fully excavated pit and for preparation of bunds inside safety zone of 7.5 meter for development of green belt.

Mining will be carried out in total eleven nos of pits, varying in size from 7.5 ha to 79.5 ha with a cumulative mined out area at conceptual stage to be around 360 ha. Rest of the area will be covered under safety barriers, afforestation etc. At conceptual stage, out of 360 ha of total excavated area, 306 ha will be converted into water reservoir and 54 ha will be backfilled. The proposed sequence of reclamation and rehabilitation as conceptualized are given in the table below :

Block	Area of Pit (Ha)	Area- converted into water reservoir (ha)	Converted into water reservoir (Years from mine opening)	Backfilled area (ha)	Backfilling year
J	79.5	79.5	End of 6th year	NIL	NIL
H2	39.5	39.5	from 7th to 10th year	NIL	NIL
H1	41	41	From 8th to 14th year	NIL	NIL
B	26	26	From 15t to 17th year	NIL	NIL
A	22.2	22.2	From 18th to 19th year	NIL	NIL
C1	7.5	7.5	From 19th to 20th year	NIL	NIL
E	15.5	15.5	From 20th to 21st year	NIL	NIL
D	39	39	From 22nd to 24th year	NIL	NIL
C2	19	19	From 25th to 28th year	NIL	NIL
C3	16.5	16.5	From 29th to 31st year	NIL	NIL
I	54.3	0.3	in 40th year	54	From 32nd to 39th year
TOTAL	**360**	**306**		**54**	

Point No. 14 **PP submitted that the public hearing (PH) was conducted on 07.06.2019 and mentioned that there was continuous sloganeering and protest was held by affected people throughout the public hearing. PP further submitted that the 11 written/oral objections/suggestions were received. PP submitted that major public concerns raised were that the complete details of project have not been properly informed to the villagers. PP informed that the information was shared only with regard to mining activities as the PH was for mining proposal. PP informed that out of 11 suggestions/objections, 10 people opposed the proposed mining activity; also alleged that the public hearing was not as per the rules and regulation. It was also requested that the PH needs to be postponed and conducted after giving proper information to project affected villages and families. Therefore, the Committee is of the view that the details of public hearing need to be verified. It was suggested by the committee that the Ministry may get the confirmation on the concerns highlighted from the State Pollution Control Board regarding the public hearing.**

Reply Request letter has been submitted to CECB for clarification regarding the points highlighted by the committee regarding the Public Hearing procedure followed and the doubts raised by the public. Copy of receipt is enclosed as ***Annexure X***.

Point No. 15 **PP submitted the point-wise action plans for public hearing (PH) issues; however, the Committee felt that the points have been responded in very generic terms. PP needs to revise the actions plans for PH issues and submit the associated budgetary provisions with timeline.**

Reply A revised action plan for public hearing issues alongwith the associated budgetary provisions with timeline has been prepared and detailed in ***Annexure X***I

Point No. 16 **PP submitted that the mined limestone (approximately 10000-15000 tonnes per annum) will be send to Jamul Cement Works of ACC (Durg, Chhattisgarh) by road, till the proposed cement plant is made operational. PP needs to submit the details of transport route map, environmental impact by road transportation as well as the precautionary measures for mitigating the impact.**

Reply

- Till setting up of the Chilhati Cement Plant, small quantity of limestone (approx. 10000-15000 tons per annum) may be dispatched to Jamul Plant of ACC Limited situated in Durg District, Chhattisgarh by Road. This works out to about two trips per day. Jamul cement plant is at around 159 kms distance from the mine site. Transportation route map is given as ***Annexure XII.***
- Detailed traffic study has been conducted to analyse the impact and same is given in EIA Report. Material prior to loading will be water sprayed and trucks will be covered with tarpaulin to avoid any dust spillage over roads. Further, increase of two nos trips per day will not have any significant adverse impact.

Point No. 17 **PP mentioned that the total amount of compensation for land will be divided in three parts such as one-time partial payment, fixed deposit and annuity and also mentioned that option will be explored for alternative land to land owners. PP requires to revise the entire R & R plans with quantitative values, specifically the details of percentage of money going to spend in above mentioned budget heads and their timeline and how the affected person/families will receive it and get access to it throughout their lifetime.**

Reply As per ACC planned Compensation Policy, the total amount of compensation will be divided in three Budget Heads-

- One time Partial payment (40%)
- Fixed Deposit (40%)
- Payment as an annuity (20%)

One time partial payment

- ACC will initially provide one time partial payment of 40% of total compensation in joint bank account (Name of husband& wife), in case of widow and widower money will be transferred in single name bank

account.

- ACC will provide guidance and training program how PAFs will use that money as per their area of interest as well as guide them to invest in the right business sector with the help of NGO so that regular income is generated by their efforts. ACC will also help them by continuous mentoring so that they do not feel cheated at any stage.
- ACC will encourage PAFs for self-employment with help of awareness and training program.

Fixed Deposit

- Remaining 40% of total compensation will be put into fixed deposit in their name to the all effected families by providing support of finance experts and banks.
- For better distribution of the compensation amount in the family and considering the females of the family the bifurcation of fixed Deposit will be:
  - 10% amount will be fixed on the name of girl child for her education and marriage for 10 years. It will depend upon the age of the girl. If girl child is married then money will be fixed in the name of married girl. In case of more than 1 girl child, the money will be divided into that number of girl children.
  - 30% amount will be fixed on the name of land owner for 10 years for financial security.

Annuity

- 20% of total compensation amount will be put under Monthly Income Scheme on joint name (Name of husband & wife). In case of widow and widower, the scheme will be on single name with the concerned to get monthly income for keeping the affected family's livelihood for life time. (PAFs will get interest of money as their monthly income. This money of 20% cannot be withdrawn by any one of the family and they will get interest as monthly or quarterly instalment for running their livelihood minimum up to 20 years.).

Point No. 18 **In R & R plan, PP mentioned that the company shall facilitate employability training under its skill development initiatives (ACC DISHA - HunarShala) and enhance their skills for employability and placement elsewhere. PP needs to submit the specific plans details, timeline and budgetary provisions for the skill development.**

Reply A three pronged approach is proposed to be adopted to facilitate livelihood options through skill development initiative. Details given in ***Annexure XIII***.

Point No. 19 **PP should revise the total project cost by including all compensation paid and going to pay for the remaining agricultural land, accordingly, revise all the budget details of the project.**

Reply The total project cost after including the total land compensation paid and going to be paid including all equipments, machines, EMP etc is Rs 393.01 Crores.

MINE PROJECT COST BRAKEUP

Sr. No.	HEAD/ ITEM	COST (Rs in Crores)
1	Limestone Mobile Crusher with Infrastructure and civil work including conveyor belt	20.0
2	Mine Machinery	22.0
3	Electrical connection	3.5
4	Office	2.0
5	Workshop & Water Treatment System	2.50
6	Road and Bridge	2.0
7	EMP Cost	12.5
8	Safety	0.1
9	Total Land Cost (private and Government)	283.70
10	Compensation for Displacement of Families and Houses	39.71
11	R & R Budget for Skill development of PAF and Resettlement of PDF	5.0
	TOTAL	**393.01**

Point No. 20 **PP presented that the 10 families have houses in the mine lease area and it will be shifted and the company will provide the cost of land for construction of houses for all 10 families. The company will construct houses in adjoining village with basic amenities like road, playground and electricity. The Committee is of the view that PP should submit the details of family (members), budgetary provisions for construction of houses with all facility, family members (if family have girl child separate budget need to be allotted) and their implementation timeline.**

Reply

- 10 houses are coming within mining lease area. It will be shifted and ACC will provide the cost of land and money for construction of houses for all 10 families. The company will construct houses in adjoining village with basic amenities like road, playground and electricity.
- Details of houses within mining lease are given in the following table.

S. No.	Village name	House hold Inside Mine Lease
1.	Bidiyadih	2
2.	Bohardih	Nil
3.	Bhurkunda	7
4.	Godadih	1
Total		10

- The households will be shifted in the same village in which they currently reside. ACC will purchase land for the construction of the houses and will construct the houses as per Pradhan Mantri Awaas Yojna

pattern.

- In village Bhurkunda, for 7 households, land will be purchased in cluster in the same village and houses will be constructed in the form of planned colony with provision of all basic amenities.
- The amenities to be provided by ACC for the displaced families are given below:
  - Proper houses will be constructed in a small colony manner
  - Pucca Road within the resettled area and road link to the nearest main village road.
  - Proper drainage plans executed before physical resettlement.
  - An assured source of safe drinking water for each displaced family.
  - Provision of drinking water for cattle.
  - Sanitation facilities including individual toilet for all displaced families.
  - Individual single electric connection for all displaced families. (or connection through non-conventional sources of energy like solar energy).
  - Public street lighting on the roads.
  - Sub-health center within 2 kilometers range from the settled location.
  - Chowpal/ tree platform will be constructed where people will be displaced.
  - Tree plantation along the road and near each house

Budget: A separate budget for the procurement of the land and construction of houses on it with basic facilities for 10 numbers of house holds falling under mine lease area is earmarked as Rs 4 Crores.

Time Line; The displacement and completion of construction of houses with basic facilities will be completed by the year 2024.

Point No. 21 **The emission rate data reference for air quality prediction should be submitted.**

Reply The prediction of incremental ground level concentrations (GLC's) have been made by AERMOD version 8.2.0 model as per CPCB guidelines and the emission rate data reference for air quality prediction is a part of the study as detailed in ***Annexure-II***.

Point No. 22 **PP presented that there will be water table intersection due to mining activities and mentioned that no surface run off will be mixed with the ground water. PP needs to submit details of control measurements for protecting the surface run off so that it will not mix with the groundwater. PP need to submit management of ground water after the water table is intersected.**

Reply There will be water table intersection due to mining activities and no surface run off will be mixed with the ground water. Details of control measurements for protecting the surface run off to avoid mixing with the groundwater and management of ground water after the water table is intersected is detailed in ***Annexure-XIV.***

Point No. 23 **PP should revise and submit the KML file with proper marking and displaying of mining lease area and other details (marking of ponds, rivers and their direction, villages, homes present in the MLA, proposed position of cement plant and others etc.).**

Reply The KML file has been revised with proper marking and displaying of mining lease area and other details like ponds, rivers, villages, houses, proposed cement plant etc as given in ***Annexure-XV***.

Point No. 24 **PP reported that there is no forest land in the mine lease area and submitted the letter from DFO. However, the Committee is of the view that DFO is not competent authority responsible for providing the no forest land certificate. PP needs to submit certificate from the Competent Authority (PCCF and Chief Wildlife Warden) and the certificate should have mention of name, designation, official seal of the person signing the certificate and letter number.**

Reply The request letter to PCCF & Chief Wild Life Warden Raipur was submitted for no forest land involved in the mine lease area vide our letter no. JL/ENV/19/73 dtd.10.07.2019. Letter with KML drawing was forwarded to DFO- Bilaspur for confirmation and submit the report of forest available in 10 km radius and no forest available in mine lease area vide their letter no. 2251 dtd.07.08.2019. Getting the NOC from PPCF regarding no forest land in mine lease area is in process and is expected to get the letter from PCCF by 15th September 2019. Correspondence with Forest Dept is enclosed herewith as ***Annexure-XVI***.

Point No. 25 **As per the TOR Conditions, PP needs to submit the mitigation measures on impact of mining activities on Habitations as per Ministry's OM No. Z-11013/57/2014-IA-II (M) dated 29.10.2014. However, the PP neither submitted nor presented any compliance to this TOR conditions. PP needs to submit the same.**

Reply The mitigation measure on impact of mining activities on Habitations as per said OM is given as ***Annexure XVII.***

Point No. 26 **PP needs to submit an authenticated English translated copy of the document for surface water permission letter.**

Reply An authenticated english translated copy of the document for surface water permission letter is given as ***Annexure-XVIII.***

Point No. 27 **PP needs to submit the authorization letter of the person delegated or authorized by the company for pursing the application with the ministry.**

Reply Authorization letter dtd. 27.08.2019 in the name of Dr. V. S. Kapur is enclosed as ***Annexure-XIX***.

---------- Forwarded message ---------
From: <sundeep.cpcb@nic.in>
Date: Wed, Aug 21, 2019 at 6:32 PM
Subject: Additional Information to PP
To: <vinay.kapur@acclimited.com>
Cc: <sundeep.cpcb@nic.in>, <monitoring-ec@nic.in>

Email alert to proponent, if any, Additional details are sought by concerned Member Secretary after consideration of proposal in EAC Meeting

A proposal for EC, as per the details given below has been examined by the Member Secretary

The said proposal has not been accepted on account of the Additional details sought as per the statement uploaded on the portal of Ministry. Please upload the Additional details sought by Member Secretary.

1. Proposal No.	:	IA/CG/MIN/109258/2018
2. File No.	:	J-11015/45/2018-IA.II (M)
3. Category of the Proposal	:	Mining Projects
3. Name of the proposal	:	Proposed Limestone Mine (ML Area: 582.962 ha) with Limestone Production Capacity of 3.9 Million TPA and waste/ topsoil 225000 CuM per annum (Maximum) with installation of Crusher of 1000 TPH Capacity
4. Date of submission	:	30 Jun 2019
6. Details Sought	:	The proposal was placed in before the EAC and PP made presented about the project, findings of their study and EMP. Based on the deliberation by EAC and presentation made by PP, the**Committee deferred the proposal** and asked the PP to submit the following information for further consideration and assessment. i. PP submitted that the limestone production is 3.9 Million TPA and waste and topsoil of production 225000 CuM per annum (Maximum) along with installation of mobile crusher(s) of 1000 TPH capacity in the mine lease area. The Committee asked the PP

to submit the total excavation details in same unit (MTPA) including mineral, overburden (OB), interburden (IB), side burden (SB) and waste/topsoil production and etc. The Committee also informed the consultant that the presentation should be in the same unit and should not mix the units for representation.

ii. PP submitted that the **total mine lease area is 582.962 ha,** out of which**77.795 ha** is a **government land** and **505.167 ha** is**private agricultural land**. PP submitted the land acquisition detail which revealed that **82.247 ha agriculture land is acquired** and the **land yet to be acquired is 422.62 ha**. PP needs to submit the timeline for land acquisition and plans for mining activities, if the part of land is not acquired by PP.

iii. PP submitted that the M/s. ACC Limited is proposing to put up a new cement plant (clinkerization) of 2.72 MTPA capacity outside mine lease over an area of ~105 ha. PP further submitted that the distance between the plant and mine lease area is ~500 m. The Committee asked the PP to submit land break up details for 105 ha cement plant.

iv. PP should perform the cumulative effect of mine lease area and cement plant in the EIA studies and submit a separate report for the same.

v. PP has submitted the average annual rainfall in the region is around 1167 mm. PP needs to submit the methodologies used for calculation and references used for validation of the results. Furthermore, PP needs to submit the water balance budget and it should also mention total water

requirement for mining activities and cement plant and the source for the same. In addition, the PP should mention how much water is harvested, utilized, drawn and conserved.

vi. PP submitted the land use/land cover status of the study area has been assessed using satellite data but analysis is not adequate and therefore, PP needs to revise the plans and submit the same.

vii. PP presented that the perennial river such as Lilagarh River (250 m in the east direction) that flows from north to south, Sheonath River (~ 6.5 km in SSW direction) that flows from WNW to ESE and Kurang Left Bank Canal (Adjacent in West direction). PP need to submit the details of precautionary measures considered in the proposal to avoid water ingress (surface or sub-surface) in the mine area during the period of mine operation, including proposal for plantation, if any and associated budgetary provisions.

viii. PP submitted that the two nallah flowing easterly divides the mining lease area into blocks and further mentioned that the lease has been granted excluding that part of the area. PP needs to submit the conceptual plans for protection of these nallah including plantation or forest development along the rivers and their budgetary provisions.

ix. PP presented the KML file and the Committee observed there is multiple water reservoirs (ponds) present in the mining lease area which provides water facility to the village people. PP requires to submit the details of precautionary measurement for conservation and management of water bodies, and their

budgets plans. In addition, PP should also submit the details that how the villagers will access the reservoirs (ponds). Alternatively, if PP propose to facilitate alternative sources of water to villagers, PP needs to submit the details (timeline for implementation of such system, capacity, availability during the year, etc), and budget provisions for such proposed water facility.

x. PP submitted that village road is passing through mine lease area which is connecting three villages and also used for other transport purposes. PP needs to submit details of precautionary measurement for safeguarding the transport infrastructure from any impact of mining. In case, PP proposed for alternate option, detail plan, timeline for implementation, necessary approval from competent authority, concurrence of proposal from local representatives along with budgetary provision and safety procedure for the alternate option is required to be submitted.

xi. PP submitted that the total mine lease area is divided into 10 blocks. PP needs to submit the time line for blocks such as which one is going start first and when followed by the same details for other blocks as well.

xii. PP presented point-wise compliance of stipulated TOR; however, the Committee felt that few of the points have been responded in very generic terms. The units used for submitting quantity of material is not uniform, and presentation doesn't have coherence with the proposed activities in detail, but is very generic. PP needs to submit the compliance of

TOR in more specific way, especially the compliance to TOR condition no.5, 6, 7 8, 10 and 11.

xiii. PP presented that stage wise land use pattern for core zone of the mine lease area and mentioned that external waste dump area is 2.0 ha during the mine plan period. PP needs to submit specific reasons for the same. Furthermore, PP mentioned in the conceptual stage that out of total lease area, 360 ha is total excavated area and out of this 54 ha will be backfilled and 306 ha will be converted as water reservoir. PP should submit the timeline details for the same.

xiv. PP submitted that the public hearing was conducted at 07.06.2019 and mentioned that there was continuous sloganeering and protest was held by affected people throughout the public hearing. PP further submitted that the 11 written/oral objections/suggestions were received. PP submitted that major public concerns raised was that the complete details of project has not been properly informed to the villagers. PP informed that the information was shared only with regard to mining activities as the PH was for mining proposal. PP informed that out of 11 suggestions/objections, 10 people opposed the proposed mining activity; also alleged that the public hearing was not as per the rules and regulation. It was also requested that the PH needs to be postponed and conducted after giving proper information to project affected villages and families. Therefore, the Committee is of the view that the details of public hearing need to be verified. It was

suggested by the committee that the Ministry may get the confirmation on the concerns highlighted from the State Pollution Control Board regarding the public hearing.

xv. PP submitted thepoint-wise action plans for public hearing (PH) issues; however, the Committee felt that the points have been responded in very generic terms. PP needs to revise the actions plans for PH issues and submit the associated budgetary provisions with timeline.

xvi. PP submitted that the mined limestone (approximately 10000-15000 tonnes per annum) will be send to Jamul Cement Works of ACC (Durg, Chhattisgarh) by road, till the proposed cement plant is made operational. PP needs to submit the details of transport route map, environmental impact by road transportation as well as the precautionary measures for mitigating the impact.

xvii. PP mentioned that the total amount of compensation for land will be divided in three parts such as one-time partial payment, fixed deposit and annuity and also mentioned that option will be explored for alternative land to land owners. PP requires to revise the entire R & R plans with quantitative values, specifically the details of percentage of money going to spend in above mentioned budget heads and their timeline and how the affected person/families will receive it and get access to it throughout their lifetime.

xviii. In R & R plan, PP mentioned that the company shall facilitate employability training under its skill development initiatives (ACC DISHA-hunarShala) and

enhance their skill for employability and placement elsewhere. PP needs to submit the specific plans details, timeline and budgetary provisions for the skill development.

xix. PP should revise the total project cost by including all compensation paid and going to pay for the remaining agricultural land, accordingly, revise all the budget details of the project.

xx. PP presented that the 10 families have houses in the mine lease area and it will be shifted and the company will provide the cost of land for construction of houses for all 10 families. The company will construct houses in adjoining village with basic amenities like road, playground and electricity. The Committee is of the view that PP should submit the details of family (members), budgetary provisions for construction of houses with all facility, family members (if family have girl child separate budget need to be allotted) and their implementation timeline.

xxi. The emission rate data reference for air quality prediction should be submitted.

xxii. PP presented that there will be water table intersection due to mining activities and mentioned that no surface run off will be mixed with the ground water. PP needs to submit details of control measurements for protecting the surface run off so that it will not mix with the ground water. PP need to submit management of ground water after the water table is intersected.

xxiii. PP should revise and submit the KML file with proper marking and displaying of mining lease area and other details (marking

of ponds, rivers and their direction, villages, homes present in the MLA, proposed position of cement plant and others etc.).

xxiv. PP reported that there is no forest land in the mine lease area and submitted the letter from DFO. However, the Committee is of the view that DFO is not competent authority responsible for providing the no forest land certificate. PP needs to submit certificate from the Competent Authority (PCCF and Chief Wildlife Warden) and the certificate should have mention of name, designation, official seal of the person signing the certificate and letter number.

xxv. As per the TOR Conditions, PP needs to submit the mitigation measures on impact of mining activities on Habitations as per Ministry's OM No. Z-11013/57/2014-IA-II(M) dated 29.10.2014. However, the PP neither submitted nor presented any compliance to this TOR conditions. PP needs to submit the same.

xxvi. PP needs to submit an authenticated English translated copy of the document for surface water permission letter.

xxvii. PP needs to submit the authorization letter of the person delegated or authorized by the company for pursing the application with the ministry.

7. Name of the Project proponent along with contact details

a) Name of the proponent	: ACC LTD
b) State	: Chhattisgarh
c) District	:
d) Pincode	: 490024

AMBIENT AIR QUALITY IMPACT PREDICTION MODELING

1.0 INTRODUCTION

Impact Prediction is an important part of Environmental Impact Assessment Study. There are various techniques available to predict the impacts. Mathematical modeling is an established and accepted technique for the same.

The ambient air quality depends upon emission sources, meteorological conditions and the topographical features of the study area. The impact of any future emission activities can be accessed through air quality modeling. Air quality modeling is a mathematical replication of how air pollutants disperse and transport to the receptor considering the effect of meteorology and site terrain. An air quality models reflects a mathematical description of hypothesis conveying the behavior of some physical process or other and not exact replica but contain some of nature's essential elements. Air quality managers use models to identify source contributions to air quality problems and assist in the design of effective strategies to reduce harmful air pollutants.

The present study has evaluated the impact on surrounding air quality due to operation of Proposed Limestone Mine (ML Area: 582.962 ha) with Limestone Production Capacity of 3.9 Million TPA and waste/topsoil 225000 CuM per annum (Maximum) with installation of mobile Crusher(s) of 1000 TPH Capacity through air quality dispersion modelling without and with dust mitigations measures.

This report gives the cumulative peak incremental concentration of Particulate Matter to a distance of 10 km, due to the mining & allied activity and proposed cement plant. The concentrations have been predicted in all directions covering study period. Spatial distributions of all the pollutants are also presented in the form of Isopleths**.**

1.1 ACTIVITIES INVOLVED IN THE PROJECT

The proposed mining project includes various mining operations like drilling, loading and unloading of mineral and waste material, crushing, transport of minerals etc. Mining operation will be carried out by mechanized opencast mining method i.e. by combination of shovel and dumper with drilling and blasting. Drilling will be carried out with the help of hydraulic drill machine. Wet Drilling will be done to control dust emission. Conventional blasting will be done using ANFO, SME etc. NONEL detonating fuse will be used since multi row system of firing will be carried to reduce the ground vibration, noise, fly rock etc. due to blasting. A 1000 TPH Capacity of Mobile Crusher(s) will be used inside the mining lease. Crusher(s) feed size will be less than 1000 mm and the output size will be less than 75 mm. After screening & wobbling the limestone will be crushed by crusher(s) and directly fed to the plant through stacker reclaimer.

1.2 EMISSION RATE AS PER MATERIAL HANDLED

The emissions in the present case have been computed using empirical factor given in "Indian Mining and Engineering Journal". The details of emissions computed from block wise mining operations are given below:

1.3 STACK DETAILS FOR CRUSHER PROPOSED (1000 TPH) IN MINE LEASE

Table - 1

Emission rate as per material handled (For crushing activity-worst case scenario)

S. No.	Source	PCE	Stack Height	Stack Duct Diameter	Platform Height	Port Hole	Duct Joint Centre Point from BGL	Velocity	Temp.
		Unit	(m)	(m)	(m)	(m)	(m)	(m/s)	(^oC)
1	Crusher(s)	Bag Filter	30	1.1	9	9	2	20	45

1.4 STACK DETAILS OF CEMENT PLANT

Table - 2

Proposed Stack Emission Details

Stack attached to	Height from ground level (m)	Internal Diameter (Top)(m)	Emission Rate			Exit Velocity (m/sec)	Exhaust Gas			
							Temp. (^oC)	Density (kg/Nm^3)	Specific Heat (kcal / kg^oC)	Volumetric Flow (m^3/Hr)
			PM	SO_2	NO_x					
Kiln & Raw Mill RABH	173	6	<30mg/Nm^3	<100 mg/Nm^3	<600 mg/Nm^3	14-16	210	0.74	0.26	12,50,000
Clinker Cooler	60	5	<30mg/Nm^3	NA	NA	14-16	240	0.61	0.25	9,35,000
Cement Mill	48	4	<30mg/Nm^3	NA	NA	14-16	80	0.84	0.25	8,50,000
Coal Mill	50	3	<30mg/Nm^3	NA	NA	14-16	80	0.87	0.24	3,73,000

Table - 3

Proposed Stack Emission Details of CPP Stack

PARTICULARS	65 MW coal based power plant
Type Of Fuel	Coal
No. Of units	2
Capacity of boiler	160
Coal Consumption (t/hr/boiler)	30

Sulphur content (%)		0.60
No. of Stacks		1 (common stack for two boilers)
Height of the stack (m)		100
Diameter of stack (m)		4.0
Temperature of flue gas (^{o}C)		150
Velocity of flue gas (m/s)		15
Particulate matter at outlet of ESP (gm/sec)	Total Particulate matter (TPM) at outlet of ESP (gm/sec) (based on 30 mg/Nm^3 at outlet)	7.2
	Particulate matter (PM_{10}) at outlet of ESP (gm/sec) – $^{+}$75 % of TPM	5.4
	Particulate matter (PM2.5) at outlet of ESP (gm/sec) – $^{+}$40 % of TPM	2.8

1.5 EMISSION & DETERIORATION FACTORS FOR INDIAN VEHICLES FOR LINE SOURCE

Table - 4

S. No.	Type of Vehicle	Vintage	Fuel	Emission Factor g/km					
				CO	HC	NOx	CO_2	SO_2	PM_{10}
1.	HCV Diesel Truck	Post 2010	BS-IV	6.00	0.37	9.30	762.39	0.15	0.0714
				Deterioration Factor					
				1.17	1	1	1	1	1.35

1.6 AIR QUALITY DISPERSION MODEL

In a Limestone mining, all three types of sources are present and spread over a large area. Due to complexity in the mining activities, high source roughness and different types of small and large sources, USEPA regulatory model i.e. AERMOD is one of the suitable model which can take care all the sources and predict the pollutant concentration more satisfactorily. Prediction of incremental ground level concentrations (GLC's) due to Limestone Mine has been made by AERMOD version 8.2.0 as per CPCB guidelines.

It is US-EPA approved model for prediction of the air quality. The model uses rural dispersion and regulatory default options as per guidelines on air quality models (PROBES/70/1997-1998). USEPA has replaced the ISCST3 model with AERMOD as regulatory model for line, area and points sources. For this study, uniform polar receptors on flat terrain have been assumed.

AERMOD

AERMOD is developed by AMS/EPA Regulatory Model Improvement Committee (AERMIC). It is a steady-state plume model. In the stable boundary layer (SBL), it assumes the concentration distribution to be Gaussian in both the vertical and horizontal and in convective boundary layer (CBL), the horizontal distribution is also assumed to be Gaussian, but the vertical distribution is described with a bi-Gaussian probability density function. This behavior of the concentration distributions in the CBL was demonstrated by Willis and Deardorff (1981) and Briggs (1993). The AERMOD model is applicable to rural and urban areas, flat and complex terrain, surface and elevated releases and multiple sources (including point, area and volume sources).

The AERMOD has two pre-processors for meteorological data and surface data. AERMET calculates the PBL parameters: friction velocity (u*), Monin-Obukhov length (L), convective velocity scale (w*), temperature scale (θ*), mixing height (zi), and surface heat flux (H). All these parameters are transferred AERMOD to calculate vertical profiles of wind speed (u), lateral and vertical turbulent fluctuations (Fv, Fw), potential temperature gradient (d2/dz), and potential temperature.

The AERMIC terrain pre-processor AERMAP uses gridded terrain data to calculate a representative terrain-influence height (hc), also referred to as the terrain height scale. The gridded data needed by AERMAP is selected from Digital Elevation Model (DEM) data. The elevation for each specified receptor is automatically assigned through AERMAP.

1.7 METEOROLOGICAL DATA/INPUT PARAMETERS FOR AERMOD

Data recorded at the weather monitoring station on wind speed, direction, and temperature at one-hour interval for the monitoring period has been used as meteorological input.

1.8 AMBIENT AIR QUALITY STANDARDS

Ambient air quality standards promulgated by National Ambient Air Quality Standards for different areas are as follows:

Table - 5
Ambient Air Quality Standards

Area	Time Weighted Average	Concentration (µg/m^3)			
		PM_{10}	$PM_{2.5}$	SO_2	NO_2
Industrial Area, Residential	Annual Average *	60	40	50	40
Rural and Other Areas	24 hours **	100	60	80	80
Ecologically Sensitive Area	Annual Average *	60	40	20	30
(Notified by Central Govt.)	24 hours **	100	60	80	80

1.9 POLLUTION EMISSION INVENTORY

Development of pollutant emission inventory is essential part of any dispersion modelling and emission rate is one of the important input parameters. It is necessary to understand the source of emission of air pollution from each mining activity.

In Limestone mining, most of the major activities contribute to the emission of particulate matter, right from exploration to exploitation including mineral processing. These activities are Drilling, Ore Loading, Haul Road, Ore Unloading, Crusher Plant, Stock Yard, Exposed Pit Surface, Exposed Waste Dump, Waste Loading and Unloading. Numerous researchers have derived various formulation based on the experimental data and generalized the emission calculation for various open cast mining activities irrespective of type of mining (CMFRI, 1998; Chakraborty et al. 2002).

1.10 ESTIMATED EMISSION LOAD OF PARTICULTAE MATTER

After screening & wobbling the limestone will be crushed by crusher(s) and directly fed to the plant through stacker reclaimer. This activity generates both gaseous and particulate matter from exhaust emission. Therefore, there will be emission from the transport of minerals from Mine to Plant. Transport of ore from Mine to Plant generates huge emission due to movement of diesel dumpers.

Total Limestone Handling in the mine will be maximum 3.9 Million TPA. Blasted limestone will be loaded by Hydraulic Excavator and transported by tippers/dumpers to mobile crusher which will be installed inside the mining lease. In addition to that movement of dumpers within the mine for mineral transport from quarries to crusher emits gaseous emissions from their exhaust. Most of these dumpers are diesel fueled and emit huge amount of NOx and CO emission. Transportation of material from mine face to the mobile crusher(s) (located within ML Area) will be carried out by dumpers. The crushed limestone will be transported to Proposed Chilhati Cement Plant by covered conveyor belt.

1.11 ANALYSIS OF METEROLOGICAL DATA

AERMOD requires meteorological data of both surface level and upper air level. The meteorological parameters required at surface level are ambient temperature, relative humidity, wind speed, wind direction, solar radiation, cloud cover, rainfall and atmospheric pressure. AERMET, Met. Pre-processor of AERMOD use these surface data and estimate the boundary layer parameters. However, if site specific upper air data are not available, then upper air estimator of AERMET are used for generation of boundary layer parameters. This option uses well-referred algorithms (Thomson, 1992) and estimate upper air parameters based on the surface meteorological data (The, 2011).

Fig. 4.1 shows the windrose diagram of the meteorological data for a period of Dec., 2018 to Feb., 2019 which is the study period of this study. It is observed that 37.09% of the time, wind speed was in calm condition and rest of the period, wind is blowing from North East and North.

1.12 PRESENTATION OF RESULTS

In the present case, model simulations have been carried out for mining project to obtain an optimum description of variations in concentration over the site in 10 km radius covering 16 directions.

The incremental concentrations have been estimated based on mathematical emission data-basedmodelling. For each time scale, i.e. for 24 hrs, the model computes the maximum GLC observed during the period over all the measurement points. Existing value has been covered in the Background Ambient Air Quality Monitoring.

The Ground level incremental concentrations are estimated for the monitoring period. For each time scale, i.e. for 24 hr the model computes the highest concentrations observed during the period over all the measurement points.

The maximum incremental GLCs due to the mining and cement plant for PM10 is 5.58 µg/m^3, for PM2.5 is 1.94 µg/m^3, for SO_2 is 2.80 µg/m^3 and for NO_2 is 3.30 µg/m^3. Isopleth sowing the incremental concentration of PM10, P2.5, NO_2 & SO_2 due to mine and plant is given as Fig no 1 to 4. The study area experiences moderate values of PM_{10}, however, all the parameters were found well within the prescribed limits.

Table 6

Peak Incremental Concentration for Different Scenarios

S. No.	Particular	Concentration (µg/m^3)			
		PM10	**PM2.5**	**SO_2**	**NO_2**
1.	Monitored Maximum concentrations	70.9	32.8	10.4	18.9
2.	Predicted incremental Maximum concentrations	5.58	1.94	2.80	3.30
3.	Resultant Maximum concentrations	76.48	34.74	13.20	22.2
4.	NAAQS (dated 2009)	100	60	80	80

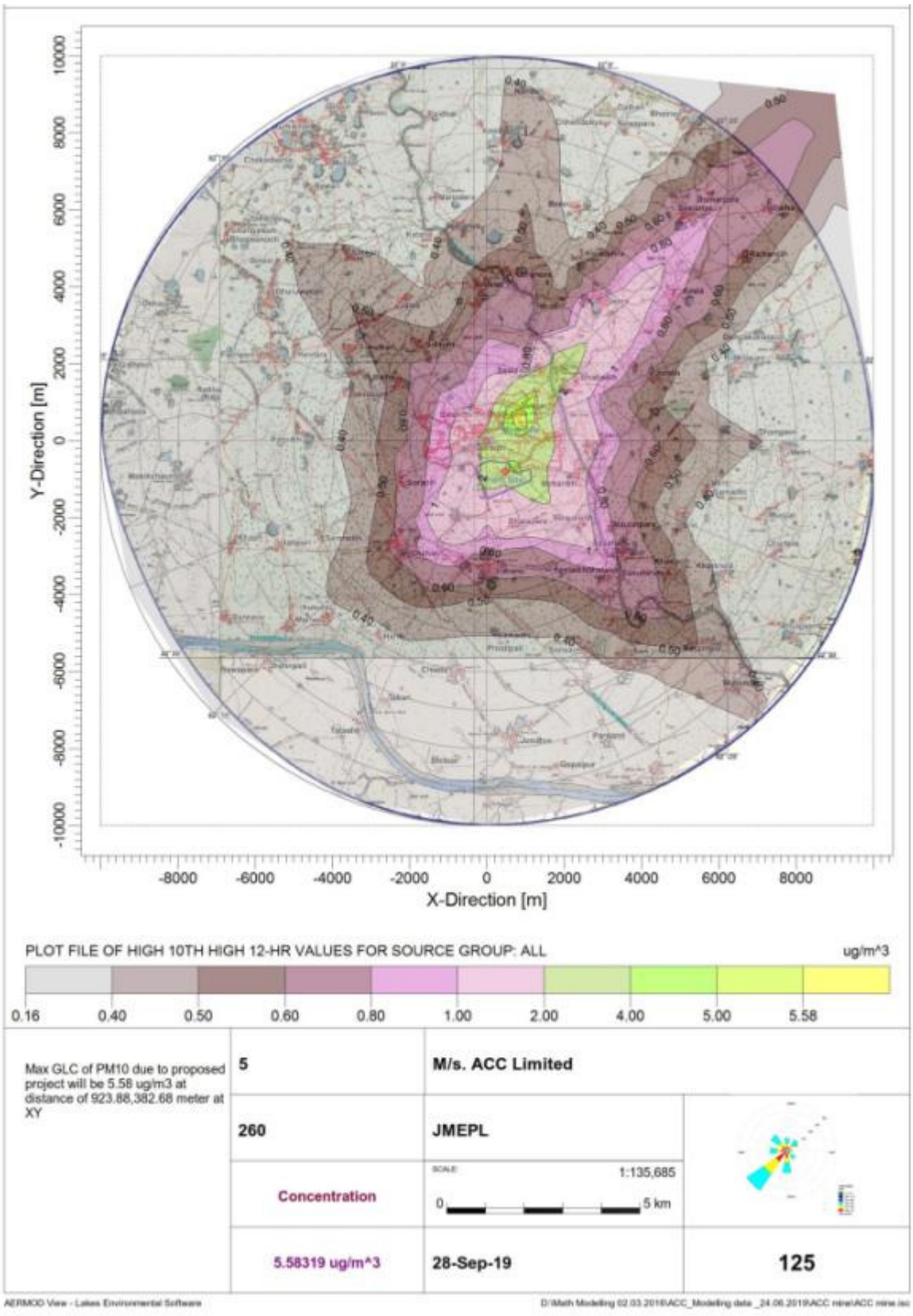


Figure 1: Isopleth showing incremental GLC of PM 10

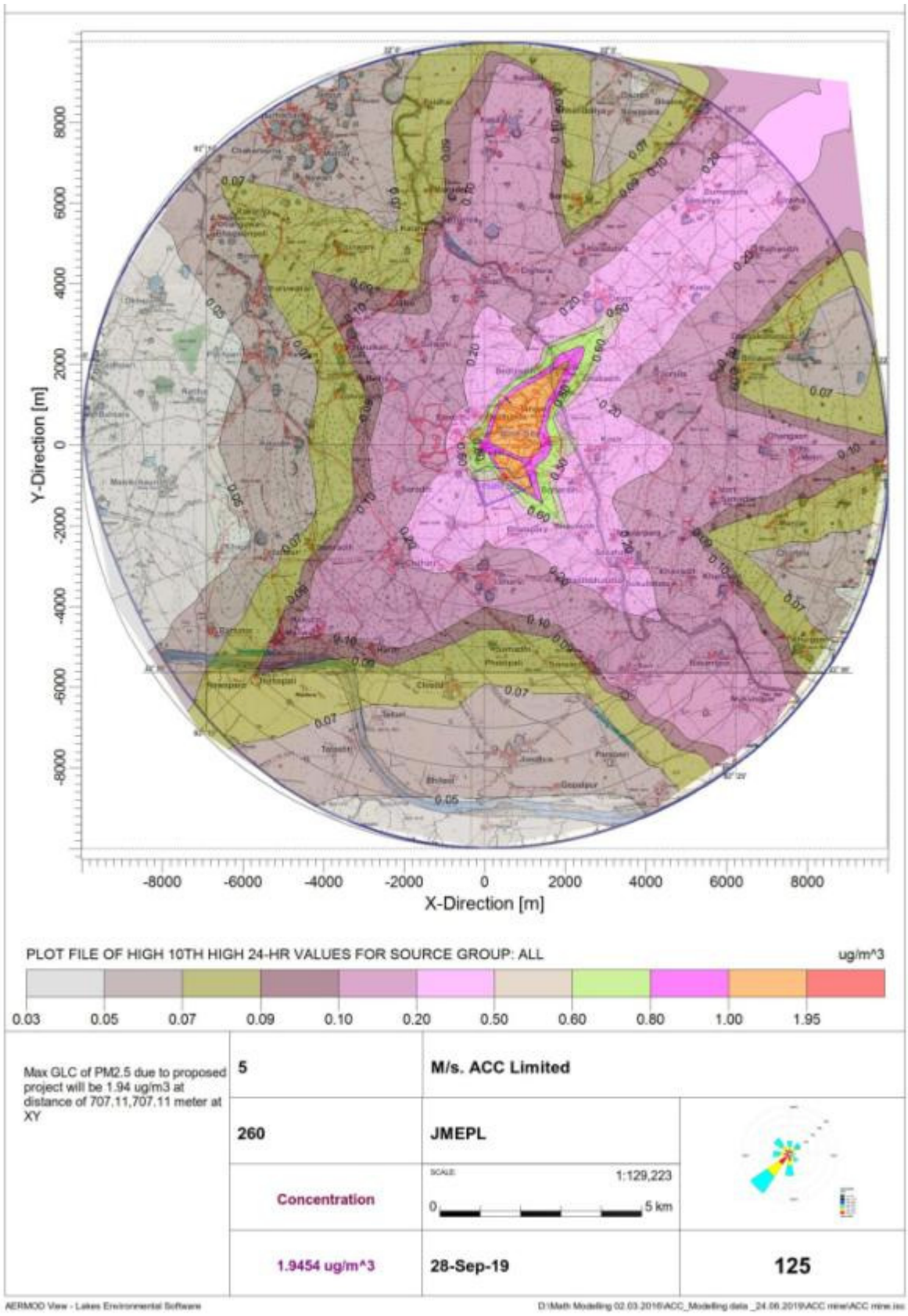


Figure 2: Isopleth showing incremental GLC of PM 2.5

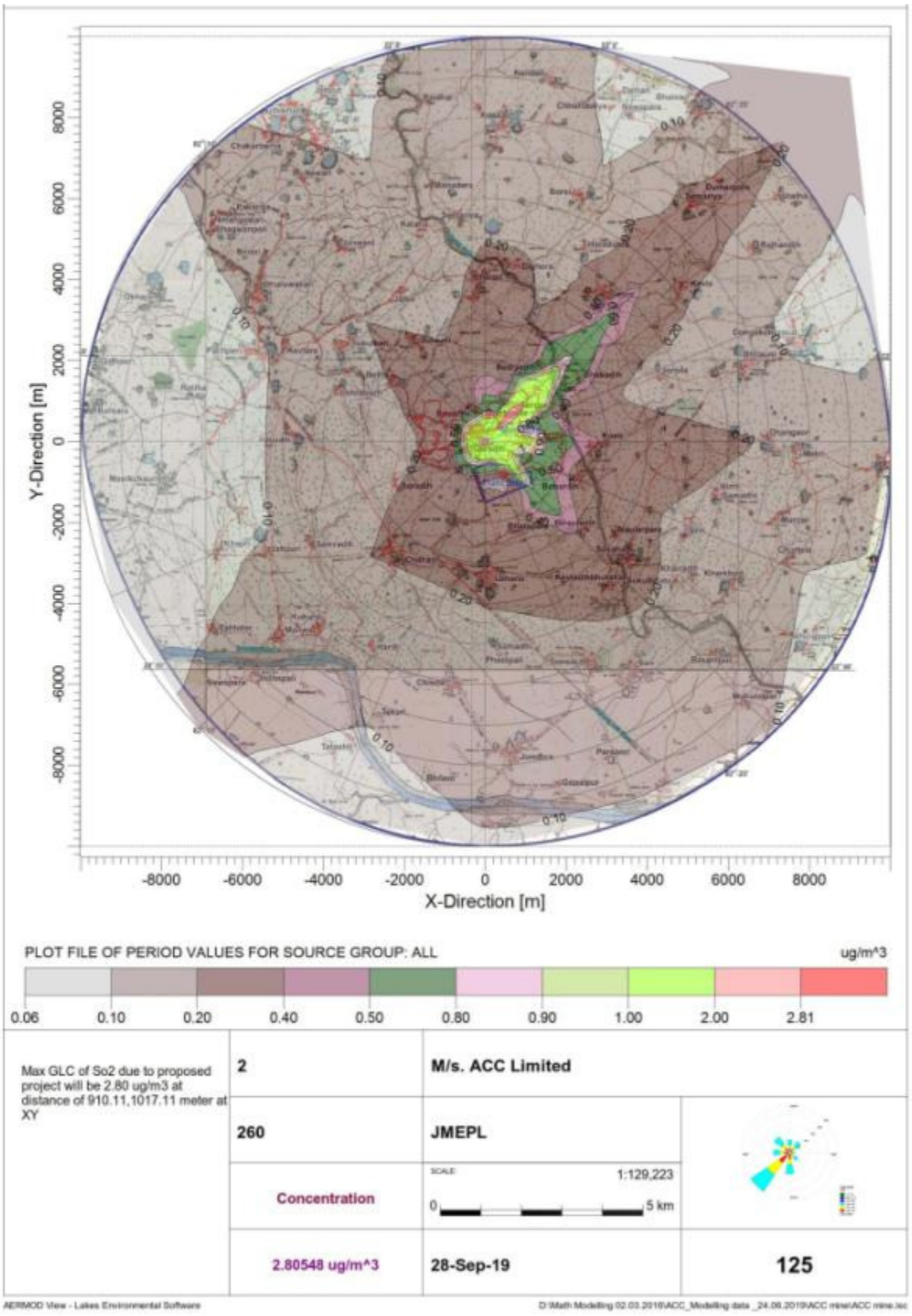


Figure 4.4: Isopleth showing incremental GLC of SO 2

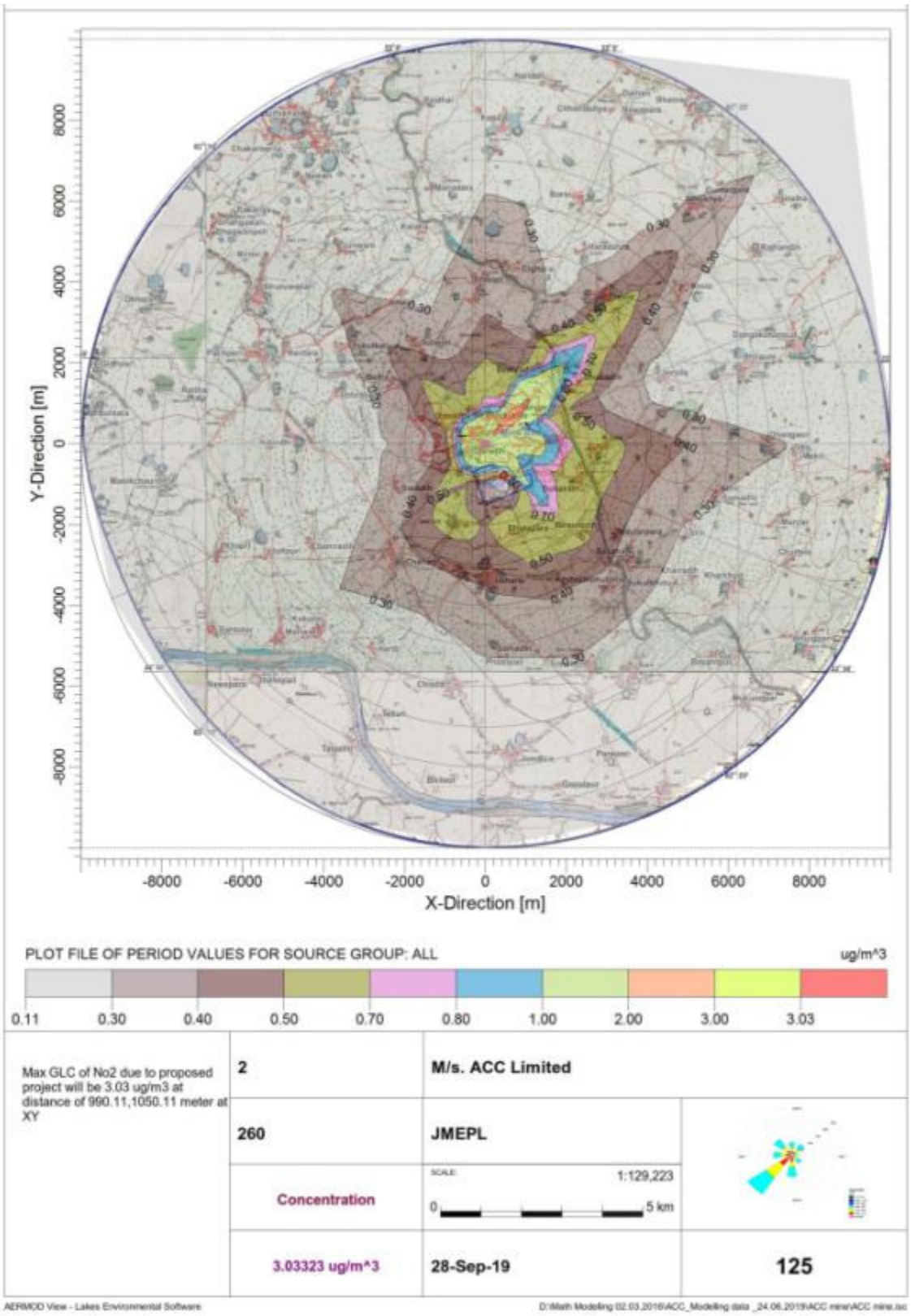


Figure 3: Isopleth showing incremental GLC of NO2

1.13 SAFEGUARD/MITIGATION MEASURES

The following mitigation measures will be adopted to mitigate air pollution generated due to the mining activities:

- Drilling machines will be equipped with wet drilling arrangements by water injection system with compressed air.
- Controlled Blasting will be adopted with the optimum use of explosive energy which will help in reducing air pollution.
- Rock breaker is proposed to be used in place of secondary blasting for breaking over size boulders.
- Regular Water sprinkling will be done on haulage roads & loading & unloading area to arrest dust from becoming air borne.
- Proper maintenance (preventive as well as scheduled maintenance), oiling and greasing of HEMMs will be done to minimize gaseous pollutants.
- Covered crusher with water sprinkling arrangement at the unloading and inside the crusher.
- Development of green belt/plantation around lease boundary, roads and other places will be carried out to control the air pollution.
- Development of concrete road from mine exit to Plant.
- Personal protective equipments i.e. Dust mask will be provided to all employees.
- Periodic air quality monitoring will be carried

Point 5: *PP has submitted the average annual rainfall in the region is around 1167 mm. PP needs to submit the methodologies used for calculation and references used for validation of the results. Furthermore, PP needs to submit the water balance budget and it should also mention total water requirement for mining activities and cement plant and the source for the same. In addition, the PP should mention how much water is harvested, utilized, drawn and conserved.*

Reply: The annual rainfall data (monthly rainfall) for the Bilaspur district from 2004-2018 (fifteen years rainfall data) was taken from the website of Indian Meteorological Department (IMD). The average value of annual rainfall for fifteen years duration during 2004-2018 is coming 1167 mm as given in table below.

Rainfall Pattern of Bilaspur District

S.No.	Year	Annual Rainfall (mm)
1	2004	1272
2	2005	1476
3	2006	1092
4	2007	1269
5	2008	1047
6	2009	855
7	2010	974
8	2011	1409
9	2012	1236
10	2013	1450
11	2014	1348
12	2015	1057
13	2016	1127
14	2017	945
15	2018	942
Average		**1167**
Source: *India Meteorological Department*		
http://hydro.imd.gov.in/hydrometweb/(S(yyttbt455bqfa455cd11kcu5))/DistrictRaifall.aspx		
https://www.indiawaterportal.org/articles/district-wise-monthly-rainfall-data-list-raingauge-stations-india-meteorological-department		

5.1 TOTAL WATER REQUIREMENT–INTEGRATED PROJECT (CEMENT PLANT AND LIMESTON MINE)

A total of 1753 KLD water (for First Run) shall be required for proposed cement plant (1543) and limestone mine (210 KLD). Out of this approx. 211 KLD treated water shall be recycled and re-utilized i.e. 32 KLD treated water from STP in plantation and greenbelt activities while 179 KLD treated water from ETP for Dust Suppression and other project activities. Therefore, a total of 1542 KLD fresh water will be required for integrated project by ACC Limited. Combined Water Balance Chart is shown in **Figure 5.1**.

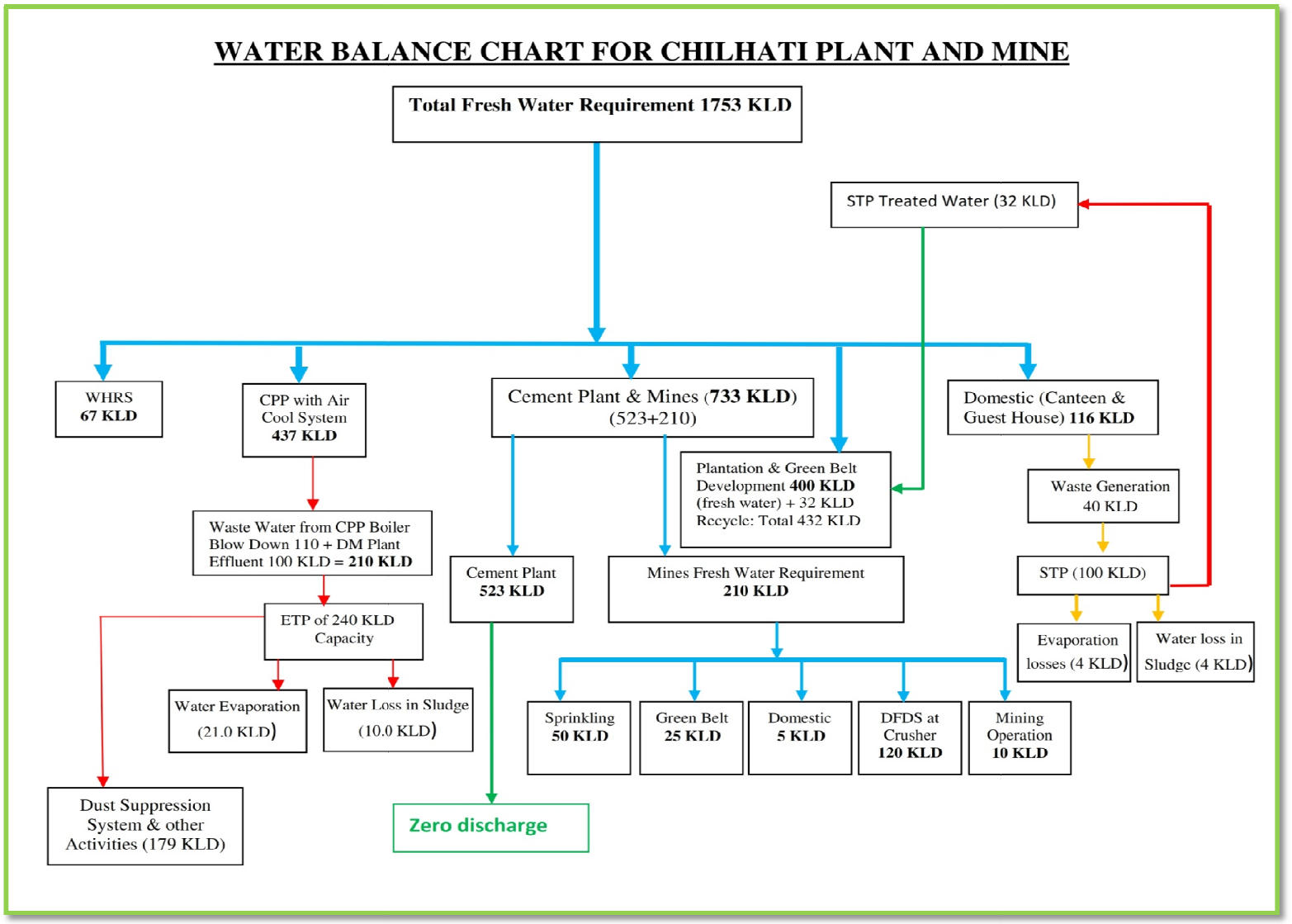


Figure 5.1: Combined Water Balance Chart for Proposed Cement Plant and Limestone Mine, ACC Limited, Bilaspur

5.2 TOTAL WATER AVAILABILITY IN MINE LEASE

5.2.1 GROUNDWATER SEEPAGE

1. Depth to water level in and around mine lease area is found to vary between 5 to 9 m bgl. Depth of Mining will be **17 m bgl** in Five Year Plan period and **43 m bgl** in conceptual stage; hence **groundwater seepage will occur in present plan period up to conceptual stage.**
2. Seepage will occur from third year onwards with depth of mining 9 m bgl.
3. Groundwater seepage shall be 1,427 cum/annum in third year, 14,615 cum/annum in fourth year and 19,929 cum/annum in fifth year. At the end of plan period, total seepage will be 35,971 cum.
4. Quantum of groundwater seepage will be 6,99,622 cum/annum (1917 cum/day) at the conceptual stage.

Year	Pit Name	Excavated Area (Hectare)	Depth of Mining (m)	Groundwater Seepage	
				Cum/day	Cum/annum
Present Plan Period					
End of 1st Year	No Mining Activities				
End of 2nd Year	Pit J	4.05	1.5	-	-
End of 3rd Year		11.16	9	3.9	1,427
End of 4th Year		17.21	17	40.0	14,615
End of 5th Year		25.01	17	54.6	19,929
Total					**35,971**
Conceptual Stage	Pit A	300.96	29	103.6	37,831
	Pit B		32	154.7	56,466
	Pit J		29	166.5	60,755
	Pit C1		28	52.9	19,291
	Pit C2		43	132.5	48,376
	Pit C3		43	139.7	50,973
	Pit I		38	302.7	1,10,498
	Pit H1		40	336.2	1,22,700
	Pit H2		43	249.7	91,150
	Pit E		28	108.0	39,420
	Pit D		30	170.3	62,163
Total					**6,99,622**

5.2.2 RAINWATER AVAILABILITY IN EXCAVATED MINE PITS

1. Total rainwater accumulation in excavated mine pits in present plan period -**6,03,187 cum**
2. Total rainwater accumulation at Conceptual Stage (Water Reservoir-306 Ha), **32,13,918 cum/annm.**

Year	Excavated Area (Sq.m.)	Depth (m)	Average Annual Rainfall (m)	Annual Rain water Stored (Cum)	Annual Losses (50%) {i.e. Evaporation - 30% & Other losses - 20%)	Daily Available Rainwater (Cum)
Five Year Mine Plan period						
I Year	No Mining Activities					
II Year	40,500	1.5	1.167	42,537	21,269	58
III Year	1,11,600	9	1.167	1,17,213	58,607	161
IV Year	1,72,100	17	1.167	1,80,757	90,378	248
V Year	2,50,100	17	1.167	2,62,680	1,31,340	360
Total				**6,03,187**	**3,01,594**	
Conceptual Stage	30,60,000		1.167	32,13,918	16,06,959	4,403

5.3 TOTAL WATER AVAILABILITY IN CEMENT PLANT (RWH Potential)

Proposed Cement Plant at Villages- Bohardih, Godadih and Loharsihas a total area of 105 Ha including 77.3 ha Industrial Complex and 28 ha Colony area. The total runoff generated from different sections of cement plant area shall be to the tune of 3,58,305 cum/annum considering 1167 mm average annual rainfall (2004-2018). Details of rainwater runoff from various land surfaces are given below:

Surface Type	Area (Sq.m.)	Rainfall (m)	Runoff Coefficient	Runoff Potential (cum/annum)
Roof-top	2,23,580	1.167	0.8	2,08,734
Road Paved	1,49,770	1.167	0.6	1,04,869
Greenbelt	2,20,000	1.167	0.1	25,674
Open land	1,63,050	1.167	0.1	19,028
				3,58,305

This entire runoff shall be diverted to proposed storage/collection ponds (lined or unlined) within plant premises. Considering 30% losses in the form of evaporation, groundwater recharge and other handling losses, approx. **2,50,814 cum/annum** shall be harvested and utilized for various project activities including greenbelt, dust suppression etc.

5.4 RAINWATER HARVESTING PROPOSAL OUTSIDE MINE LEASE (ADOPTION OF VILLAGE PONDS)

A total of three number of village ponds have been adopted and proposed for rainwater harvesting and artificial recharge proposal outside the lease area in village Bhurkunda, Bidyadih and Godadih i.e. Deepening/desilting along with installation of recharge shafts/injection wells in pond bed. A total of 3,02,792 cum/annum wateris proposed to be recharged by RWH structures includingnatural percolation from pond beds and induced recharge by injection wells.

Summarization of Artificial Groundwater Recharge by Proposed Recharge Ponds outside Mine Lease

Location	Pond Area (sq.m.) A	Depth (m) B	Total Storage Capacity (cum) C= A×B	No. of Fillings D	Total Water availability for Recharge E=C×D	No. of Injection Wells	Total Recharge (65% of E) Cum/annum
Bhurkunda	4,452	3.00	13,355	3	40,064	1	26,042
Bidyadih	6,839	3.00	20,518	3	61,553	1	40,009
Godadih	40,469	3.00	1,21,406	3	3,64,217	6	2,36,741
Total							**3,02,792**

5.5 SUMMARIZATION OF RAINWATER HARVESTING PLAN (Five Year Plan Period)

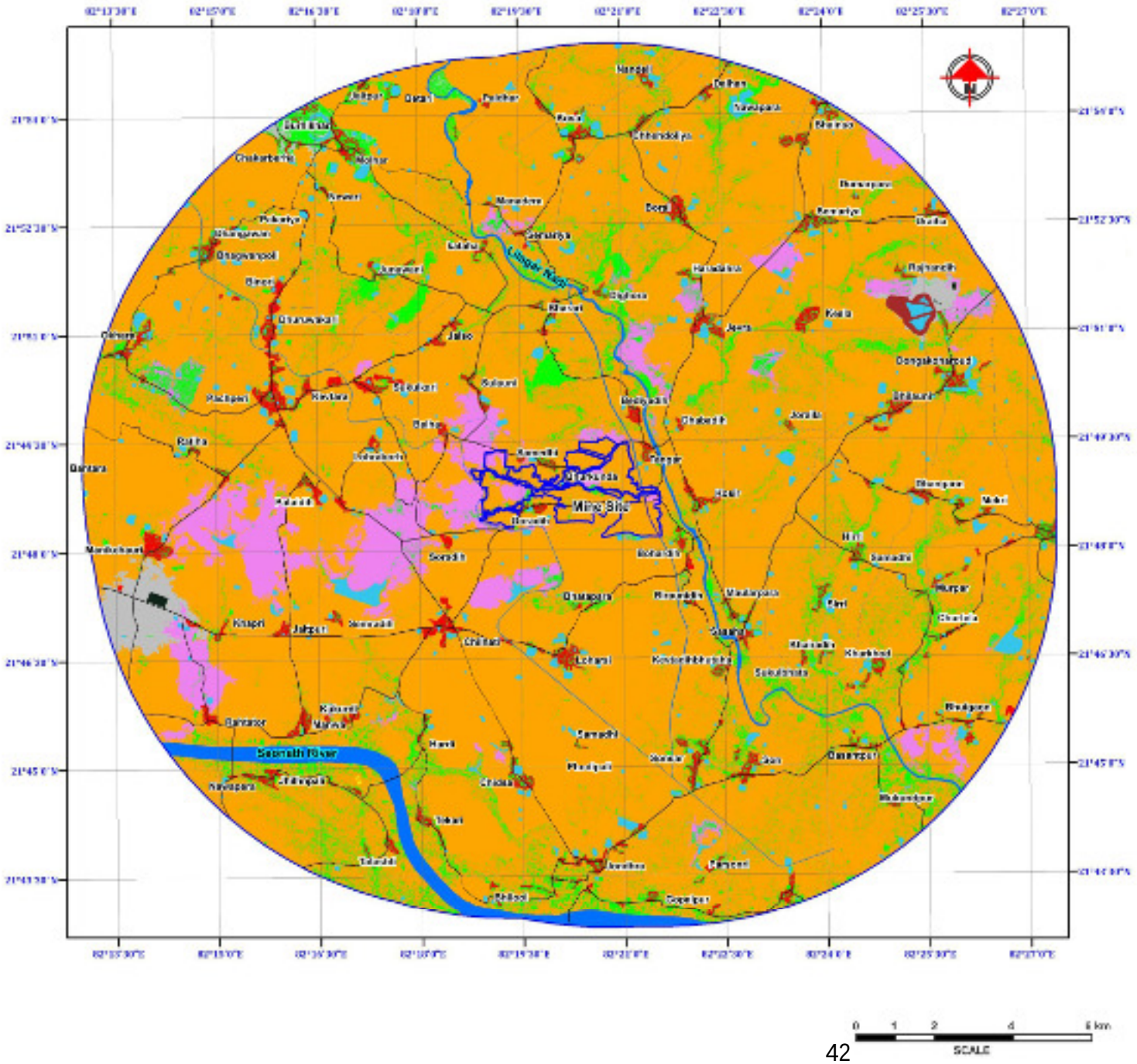
Total Fresh Water Requirement for Proposed Cement Plant and Mining Project	1542 KLD or 5,08,860 Cum/annum (330 working days)
Source of Water Withdrawal for Cement Project and Mining Activities	Total water requirement for Integrated Project shall be sourced from Lilaghar River vide Letter No.**5297/F 4-231/S2/31/OJapra/13** on **12.09.2018** from Water Resource Department, Govt. of Chhattisgarh
RWH Potential within Plant Premises*	**2,50,814 cum/annum**
Groundwater Seepage (End of Fifth Year)	**19,929cum/annum**
Rainwater Accumulation in Mine Pits (End of Fifth Year)*	**1,31,340 cum/annum**
RWH Proposal outside Mine Lease (Recharge Ponds)*	**3,02,792 cum/annum**
Total Rainwater Harvesting Potential	**7,04,875 Cum/annum**

*AnnualLosses included

It may be concluded that at the end of five year plan period or afterwards, ACC limited will be self-sustained to fulfill approx. 80% of its total water requirement by adopting Rainwater Harvesting Practices within cement plant premises and through mine sump water (accumulated rainwater and mine seepage) even after considering of annual losses. Moreover, with successive years of mining, water shall be available in excess amount which shall stored in large excavated mine pits. Part of this quantity shall be utilized to meet project water requirement, supplied to nearby villages and utilized for artificial groundwater recharge augmenting groundwater resources of the area.

Land Use Pattern Based on Satellite Image

Annexure III



LAND USE & LAND COVER MAP
of 10.0 km radius study area

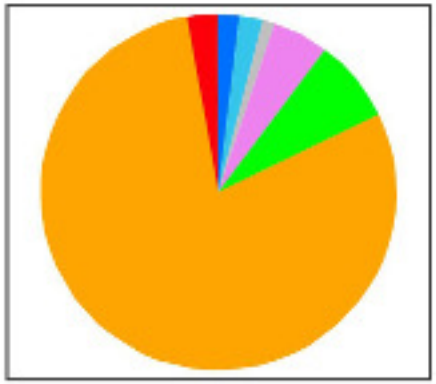
Vintage Date : February, 2017

Proposed Limestone Mine
(M.L. Area 582.962 ha)

M/s. ACC Limited

At

Villages : Bidiyadih, Bhurkunda, Godadih & Bohardih,
Tehsil : Masturi,
District : Bilaspur (Chhattisgarh)



Village Road

Color	Class Names	Area(Ha)	%(Area)
	River/Canal	857.28	1.90
	Ponds/Reservoir	980.21	2.17
	Open Land	501.45	1.11
	Open Scrub Land	2295.72	5.08
	Plantation	3402.92	7.53
	Agriculture Land	35861.15	79.34
	Human Settlement	1220.78	2.70
	Industrial Area	16.13	0.04
	Mine Quarry	59.19	0.13
	Total	45194.83	100.00

Mine Site

Point 7: **PP presented that the perennial river such as Lilagarh River (250 m in the east direction) that flows from north to south, Sheonath River (~ 6.5 km in SSW direction) that flows from WNW to ESE and Kurang Left Bank Canal (Adjacent in West direction). PP need to submit the details of precautionary measures considered in the proposal to avoid water ingress (surface or sub-surface) in the mine area during the period of mine operation, including proposal for plantation, if any and associated budgetary provisions.**

Reply:

(i) MEASURES TO AVOID WATER INGRESS FROM LILAGHAR RIVER

Mine lease area is located close to Lilaghar River and the nearest distance to river is 250 meters from eastern side lease boundary. However, the minimum distance of LilagharRiverfrom active mine pits near eastern boundary at conceptual stage will be 782 m for Block-Iwhile 725 m for Block-J. Moreover, the surface gradient in the area is towards Lilaghar River (eastern direction) and the minimum difference of contour levels between active mine pits and LilagharRiver is 8-9 m (239 m to 230 m)(**Figure 7.1**).

Lilaghar River is a perennial river, however, the river is having very nominal/no flow in summer season i.e. base flow in river during lean season is mainly contributed by high groundwater table in the surroundings. Under normal circumstances, groundwater flow direction will be towards Lilaghar River except monsoon season when higher flood level in river will contribute towards recharging groundwater along the riverbanks.

Further, to estimate maximum distance from which groundwater (in the form of seepage) mayingress in to mine pits of Block- I and Block-J, zone of influence has been calculated based on hydraulic conductivity, total excavated area, depth of mining and total quantum of seepage at conceptual stage. Maximum excavated area of mine pits in Block-I and Block-J will be 54.3 ha and 79.45 Ha at the conceptual stage with maximum depth of mining 38 m and 29 m from surface. The maximum quantity of groundwater seepage will be 1,10,498 cum/annum in Block-I while 60,755 cum/annum in block J.

The quantity of the groundwater that can accumulate in the pit bottom is governed by the aquifer properties and their lateral extent. The radius of influence of the pumping from mining pit can be worked out from the Dupuit (1863) formula which is often used in such calculations. The relevant equation is as under:

$$Q = \pi K \frac{h_1^2 - h_w^2}{\ln(r_1 / r_w)}$$

Where,

K = Hydraulic Conductivity in m/day

h_w = Steady State head in pumping well

h_1 = Steady state head in Piezometer

r_w = Radius of Pumping well (m)

r_1 = Distance from piezometer to pumping well

Q = Well discharge (m^3/day)

Year	Depth of mining	Area (m^2)	Hyd. Cond. (m/d)	Thickness of aquifer (m)	Av Depth to water level (m)	Av. Post monsoon Water Level (m)	Level to which water table to be lowered	Mine radius (m)	Dewater Volume (m^3)	Pumping rate (m^3/d)	Radius of influence (m)
			K			Hw	h1	rw		Q	r1
Conceptual Stage											
Block-I	38	5,41,900	1.3	40	7.0	33.0	2.0	415	110498	303	**432**
Block-J	29	7,94,500	1.3	40	7.0	33.0	11.0	503	60755	166	**537**

From the above computation it is clear that the radius of influence for the maximum quantity of groundwater seepage at conceptual stage in Block-I and Block-J will be 432 m and 537 m respectively i.e. groundwater from maximum of 432 m and 537 m distance from the centre of mining pitwill contribute to Block-I and Block-Jwhereas the minimum distance of mine pits and Lilaghar River is much more than the zone of influence. Hence, it may be concluded that any sub-surface water ingress from Lilaghar River into excavated mine pits of Block-I and Block-J is not envisaged at any stage of mine development.

Moreover, the rainwater harvesting and artificial groundwater recharge practices shall be adopted by ACC Limited which would further enhance the water regime of area and hydraulic gradient towards River.

Schematic representation of zone of influence and its distance from Lilaghar River is shown in **Figure 7.2 A** and **7.2 B.**

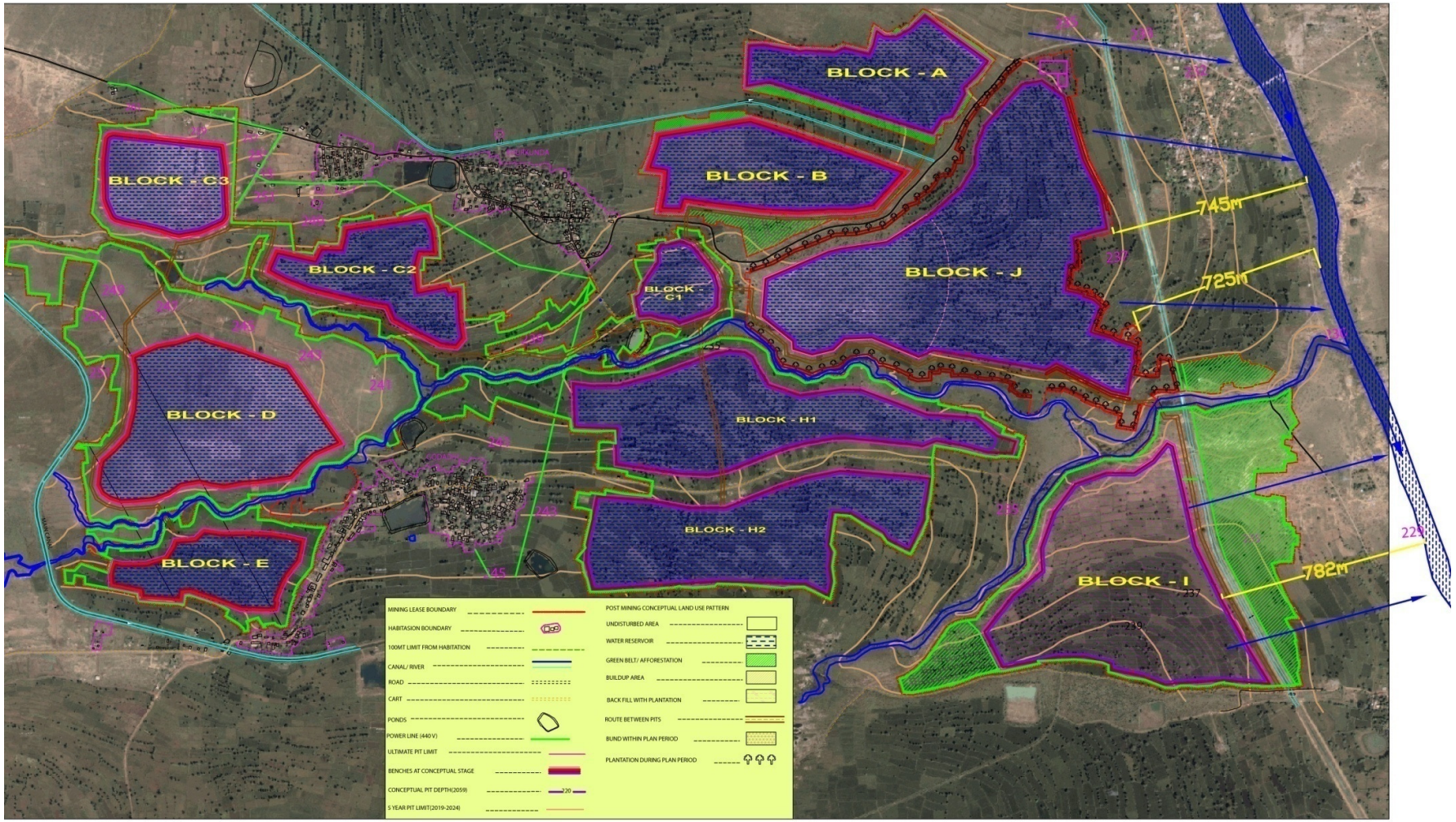


Figure 7.1: Mine – River Distance and Flow Direction Map

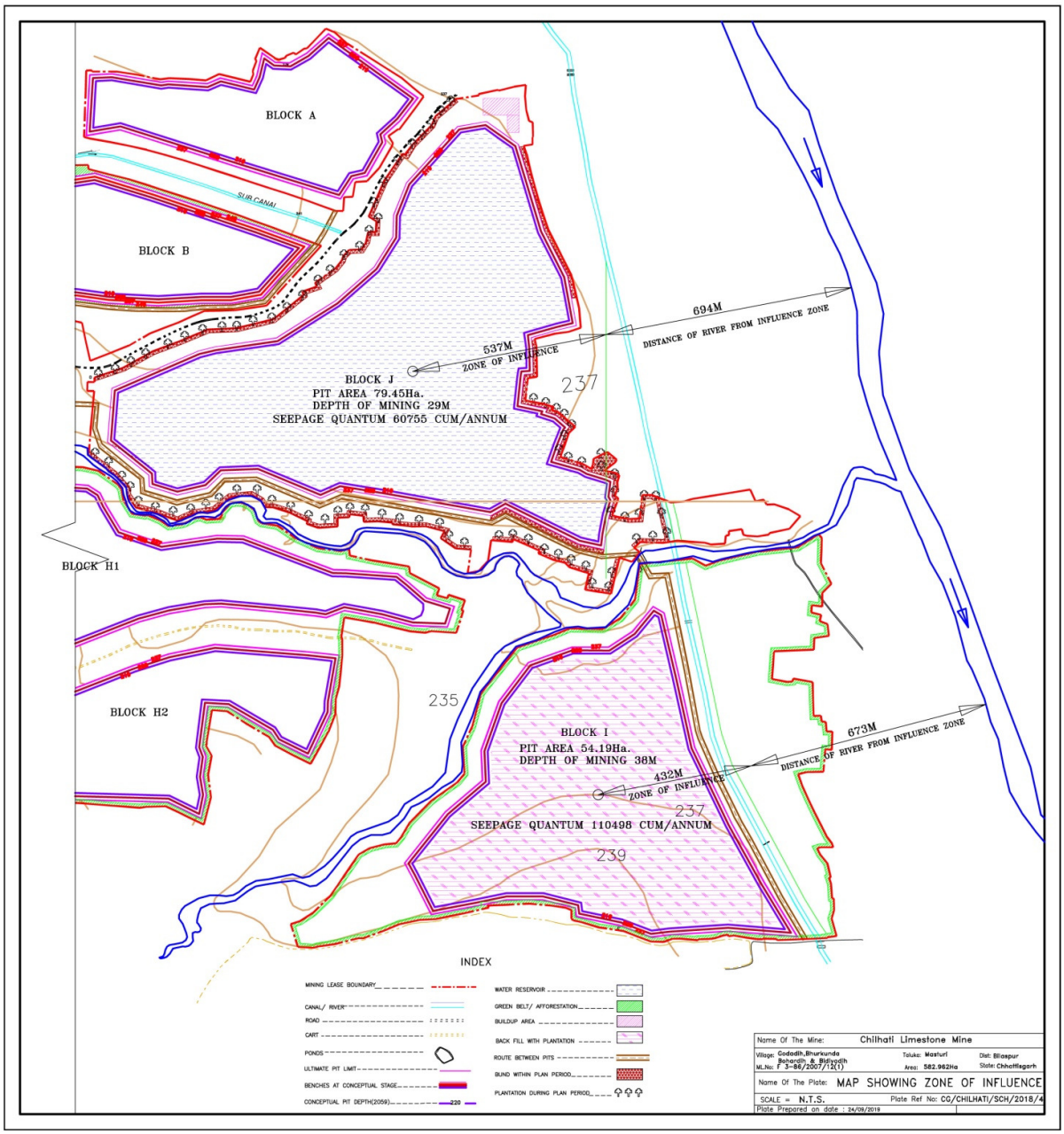


Figure 7.2: Map Showing Maximum Zone of Influence (Groundwater Seepage) for Mine Pit/Block-I and Block-J w.r.t. toLilaghar River

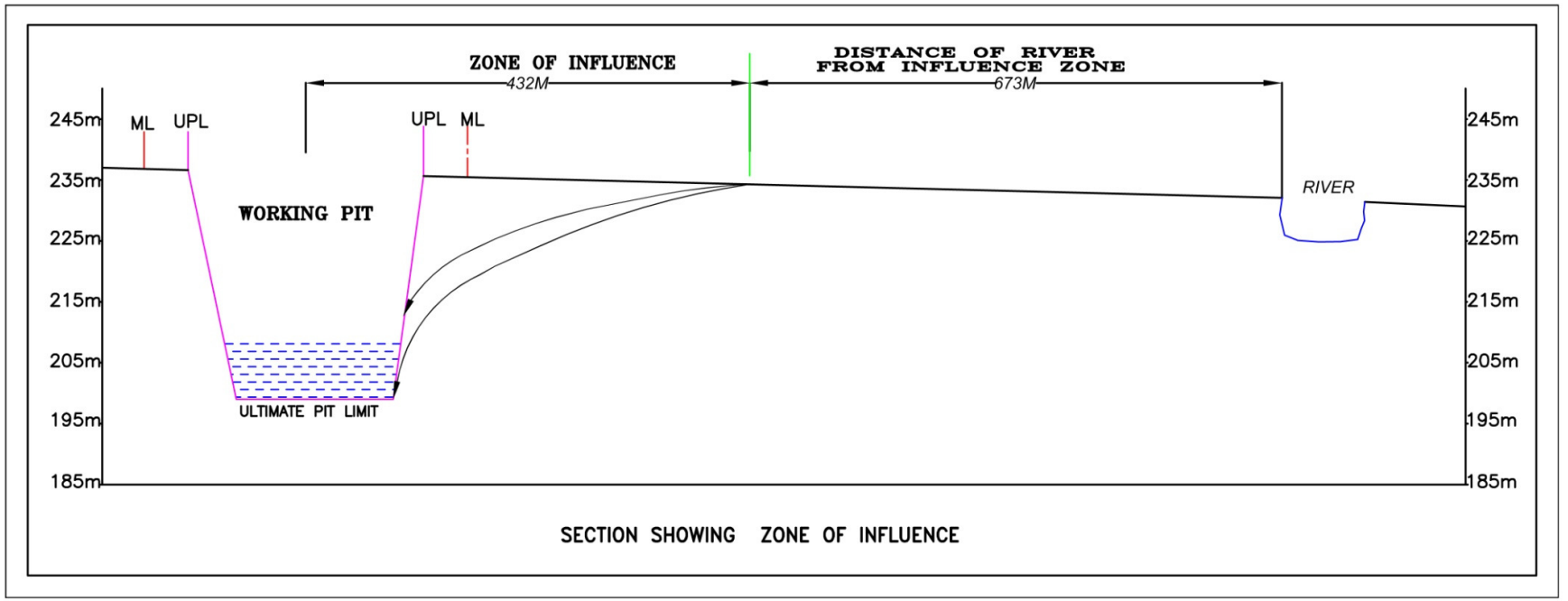


Figure 7.2B: Cross Section Showing Maximum Zone of Influence (Groundwater Seepage) for Mine Pit/Block-I w.r.t. to Lilaghar River

(ii) MEASURES TO AVOID WATER INGRESS FROM KURANG LEFT BANK CANAL

Kurang left bank canal is the only major seasonal canal passing through the buffer zone adjacent to mine lease boundary on western side. Length of canal is about 28.4 km within 10 km buffer zone while 4.22 km along western side lease boundary with width of 10 m and depth about 3 m (wetted perimeter about 9 m).

The total seepage from Kurang has been calculated as 0.23 mcm/annum considering 120 days (4months) of canal running days and type of canal is lined (seepage will be maximum 20% of unlined canal). This seepage may enter the excavated mines pits mainly through horizontal seepage as well as vertical seepage to some extent. To prevent horizontal seepage, interceptor drains may be constructed along the entire length of western side lease boundary through which excess seepage from canal may be collected and pumped out to a suitable location. Schematic Diagram for the same is shown in **Figure 7.3**.

The part of water ingress in to mine pits as vertical seepage from canal shall be allowed to store in pits and later pumped out to a suitable location.

To avoid surface ingress in to mine pit, following precautionary measures shall be taken during mine operation both for Canal and River-

- Protective bunds within 7.5 meter of mining lease boundary will be constructed and dense plantation on bunds will be undertaken.
- If required at some places, protective bunds along the length of river will be prepared and plantation will be done on bunds for its stabilization.

Further, Sheonath River is distantly located at around 6.5 kms from project in SSW direction and therefore will not have any significant impact on mining or mining will have any adverse impact on river as radius of influence of dewatering in mining pits is worked out upto around 500 m.

A budget of around Rs50 lakhs has been worked out for above protection measures.

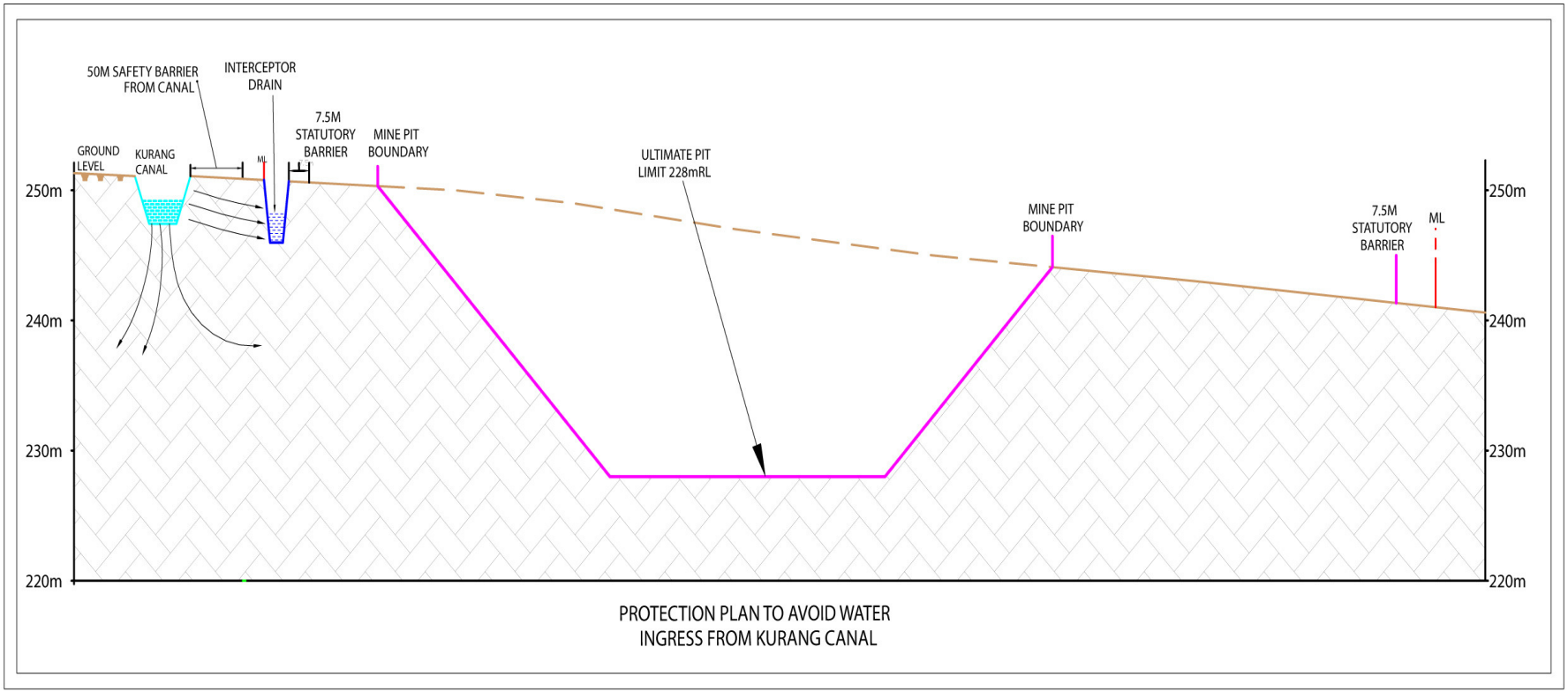
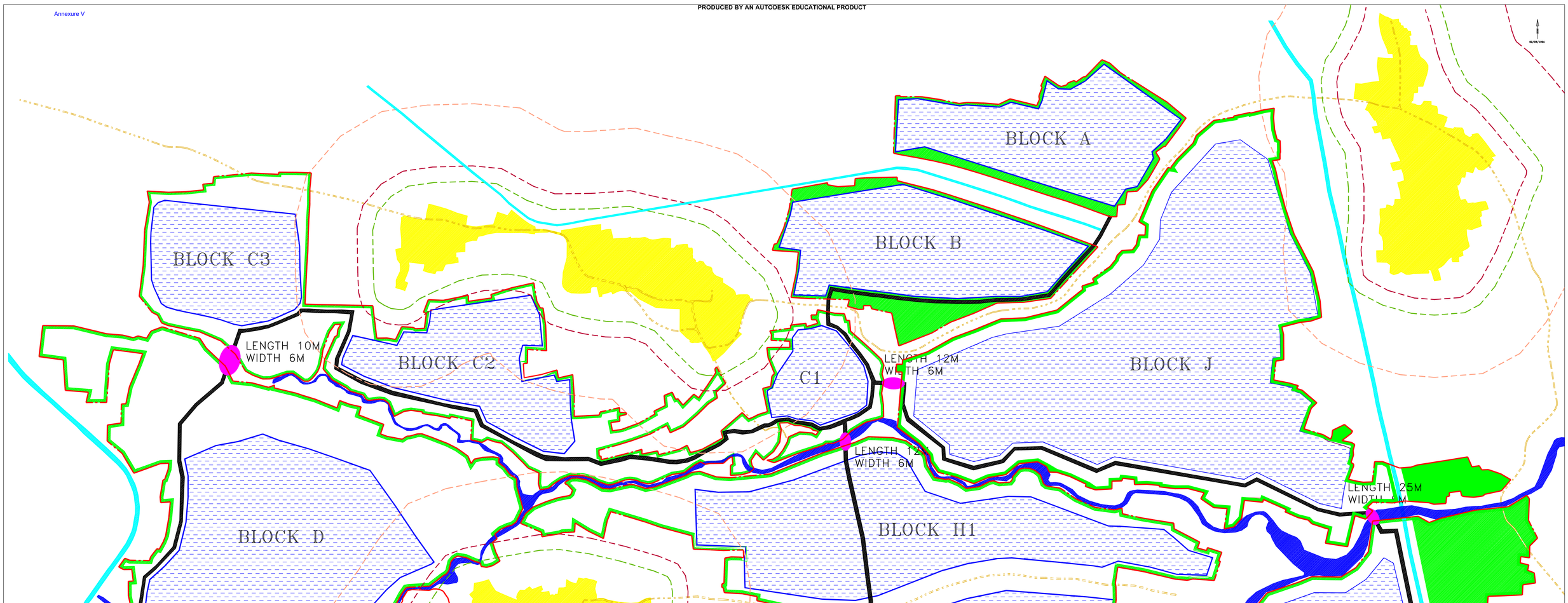


Figure 7.3: Safety Barrier and Protection Plan to Avoid Horizontal Seepage from Kurang Canal

Annexure V



I N D E X

MINING LEASE BOUNDARY

PROPOSED MINING PIT

PROPOSED TRANSPORTATION ROUTE

CANAL

NALLA

PLANTATION & GREEN BELT

SAFETY ZONE (100M FROM VILLAGE)

50m From Village

300m From Village

CULVERTS PROPOSED

Sequence of pit operation	Block	Area (Hect)	Resource (MioT)	Life of pit (years)
1	J	79.5	19.40	6
2	H2	39.5	13.21	4
3	H1	41.0	14.42	4
4	B	26.0	11.85	3
5	A	22.2	9.51	2
6	C1	7.5	3.41	1
7	E	15.5	2.86	1
8	D	39.0	10.92	3
9	C2	19.0	13.50	4
10	C3	16.5	12.60	3
Continuous mining	I	54.3	33.40	9

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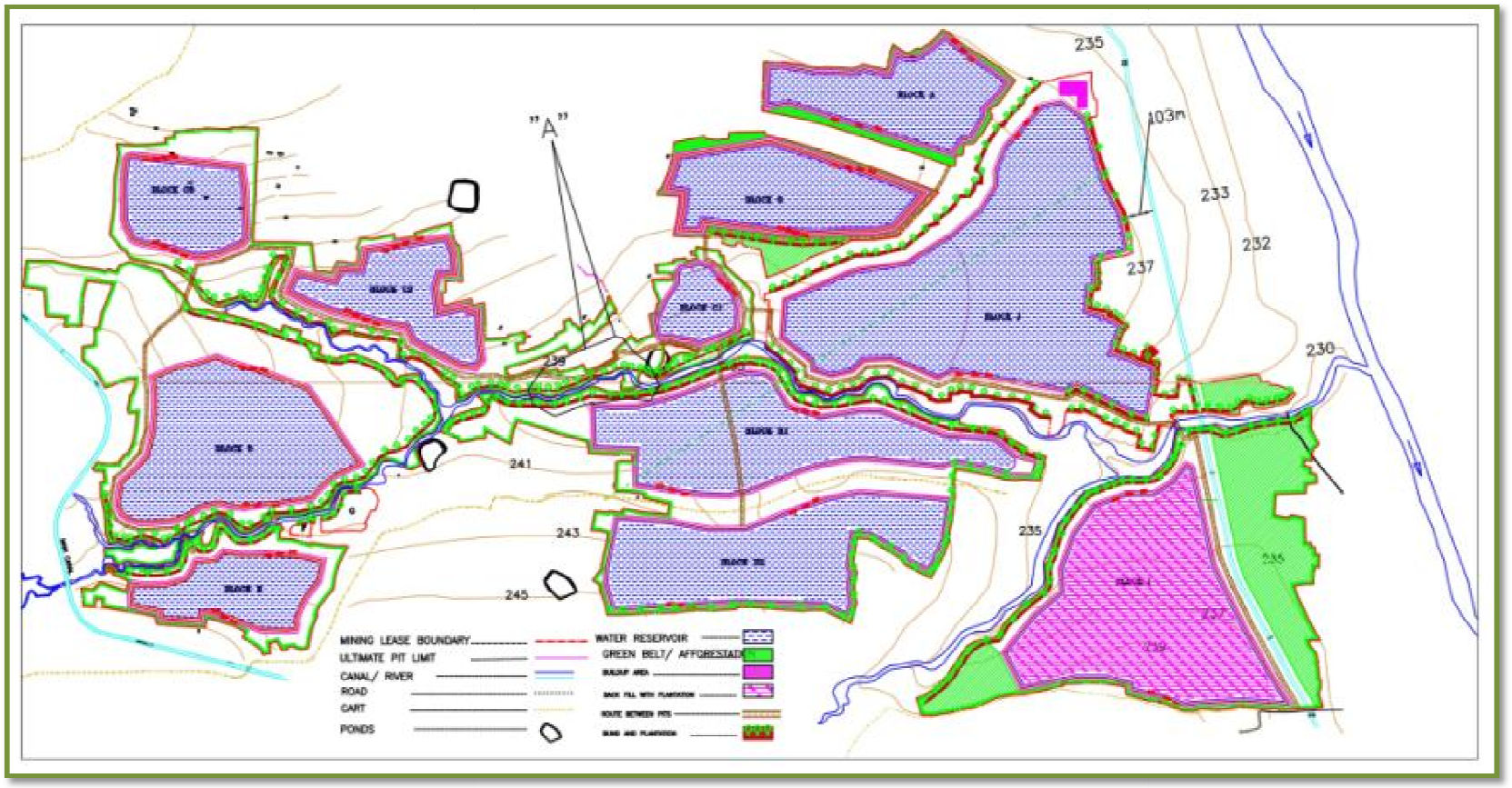


Figure 8.1 A: Map Showing Nallah Stretch ("A") for Safety Barriers and Protection Plan

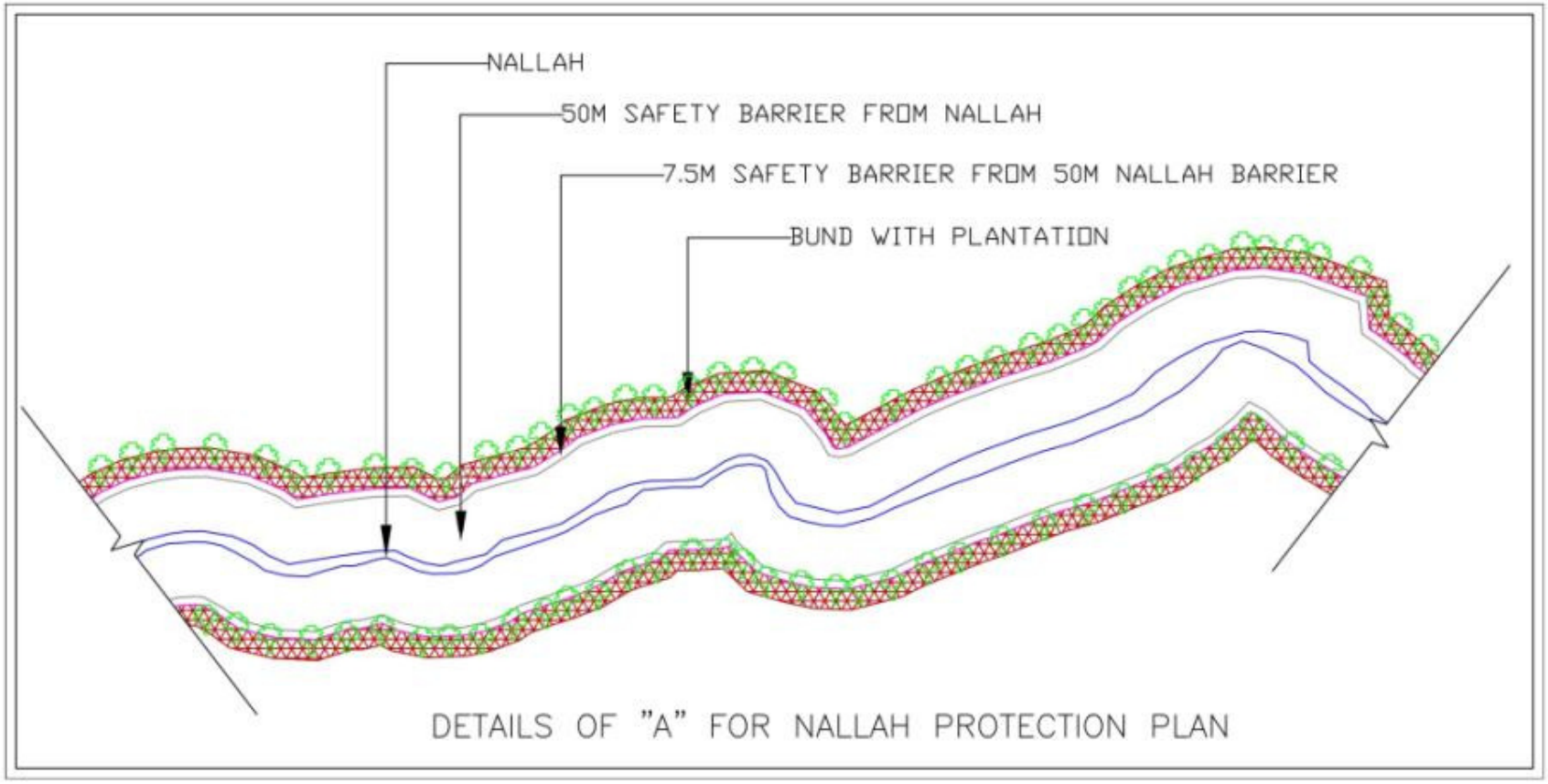


Figure 8.1b: Safety Barriers and Protection Plan for Seasonal Nallahs (Top View)

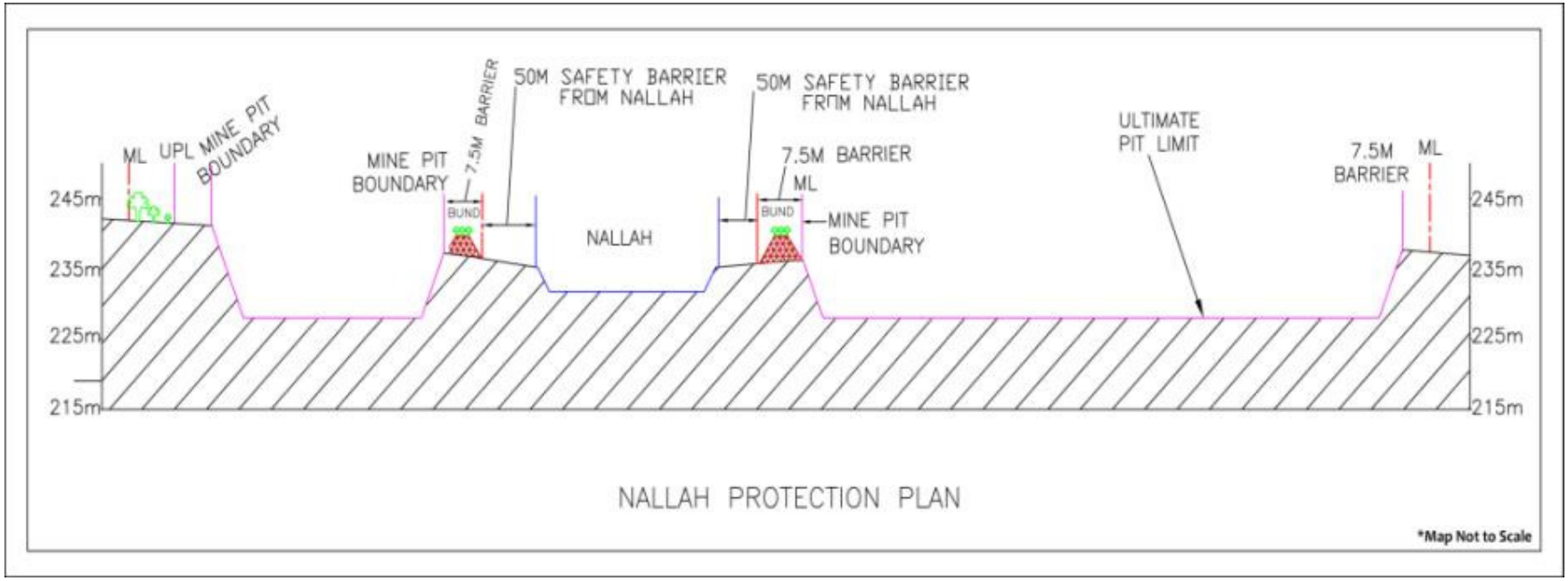


Figure 8.2: Safety Barriers and Protection Plan for Seasonal Nallahs (Cross Section)

Point 9: PP presented the KML file and the Committee observed there is multiple water reservoirs (ponds) present in the mining lease area which provides water facility to the village people. PP requires submitting the details of precautionary measurement for conservation and management of water bodies, and their budgets plans. In addition, PP should also submit the details that how the villagers will access the reservoirs (ponds). Alternatively, if PP propose to facilitate alternative sources of water to villagers, PP needs to submit the details (timeline for implementation of such system, capacity, availability during the year, etc), and budget provisions for such proposed water facility.

Reply:

(i) POND PROTECTION PLAN

There areno multiple water reservoirs (ponds) present in the mining lease area. One pond exists which slightly falls inside mining lease between block H1 and C1 and rest outside. Likewise, there are ponds in 10 kms study area. However, mining activities will not disturb thispond and any access of villagers to the pond and the following precautionary measures are proposed:

- Safety barrier of 50 m around pond is proposed in which no mining activity will be carried out.
- Additional 7.5 m safety barrier will be left within the lease from 50 m pond barrierand protective bunds will be prepared and dense plantation will be undertaken overbunds.
- Proper deepening/desilting/maintenance work of pond shall be carried out by ACC.
- Alternate means of mineral extraction i.e. rock breaker/vibro ripper etc. will be used for mining beyond 50 meter and upto 100 meter of pond or its any access.
- Only controlled blasting will be carried out within 300 meter of pond or its any access.

Location of pond at the junction of Block-H1 and C1 is shown in Figure 9.1 A while itsProtection Plan as well as access to local villagers is shown in Figure 9.1 B.

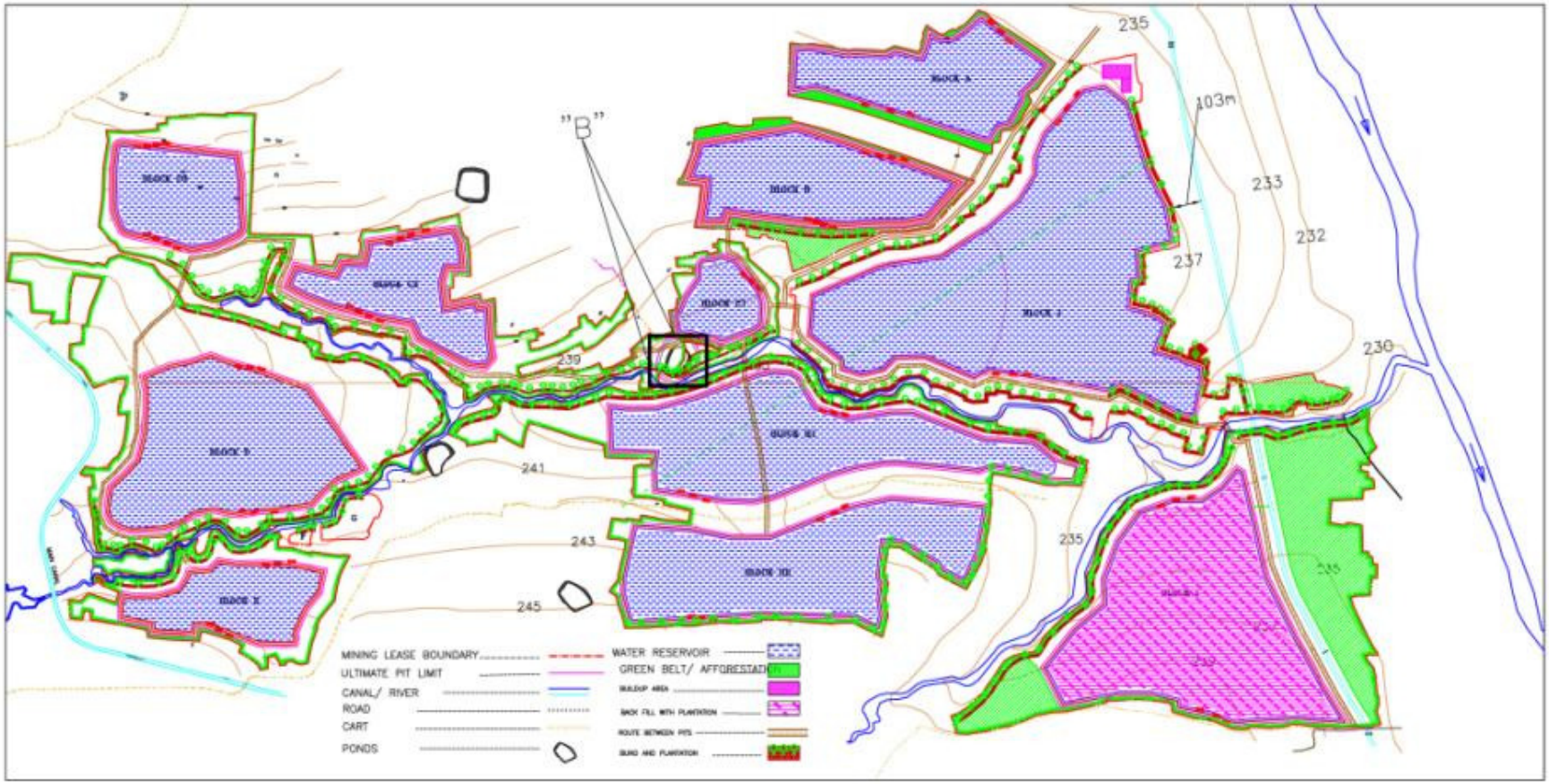


Figure 9.1 A: Map showing Location of Pond at the Junction of Block H-1 and C-1

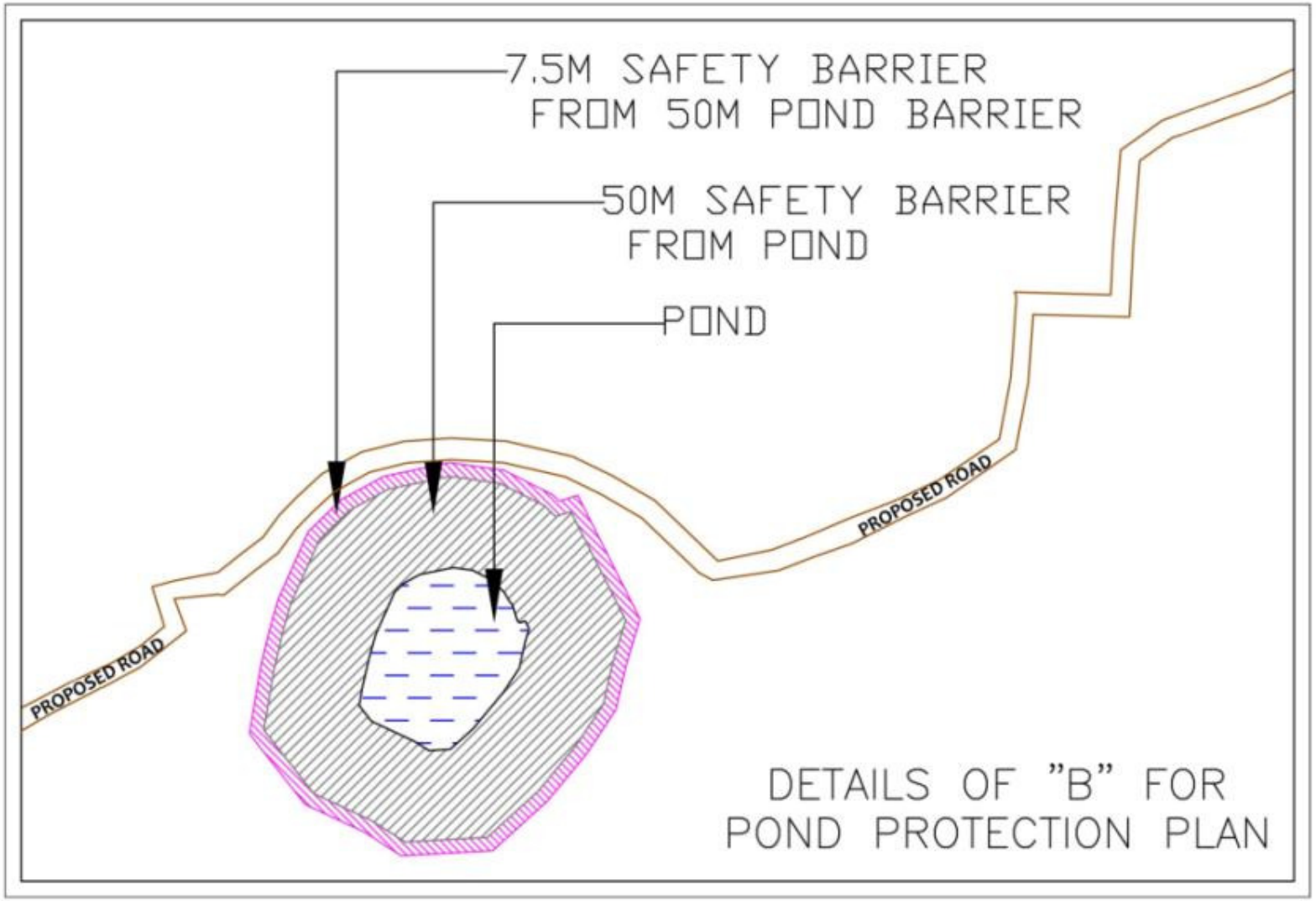


Figure 9.1 B: Map showing Protection Plan for Seasonal Pond between Block-H and C1

(II) ALTERNATIVE SOURCES OF WATER TO NEARBY VILLAGES

ACC Limited has proposed to adopt a total of 16 numbers of existing village ponds in surrounding areas of mine lease in villagesBohardih, Bidyadih, Godadih and Bhurkunda respectively which includes6 numbers of ponds in village Bohardih, 2 numbers in Bidyadih, 4 numbers each in Godadih and Bhurkunda. Total water spread area of selected ponds is 15.21 hectare (1,52,089 sq.m.). Details of these ponds are tabulated below:

Name of Village	No. of Ponds	Area (Sq.m.)						
		Pond-1	Pond-2	Pond-3	Pond-4	Pond-5	Pond-6	Avg. Pond Depth
Bohardih	6	1,214	4,046	6,069	16,184	4,046	6,069	3 meter
Bidyadih	2	6,838	2,023					
Godadih	4	16,184	40,460	8,092	10,115			
Bhurkunda	4	1,214	3,237	10,115	16,184			
Total	**16**	**25,449**	**49,766**	**24,276**	**42,483**	**4,046**	**6,069**	

It is proposed that rejuvenation of these ponds including deepening/desilting and maintenance work of these ponds, provision of ghatsshall be carried out by ACC which shall store and recharge surface runoff from surrounding areas and the excess water shall be available for use of local villagers to fulfill their domestic, livestock and irrigation water needs. About **6,84,401 cum/annum** water shall be available for different uses by adoption of these ponds apart from substantial amount of groundwater recharge.

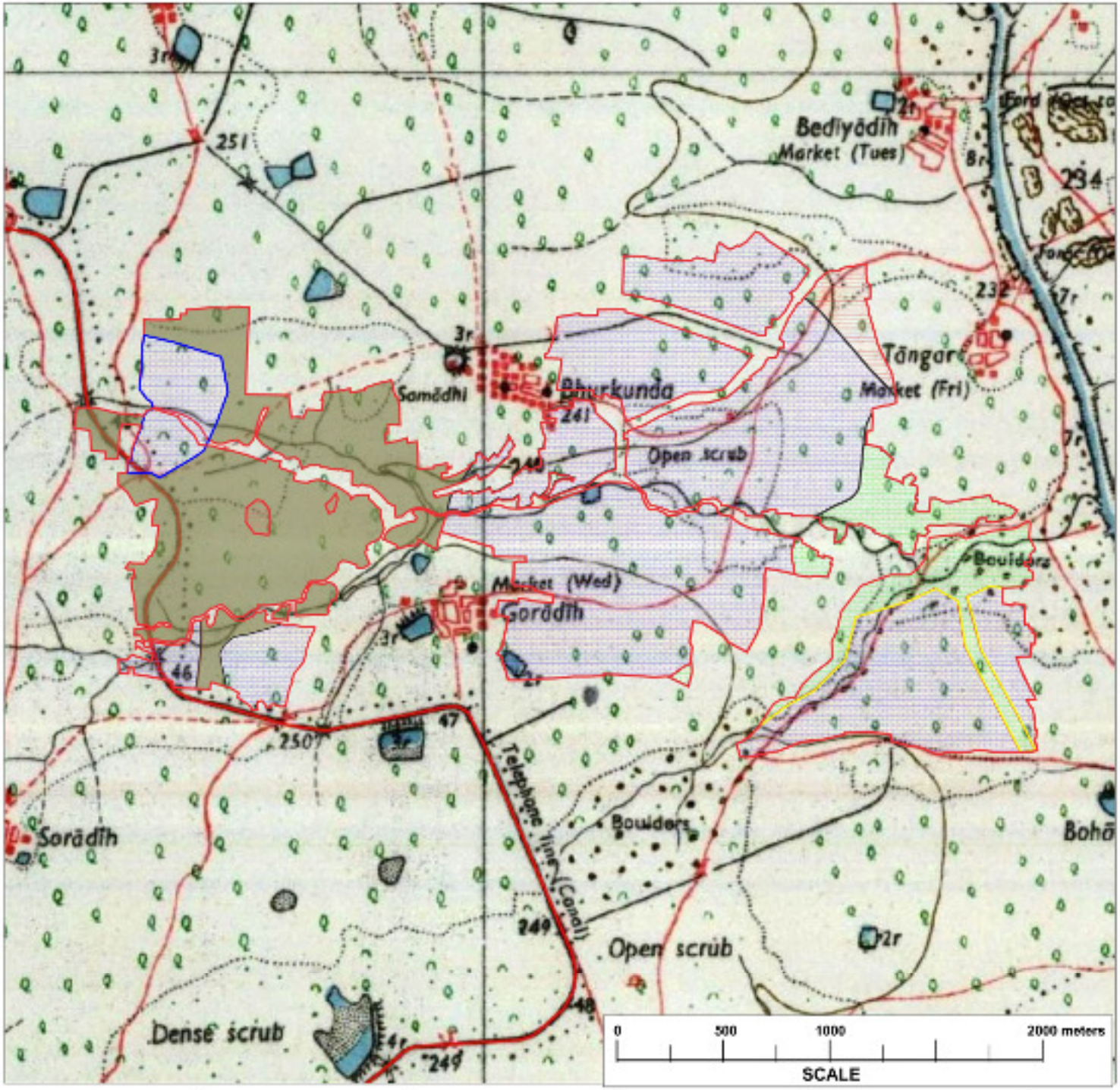
Computation of Water availability from adopted Village Ponds

Village Name	Pond Spread Area (sq.m.) A	Average Depth (m) B	Total Storage Capacity (cum) C= A×B	No. of Fillings D	Total Water availability E=C×D	Total water Availability for Use (after 50% Losses) Cum/annum
Bohardih	37,628	3	1,12,883	3	3,38,650	1,69,325
Bidyadih	8,861	3	26,582	3	79,747	39,873
Godadih	74,851	3	2,24,553	3	6,73,659	3,36,830
Bhurkunda	30,750	3	92,249	3	2,76,746	1,38,373
			4,56,267		13,68,802	**6,84,401**

A budget of around Rs 50-60 lakhs has been worked out for above mitigative measures and these activities will be completed during first five years of mine opening and development.

Source :Part of G.T. Sheet
No. 64 K/5

Annexure VIII



INDEX

Mine Boundary

Roads, numbered; according to importance; distance stone
Roads unmetalled; do. Do. ; bridge
Cart track, Pack track and path, Footpath with Bridge
Bridges, with piers; without, Causeway, Ford or Ferry
Streams; with track in bed; unrefined, Canal
Dams; masonry or rock-filled; earthwork, Weir
River banks; shelving; steep, 3 to 6 metres; over 6 metres
River dry with water channel; with island & rocks, Tidal river
Submerged rocks, Shoal, Swamp, Reeds
Wells; lined; unlined, Tube-well; Spring, Tanks; perennial; dry
Embankments; road or rail; tank, Broken ground
Railways; broad gauge; double, single with station, under construn.
Railways; other gauges; do., do. with distance stone; do.
Mineral line or tramway, Telegraph line, Cutting with tunnel
Contours with sub-features, Rocky slopes, Cliffs
Sand features, (1) flat (2) and hills and dunes as surveyed (3) shifting dunes
Towns or Villages; inhabited; deserted, Fort
Huts; permanent; temporary, Tower, Antiquities
Power lines with pylons surveyed; with poles unsurveyed
Boundary international
Boundary state; demarcated; undemarcated.
Boundary district, subdiv., tahsil or taluk; forest
OVERBURDEN
DOLOMITE
MASSIVE LIMESTONE
SHALLY LIMESTONE

Geological Extents	
Latitude	21° 45' 30.50" to 21° 54' 08.67" N
Longitude	82° 14' 02.99" to 82° 21' 38.95" E

Map Showing Geology and Geomorphology of the Mine Site with Corner Coordinates

Proposed Limestone Mine

(M.L. Area 582.962 ha)

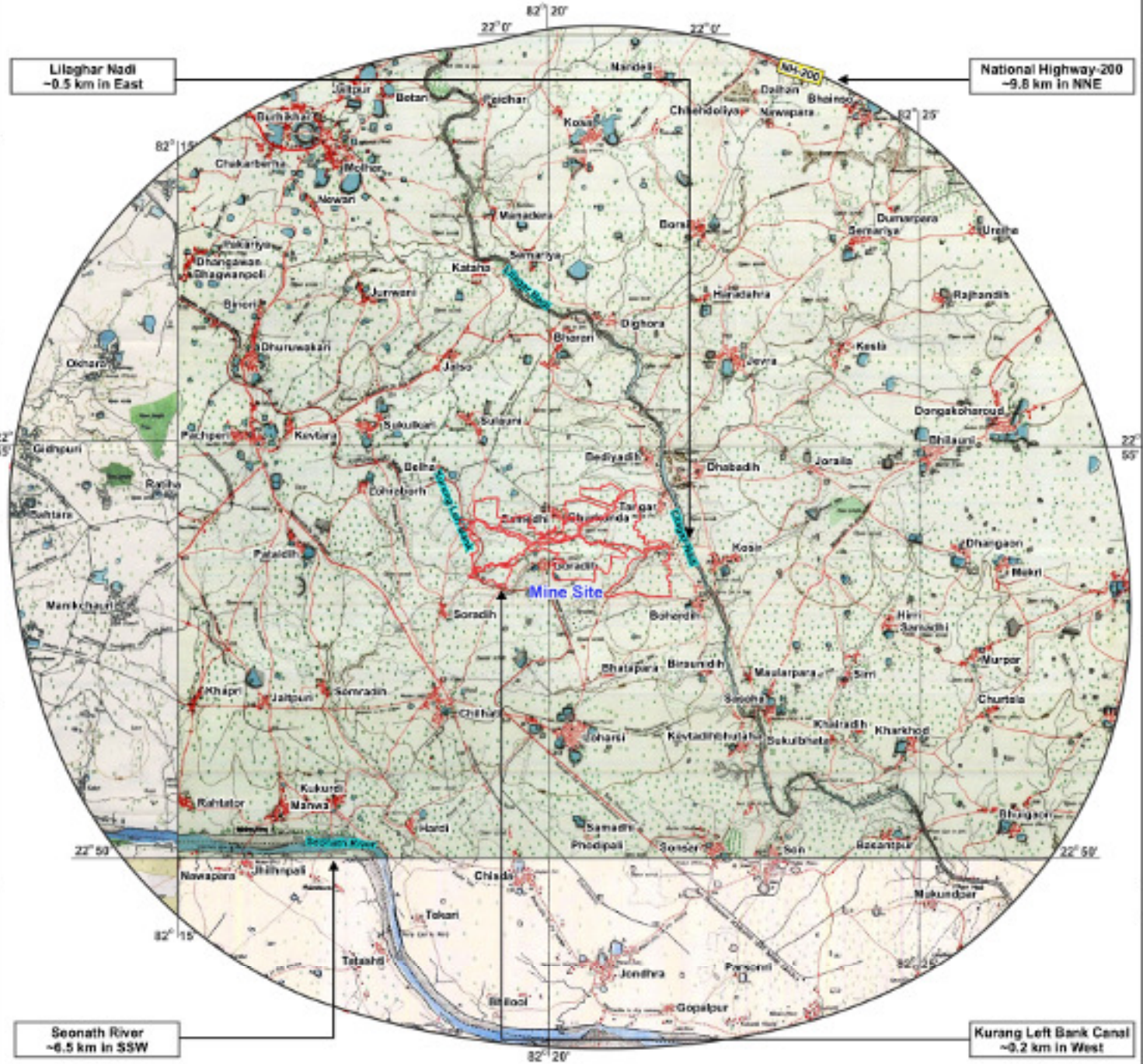
M/s. ACC Limited

At

Villages - Vidlyadih, Bhurkunda, Godadih & Bohardih,
Tehsil - Masturi, District - Bilaspur (Chhattisgarh)

Source G.T. Sheet NO.
Core Zone: 64 K/5
Buffer Zone: 64 K/1, 64 K/2, 64 K/5 & 64 K/6

Annexure IX



INDEX

Mine Site Boundary

Buffer Zone Boundary

Roads, installed; according to importance: distance stone
Roads unmetalled; do. Do. ; bridge
Cart-track, Pack-track and pass. Post-path with bridge
Bridges: with piers; without. Causeway. Ford or Ferry
Streams: with track in bed; undefined. Canal
Dams: masonry or rock-filled; earthwork. Weir
River banks: shelving; steep. 3 to 6 metres; over 6 metres
River dry with water channel; with island & rocks. Tidal river
Submerged rocks. Shoal. Swamp. Reeds
Wells: lined; unlined. Tube-well. Spring. Tanks: perennial; dry
Embankments: road or rail; tank. Broken ground
Railways, broad gauge: double, single with station, under constrn.
Railways, other gauges: do. ; do. With distance stone; do.
Mineral line or tramway. Telegraph line. Cutting with tunnel
Contours with sub-features. Rocky slopes. Cliffs
Sand features. (1) flat (2) and hills and dunes surveyed (3) shifting dunes
Towns or Villages: inhabited; deserted. Fort
Huts: permanent; temporary. Tower. Antiquities
Power line: with pylons surveyed; with poles unsurveyed
Areas: cultivated; wooded. Surveyed tree
Boundary international
Boundary state: demarcated; undemarcated
Boundary district: subdivn., tahsil or taluk; forest

0 0.5 1 2 3 4 5 km
SCALE

Environmental Setting Map

Proposed Limestone Mine
(M.L. Area 582.962 ha)

M/s. ACC Limited

At

Villages - Vidiyadih, Bhurkunda, Godadih & Bohardih,
Tehsil - Masturi, District - Bilaspur (Chhattisgarh)

Annex- X

ACC Limited
P.O.Jamul Cement Works
Dist Durg - 490 024
Chattishgarh, India
Phone +91 788 2285581 to 84
Fax +91 788 2282585
www.acclimited.com

Ref : JL/ENV/19/98
Date : Sept 16, 2019

Member Secretary
C.G. Environment Conservation Board
Paryawas Bhawan,Sector -19,
Naya Raipur (C.G) -492002

Dear Sir,

Sub: Environmental Clearance of Proposed Limestone Mine (ML Area: 582.962 ha) with Limestone Production Capacity of 3.9 Million TPA and waste/topsoil 225000 CuM per annum (Maximum) with installation of Crusher of 1000 TPH Capacity at Villages Bidiyadih, Bhurkunda, Godadih & Bohardih, Tehsil Masturi, District Bilaspur, Chhattisgarh of M/s. ACC Ltd.
Regarding : Reply to the ADS point no. xiv regarding for Public Hearing procedure for Chilhati Mine - Bilaspur

This is in reference to the above mentioned subject ADS (Additional Data Sought) point was raised by MoEFCC after EC presentation dtd. 30th July 2019. As per **ADS point no. xiv** MoEFCC, it has been requested by the EAC - MoEFCC to confirm the concern highlighted points raised during public hearing conducted on 07.06.2019 at Village Bohardhi - Bilaspur.

MoEFCC want to confirm the procedure adopted by the State Pollution Board for conducting Public Hearing and give clarification to the questions raised by the public during public hearing on the procedure of the Public Hearing adopted. The copy of the ADS / MOM uploaded at MoEFCC portal is attached as **Annexure - 1** for your reference.

Hereby we request your office to kindly give clarification in the reply to the point mentioned above so that the same can be submitted to the MoEFCC.

Thanking you,

Yours truly,
For M/s ACC Limited

(Vaibhav Dixit)
Director Plant
Jamul Cement Works

Environment Conservation Board ★ (C.G.) HO C.G. ★ Atal Nagar, Distt.-Raipur
17/9/19

PUBLIC HEARING POINTS RAISED DURIGING PUBLIC HEARING DTD. 07.06.2019 THEIR ACTION PLAN WITH BUDGET AND TIME LINE

S. No.	ISSUES RAISED DURING PUBLIC HEARING	ACTION PLAN	BUDGET	TIME LINE
1.	Proposed mining project was opposed, however if the cement plant is proposed to set up then we are fully supporting the proposed mining project also	Proposed limestone mining is captive limestone mine and has proposed to put up a new cement plant. Limestone requirement for the proposed cement plant will be met from the proposed Chilhati Limestone Mining project." The same has been confirmed in the draft EIA report submitted for Public Consultation (Chapter II page no. 27 section no. 2.2) and also in the executive. • TOR application for Plant has been submitted online vide proposal no. IA/CG/IND/112784/2019 dated 29th Jul 2019. • MoEFCC has raised an EDS dtd. 13th Aug. 2019	**Cement Plant project cost : 2900 Crs**	**Expected date of Establishment is 2024**
2.	Plan related to the provision of health, education, roads, water and electricity, in the areas affected by the proposed project	**HEALTH: ACC WASH Project will f**acilitate for better health service delivery and accessibility, focusing on preventive and curative aspects of health in the area are – • **Mobile Health Unit** will be initiated for all the four villages to address prevalent health issues in villages. • **Vitalize sub center at Bohardih** • **Strengthening 8 Anganwadi centers (**3 -Godadih, 3 –Boahardih, 1 -Bidyadih and 1 – Bhurkunda) mainly focusing on anganwadi infrastructure, pre-school education, ensure 100 % Immunization , nutrition and Information, Water & sanitation, Education and Communication, Breast Feeding corner with the support ICDS dept • Organize **specialized health camps** in Eye Check up camp , Cataract, address	Estimated Budget for Health facility under CER: Rs. 0.63 Crores/- Estimated Budget for Education facilities under CER Rs. 0.73 Crores/-	**2019-2024**

		Gyn issue , Bone Test etc as there is no such facility available in village periphery with support of Govt. • Conducting **HIV/AID awareness camp** and referring to ICTC center with collaboration with Govt as area has around 50 % migration. **EDUCATION: Under education, ACC *Vidya Utkarsh* project will initiative to create a conducive environment in the area..** • There are 4 Primary Schools, one in each village, 3 Middle Schools in Bohardih, Bhukunda, Godadih and 2 High Schools in Bohardih and Bhurkunda. Work aspects in education are • We will be facilitating Age specific learning levels in all primary schools. • Introducing BALA(Building & Learning Aid) concept in all 3 primary school to make conducing educational environment • Providing TLM and support to extracurricular activity • Developing a conducing learning environment through smart class in primary schools , setting up mini science lab in middle and High schools and setting library in schools, rewarding/awarding meritorious students , • Initiation of scholarship for meritorious students **Coaching Initiatives –** • Coaching for Navodaya admission, • Career counselling and • Competitive exams and free tutorial assistance	Estimated Budget for water facilities under	

		School Infrastructure support: Work will be done in the following area • Ensuring drinking water supply, • Repair of school toilets and other school infrastructure. • Provision of school Furniture for better sitting arrangement and • Making of Rain Water Harvesting Systems to inculcate thought of saving water among children and community as well. **ROAD:** ACC will initiate a better intra -village connectivity for provision of all-weather access roads to the hamlets in the villages in partnership with Government. Detailed in below point -3. **WATER :** The area is has less accessibility of drinking water. The source of drinking water is majorly depended on bore wells/Hand pumps. Looking at the drinking water issues ACC has already taken initiative to provide drinking water facility through boring and laying pipeline in two of hamlets from which 1770 people are getting benefitted. Along with this, will initiate much better facility to avail drinking water facility in the village through below schemes under ACC WASH Project. • Provision for the installation of Water Filtration Plant – 500 Ltr. / Hrs. at Leelaghar River between Bidyadih and Bohardih for providing drinking water. (Pumphouse, Water Filtration Plant, building & equipment Cost) (@ Rs. 8 lakhs/ water treatment plant. This plant will be installed & operated through SHG model. Subsidised E-Rickshaw ~ @ Rs 1.50 Lakh would be used for setting up a distribution system. • Providing drinking water through lying pipeline and water tank in several	CER Rs. 0.48 Crores/- Estimated Budget for water facilities under CER Rs. 0.10 Crores/-	

		hamlets in village wherever it is required in project villages. **ELECTRICTY:** As CG is known for electricity surplus state. Hence, the project area also does not have much issue of supply of electricity. it has already done by Govt but yes still there scope of to illuminating the public places by installing solar street lights at public places and will be handed over to Panchayat .		
3.	Plan in relation to the all-round development in the surroundings villages by the proposed scheme	ACC will takeup projects for all round development in surrounding villages **For better sanitation aspect in the area under *ACC WASH* Project are -** • On average 55 % Household does not have toilets , hence there is way forward to work for making village open defecation free. • Behavioural Change Communication among village residents to achieve swachh bharat objectives. • Improving the poor sanitation situation in 17 hamlets in all 4 villages major focus will especially would be in Godadiha and Bhurkunda. • Developing drainage network and intra village road connectivity in partnership with the Government. • Segregation of wet and dry waste by providing dustbins in all villages and installation of public dustbin in collaboration with Panchayat and Government. • Water Harvesting and recharge of ground water through deepening of pondsand other water conservation measures.9 Ponds will be deepened to conserve the rain water and use for agricultural purpose • Building check dams, contouring, gully plugging etc for water harvesting	Estimated Budget for all round development is Rs. 1.67 Crore. (Swachh Bharat Abhiyan under Rs 0.87 cr+ Water Harvesting Rs .70 + Local culture promotion Rs.10) Expenditure incurred till date on various activities under CER is Rs. 0.65 Crore	**2019-2014**

		• Grooming the local youth for excellenace in sports. • Promoting local art & culture in the area. • Training and coaching on selection in Army and police		
4.	Opinion / proposal for the appropriate compensation, employment to the farmers who's land have been acquired/purchased/purchased or proposed to be acquired/purchased/purchased, to provide appropriate compensation to the bore wells available in the proposed land or being displaced due to the proposed mining project	The compensation will be paid as per applicable laws in Chhattisgarh. In case ACC decides to acquire surface rights from private parties, it will be as per ACC Compensation policy framed for the project and as well the agreement arrived based on mutual discussions. As per ACC Compensation Policy the total amount of compensation per affected family will be divided in three Budget Heads- • One time Partial payment (40%) • Fixed Deposit (40%) • Payment as an annuity (20%) The house hold with bore wells will be shifted in the same village in which they are falling in. ACC will purchase land for the construction of the houses and will construct the house as per Pradhan Mantrai Awas Yojna with all amenities like bore well, road, streetlight house light drinking water and sanitation etc. . ACC Limited will go with Government of Chhattisgarh R&R 2007 Policy (along with 2010 amendment) and LARR Act 2013 of GoI with respect to employment. Preference to the local peoples will be given in the employment. Direct / indirect employment to project affected families. The detail for skill development to generating Employment in future in the Cement plant and Mine operation is given below: A three pronged approach would be followed: • Fitter	**Compensation Cost : 311 crs** **Compensation cost 3.6 Crs** **Skill Development Training Cost : 1.5 Crs**	**The Mine lease land will be acquired within a period from 2020 to 2030** **By the end of the year 2022** **2022-2023**

		• Welder • Electrician • Rigger • Heavy Vehicle Driver • Refrigeration and AC • Instrumentation • Plumber • Loader Operator • Belt conveyor repairer • Housekeeping		
5.	Elaborate proposal to avoid the adverse impact on the Lilagarh River due to proposed mining project	Our Mining Lease admeasuring 582.962 ha is not a contiguous area and intersected by seasonal nalas and isolated pathches of land parcels excluded from mining lease. We have made a conceptual plan to mine this deposit in isolated interconnected pits leaving appropriate safety zone for all the permanent features, access to private parcels etc. Lilagarh river is 0.25 km away from the nearest point of mine lease area Due care is taken during the selection of mining pit operation to avoid the impact of the mining operations on surrounding as well Lelagar river. ACC will develop thick green belt between the habitation and the mine. Controlled blasting with proper monitoring will be integral part of the mining process and no secondary blasting will be done. Hydraulic Rock breaker/mechanized breaking will be done to eliminate the secondary blasting, if required. Limestone extraction will be by conventional mining (drilling blasting, loading and	**For Bund preparation Rs. 50 Lakhs** **For Green Belt Development Rs. 1.0 Crs.**	**Till Conceptual stage**

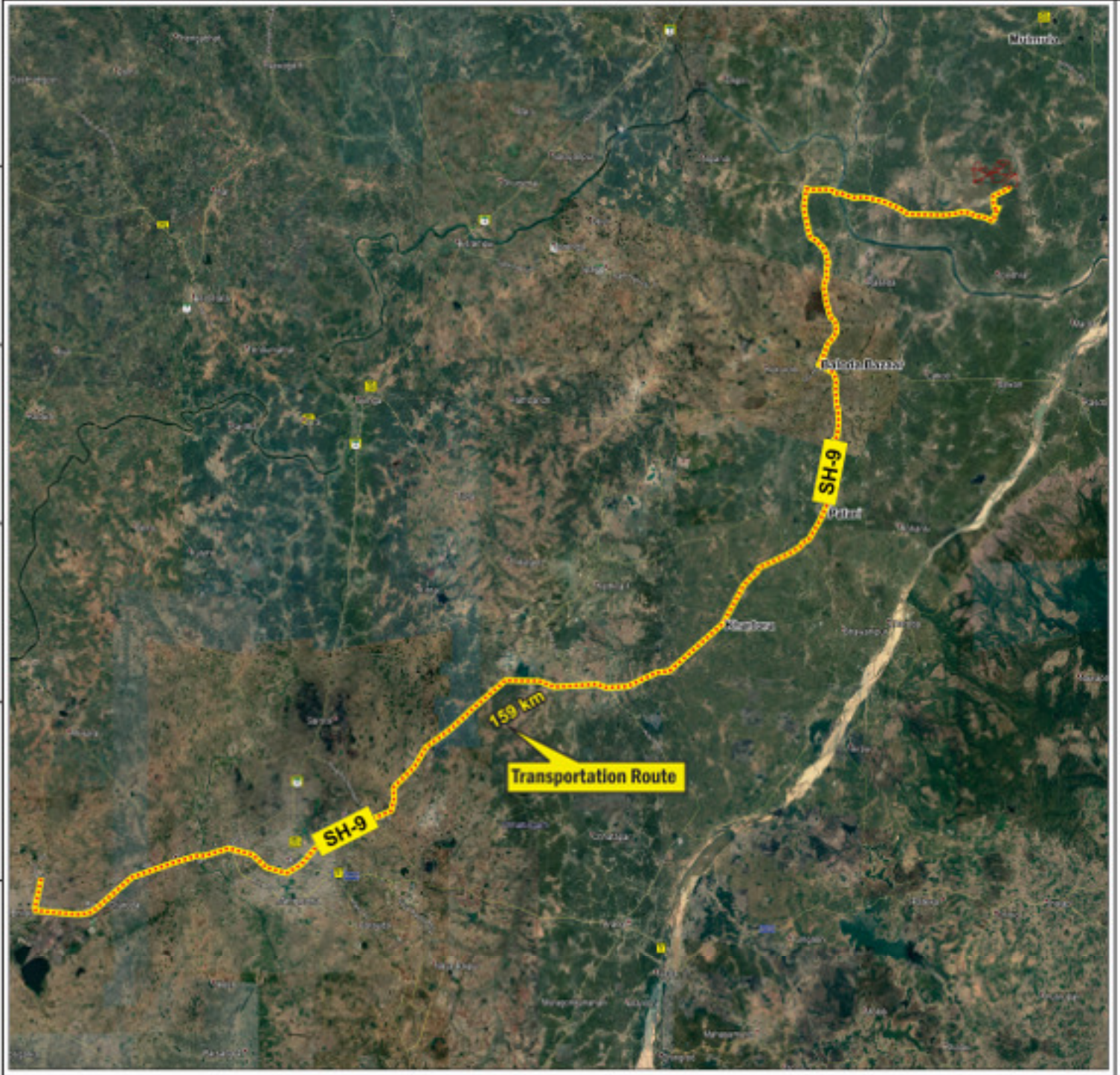
		hauling) since the mining operations is planned to be in each of the isolated block (maximum one or two blocks at a time), mobile crusher(s) is proposed considering mineral conservation, ease of mining. This will take care of various public utilities, no adverse impact on nallahs / Lilagarh River, etc (including safety zones) and will not get disturbed by mining operations.		
6.	What are the proposed project for the empowerment of the women and their employment for their livelihood	ACC recognizes Women's empowerment as a priority are in the development of the community. In the area, there are 36 registered SHGs in the area, 16 in Godadih, 5 are in Vidyadih, 8 in Bhurkunda, 6 in Bohardih. ACC under the project of project named ACC SWAVLAMBHAN will be initiated • Training, capacity building and exposure visit of SHG women to model SHG in and around area to motivate and learning. • Based on discussion with SHG members, will initiate micro enterprise for women linking them to income generation activities such as Mashala grinding, Tailoring, Mushroom cultivation, Donan Pattal Units, Phenyl & Washing powder making, beauty parlor which will cover around 500 women earning Rs 5000 to Rs 8,000 in a month. The project will executed with partnership with NABARD/Govt. • Later on SHG federation in two tiers (Direct formation federation) and three tiers (cluster approach) will be formed to ensure sustainability of these groups at ground. • Partnering with Govt to link SHG to Govt schemes will be made to benefit towards women empowerment	Rs.0.49 Crores/- under CER	**2020-2024**
7.	Opinion regarding the provision of training for people	ACC's DISHA project focuses on alternate livelihood initiatives by strengthening people capabilities, assets and activities required to earn a dignified and	Estimated Budget for skill development	**2020-2024**

	to get jobs in the vicinity	sustainable living. The project would focus on skill development of youth for employability and placement. • **Skill Development Programme** - ACC DISHA Project: Construction of Skill development centre "DISHA Hunar Shala" of 7500 Square feet area @ Rs. 1000/Sqft. along with necessary infrastructure for various vocational training programs for employment generation in association with National Skill Development Mission (Refrigeration and AC, Domestic Electrician, Auto Mobile Service Mechanic, Welding, IT enabled Services, Computer hardware and Networking, Light Motor Vehicle Driving, Mason) . Currently 11 youth from project area are undergoing training in different trades such as Automobile, Electrical, Refrigeration and Air Conditioner, Welder, Fitter etc. at Jamul Cement Works Disha Center situated at Jamul, Durg district (C.G). The same model will be implemented in project area. • Moreover, if trained students do not prefer to move into a job, s/he may be supported for Self-Employment through a handholding to establish his/her self-employment venture with or without bank credit.	under CER: Rs. 1.97 Crores	
8.	To elaborate proposal to avoid the adverse impact on the environment due to proposed mining project	ACC has policy of developing Clean and Green Environment for employ and stake-holders. Under Environment Management Plan following action will be taken, 1 Pollution Control 2 Pollution Monitoring / CAAQMS installation 3 Occupational Health 4 Rainwater Harvesting and conservation 5 Others (specify) AMC of CAAQMS & other instruments • Within mine lease area haul road will be prepared and periodic water	**EMP Capital Cost: Rs. 10.5 Crores**	**Year 2022**

		sprinkling by water tanker will be done and auto water sprinkler will be installed to suppress the fugitive dust emission. • Waste water treatment and recycle within mine with Zero Discharge, • Development of 7.5 m green belt all along the mine lease boundary and as & where required. • The state of Art non – electric detonator (NONEL) technology will be used. The use of latest NONEL technology directly checks / reduces the impact of blasting by ensuring the check on fly rock, ground vibration and air blast noise much below the prescribed limit. • No Secondary blasting will be done. Hydraulic Rock breaker /mechanized breaking will be done to eliminate the secondary blasting Vibration monitoring will be done as per DGMS norms • Blasting will be avoided when strong winds are blowing towards the inhabited areas • The vehicles will be maintained in good running condition so as to reduce the noise level		**From the start Year of the Mining activity 2021** **Start from 2021 to Conceptual stage**
9.	As per EIA there is no water source within 10 KM radius. Whereas Lilagarh River, Shionath river and Arpa river is there. Mining project will consume 3,30,000 liters water per day. Against the project only one ambulance will be	**Clarification regarding source of Water:** Reference to the EIA report Chapter III, page 43 serial no. 6 of the table 3.1 (Environment Setting of the Area) it is clearly mentioned that Lilagarh river is at a distance of 0.25 km in East direction from the proposed mine lease and Sheonath river is 6.5 km in SSW direction from mine lease but Arpa river is at a distance of 13 Km in NW direction from mine lease i.e. beyond 10 km radius. Clarification regarding Water requirement and provision of ambulance:	**Not Applicable**	**Not Applicable**

	given to that area	Inadvertently the proposed query was not appropriately interpreted. As we mentioned in the EIA report total water requirement of the project is 330 KLD for dust suppression, mobile crusher operations(s), green belt development, drinking and mine operations for which we have permission from the Water Resource Department - Naya Raipur for withdrawal of water for the proposed project. As we have mentioned in the EIA report, Reference to the Chapter II page 32 section no. 2.4.1, the mines will be provided with the following facilities (including ambulance). i.e. the employs working in the mines for mining activity following facilities will be provided: 1. Portable Drinking Water. 2. Canteen Service. 3. Ambulance with first aid crew. 4. LMV for movement of men during shift. 5. Rest shelter Company has separately allocated Rs. 2.5 Crores towards CER activities for the proposed mining project as per MoEFCC OM No.22-65/2017-IA.II (M) dated 1st May 2018. Under CER (Corporate Environment Responsibility) the proposed project will help in improving the socio-economic status of the near-by villages by generating direct or indirect employment opportunities. Job opportunities to the local people will improve the earning and spending capacity of the people. The people in area will be able to utilize improved facilities with regard to education, health care, hygiene, recreational opportunities, small business opportunities etc		

Annexure XII



INDEX

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Boundary district: subdivn. ; tahsil or taluk; forest

State Highway - 9

TRANSPORTATION ROUTE MAP

Proposed Limestone Mine
(M.L. Area: 582.962 ha)

M/s. ACC LIMITED

At

Villages: Bidiyadih & Bohardih, Bhurkunda & Godadih
Tehsil: Masturi,
District: Bilaspur, (Chhattisgarh)

SKILL DEVELOPMENT INITIATIVES: DETAILED PLAN WITH TIMELINE AND BUDGETARY PROVISION.

- As per census 2011, total Population of the relevant four villages is 6306 and total number of households is 1478.
- This population is estimated to have increased to about 11300 and 2200 Household by now in year 2019.
- The R&R study identifies total872 (722 mines and 150 for Plant) families as project affected families. Ten of these722 families are project displaced families, whereas 712 families are having only land within mining lease area and estimated 150 families to have land within the identified Plant boundary area.
- The total population of the project affected families is 5804 (5054 for mines and estimated 750 for Plant).
- Total number of youth in the age cohort of 16-35 years is 31%[1]of the total population i.e. 1799among the target population (PAF) and 3503among the total population of the relevant four villages.
- The male population is 51 percent, whereas female population is 49 percent.
- Literacy rate is 66 percent; though about 24% of the population is matriculate or senior secondary pass and only 6 percent of the population is Graduate or Post Graduate.
- Labour force participation rate in the age group of 16-29 is 60 percent[2] whereas 98 percent inthe cohort of 30-35 years.(Source: Ministry of Statistics and Program Implementation)
- Among our population there are 1260 youth in the age group of 16-29 and 540 youth in the age group of 30-35 years.Now considering the labour force participation rate, total number of youth that could be targeted (among PAFs) for skill development training would be 1285 youthand 2501 youth in the general population.
- The total budget allocation for Skill Development Initiative is Rs1.97 Crores and implementation of the same would be completed in 3-4 years time.

A three pronged approach is proposed to be adopted to facilitate livelihood options through skill development initiative.

[1] http://mospi.nic.in/sites/default/files/publication_reports/Youth_in_India-2017.pdf (page 21)
[2] https://www.investopedia.com/terms/p/participationrate.asp

1. ***Employment at Company operations i.e. Mines & Plant (Estimated numbers given as below)***

Type	Estimated Positions at Plant	Estimated Positions at Mines
Management Staff	125	23
Shop Floor Associates	175	33
Contractual Staff	600	70

Opportunities at plant and mines could be multiple domains, such as mechanical, electrical, instrumentation, welder, fitter, plumber, rigger, quality analysis, Drill Operator, Loader Operator, and Heavy Earth Moving Machinery (HEMM) Operator and Mechanic. Similarly, in addition to above domains, additional opportunities available in SFAs and contractual employees are of Belt Conveyor repairer, electrician, excavator operator, grader operator, loading unloading, housekeeping, horticulture etc. People from the target population would be engaged as per their qualification and experience in various abovementioned domains.Under the company's skill development initiative i.e. atACC DISHA-HunarShaala, youth from the PAFs would be engaged for building their capacities to facilitate matching the skill levels required in various domains mentioned above.

2. ***Employment Elsewhere***

Further, there is a range of locally relevant livelihood opportunities that are in demand in this region viz. Mason, Welder, Fitter, Electrician, Plumber , Two wheel &Four Wheeler Auto Mechanic, Computer Hardware and Networking, ITEnabled Services, light and heavy vehicle driver, Refrigeration and AC, Tailoring etc. Company will set up an alternate livelihood training hub i.e. ACC DISHA-HunarShaala and facilitate employability training for the available youth and facilitate their placement elsewhere.

3. ***Livelihood through Self Employment Opportunity.***

Moreover, youths who would like to avail self-employment options after the aforementioned skill development or would like to setup other kind of shops and establishments would be facilitated by company for doing so. Company would link and leverage with Government and various other organizations for reaching out benefits to the youth of the area.Off- farm livelihood development opportunities would be also facilitated in partnership with NABARD and other government schemes.

In addition to this, Company also has two well established technical institutes such ACC Cement Technology Institute (ACTI) at Jamul, Chhattisgarh and *SumitMoolgaonkar Technical* Institute (SMTI) at Kymore, MadhyaPradesh where various relevant technical

trade training could be taken up for the training of the youth and facilitation of livelihood opportunities for them.

Among the target population, 49 percent of the youths are females. In addition to the above mentioned trainings in various domains equally available to the females in the target population, the Company would take up capacity building and facilitation of other livelihood opportunities for them through Self Help Group model that would graduate into setting up micro-enterprises (such as spice grinding and packaging, broom making, washing powder, mushroom cultivation, liquid cleaners) and individual business setup (such as local food products, beauty parlour, tailoring shop, grocery shops etc.). Further, the youths could also be engaged for various other direct or indirect works that would be undertaken by the company e. g. CSR Initiatives for village development etc..

Point 22: PP presented that there will be water table intersection due to mining activities and mentioned that no surface run off will be mixed with the ground water. PP needs to submit details of control measurements for protecting the surface run off so that it will not mix with the groundwater. PP need to submit management of ground water after the water table is intersected.

Reply:

(i) CONTROL MEASURES FOR PROTECTION OF SURFACE RUNOFF INTO MINE PITS

Natural flow of surface run off in the open land of mine lease will not be disturbed. Garland drains with protective bunds will be created around excavated area to avoid entrance of surface run off into pit and mixing with ground water.

- Garland drains/storm water drains along with siltation/settling tanks at regular interval will be constructed around the active mine pits through proper plan which follow the natural slope of surface run off and/or to avoid its mixing with groundwater. Apart from this, garland drains willbe constructed around dumps and along the periphery of mine lease across the flow direction of surface runoff in a phase wise manner.
- Two types of garland drains are proposed for surface run off management. (a) To prevent entry of surface run off from area outside of mine lease, a garland drain of approximately 1 m width and 1.5-2.0 m depth is proposed along the periphery of entire lease area. (2) To prevent entry of surface run-off from rest of the mining lease area to active mining area during first five year plan period shall be managed through a separate garland drains to silting cum settling tanks across natural water courses depending upon the slope. This garland drain shall be made approximately 50 m away from the boundary of active mining area. The length and width of garland drain for mining area will be kept around 3600 meters in length, 1 m width and 1.5 m in depth which shall further increase in length with progress of mining activities in future plan periods. Similar approach will be followed during mining in rest of the ML area. Detailed Plan of Garland Drains/Storm Water Drains during present plan period as well in later stages of mining is given in **Figure 22.1.**
- Check dams will also be constructed to prevent sedimentation/siltation of natural water courses (seasonal nallah) with prior permission from Concerned Authority.
- Regular monitoring of the quality of groundwater will be undertaken.
- Establish proper drainage pattern inside lease area.

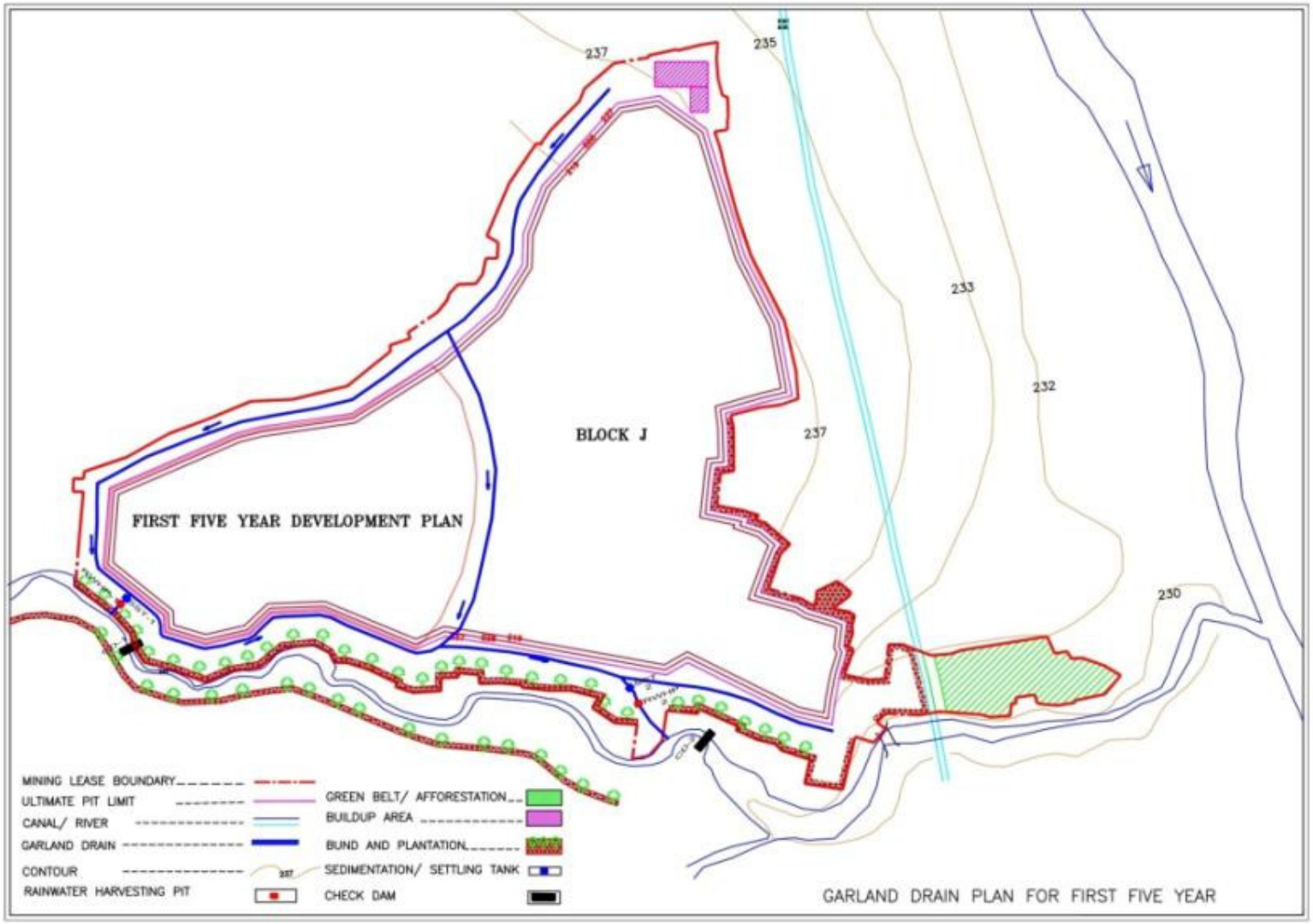


Figure 22.1: Plan for Garland Drains during present Plan Period

(ii) GROUNDWATER INGRESS INTO MINE PITS AND ITS MANAGEMENT

The initial working area during first five year plan period has the general elevation of about 235-239 m above msl(average 237 mRL) with a gentle slope towards south while in rest of the area maximum elevation is upto 263 mRL.

Depth to water level in and around proposed mine lease area is varying between 4.5 m bgl (232 mRL) to 9.3 m bgl (228 mRL). The mineral availability and depth of mine working will go up to 17 m bgl (220 mRL) in the present five year plan period while 43 m bgl (220 mRL) up to conceptual plan period. Hence, groundwater table shall be intersected by mining activities or groundwater ingress by mine workings during present plan period and up to conceptual stage.

Application for NOC to Groundwater withdrawal/dewatering permission for working below groundwater table has already been submitted to Central Ground Water Authority via Application No. **21-4/2596/CT/MIN/2019** dated **26.06.2019.** Pumping of groundwater/dewatering of mine pit shall be carried out after prior permission from competent authority only.

PROPOSED MANAGEMENT/UTILIZATION OF PUMPED GROUNDWATER

(a) During Five Year Plan Period

Total volume of groundwater seepage in excavated mine pits during next five year mine plan period which shall be pumped out works out about 35,971 cum. Volume of maximum water availability at the end of fifth year is coming approximately 19,929 cum/annum or 55 cum/day which shall be pumped out from mine sump. Total water requirement for the proposed Chilhati limestone mine shall be 210 KLD which shall be initially sourced from surface water resources from Lilaghar River and later from mine sump as and when developed. On development of proposed mine pits, this entire55 cum/day of accumulated groundwater seepage, will be utilized to meet daily mine water requirement for the purpose of dust suppression.Rest 155 cum/day shall be sourced from Lilaghar River. Schematic representation of probable utilization of pumped water is given in **Figure 22.2**and Revised Water Balance of proposed limestone mine as per source of water is given in**Figure 22.3**.

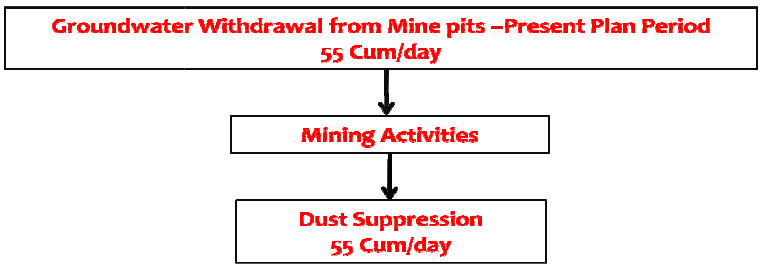


Figure 22.2: Proposed Utilization of Pumped Water (Five Year Plan period)

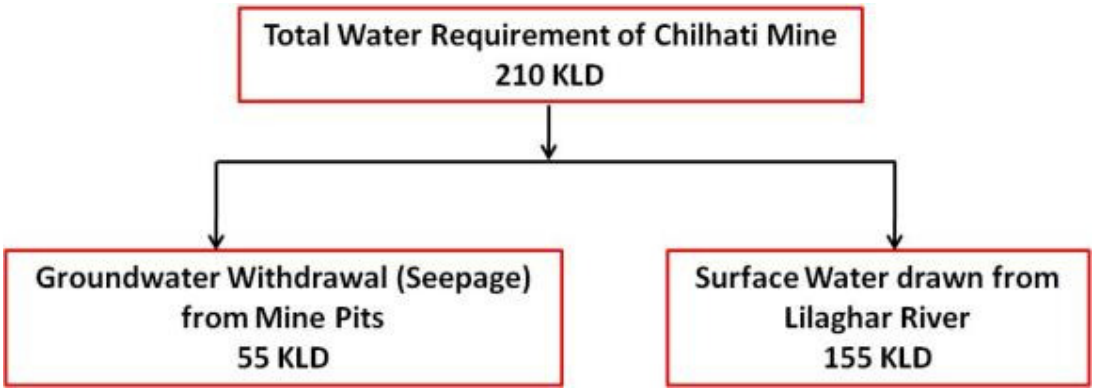


Figure 22.3: Revised Water Balance of Chilhati Mine

(b) At Conceptual Stage

However, later on after development of proposed mine pits and with increasing mining depth, more groundwater seepage shall occur in the mine pits. The seepage volume will be maximum at the conceptual stage to the tune of 6,99,622 cum/annum or 1917 cum/day. Out of this 1917 cum/day of accumulated rainwater, 210 cum/day shall be utilized to meet daily water requirement of mining activities. Additional surplus water will be 1707 cum/day and out of this, 1400 cum/day shall be supplied to (i) ProposedIntegrated Cement Project - Clinker (2.72 MTPA), Cement (4.05 MTPA) and CPP (65 MW)adjacent to Chilhati mine and (ii) remaining 307 cum/day shall be distributedto nearby villages/village ponds to fulfil their drinking/domestic and irrigation water needs. Moreover, a substantial portion (up to 20-30%) of this water shall be recharged to subsurface-aquifer in due course of time which ultimately contributes towards augmentation of groundwater resources of the area. Schematic representation of probable utilization of pumped water (Groundwater Seepage only) at conceptual stage is given in **Figure 22.4**.

Proposed Utilizationof Pumped Water from Mine Pits (1917 cum/day) at Conceptual Stage	
1.	Mining Activities of Chilhati Limestone Mine (210 Cum/day)
2.	Cement Plant Operations-Proposed Integrated Cement Plant (1400 Cum/day)
2.	Water Supply to Nearby Villages for Drinking/Domestic Supply (200 Cum/day)
4.	Water Supply to Nearby Villages for Agriculture/Irrigation (107 Cum/day)

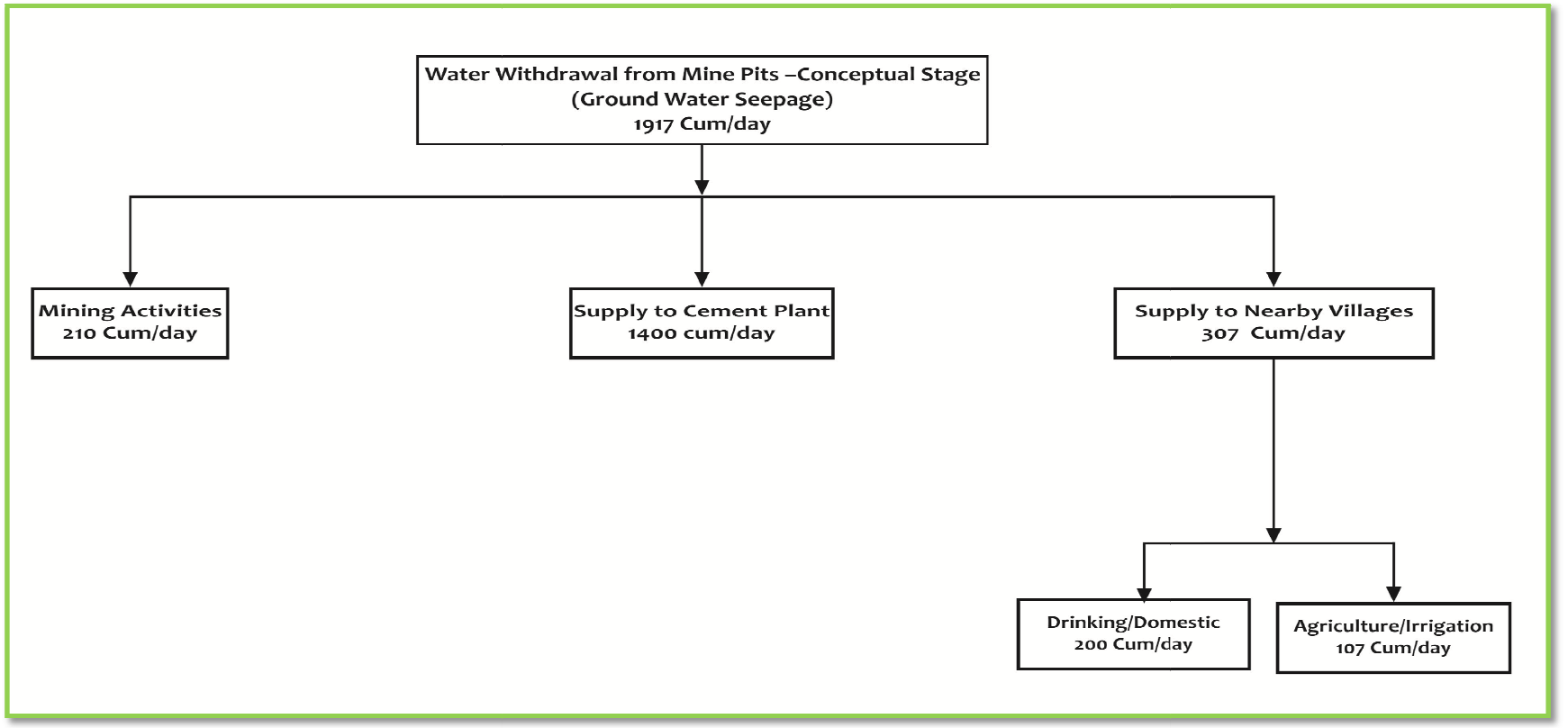
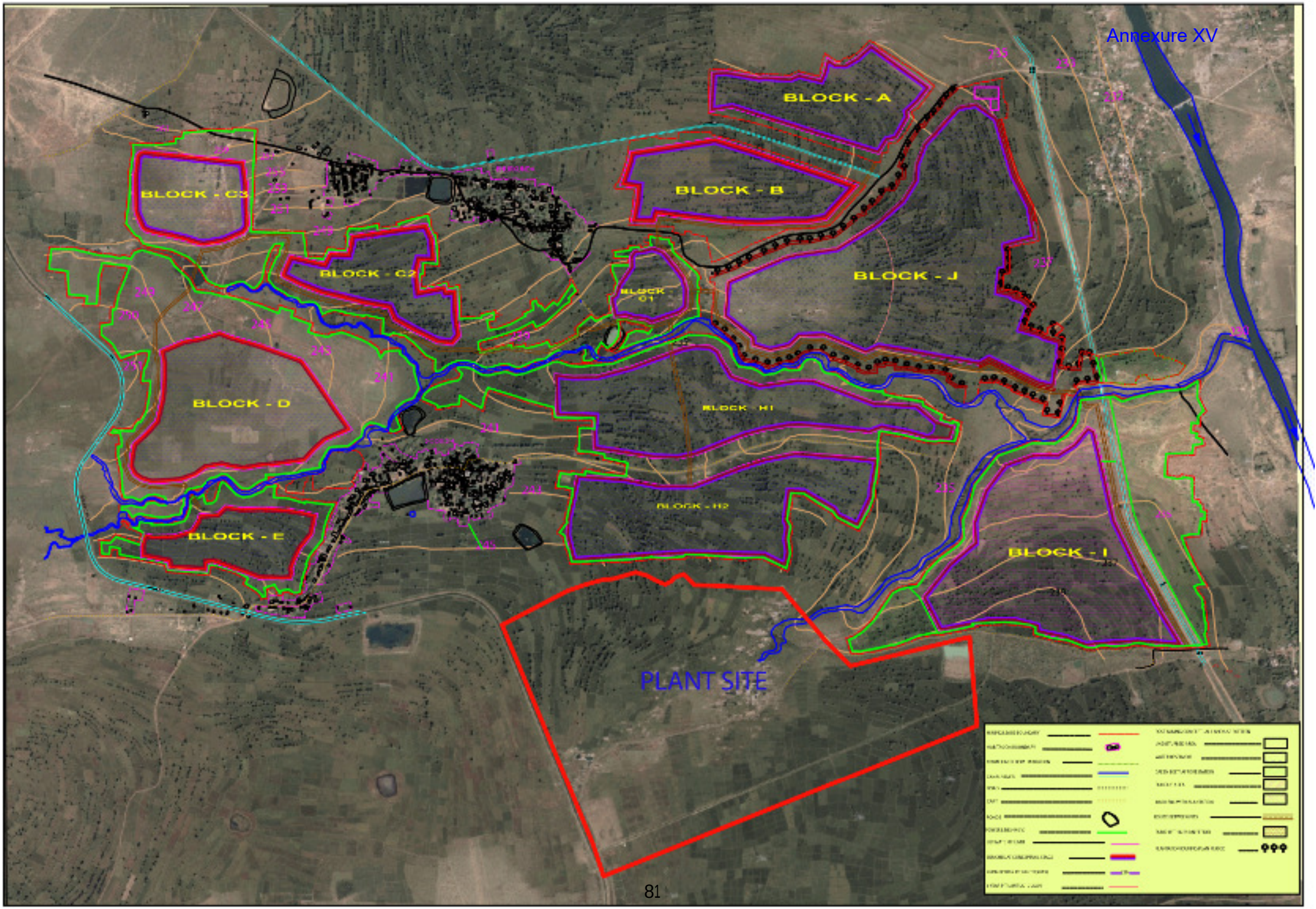


Figure 22.4: Proposed Utilization of Pumped Water (Conceptual Stage)


Annexure XV
BLOCK - A
BLOCK - B
BLOCK - C3
BLOCK - C2
BLOCK - C1
BLOCK - J
BLOCK - D
BLOCK - H1
BLOCK - H2
BLOCK - E
BLOCK - I
PLANT SITE

कार्यालय वनमंडलाधिकारी बिलासपुर वनमंडल बिलासपुर (छ.ग.)

|OFFICE TELEPHONE NO. & FAX -07752-226082
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कमांक/तक.अधि/ 2251 बिलासपुर दिनांक 2/8/2019

प्रति,

उपवनमण्डलाधिकारी
उपवनमण्डल बिलासपुर (छ.ग.)

विषय :– Request for certificate for no. forest land involved in the mining lease area for proposed limestone mine (ML Area: 582.962 Ha.) With lime Stone Production capacity of 3.9 million TPA and Waste/topsoil 225000 cum per annum (maximum) With installation of crusher of 1000 TPH Capacity at villages Bidiyadih Bhurkunda Godadih and Bo-hardih tehsil masturi district Bilaspur (C.G.)

संदर्भ :– 1.ए.सी.सी. लिमिटेड पो.ऑ. जामुल का पत्र दिनांक 20.07.2019
2. Ministry of Environment Forest And Climate Change Inpact Assessment Division का पत्र दिनांक 17.07.2019

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विषयान्तर्गत आवेदक संस्थान ए.सी.सी. लिमिटेड के द्वारा संदर्भित पत्र क्र. 02 की छायाप्रति प्रेषित करते हुये पत्र में दर्शित बिन्दु क्र. 11, 12, 16, 22 की जानकारी आवेदित स्थल का निरीक्षण कर प्रतिवेदन प्रस्तुत करने लेख किया गया है।

अतः संदर्भित पत्र क्र. 01 एवं 02 की संपूर्ण अभिलेख आपकी ओर प्रेषित की जा रही है। कृपया उपरोक्त स्थल का स्थल निरीक्षण कर Ministry of Environment Forest And Climate Change Inpact Assessment Division द्वारा चाही जा रही जानकारी यथाशीघ्र इस कार्यालय में प्रस्तुत करें। साथ ही निचे दिये गये बिन्दुओ पर जानकारी भी उपलब्ध करावें।

1. आवेदित क्षेत्र से वन क्षेत्र की दूरी कि.मी.
2. आवेदित स्थल पर कितने वृक्ष खड़े है/ प्रजाति वार संख्या बतावें
3. खनन से वन्य जीवों एवं पर्यावरण पर पड़ने वाले विपरीत प्रभाव की जानकारी
4. आवेदित क्षेत्र से 10 कि.मी. के दायरे में वनक्षेत्र, कृषि भूमि, चारागाह भूमि, वन्यजीव अभ्यारण्य, राष्ट्रीय उद्यान जीवों के प्रवासी मार्ग, जल निकायों, मानव बस्तियों और अन्य पारिस्थितिक क्षेत्र की जानकारी भी देवें।

वनमंडलाधिकारी
बिलासपुर वनमंडल बिलासपुर (छ.ग.)
बिलासपुर दिनांक 2/8/2019

पृ.क्रं./तक./ 2252

प्रतिलिपि :– ACC Limited General Manager – Environment Jamul Cement Works की ओर सूचनार्थ/आप उप.व.म.अ. बिलासपुर से संपर्क स्थापित कर आवेदित क्षेत्र का निरीक्षण करावें।

वनमंडलाधिकारी
बिलासपुर वनमंडल बिलासपुर (छ.ग.)

D/DM/MSWord/Tah.- L 18

33

कार्यालय वनमंडलाधिकारी बिलासपुर वनमंडल बिलासपुर (छ.ग.)

[OFFICE TELEPHONE NO. & FAX -07752-226082
[e-mail-dfo-bilaspur.cg@gov.in

कमांक / तक.अधि / ....4166.... बिलासपुर दिनांक 26/9/2019

प्रति,

प्रधान मुख्य वन संरक्षक
अरण्य भवन, रायपुर (छ.ग.)

विषय :– Request for certificate for no. forest land involved in the mining lease area for proposed limestone mine (ML Area: 582.962 Ha.) With lime Stone Production capacity of 3.9 million TPA and Waste/topsoil 225000 cum per annum (maximum) With installation of crusher of 1000 TPH Capacity at villages Bidiyadih Bhurkunda Godadih and Bohardih tehsil masturi district Bilaspur (C.G.)

संदर्भ :– 1.ए.सी.सी. लिमिटेड पो.ऑ. जामुल का पत्र दिनांक 20.07.2019
2. Ministry of Environment Forest And Climate Change Inpact Assessment Division का पत्र दिनांक 17.07.2019

––00––

विषयान्तर्गत आवेदक संस्थान .ए.सी.सी. लिमिटेड के द्वारा संदर्भित पत्र क्र. 02 की छायाप्रति प्रेषित करते हुये पत्र में दर्शित बिन्दु क्र. 11, 12, 16, 22 की जानकारी आवेदित स्थल का निरीक्षण कर प्रतिवेदन प्रस्तुत करने हेतु लेख किया गया है।

अतः आवेदित क्षेत्र का स्थल का सत्यापन उपवनमंण्डलाधिकारी बिलासपुर से कराया गया उपवनमंण्डलाधिकारी बिलासपुर के प्रतिवेदन अनुसार दर्शित बिन्दु क्र. 11, 12, 16, 22 की जानकारी निम्नानुसार है।

1 आवेदित क्षेत्र से वन क्षेत्र की दूरी 12 कि.मी.हैं । जो भरारी वन क्षेत्र के नाम से जाना जाता है।
2 भरारी वन स्थल पर वन्य प्राणियो का कभी–कभी विचरंण होता है। और वापस सीपत जंगल की ओर लौट जाते है। इसलिए खनन क्षेत्र से वन्य जीवो एवं पर्यावरंण पर कोई विपरित प्रभाव नही पडेगा ।
3 आवेदित क्षेत्र से 10 कि.मी. के दायरे में कोई वन्यजीव अभ्यारण्य, एवं राष्ट्रीय उद्यान नही है। ग्राम गोडाडिह. भुरकुण्डा विद्याडीह एवं बोहारडीह मानव बस्तीयां है। इन ग्रामो के किनारे से लीलागर नदी बहती है। जो कृषि एवं चारागाह भूमि है। ग्राम के नदी तालाब नालो का एवं परिस्थतिक तंत्र की मजबुति के लिये शासन के समस्त नियमो का पालन करते है, तो ए.सी.सी. लिमिटेड जामुल जिला दूर्ग (छ.ग.) द्वारा खनन परियोजना सीमेंट उधोग के लिए अनुमति दी जाती है तो विभाग को कोई आपत्ति नही है। **पूर्व में भी इस कार्यालय के पत्र क्र./मा.चि./2123 दिनांक 26.05.2009 के द्वारा चुना पत्थर के खनिज पट्टा हेतु अनापत्ति प्रमाण पत्र जारी किया गया था।**

संलग्नः– 01. दिनांक 26.05.2009में प्रेषित अनापत्ति प्रमाण पत्र की छायाप्रति।
02. संदर्भित पत्र 02 की छायाप्रति।
03. आवेदित स्थल का गुगल मैप की सत्य प्रति।

वनमंडलाधिकारी
बिलासपुर वनमंडल बिलासपुर (छ.ग.)
बिलासपुर दिनांक 26/9/2019

पृ.क्रं./तक./ 4167
प्रतिलिपि :– ACC Limited General Manager – Environment Jamul Cement Works की ओर अपका पत्र दिनांक 20.07.2019के संबंध में सूचनार्थ प्रेषित।

वनमंडलाधिकारी
बिलासपुर वनमंडल बिलासपुर (छ.ग.)

कार्यालय वनमंडलाधिकारी विलासपुर वनमंडल, विलासपुर (छ.ग.)

क्रमांक/ वा.शि./ विलासपुर, दिनांक 26/5/ 2009

प्रति, 2125/

जिलाधीश,
खनिज शाखा,
विलासपुर (छ.ग.)।

विषय– ग्राम गोंडाडीह, भुरकुंडा, बोहारडीह एवं विधाडीह तहसील गस्तूरी जिला विलासपुर छ.ग. के खसरा नं. सूची संलग्न, रकबा 582.962 हे. भूमि पर चुना पत्थर खनिज के खनि पट्टा के लिए श्री एस.सी.सी. लि. का आवेदन पत्र।

संदर्भ– आपका पत्र क्रमांक/ 141 दिनांक 21.04.2009.

विषयांतर्गत संदर्भित ज्ञापन के परिप्रेक्ष्य में ग्राम गोंडाडीह, भुरकुंडा, बोहारडीह एवं विधाडीह तहसील गस्तूरी जिला विलासपुर छ.ग. के खसरा नं. सूची संलग्न, रकबा 582.962 हे. भूमि पर चुना पत्थर के खनि पट्टा हेतु प्राप्त आवेदन पत्र का स्थल निरीक्षण उपवनमंडलाधिकारी विलासपुर वनगंडल विलासपुर से कराया गया है। जांच प्रतिवेदन अनुसार ग्रामवार प्रतिवेदन निम्नानुसार है:–

1) ग्राम गोंडाडीह, के कुल खसरा 463 क्षेत्रफल, 142.696 हे. निजी भूमि तथा 9 खसरा क्षेत्रफल 3.064 हे. शासकीय घास मद की राजस्व भूमि है।

2) ग्राम भुककुंडा, के कुल खसरा 439, क्षेत्रफल 129.208 हे. निजी भूमि तथा 38 खसरा क्षेत्रफल 40.333 हे. शासकीय घास मद की राजस्व भूमि है।

3) ग्राम वोहारडीह, के कुल खसरा 337, क्षेत्रफल 92.875 हे. निजी भूमि तथा 5 खसरा क्षेत्रफल 7.071 शासकीय घास मद की राजस्व भूमि है।

4) ग्राम विधाडीह के कुल खसरा 727, क्षेत्रफल 140.388 हे. निजी भूमि तथा 19 खसरा क्षेत्रफल 27.327 शासकीय घास मद की राजस्व भूमि है।

जांच प्रतिवेदन से स्पष्ट है कि आवेदित भूमि निजी एवं घास मद की शासकीय राजस्व भूमि है। वनभूमि नहीं है। अतएव श्री एस.सी.सी. लिमिटेड पोस्ट जामुल, सीमेंट वर्क्स जिला दुर्ग को चुना पत्थर खनिज के लिए खनि पट्टा जारी किया जाता है तो इस वनमंडल को आपत्ति नहीं है।

वनमण्डलाधिकारी
विलासपुर वनमण्डल विलासपुर (छ.ग.)

26/5/09
सहायक ग्रेड-III
वन-शाखा विलासपुर

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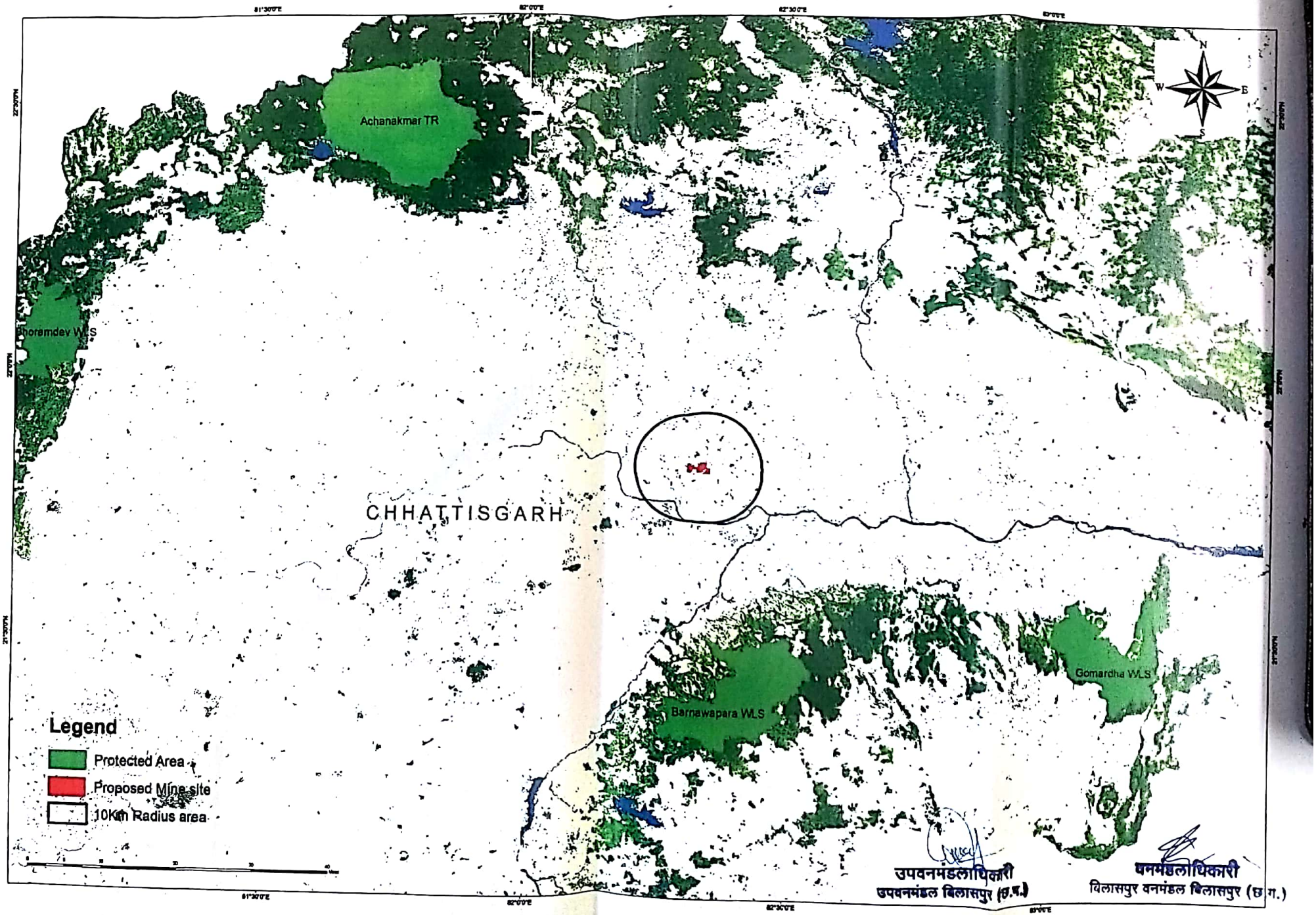
144

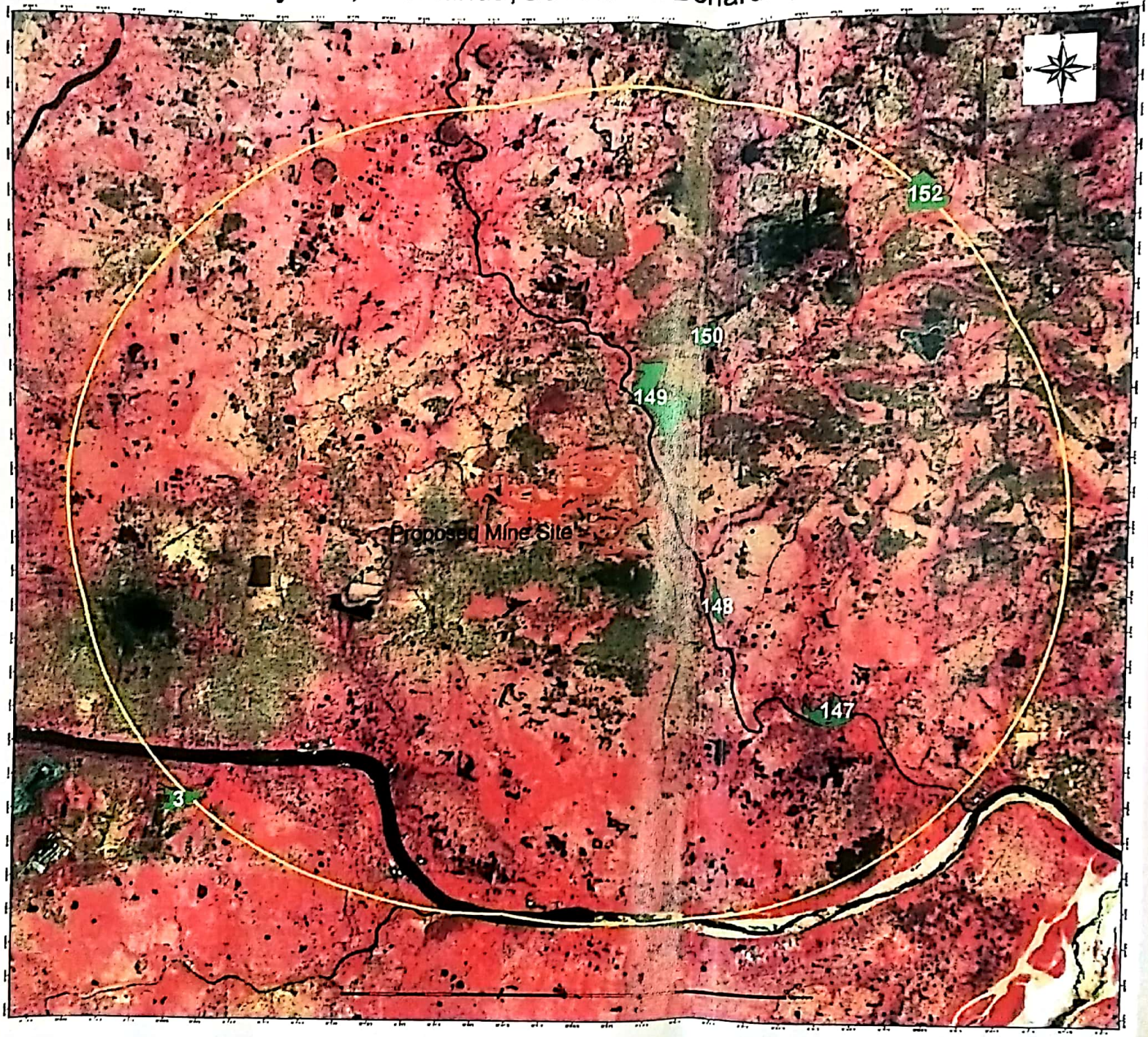
The Map Showing No Protected Areas,Biosphere Reserve,Wildlife Corridors,Important Bird areas,ESZ in 10Km radius of Proposed Limestone Mine at Villages Bidiyadhi,Bhurkunda,Godadih & Bohardih, Teshil Masturi,District Bilaspur,Chhattisgarh

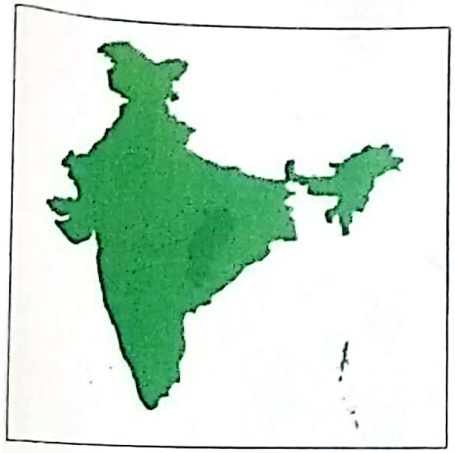


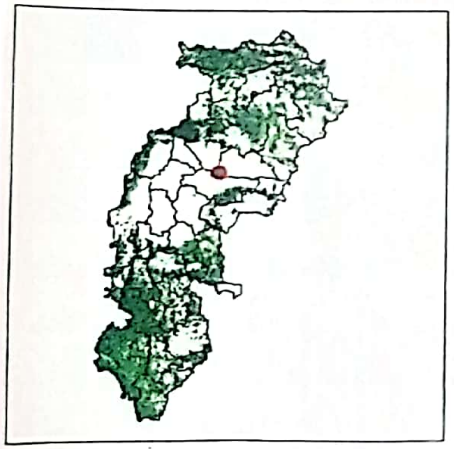
उपवनमंडलाधिकारी
उपवनमंडल बिलासपुर (छ.ग.)

वनमंडलाधिकारी
बिलासपुर वनमंडल बिलासपुर (छ.ग.)

The Satellite image showing Forest Land (Compartments) around the Proposed Mine Site at Village Bidiyadih,Bhurkunda,Godadih & Bohardih,Tehsil Masturi,District Bilaspur,Chhattisgarh







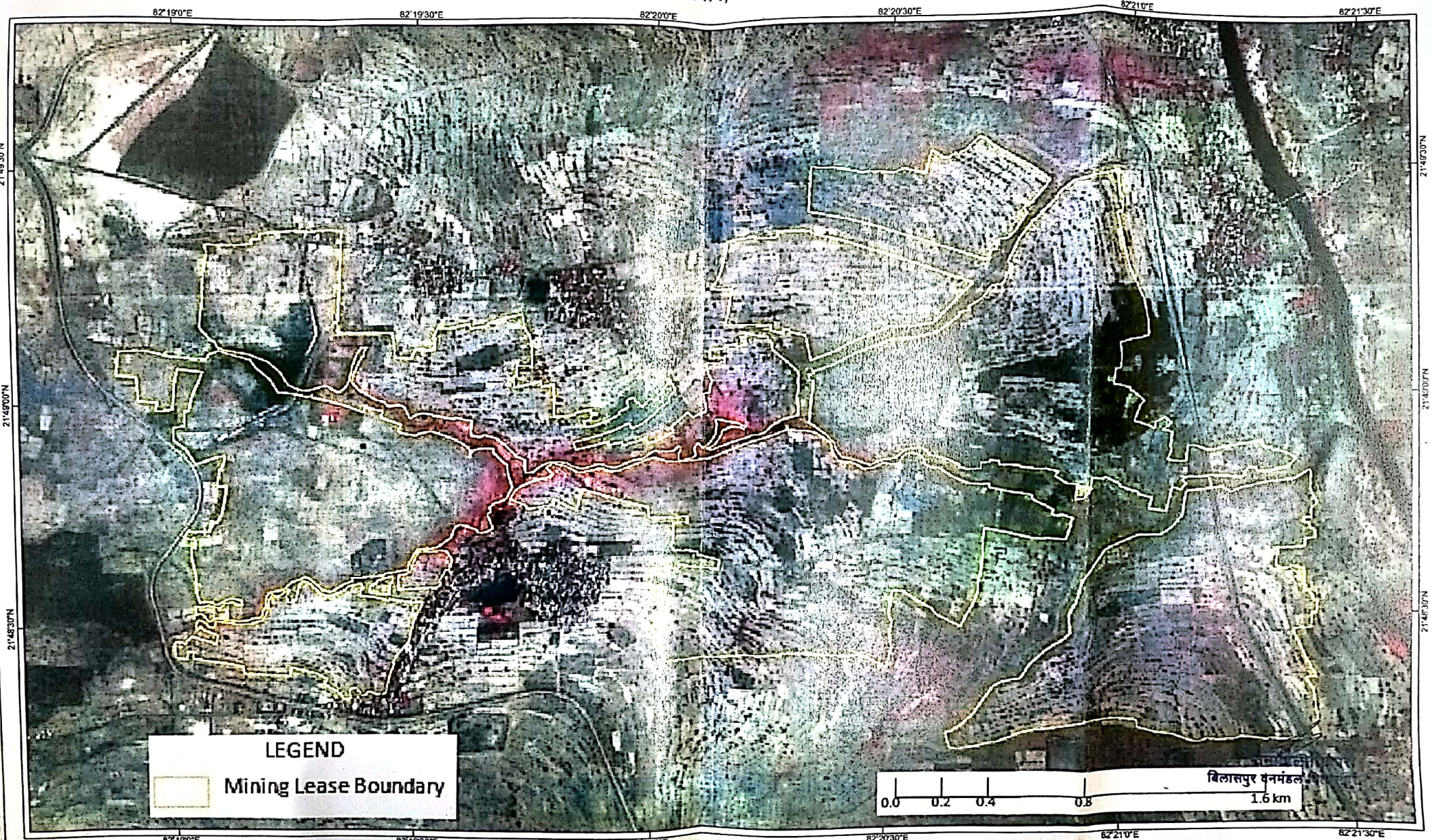
Legend

- Forest Compartment
- 10 Km Radius of Mine
- Proposed Mine Site

उपवनमंडलाधिकारी
उपवनमंडल बिलासपुर (छ.ग.)

वनमंडलाधिकारी
बिलासपुर वनमंडल बिलासपुर

MAP SHOWING NO FOREST LAND INVOLVED IN THE PROPOSED LIMESTONE MINES AT VILLAGE BIDIYADIH, GODADIH, BHURKUNDA & BOHARDIH, TEHSIL MASTURI, DISTRICT BILASPUR,CHHATISGARH



कार्यालय वनमंडलाधिकारी बिलासपुर वनमंडल बिलासपुर (छ.ग.)

|OFFICE TELEPHONE NO. & FAX -07752-226082
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कमांक/तक.अधि/ ....4166..... बिलासपुर दिनांक 26/9/2019

प्रति,

प्रधान मुख्य वन संरक्षक
अरण्य भवन, रायपुर (छ.ग.)

विषय :– Request for certificate for no. forest land involved in the mining lease area for proposed limestone mine (ML Area: 582.962 Ha.) With lime Stone Production capacity of 3.9 million TPA and Waste/topsoil 225000 cum per annum (maximum) With installation of crusher of 1000 TPH Capacity at villages Bidiyadih Bhurkunda Godadih and Bohardih tehsil masturi district Bilaspur (C.G.)

संदर्भ :– 1.ए.सी.सी. लिमिटेड पो.ऑ. जामुल का पत्र दिनांक 20.07.2019
2. Ministry of Environment Forest And Climate Change Inpact Assessment Division का पत्र दिनांक 17.07.2019

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विषयान्तर्गत आवेदक संस्थान .ए.सी.सी. लिमिटेड के द्वारा संदर्भित पत्र क्र. 02 की छायाप्रति प्रेषित करते हुये पत्र में दर्शित विन्दु क्र. 11, 12, 16, 22 की जानकारी आवेदित स्थल का निरीक्षण कर प्रतिवेदन प्रस्तुत करने हेतु लेख किया गया है।

अतः आवेदित क्षेत्र का स्थल का सत्यापन उपवनमंण्डलाधिकारी बिलासपुर से कराया गया उपवनमंण्डलाधिकारी बिलासपुर के प्रतिवेदन अनुसार दर्शित विन्दु क्र. 11, 12, 16, 22 की जानकारी निम्नानुसार है।

1 आवेदित क्षेत्र से वन क्षेत्र की दूरी 12 कि.मी.हैं । जो भरारी वन क्षेत्र के नाम से जाना जाता है।
2 भरारी वन स्थल पर वन्य प्राणियो का कभी–कभी विचरंण होता है। और वापस सीपत जंगल की ओर लौट जाते है।/इसलिए खनन क्षेत्र से वन्य जीवो एवं पर्यावरंण पर कोई विपरित प्रभाव नही पडेगा ।
3 आवेदित क्षेत्र से 10 कि.मी. के दायरे में कोई वन्यजीव अभ्यारण्य, एवं राष्ट्रीय उद्यान नही है। ग्राम गोडाडिह, भुरकुण्डा विद्याडीह एवं वोहारडीह मानव बस्तीयां है। इन ग्रामो के किनारे से लीलागर नदी वहती है। जो कृषि एवं चारागाह भूमि है। ग्राम के नदी तालाब नालो का एवं परिस्थतिक तंत्र की मजवुति के लिये शासन के समस्त नियमो का पालन करते है, तो ए.सी.सी. लिमिटेड जामुल जिला दूर्ग (छ.ग.) द्वारा खनन परियोजना सीमेंट उधोग के लिए अनुमति दी जाती है तो विभाग को कोई आपत्ति नही है। <u>पूर्व में भी इस कार्यालय के पत्र क्र./मा.चि./2123 दिनांक 26.05.2009 के द्वारा चुना पत्थर के खनिज पट्टा हेतु अनापत्ति प्रमाण पत्र जारी किया गया था।</u>

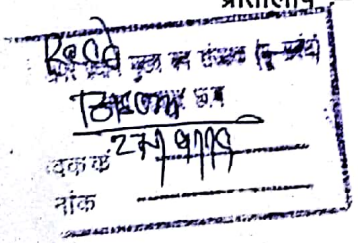
संलग्नः– 01. दिनांक 26.05.2009में प्रेषित अनापत्ति प्रमाण पत्र की छायाप्रति।
02. संदर्भित पत्र 02 की छायाप्रति।
03. आवेदित स्थल का गुगल मैप की सत्य प्रति।

वनमंडलाधिकारी
बिलासपुर वनमंडल बिलासपुर (छ.ग.)
बिलासपुर दिनांक 26/9/2019

पृ.क्रं./तक./ 4167

प्रतिलिपि :– ACC Limited General Manager – Environment Jamul Cement Works की ओर अपका पत्र दिनांक 20.07.2019के संवंध में सूचनार्थ प्रेषित।

वनमंडलाधिकारी
बिलासपुर वनमंडल बिलासपुर (छ.ग.)



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कार्यालय वनमंडलाधिकारी बिलासपुर वनमंडल बिलासपुर (छ.ग.)

|OFFICE TELEPHONE NO. & FAX -07752-226082
|e-mail-dfo-bilaspur.cg@gov.in

क्रमांक/तक.अधि/.................. बिलासपुर दिनांक ....

प्रति,

प्रधान मुख्य वन संरक्षक
अरण्य भवन, रायपुर (छ.ग.)

विषय :— Request for certificate for no. forest land involved in the mining lease area for proposed limestone mine (ML Area: 582.962 Ha.) With lime Stone Production capacity of 3.9 million TPA and Waste/topsoil 225000 cum per annum (maximum) With installation of crusher of 1000 TPH Capacity at villages Bidiyadih Bhurkunda Godadih and Bohardih tehsil masturi district Bilaspur (C.G.)

संदर्भ :— 1.ए.सी.सी. लिमिटेड पो.ऑ. जामुल का पत्र दिनांक 20.07.2019
2. Ministry of Environment Forest And Climate Change Inpact Assessment Division का पत्र दिनांक 17.07.2019

—00—

विषयान्तर्गत आवेदक संस्थान ए.सी.सी. लिमिटेड के द्वारा संदर्भित पत्र क्र. 02 की छायाप्रति प्रेषित करते हुये पत्र में दर्शित बिन्दु क्र. 11, 12, 16, 22 की जानकारी आवेदित स्थल का निरीक्षण कर प्रतिवेदन प्रस्तुत करने हेतु लेख किया गया है।

अतः आवेदित क्षेत्र का स्थल का सत्यापन उपवनमण्डलाधिकारी बिलासपुर से कराया गया उपवनमण्डलाधिकारी बिलासपुर के प्रतिवेदन अनुसार दर्शित बिन्दु क्र. 11, 12, 16, 22 की जानकारी निम्नानुसार है।

1 आवेदित क्षेत्र से वन क्षेत्र की दूरी 12 कि.मी.है । जो मरारी वन क्षेत्र के नाम से जाना जाता है।
2 मरारी वन स्थल पर वन्य प्राणियो का कभी–कभी विचरण होता है। और वापस सीपत जंगल की ओर लौट जाते है। इसलिए खनन क्षेत्र से वन्य जीवो एवं पर्यावरण पर कोई विपरित प्रभाव नही पड़ेगा ।
3 आवेदित क्षेत्र से 10 कि.मी. के दायरे में कोई वन्यजीव अभ्यारण्य, एवं राष्ट्रीय उद्यान नही है। ग्राम गोडाडिह, भुरकुण्डा बिद्याडीह एवं बोहारडीह मानव बस्तीया है। इन ग्रामो के किनारे से लीलागर नदी बहती है। जो कृषि एवं चारागाह भूमि है। ग्राम के नदी तालाब नालो का एवं परिस्थतिक तंत्र की मजबुति के लिये शासन के समस्त नियमो का पालन करते है, तो ए.सी.सी. लिमिटेड जामुल जिला दुर्ग (छ.ग.) द्वारा खनन परियोजना सीमेंट उधोग के लिए अनुमति दी जाती है तो विभाग को कोई आपत्ति नही है। <u>पूर्व में भी इस कार्यालय के पत्र क्र./मा.चि./2123 दिनांक 26.05.2009 के द्वारा चुना पत्थर के खनिज पट्टा हेतु अनापत्ति प्रमाण पत्र जारी किया गया था।</u>

संलग्नः— 01. दिनांक 26.05.2009में प्रेषित अनापत्ति प्रमाण पत्र की छायाप्रति।
02. संदर्भित पत्र 02 की छायाप्रति।
03. आवेदित स्थल का गुगल मैप की सत्य प्रति।

वनमंडलाधिकारी
बिलासपुर वनमंडल बिलासपुर (छ.ग.)

पृ.क्र./तक./ बिलासपुर दिनांक..........

प्रतिलिपि :— ACC Limited General Manager – Environment Jamul Cement Works की ओर आपका पत्र दिनांक 20.07.2019के संबंध में सूचनार्थ प्रेषित।

वनमंडलाधिकारी
बिलासपुर वनमंडल बिलासपुर (छ.ग.)

COMPLIANCE OF OM DATED 29.10.2014

Point No. 1 **The Project Authority shall adopt Best Mining Practice for the given mining conditions. In the mining area, adequate number of check dams, retaining walls/structures, garland drains and settling ponds should be provided to arrest the wash off with rainwater in catchment area.**

Reply

- Protective bunds along the entire length of nallahs on both the sides; plantation for stabilization.
- Check dams across the seasonal nallah to prevent sedimentation / siltation of natural water courses with prior permission from Concerned Authority.
- Garland drains/storm water drains along with siltation ponds at regular intervals will be constructed through proper plan.
- No surface run off from working mine pit will be allowed to join natural water courses / streams of surrounding areas.

Point No. 2 **The natural water bodies and or streams which are flowing in and around the village should not be disturbed. The water table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Authorities have to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug well located in village should be incorporated to ascertain the impact of mining over ground water table**

Reply

- Periodical monitoring of surface/groundwater quality and stream flows will be undertaken to understand the impact of mining and plan remedial measures.
- Retaining walls, Garland drains, along the periphery of pits and dumps for collection of surface runoff will be constructed along with settling tanks to arrest silt, clay and sediments.
- Three number of Village Ponds at Bhurkunda, Bidiyadih and Godadih shall be adopted for Rainwater harvesting and artificial groundwater recharge along with installation of recharge shafts.
- Apart from that, excess rainwater in mine sump shall be supplied/transferred to nearby villages for irrigation purpose, thereby reducing the groundwater withdrawal for the same.
- At the conceptual stage, part of the mined out pit admeasuring 306 ha area will be converted into water reservoir; thereby augmenting the water resources of area.

Point No. 3 **The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. The Project Proponent (PPs) must ensure that the biological clock of the villagers is not disturbed by orienting the floodlights/masks away from the villagers and keeping the noise levels well within the prescribed limits for day/night hours**

Reply No light source will be facing towards the villagers so that the illumination at night at project site does not disturb the villages in respect of both human and animal population. Controlled blasting will be carried out in day time only so that biological clock of the villagers is not disturbed. Noise levels will

remain within permissible limits through sustainable mining practices so that the villages do not have sleeping disorders or stress which may affect their health.

Point No. 4 **The Project Authority shall make necessary alternative arrangements, where required. In consultation with the State Government to provide alternate areas for livestock grazing. In this context, Project Authority should implement the directions of the Hon'nle Supreme Court with regard to acquiring grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded against felling. Lest the cattle abandon the grazing ground or return home by noon**

Reply Total grazing land involved in this mining project is 4.905 ha in Bhurkunda Village (Khasra no 646). Alternate grazing land will be developed in Bhurkunda Village with due permission of the Collector, Bilaspur.

Point No. 5 **Where ever blasting is undertaken as part of mining activity, The Project Authority shall carry out vibration studies well before approaching any such habitats or other buildings to evaluate the zone of influence and impact of blasting on the neighbourhood. Within 500 meters of such sites vulnerable to blasting vibrations, avoidance of use of explosives and adoption of alternative means of mineral extraction, such as ripper/dozer combination/rock breakers/surface miners etc. should be seriously considered and practiced wherever practicable. A provision for monitoring of each blast should be made so that the impact of blasting on nearby habitation and dwelling units could be ascertained. The covenant of lease deed under Rule 31 of MCR 1960 provides that no mining operations shall be carried out within 50 meters of public works such as public roads and buildings or inhabited sites except with the prior permission from the Competent Authority.**

Reply

- Limestone extraction will be done by conventional mining (drilling blasting, loading and hauling).
- Based on experience in similar mines in the State and current regulations, necessary permission will be obtained from competent authorities for controlled blasting within 300 meter and upto 100 m from the villages/habitation.
- No mining will be carried out within 50 m safety zone from the villages, public work, nallah etc.
- Beyond 50 m safety zone and upto 100 m vulnerable blasting zone, mining will be carried out by alternative means of mineral extraction viz Hydraulic Rock breaker / mechanized breaking/vibro ripper/ terminator etc.
- Controlled blasting with proper monitoring will be integral part of the mining process and no secondary blasting will be done.
- Hydraulic Rock breaker / mechanized breaking will be done to eliminate the secondary blasting, if required.
- Regular ground vibration monitoring will be undertaken to improve blasting and to avoid any damage to structures of habitants.

Point No. 6 **Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. Crusher and material transfer points should invariably be provided with Bag Filters and or dry fogging system. Belt-conveyors should be fully covered to avoid air borne dust.**

Reply Main haulage road in the mine will be provided with permanent water sprinklers and other haul roads will be regularly wetted with water tankers fitted with sprinklers. Crusher and material transfer points will be provided with Bag Filters and the hopper will have dry fogging system. Belt-conveyors would be fully covered to avoid dust being air borne.

Point No. 7 **The Project Authority shall ensure that the productivity of agricultural crops is not affected due to mining operations. Crop Liability Insurance Policy has to be taken by the PP as a precaution to compensate from any crop loss. The impact zone shall be 5 km from the boundary of mine lease area for such insurance policy. In case, several mines are located in a cluster, the Associations of owners of the cluster mines, formed inter-alia, to sub-serve such an objective, shall take responsibility for securing such Crop Liability Policy.**

Reply No village is located within the mining lease area. Every effort will be made to ensure that the productivity of agricultural crops is not affected due to mining operations. The crushed material will be transported to cement plant via covered conveyor belt which will avoid air borne dust. ACC will develop thick green belt within 7.5 m area all along the mining lease boundary besides development of plantation in other safety barriers of upto 50 m width.

Point No. 8 **In case any village is located within the mining leasehold which is not likely to be affected due to mining activities during the life of mine, the Expert Appraisal Committee (EAC) should consider the proposal of Environmental Clearance (EC) for reduced -mining area. The Mining lease may be executed for the area for which EC is accorded. The mining plan may also he accordingly revised and required stipulations under the MMDR Act, 1957 and MCR, 1960 met**

Reply No village has been located within the mining lease area.

Point No. 9 **Transportation of the minerals by road passing through the village shall not be allowed. A `bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The PP shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads**

Reply

- About 13000 TPD limestone from mine site after processing in mobile crusher will be transported to the proposed cement plant by covered belt conveyor.

- Till setting up of the Chilhati Cement Plant, a small quantity of limestone (approx. 10000-15000 tons per annum) may be dispatched to Jamul Plant of ACC Limited situated at Durg District, Chhattisgarh by Road.
- However, no major re-routing or alteration of foot paths, cart road, pagdandies etc will be done which affect movement of local habitants except those falling in between mineable blocks

Point No. 10 **Likewise, alteration or re-routing of foot paths, pagdandies, cart roads, and village infrastructure/public utilities or roads (for purposes of land acquisition for mining) shall be avoided to the extent possible and in case such acquisition is inevitable, alternative arrangements shall be made first and then only the area acquired. In these types of eases. Inspection Reports by site visit by experts may be insisted upon which should he done through reputed Institutes**

Reply No re-routing or alteration of foot paths, cart road, pagdandies, etc will be done.

Point No. 11 **As CSR activities by Companies including the Mining Establishments has become mandatory up to 2% of their financial turn-over. Socio Economic Development of the neighborhood Habitats could also be planned and executed by the PP's more systematically based on the Need based door to door survey' by established Social Institutes/Workers on the lines as required under TOR. "R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should he kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village located in the mine lease area will be shifted or not. The issues relating to shifting of Village including their R&R and socio-economic aspects should be discussed in the EIA report."**

Reply The Company has allocated Rs 2.5 Crores towards CER activities for the proposed mining project. CER activities will be carried out based on the issues raised during public hearing.

Office of Executive Engineer,
Kharang Water Resources Division, Bilaspur (CG)

Letter No...../Tech/2018 Bilaspur, dated .....

To,

Officer on Special Duty,
CG State, Water Resources Department,
Mantralaya, Mahanadi Bhavan, Capital Complex,
Naya Raipur (CG)

Sub: Regarding 1.58 MQM annual water allotment/sanction from Leelagar River to M/s ACC Jamul Cement Works Ltd. Durg, for the proposed 4.05 MTPA Cement Plant and 65 Mega Watt Captive Power Plant near Distt. Bilaspur, Block-Masturi, Village-Vidyadeeh, Bohardeeh etc. and for payment of commitment charges.

Ref: Your Endor.6209/F 4-231/S-2/31/IWM/13 dated 08.12.2017

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In compliance of the above letter under reference, for 1.58 MQM annual water sanction from Leelagar River to M/s ACC Jamul Cement Works Ltd. Durg, for the proposed 4.05 MTPA Cement Plant and 65 Mega Watt Captive Power Plant near Distt. Bilaspur, Block-Masturi, Village-Vidyadeeh, Bohardeeh etc., the commitment charges of Rs.39,500/- (Rupees thirty nine thousand five hundred only) has been paid which has been deposited in the State Bank of India, Collectorate Branch, Bilaspur through Challan No.38 dated 19.01.2018. Submitted for information and necessary action.

Enclosure: Copy of the Challan.

Sd/-
Executive Engineer-in-Chief,
Kharang Water Resources Division,
Bilaspur (CG)

Endors.No.469/Tech/2018 Bilaspur, dated 24/01/2018

Copy to:-

01. Engineer-in-Chief, Water Resources Department, Sihava Bhavan, Raipur (CG)

P.R. Patankar (Advocate)
R-4/17 Ramavalley
Raipur Road, Bilaspur (C.G.)
Mob. 9425242284

02. Chief Engineer, Hasdev Kachhar, Water Resources Department, Bilaspur (CG)

03. Superintendeing Engineer, Water Resources Board, Bilaspur (CG)

04. Director, ACC Ltd., Post-Jamul Cement Works, Distt. Durg (CG) for information.

Enclosure: As above

Sd/- Illegible
Executive Engineer-in-Chief,
Kharang Water Resources Division,
Bilaspur (CG)

Translated Copy

3/9/19

P.R. Patankar (Advocate)
R-4/17 Ramavalley
Raipur Road, Bilaspur (C.G.)
Mob. 9425242284

State of Chhattisgarh

Water Resources Department

Mantralaya, Raipur

No.2296/7-A/WR/TSHA/IWM/02/D-4, Dated 20/04/2007

Sub: Regarding fixation of commitment charges in lieu of water allotment/reservation/sanction for industrial/drinking water use.

By the Notification No.843/7-A/WR/TSHA/IWM/02/D-4 dated 20.02.2004 of the State of Chhattisgarh, Water Resources Department, Manatralaya, various Industrial Institutes, Urban Bodies, Government and Semi-Government Departments in the entire State are to fix commitment charges against water allotment/reservation/sanction for industrial/drinking water use from government/natural sources, and in this notification, amendment has been made as per Amendment Letter No.1942//7-A/WR/TSHA/IWM/02/D-4, dated 30.03.2007 of the Government.

In the subject matter of the case, having considering the aforesaid notification dated 20.02.2004 with the amendment dated 30.03.2007, for fixation of commitment charges, the following instructions are issued:

1. In the event of decision by the State Government for water allotment/reservation from government/natural sources, the concerned Institute before the allotment order shall make payment of commitment charges to the Water Resources Department at the rate of Rs.25,000/- (Rupees twenty five thousand only) per Million Cubic Meter. Thereafter only the formal sanction letter regarding water allotment/reservation shall be issued by the department. This amount shall not be adjusted in the regular water tax or any other amount and shall also not be refundable.

2. On the basis of quantity of water allotted, concession in the prescribed period for use of water from government/natural sources shall be as under:

P.R. Patankar (Advocate)
R-4/17 Ramavalley
Raipur Road, Bilaspur (C.G.)
Mob. 9425242284

2.1 Industrial Water Supply to Industrial Institutes: -

Category	Quantity of water allotted	Concession Period (From the date of allotment/reservation letter)
i	Upto 10 Million Cubic Meter per annum	2 years
ii	10 to 25 Million Cubic Meter per annum	3 years
iii	Above 25 Million Cubic Meter per annum	4 years

2.2 Drinking water supply to Urban and Local Bodies: -

Category	Quantity of water allotted	Concession Period (From the date of allotment/reservation letter)
i	Upto 30 Million Cubic Meter per annum (approx. 1 TMC)	2 years
ii	30 to 150 Million Cubic Meter (approx. 1 to 5 TMC) per annum	3 years
iii	Above 150 Million Cubic Meter (approx. 5 TMC) per annum	4 years

3. If even after the aforesaid prescribed concession period, the allottee does not commence use of water from the government sources, water tax of 5% of the entire quantity of water allotted/reserved in the first year and 10% in the second year shall have to be deposited within three months after expiry of the concerned year as additional commitment charges.

4. In case of drawing of water from natural sources, 50% of the prescribed amount as per Clause 3 for drawing of water from government sources will be only payable.

5. If after the prescribed period, partial use of the allotted/reserved water is commenced without agreement, then for the remaining water, water tax of 50% of the remaining quantity of water or water tax in the form of penalty imposed under Rule 73 of Section 44 of Irrigation Act, 1974 for want of agreement, whichever is higher, shall be payable. This amount shall be payable within three months from the date of issuance of demand letter and immediate execution of agreement shall be

P.R. Patankar (Advocate)
R-4/17 Ramavalley
Raipur Road, Bilaspur (C.G.)
Mob. 9425242284

mandatory or else water allotment shall be cancelled. If the allottee even after execution of the agreement does not utilize the water allotted to it completely, then its water allotment sanction shall be reduced in proportion to the quantity of water being not used by it. This condition shall not be applicable to the water electricity cases.

6. In case of non-payment of amount of Clauses 3 & 4 in the prescribed period, the amount shall be recoverable with interest @ 15% per annum.

7. Even after the concession period, if the Institute does not commence use of water after two years, the water allotment/reservation shall be deemed to be automatically cancelled with immediate effect and the Government shall be at liberty to allot/reserve this water to any other for its use.

8. This order shall also be applicable to those cases where water is allotted on the condition of recovery of "commitment charges".

9. In the cases of sanction regarding use of water for the purpose of water electricity generation (again receiving after use of water), on State Government taking decision on sanction for use of water from government/natural sources, the concerned Institute shall pay commitment charges at the rate of Rs.25,000/- (Rupees twenty five thousand only) per megawatt prior to allotment order to the Water Resources Department. Thereafter only the formal sanction letter shall be issued by the department. This amount shall not be adjusted in the regular water tax or any other amount and shall also not be refundable. As against the sanction for use of water from government/natural sources to Hydro Houses, the time limit (concession period) for commencement of use of water, as per total electric generation capacity of the Hydro House shall be for 10 Megawatt per year upto two years, 10 to 25 Megawatt per year upto three years and for above 25 Megawatt per year upto four years. Along with this, in cases related to hydro electric purposes if the allottee does not commence use of water from the government sources even after the prescribed concession period, water tax of 5% of the total electric generation

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capacity of the hydro house in the first year and 10% in the second year shall have to be deposited within three months after expiry of the concerned year as additional commitment charges. In cases related to hydro electric purposes the conditions prescribed as per Clauses 4, 6, 7 & 8 shall remain intact.

By name and order of Governor of the Chhattisgarh

Sd/Illegible
19.4.2007
(Dilip Wasnikar)
Joint Secretary,
Water Resources Department,
Mantralaya, Raipur

Translated Copy

P. R Patankar
3/9/19

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State of Chhattisgarh

Water Resources Department

Mantralaya

Mahanadi Bhavan, Atal Nagar,

Distt. Raipur

No...../F 4-231/S-2/31/IWM/13, Atal Nagar, dated /09/2018

To,

Chief Engineer,
Hasdev Kachhar,
Water Resources Department,
Bilaspur (CG)

Sub: Regarding 1.58 MQM annual water allotment/sanction from Leelagar River to M/s ACC Jamul Cement Works Ltd. Durg, for the proposed 4.05 MTPA Cement Plant and 65 Mega Watt Captive Power Plant near Distt. Bilaspur, Block-Masturi, Village-Vidyadeeh, Bohardeeh etc.

Ref:
1. Letter No.3451519/IWM/CG/014/2176-2177 dated 17.12.2014 of Engineer-in-Chief.
2. Letter No.3451519/IWM/CG/015/14448-14449 dated 28.10.2015 of Engineer-in-Chief.
3. Letter No.5359-5360/7/WR/TSHA/IWM/01/D-4, dated 18.10.2017 of the State Government.
4. Your Letter No.251/Works/D-5, dated 02.02.2018.

--00--

With reference to the above, as per decision taken by the State Water Resources Utilization Committee, Chhattisgarh in its 41st meeting dated 11.10.2017, allotment/sanction of 1.58 MQM annual water from Leelagar River through government sources from Bohradeeh Anicut under construction in Leelaghar River and constructed Kenvtadeeh (Bhutha) Anicut (Offtake Point) to M/s ACC Jamul Cement Works Ltd. Durg, for the proposed 4.05 MTPA Cement Plant and 65 Mega Watt Captive Power Plant

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near Distt. Bilaspur, Block-Masturi, Village-Vidyadeeh, Bohardeeh etc. is granted under the following conditions:

1. As per Clause No.1 of the Circular dated 20.4.2007 issued by the State Government for commitment charges in lieu of water allotment/reservation/sanction for industrial/drinking water use in the case, the commitment charges of Rs.39,500/- (Rupees thirty nine lacs five hundred only) paid by the institute, shall not be adjusted in regular water tax or any other amount, and shall also not be refundable.

2. For the purpose of drawing water from Leelaghar River, the necessary arrangements (construction of Intake-well, laying of pipe lines etc.) for supply of water from the proposed fixed place to one's plant shall be made on one's own expenses after approval from the Water Resources Department.

3. In the case, installation of Standard Water Measurement Device in the Pump House for measuring the water supplied shall be done by the Institute on its own expenses and calibration of the Standard Water Measurement Device shall be done in presence of concerned authorities of the department. The department having sealed the Standard Water Measurement Device shall have its control. Entry of the concerned authorities and employees of the department in the Pump House shall always be free from hurdles.

4. Whatever problem occurs during the course of laying of pipe lines concerning the land acquisition and incidental thereto, for supply of water from the government source of Leelagar River, shall be sorted out by the Institute on its own expenses. Besides this, compliance of the Model Rehabilitation Policy-2007 (As amended) of the Chhattisgarh State shall be mandatory.

5. The assessment and review of the sanctioned quantity of water based on the actual drawing of water by the Institute shall be done by the State from time to time.

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6. The Water Resources Department shall be free to use the water above and below the place proposed for drawing of water from Leelagar River.

7. The Institute shall not cause any adverse effect on the rights of the local people for use of water such as drinking water and Nistar (release) etc. and for this purpose shall always keep the necessary quantity of water reserved for Bohardeeh Anicut and Kenvtadeeh (Bhutha) Anicut.

8. The Institute by making balancing reservoir (pond) at its own expenses in the premises of its plant shall store the necessary quantity of water as per its requirement for 60 days.

9. The Institute shall utilize the used water released from its plant by recycling it and shall release the water as per norms and rules prescribed by the Chhattisgarh Environment Conservation Board so that there should not be any water pollution in the area.

10. Before utilizing the water, the Institute shall have to execute an agreement in the prescribed format – 7(A) of the department as per directions/approval of the Chief Engineer, Hasdev Kachhar, Water Resources Department, Bilaspur.

11. The Institute shall have to pay water tax and commitment charges as per rules to the Water Resources Department at water rate as prescribed by the Government from time to time for use of water from government sources for industrial purposes and in respect of commitment charges, compliance of the circular dated 20.4.2007 issued by the Government shall be binding on the Institute.

12. In this case, the instant sanction for water supply is based on the present available datas/circumstances. If in future there is deficiency in water flow of the river or water collection structures for any reason, the Government shall not be responsible for this and no claim of any nature shall be maintainable against the Government in this regard.

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13. As per circular dated 20.4.2007 issued by the Government regarding commitment charges, the Institute shall have to commence use of water within a period of two years from the date of issuance of this sanction letter. If use of water within this period is not started by the Institute, the time limit for commencement of use can be extended for a further maximum period of two years and for this, water tax of 5% of the entire quantity of water allotted/reserved in the first year and 10% in the second year shall have to be deposited within three months after expiry of the concerned year as additional commitment charges. Even after payment of additional commitment charges as per prescribed maximum time limit of two years if the Institute does not commence use of water and does not comply with all the above prescribed conditions, the water allotment/reservation shall be deemed to be automatically cancelled with immediate effect and the Government shall be at liberty to allot/reserve this water to any other for its use.

Enclosure: NIL.

Sd/ Illegible
6/9/18
(Yaqub Khan)
Joint Secretary,
Chhattisgarh State,
Water Resources Department

Translated Copy

3/9/19

P.R. Patankar (Advocate)
R-4/17 Ramavalley
Raipur Road, Bilaspur (C.G.)
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Annexure XIX

ACC Limited
Registered Office
121, Maharshi Karve Road
Mumbai 400 020, India

Phone +91 22 6665 4294
Fax +91 22 6631 7421

Ref.: Legal/LOA/JL/Chil/1709
Date: 17.09.2019

LETTER OF AUTHORITY

We, hereby authorize Mr. Vaibhav Dixit, Director - Plant, Jamul Cement Works, to act on behalf of ACC Limited (hereinafter referred to as "the Company") and in its name and to prepare, sign, submit, pursue and / or rectify, as the case may be of various applications, documents and writings in connection with the Chilhati Limestone Mine at Village - Godadhi, Bohardhi, Loharsi Tehsil - Masturi, District - Bilaspur, in the State of Chhattisgarh (referred to as "Chilhati Project"), with the Central and / or other State Government / Statutory authorities and to do all the necessary acts, deeds, matters and things as may be required in pursuance thereof.

This Letter of Authority is issued to Mr. Vaibhav Dixit, in furtherance of the POA dated 05.10.2018 issued to him by the Company to enable him to act on behalf of the Company and to carry on the day to day activities of Jamul Cement Works including those related to the mining and allied activities as may be required for the said Cement Works.

This Letter of Authority shall be valid till 04.10.2021, that is during the validity period of the aforesaid POA or shall be co-terminus with it, whichever is earlier.

For ACC Limited

(MR. NEERAJ AKHOURY)
MANAGING DIRECTOR& CEO

The signature of Mr. Vaibhav Dixit is attested below.

SIGNATURE OF MR. VAIBHAV DIXIT

SIGNATURE ATTESTED BY

(MR. NEERAJ AKHOURY)
MANAGING DIRECTOR & CEO

कार्यालय कलेक्टर (खनिज शाखा) बिलासपुर, छत्तीसगढ़

कलेक्टर परिसर (भूतल) Ph./Fax No. 07752-238508 e-mail :- miningofficebilaspur@gmail.com

क्रमांक 1928 / ख.लि. / न.क्र. / 2015 बिलासपुर, दिनांक 27 / 10 / 2015

प्रति,

मेसर्स ए.सी.सी. लिमि.,
जामुल सीमेंट वर्क्स,
दुर्ग (छ.ग.)

विषय :— खान एवं खनिज (विकास तथा विनियमन) संशोधन अधिनियम 2015 की धारा 8 ए (5), 8 ए (6) तथा 8 ए (8) के अधीन खनिपट्टा अवधि वृद्धि बाबत्।

संदर्भ :— सचिव, छ.ग. शासन, खनिज साधन विभाग मंत्रालय रायपुर का पत्र क्रमांक एफ 7—9 / 2015 / 12 रायपुर दिनांक 19.05.2015

———

विषयांतर्गत आपके पक्ष में ग्राम गोंडाडीह एवं अन्य, तहसील मस्तूरी, जिला बिलासपुर अंतर्गत रकबा 582.962 हे. क्षेत्र पर खनिज चूनापत्थर हेतु छ.ग. शासन खनिज साधन विभाग मंत्रालय रायपुर का पत्र क्र. एफ 3—86 / 2007 / 12 (1) रायपुर दिनांक 10.08.2009 द्वारा 30 वर्ष की अवधि हेतु खनिपटटा स्वीकृत हुआ है।

खान एवं खनिज खान एवं खनिज (विकास तथा विनियमन) अधिनियम 1957 में भारत सरकार राजपत्र संख्या 13, नई दिल्ली द्वारा दिनांक 27.03.2015 प्रकाशित अधिसूचना जो कि दिनांक 12.01.2015 से प्रभावशील है, उक्त संशोधन की धारा 8 ए (5) में उल्लेखित प्रावधान के अनुरूप मूल स्वीकृति तिथि से अवधि 31.03.2030 तक, नवकरण की स्थिति में नवकरण की अवधि पूर्ण होने तक अथवा स्वीकृत तिथि से 50 वर्ष जो भी बाद में हो, तक खनिपटटा के सभी शर्तो के पालन किये जाने की स्थिति में मान्य किया जाना है।

संदर्भित पत्र के माध्यम से उक्त आशय का एवं संशोधित अधिनियम की धारा 8 ए के प्रावधानों के अनुरूप परीक्षण करते हुए पूरक अनुबंध निष्पादित हेतु निर्देश दिये गये हैं। उक्तानुसार कृपया पत्र के साथ संलग्न चेक लिस्ट अनुसार वांछित जानकारी के साथ पूरक अनुबंध निष्पादन कराने की कार्यवाही करने का कष्ट करें।

संलग्न :— 1. संशोधित पूरक अनुबंध का प्रारूप।
2. चेक लिस्ट।

27/10/15

उप संचालक (खनि प्रशा.)
वास्ते, कलेक्टर बिलासपुर (छ.ग.)

पृ.क्र. /ख.लि. / न.क्र. / 2015 बिलासपुर, दिनांक 27 / 10 / 2015

प्रतिलिपि :—

संचालक, भौमिकी तथा खनिकर्म, इन्द्रावती भवन, नया रायपुर की ओर सूचनार्थ सम्प्रेषित।

उप संचालक (खनि प्रशा.)
वास्ते, कलेक्टर बिलासपुर (छ.ग.)