BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI

Original Application No. 593 of 2023

Mursaleen Versus State of Haryana and others

INDEX

SR NO.	PARTICULARS	DATED	PAGES
1.	Reply by way of affidavit on behalf of respondent No. 16 i.e. M/s JSM Foods Pvt. Ltd.	24.05.2024	1-12
2.	**Annexure R-16/1** (Board Resolution)	25.09.2021	13
3.	**Annexure R-16/2** (Letter of Intent for both the mining blocks)	19.06.2015	14-27
4.	**Annexure R-16/3** (Mining Plan for Mandoli Ghaggar East mining block)	08.01.2016	28-112
5.	**Annexure R-16/4** (Mining Plan for Mandoli Ghaggar West mining block)	08.01.2016	113-198
6.	**Annexure R-16/5** (Environmental Clearance for both the mining blocks)	21.12.2016	199-219

NOTARY MALIK SINGH WASU Distt. Gurugram (Haryana) INDIA GOVT.

7.	**Annexure R-16/6** (Orders for both the mining blocks)	05.02.2021	220-232
8.	**Annexure R-16/7** (Letters issued by SEIAA, Haryana)	07.10.2022	233-240
9.	**Annexure R-16/8** (Orders passed by DGMG as well as office noting of the Department)	12.07.2022 01.07.2022	241-244
10.	**Annexure R-16/9** (Relevant Documents relating to final DSR, District Yamunanagar)	2017-2018	245-251
11.	**Annexure R-16/10** (Draft District Survey Report)	12.10.2023	252-354
12.	**Annexure R-16/11** (Replenishment study report for both the mining blocks)		355-407
13.	**Annexure R-16/12** (Approval Letter by the Department for both the mining blocks)	12.10.2021	408-411
14.	**Annexure R-16/13** (Approved revised mining plan for Mandoli Ghaggar East)	12.10.2021	412-594
15.	**Annexure R-16/14** (Approved revised mining plan for Mandoli Ghaggar West)	12.10.2021	595-778
16.	**Annexure R-16/15** (CTE and CTO issued in favour of	30.03.2017 28.11.2022	779-785

NOTARY AMIK SINGH WASU Distt. Court Jagadhri Regd. No. 9725 GOVT. OF INDIA

	answering respondent)		

PLACE: NEW DELHI

DATED: 24.05.2024

Respondent No. 16

Through Counsel



(M.F. KHAN, B. KRISHNA)
Advocates for the Respondent
MFK & Co.
Ch. No. 417, Additional Building, Block D,
Gate No. 03, Supreme Court of India,
New Delhi- 110001
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BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI

Original Application No. 593 of 2023

Mursaleen Versus State of Haryana and others



Reply by way of affidavit on behalf of respondent No. 16 i.e. M/s JSM Foods Pvt. Ltd., Office at WZ 932/16, Ground Floor, Near MCT School, Village Basai Darapur, New Delhi-110015.

I, Veerbhan Wadhwa aged __ years S/o Sh. Dayal Dass R/o Village and Post Office Gumthala Rao, Tehsil Radaur, District Yamunanagar, Haryana do, hereby, solemnly affirm and declare as under:

1. That the deponent has been authorized to file the present affidavit on behalf of the answering respondent on the basis of the resolution dated 25.09.2021 passed by the Board of Directors of the answering respondent. A copy of the Board Resolution dated 25.09.2021 is attached as **Annexure R-16/1.**



2. That in the present case, the applicant has made allegations of rampant and excessive illegal sand, bajri and boulder mining in District Yamunanagar, Haryana by the mining lease

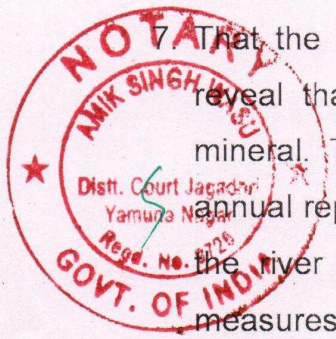
holders and stone crushers and screening plants in connivance with the concerned authorities.

3. That the answering respondent denies each and every averment, allegation, contention and submission made by the applicant in the Original Application, unless the same are specifically admitted by the answering respondent herein below.

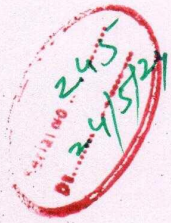
4. That as per the knowledge of the deponent, the answering respondent had participated in the e-auction which was conducted in pursuance of e-auction notice dated 27.04.2015 and submitted bid for grant of mining contract for **Mandoli Ghaggar East** and **Mandoli Ghaggar West** Mining Blocks. The bid submitted by the answering respondent was accepted as the highest bid and the Department had communicated the acceptance by way of issuance of Letter of Intent dated 19.06.2015. A copy of the Letter of Intent dated 19.06.2015 (for both the mining blocks) is **Annexure R-16/2.**

5. That the bare perusal of the respective Letter of Intent shall reveal that the period of contract was 10 years for Mandoli Ghaggar East mining block and 7 years for Mandoli Ghaggar West mining block. In so far as the mining contract for Mandoli Ghaggar West mining block is concerned, the same had expired on 18.06.2023.

6. That after the issuance of LOI, the answering respondent had submitted Mining Plan and Progressive Mine Closure Plan with the Department for the aforesaid mining blocks. The mining plans were approved by the Department on 08.01.2016. A copy of the Mining Plan for Mandoli Ghaggar East mining block is **Annexure R-16/3** and Mining Plan for Mandoli Ghaggar West mining block is **Annexure R-16/4.**



7. That the bare perusal of the respective mining plans shall reveal that both the mining blocks contained sand minor mineral. There was a detailed study with regards to the annual replenishment of minerals by way of sedimentation in the river bed area. The mining plan further provided the measures to be taken for the purpose of protection of environment as well as restoration, reclamation and plantation in the lease area.



8. That after the approval of the respective mining plans, the answering respondent had submitted applications dated 17.06.2016 with State Environment Impact Assessment Authority, Haryana (SEIAA) for the purpose of grant of environmental clearance. After due discussion and deliberation, the environmental clearance was granted by way of letters dated 21.12.2016. A copy of the Environmental Clearance dated 21.12.2016 (for both the mining blocks) are attached herewith as **Annexure R-16/5.**

9. That the answering respondent had further obtained the necessary permission/clearance from Haryana State Pollution Control Board (HSPCB) in terms of the provisions of Water (Prevention and Control of Pollution) Act, 1974 as well Air (Prevention and Control of Pollution) Act, 1981. The answering respondent had commenced the mining operations in the year 2017.

10. That after the extraction of the minerals from the upper layers of the mining lease area, the answering respondent came across minor quantities of boulder and gravel which were inextricably mixed with sand. The answering respondent submitted application dated 25.09.2020 with the Department seeking permission to dispose off the newly found minerals. The Director General, in exercise of powers available under Rule 56 (19) of Haryana State Mining Rules, 2012, granted permission to the answering respondent to dispose boulder and gravel on payment of additional royalty. The permission was granted after taking into consideration the survey conducted by the Department and after assessing economic viability. A copy of the Orders dated 05.02.2021 (for both the mining blocks) are attached herewith as **Annexure R-16/6.**

11. That it shall be imperative to state that while passing the orders dated 05.02.2021, there was neither any increase in the approved production capacity (as granted in the EC) nor there was any increase in the mining area. Hence, in

view of paragraph No. 7 (ii) of the notification dated 14.09.2006 issued by MoEF and CC, Government of India, the answering respondent was not required to obtain EC for the newly added minerals.

12. That it shall be further pertinent to mention that the EC dated 21.12.2016 was granted for a period of 5 years and the answering respondent had duly complied with the terms and conditions of the EC. In view of the Notification dated 18.01.2020 issued by MoEF and CC, Government of India, the validity of EC was extended for a period of one year by excluding the period between 01.04.2020 to 31.03.2021 on account of out break of Covid 19 pandemic.

13. That the answering respondent had submitted application dated 01.06.2022 for the purpose of extension of EC as well as for addition of newly added minerals in the EC (as a matter of abundant caution). The applications were allowed and EC was extended by SEIAA, Haryana vide Letters dated 07.10.2022. Copy of Letters dated 07.10.2022 are **Annexure R-16/7.**

14. That it shall be pertinent to mention that Original Application No. 423 of 2022 titled as Mohinder Pal and another v/s State of Haryana and others was filed before this Hon'ble Court wherein the answering respondent was arrayed as respondent No. 7. This Hon'ble Tribunal, vide Order dated 31.05.2022, had directed the answering

respondent not to carry out mining of boulder and gravel. The answering respondent has duly complied with the Order dated 31.05.2022 and has not conducted any mining of boulder and gravel after the said order. In this regard, a copy of the Order dated 12.07.2022 passed by DGMG as well as office noting dated 01.07.2022 of the Department are attached as **Annexure R-16/8.**

15. That in the present case, the applicant has raised various issues such as the absence of District Survey Report, comprehensive mining plan, replenishment study, mining outside lease area, cluster mining etc.

16. That in so far as the issue regarding District Survey Report is concerned, it is submitted that the draft District Survey Report for District Yamunanagar was prepared by District Environment Impact Assessment Authority, District Yamunanagar on 10.08.2017. Thereafter, in terms of notification dated 15.01.2016 issued by MoEF and CC, GOI, the draft District Survey Report was uploaded on the official website of District Yamunanagar on 18.09.2017 for the purpose of inviting comments/suggestions /objections from general public. After a lapse of 21 days, no objections/suggestions/comments were received. Thereafter, the draft District Survey Report was finalized and the final District Survey Report was uploaded on the official website on 24.05.2018. In this regard, the relevant documents are attached herewith as **Annexure R-16/9.**

17. That as per the notification dated 15.01.2016 and 25.07.2018 issued by MoEF and CC, GOI, the District Survey Report is valid for a period of 5 years. In view of the averments made in the preceding paragraph, the District Survey Report is valid till 23.05.2018.

18. That as per the knowledge of the deponent, the official respondents, in pursuance of the notification dated 25.07.2018 issued by MoEF and CC, GOI as well as the Guidelines of 2016 & 2020, initiated the process for updation of the District Survey Report for District Yamunanagar. The draft District Survey Report was approved on 12.10.2023. A copy of the draft District Survey Report dated 12.10.2023 is **Annexure R-16/10.**

19. That the bare perusal of the draft District Survey Report, 2023 shall reveal that the same was prepared on 07.08.2023. However, the Forest Department and the Irrigation Department had submitted shortcomings in the draft vide Letter dated 10.08.2023 and 31.08.2023 respectively. Thereafter, the same were considered and incorporated in the draft which was approved by the Chairman of the Committee on 12.10.2023.

20. That in so far as the issue with regards to replenishment study is concerned, the answering respondent had duly submitted the replenishment study report for both

the mining blocks with the Department. A copy of the replenishment study report (for both the mining blocks) is **Annexure R-16/11** and the approval granted by the Department is **Annexure R-16/12.**

21. That apart from submission of replenishment study, the answering respondent had also submitted the revised mining plan for both the mining blocks with the Department. The same were approved by the Department. A copy of the approved revised mining plan for Mandoli Ghaggar East is **Annexure R-16/13** and for Mandoli Ghaggar West is **Annexure R-16/14.**

22. That the fact that the answering respondent had duly complied with the conditions mentioned in the EC dated 21.12.2016 and had submitted the replenishment study report as well as the approved mining plans is further apparent from the letters dated 07.10.2022 issued by SEIAA granting extension of EC. Hence, the Original Application is liable to be rejected qua the answering respondent on this score.

23. That in so far as the issue regarding conduct of mining operations beyond the mining area is concerned, the same are vehemently denied being false and without any basis. The answering respondent has conducted mining operations within the permissible area and has not conducted any mining beyond the permissible area. The said fact is also

apparent from the status report dated 11.02.2024 since the report was prepared on the basis of the physical inspection of the mining sites including those granted to the answering respondent (serial No. 10 and serial No. 11 of the report).

24. That in so far as the issue regarding cluster around the mining lease area granted to the answering respondent is concerned, the same is also nullified in view of the status report dated 11.02.2024 submitted by SEIAA in the present case. Furthermore, the answering respondent denies the allegations regarding cluster mining being completely false and baseless.

25. That in so far as the issue regarding the grant of CTE/CTO is concerned, it is submitted that the answering respondent has been operating only after seeking prior consent (CTE and CTO) from HSPCB. No mining operations were/are being conducted without seeking the necessary consent from HSPCB. A copy of the CTE and CTO issued in favour of answering respondent are attached herewith as **Annexure R-16/15.**

26. That the allegations with regards to use of heavy machinery are vehemently denied being false. In this regard, it is submitted that the answering respondent has been conducting mining operations through the machinery prescribed in the Environmental Clearance dated 21.12.2016.

27. That in so far as the allegations regarding mining beyond permissible depth is concerned, the same are vehemently denied being false. It is submitted that the mining blocks granted to the answering respondent are classified as river bed mining blocks and the permissible depth is three meters as per Clause 10 of EC dated 21.12.2016. The answering respondent has not conducted any mining beyond the permissible depth and the same is apparent from the perusal of the status report dated 11.02.2024 submitted in the present case by SEIAA, Haryana.

28. That in so far as the allegations regarding breach of water table is concerned, the same are vehemently denied being false. In this regard, it is submitted that as per Clause 10 of the EC dated 21.12.2016, the answering respondent is authorized to conduct mining upto depth of three meters from the surface of mineral deposit and not less than 1 meter from the water level of the river channel which ever is earlier. The answering respondent has duly complied with the said condition and there is no breach of water table/water level by the answering respondent.

29. That it shall be pertinent to mention that the perusal of the status report dated 11.02.2024 shall reveal that the answering respondent has conducted mining operations at the aforesaid mining blocks in compliance of the SSMG,

2016 and EMGSM, 2020 Guidelines. In this regard, the relevant extract is as follows:

15.	**Compliance of Sand Mining Guidelines, 2016 & 2020**			**As per the report of Mining Department, all the mining blocks are operating as per compliance of Sand Mining Guidelines, 2016 & 2020**

30. That in the present case, in view of the submissions made herein above, it is submitted that there is no cause of action in favour of the applicant to invoke the jurisdiction of this Hon'ble Tribunal under Section 14 of NGT Act, 2010. Hence, the Original Application is liable to be dismissed.

31. That apart from the fact that there was no cause of action in favour of the applicant, it is submitted that the Original Application is barred by the limitation prescribed under Section 14(3) of NGT Act, 2010. As per the averments in the Original Application, the applicant had filed a complaint dated 01.10.2022 (Annexure A-27) with the authorities. However, the original application was filed on 20.09.2023 i.e. beyond the prescribed period of limitation of 6 months. Hence, the original application is liable to be dismissed on this score alone.

32. That there is no substantial issue relating to environment in the present case and no case is made out to

invoke the jurisdiction of this Tribunal under Section 14 of NGT Act, 2010.

33. That in the light of the submissions made herein above, the original application may kindly be dismissed with exemplary costs.

NOTARY AMIK SINGH WASU Distt. Court Jagadhri Yamuna Nagar Regd. No. 9726 GOVT. OF INDIA

PLACE: YAMUNANAGAR
DATED: 24.05.2024

DEPONENT

Verification

Verified that the contents of my above affidavit are true and correct to my knowledge and belief. No part of it is false and nothing material has been concealed therefrom.

PLACE: YAMUNANAGAR
DATED: 24.05.2024

DEPONENT

Serial No. 2461 Dt. 24/5/24

ATTESTED
24/5/2024
AMIK SINGH WASU
B.A. (Honours) M.A. LL.B
Advocate & Notary
Distt. Court Jagadhri Yamuna Nagar

ANNEXURE R 16/1

JSM FOODS PRIVATE LIMITED

CIN No. U14100DL2011PTC14636

Registered Address : WZ 932/16 , Floor Ground NEAR MCD SCHOOL VILLAGE BASAI DARAPUR New Delhi , West Delhi PIN No. 110015

Corporate Office Address : WZ 676, Sector 13, Urban Estate, Karnal-132001 (Haryana)

Email : jsmfoodsprivatelimited@gmail.com , jsmfoodsmandoli@gmail.com

Mobile : 093151-33000, 92548-31000

COPY OF RESOLUTION DATED. 25/09/2021

"It is here by Resolved that **JSM FOODS PRIVATE LIMITED** , is doing extraction of Mining Products at Mandoli Ghaggar West Block in the District Yamuna Nagar and Mandoli Ghaggar East Block in the District Yamuna Nagar.

It is further resolved that Director Mr Tanish Wadhwa S/o Sh Manoj Kumar and Sh Veerbhan Wadhwa S/o Sh Dayal Dass are authorized for the Administrative functions including handling, execution of mining operations at above both the locations Mandoli Ghaggar West Block and East Block in the District Yamuna Nagar.

Their Signatures are attested below.

For JSM FOODS PVT. LTD.

Auth.Sign.

Signature of (a) Mr Tanish Wadhwa S/o Sh Manoj Kumar

Signature of (b) Mr Veerbhan Wadhwa S/o Dayal Dass "

Compiled & Attested by :

For JSM FOODS PVT. LTD.

Auth.Sign.

(Radhey Shyam Wadhwa)

Director

For JSM FOODS PVT. LTD.

Auth.Sign.

(Tanish Wadhwa)

Director

ANNEXURE R 16/2A

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

Registered
From

The Director General,
Mines & Geology Department, Haryana
30 Bays building, Sector-17,
Chandigarh.

To

JSM Foods Private Limited,
W Z/ 932, Basie Darapur, 1st Floor,
Near Senior Secondary School,
New Delhi-110015.

Memo No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/**3918**
Dated Chandigarh, the **19.06.2015**

Subject: **Acceptance of the highest bid/ in respect of the Sand minor mineral mines of "Mandoli Ghaggar West Block/YNR B 4" having Tentative Area of 25.56 hectares in the district Yamuna Nagar, offered in e-auction held on 10.06.2015 and 11.06.2015 and issue of Letter of Intent (LoI) – regarding.**

You participated in the in the **e- auction** held on **10.06.2015 and 11.06.2015 on the State Government web portal https://haryanaeprocurement.gov.in after accepting the terms and conditions of the auction notice DMG/HY/e Auction/YNR/2015/2150 dated 27.04.2015 and Corrigendum DMG/HY/e-Auction/YNR/Corr./2015/3358 dated 19.05.2015 in order to obtain mining contracts of minor mineral mines of the district Yamuna Nagar.** You offered the highest bid of **Rs. 04,20,50,000/-** [Rs. Four crore twenty lakh fifty thousand only] per annum, against the Reserve Price of **Rs. 04,20,00,000/-** per annum, for obtaining the Mining Contract of Minor Mineral Mines namely **'Mandoli Ghaggar West Block/YNR B 4'** for extraction of Sand having tentative area of **25.56** hectares. The details of the khasra numbers of the tentative area under above said Mining Block is attached as **Annexure 'A'**.

2. You are hereby informed that the State Government has accepted the highest bid of **Rs. 04,20,50,000/-** [Rs. Four crore twenty lakh fifty thousand only] offered by you in respect of the above said minor mineral mines of **'Mandoli Ghaggar West Block/YNR B 4'** under the provisions of the Haryana Minor Mineral Concession, Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules-2012 (State Rules). Accordingly, you have become the successful bidder in respect of **Mandoli Ghaggar West Block/YNR B 4** of the district Yamuna Nagar.

3. The State Government having accepted the aforementioned highest bid offered by you, the Department is pleased to issue this Letter of Intent (LoI) in your favour in respect of the Mining Block/area namely **'Mandoli Ghaggar West Block/YNR B 4'** subject to the following terms and conditions:

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

(i) The period of contract shall be **07 years** and the same shall commence with effect from the date of grant of environmental clearance by competent authority or on expiry of a period of 12 months from the date of this communication of acceptance of highest bid/ issuance of **"Letter of Intent"**, whichever is earlier;

(ii) You may note that the detail of the area of the mining blocks is tentative and was notified "on as is where is basis" **(refer condition no. 4 of the notice)**. In case of any inadvertent mistake, if any, the same would be rectified/ corrected before execution of the agreement **(refer condition no. 3 of the notice)**.;

(iii) No request regarding reduction in bid amount on account of reduction in land/area of the Mining block, including due to change in description of khasra numbers/location etc. at any stage will be entertained on any ground including loss/reduction of area for mining on account of compliance of applicable laws/restrictions. Needless to state that this also includes the changes, if any, as per condition no. 3 of auction notice.

(iv) The amount of the highest successful bid i.e. **Rs. 04,20,50,000/-** [Rs. Four crore twenty lakh fifty thousand only] per annum shall be the "Annual Contract Money" payable by you as the contractor in the manner prescribed in the contract agreement to be executed on form MC-1 appended to State Rules;

(v) The above said annual contract money shall be increased at the rate of 25% on completion of each block of three years. Accordingly, the year-wise amount of the annual contract money shall be as per details given below:

Sr. No.	Year of the Contract Period	Annual contract Money
1	First Year	Rs. 04,20,50,000 /-
2	Second Year	Rs. 04,20,50,000 /-
3	Third Year	Rs. 04,20,50,000 /-
4	Fourth Year	Rs. 05,25,62,500/-
5	Fifth Year	Rs. 05,25,62,500/-
6	Sixth Year	Rs. 05,25,62,500/-
7	Seventh Year	Rs. 06,57,03,125/-

(vi) As per the terms and conditions of the grant, you are liable to deposit **Rs. 01,05,12,500/-** i.e. equal to 25% of the annual bid amount as "security deposit" out of which you have already deposited an amount of **Rs. 42,05,000/-** (Rs. Forty two lakh five thousand only) i.e. equal to 10% of the annual bid amount as 'initial bid security' after the conclusion of e-auction. The balance amount of **Rs. 63,07,500/-** of the bid security i.e. 15% of the annual bid amount alongwith one month's advance contract money shall be deposited before commencement of the mining operations or before expiry of the period of 12 months, whichever is earlier;

(vii) You shall execute an Agreement Deed in Form MC-I appended to the Haryana Minor Mineral Concession, Stocking, Transportation of Mineral & Prevention of Illegal Mining Rules-2012 (the State Rules 2012) within a period of 90 days from the date of issuance of this communication/ grant of LoI;

(viii) It may be pointed out that as per existing applicable rates the contract agreement had to be executed on **Non Judicial Stamp papers worth Rs. 14,98,100/- (Rs. Fourteen lakh ninety eight thousand one hundred only)**. However, you are aware that M/s Om Minerals, one of the LoI holders (who participated in the auctions held in December 2013) has filed a CWP No.7991 of 2014, before the Hon'ble Punjab & Haryana High Court. Further a few other similarly situated LoI holders have also filed separate CWP's before the Hon'ble Punjab and Haryana High Court challenging demand/ levy of Stamp Duty on execution of 'Contract Agreement'. The said matter is still pending for adjudication. Accordingly, the present auction was conducted subject to outcome of said cases. **Therefore, the charging of stamp duty for the execution of contract agreement shall be as per final outcome of the said CWP's.**

(ix) The Contract Agreement would also be required to be got Registered on payment of the applicable Registration fee;

(x) In case you fail to execute the Agreement Deed within the prescribed period of 90 days, this LoI shall be deemed to have been revoked and the amount of initial bid security deposited at the time of auction shall be forfeited. Further, the balance amount of 15% towards the bid security, amounting to **Rs. 63,07,500/-**being the 15% of the annual bid amount, shall be recovered as arrears of land revenue and, you, as the LoI holder/ defaulter, shall be debarred from participation in any future auctions for a period of 5 years;

(xi) You shall also furnish a solvent surety for a sum equal to the amount of the annual bid for execution of the Agreement. In case the surety offered by the contractor(s) during the subsistence of the contract is not found solvent, the contractor(s) shall offer another solvent surety and a supplementary deed shall be executed to this effect;

(xii) After execution of Agreement, either before commencement of the mining operation or before expiry of the period of 12 months from the date of issuance of this LoI, whichever is earlier, in case of failure to deposit the balance 15% amount towards security [as required under clause (v) above] the acceptance of bid/issuance of LoI/execution of agreement shall be deemed to have been revoked and 10% amount

deposited towards as initial bid security at the time of auction shall stand forfeited. Further, un-paid 15% amount towards security shall be recovered as arrears of land revenue and you shall debarred from participation in any subsequent bids for a period of 5 years;

(xiii) You shall be liable to deposit the contract money in advance at monthly intervals as per provisions of Contract Agreement i.e. from the date of commencement of the contract Agreement;

(xiv) You shall also deposit/ pay an additional amount equal to 10% of the due contract money along with the monthly installments towards the **'Mines and Minerals Development, Restoration and Rehabilitation Fund'**.

(xv) You shall also be liable to pay advance income tax as per provisions of Section 206(c) of income tax act in addition to contract money, payable as per terms and conditions of contract agreement.

(xvi) On enhancement of the contract money with the expiry of every three years period, you shall deposit the balance amount of security so as to upscale the security amount equal to 25% of the revised annual contract money as applicable for one year with respect to the next block of three years. No interest, whatsoever, shall be payable on the security amount deposited under the prescribed security head of the government;

(xvii) You shall prepare a Mining Plan along with the Mine Closure Plan (Progressive & Final) as per chapter 10 of the State Rules for the "Mining Block" and shall not commence mining operations in any area except in accordance with such Mining Plan duly approved by an officer authorised by the Director, mines & Geology, in this behalf.

(xviii) Further, the actual mining will be allowed to be commenced only after prior Environmental Clearance is obtained by you as the LoI holder/mining contractor for the Mining Block from the Competent Authority as permitted by the competent Authority required under EIA notification dated 14/9/2006, as amended from time to time by the MoE&F, GoI and guidelines/ circulars issued in this behalf;

(xix) The Mining contractor to whom mining rights have been granted through this contract would also be liable to pay the following to the landowners to undertake mining operations:

(a) Annual rent in respect of the land area blocked under the concession but not being operated, and

(b) Rent plus compensation in respect of the area used for actual mining operations.

(xx) The amount of annual rent and the compensation shall be settled mutually between the landowner and the mining contractor. In case of non-settlement of the rent and compensation, the same shall be decided by the District Collector concerned in accordance with the provisions contained in Chapter 9 of the "Haryana Minor Mineral Concession, Stocking, and Transportation of Minerals and Prevention of Illegal Mining Rules, 2012";

(xxi) The total mineral excavated and stacked by the concession holder within the area granted on mining contract shall not exceed two times of the average monthly production as per approved Mining Plan at any point of time;

(xxii) The Mining Contractor shall not stock any mineral outside the concession area granted on mining contract, without obtaining a valid license as per provisions contained in Chapter 14 of the State Rules;

(xxiii) The contractor shall not carry out any mining operations in any reserved/ protected forest or any area prohibited by any law in force in India, or prohibited by any authority without obtaining prior permission in writing from such authority or officer authorized in this behalf. In case of refusal of permission by such authority or officer authorized in this behalf, contractor(s) shall not be entitled to claim any relief in payment of contract money on this account;

(xxiv) Following are the general/ special conditions applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas:

(a) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge structure on up-stream side and ten times the span of such bridge structure on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

(b) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorised by him;

(c) The maximum depth of mining in the river-bed shall not exceed three meters from the un-mined bed level at any point in time with proper bench formation;

(d) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

(e) No mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 meters in case of Tangri, Markanda and Ghaggar and 100 meters on either side of all other rivers/ rivulets. (This clause is applicable for mining outside river bed area);

(f) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology Department, may be made applicable to the mining operations in river-beds.

(xxv) A safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf. Further, the depth of excavation of mineral shall not exceed nine meters (9m) at any point of time.(This clause is applicable for mining outside river bed area);

(xxvi) The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws;

(xxvii) The contractor shall be under obligation to carry out mining in accordance with all other provisions as applicable under the Mines Act, 1952, Mines and Minerals (Development and Regulation) Act, 1957, Indian Explosives Act, 1884, Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986 and the rules made thereunder, Wild Life (Protection) Act, 1972, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981;

4. Accordingly, for the time being you are advised to submit the Draft Contract Agreement on Form MC-I (in Five copies) appended to the State Rules-2012, on **plain papers** along with other requisite documents including a solvent surety(s) for a sum equal to the amount of the annual bid for execution of the agreement, within a period of 90 days from the date of issue of this bid acceptance letter and the LoI. You should also furnish an affidavit to the effect that you will immediately deposit the requisite stamp duty as per out of the related Court cases as stated under para 3(viii) above.

5. Please note that one Sh. Rajbir Singh had filed a CWP bearing No. 27700 of 2013 before the Hon'ble Punjab & Haryana High Court challenging (i) commencement of contract period after 12 months from the date of acceptance of highest bid/issuance of "**Letter of Intent**" or from date of obtaining of environmental clearance from competent authority

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

which ever is earlier and (ii) payment of rent and compensation to surface right holder/land owners from where mining operations are to be carried out. Therefore, commencement of period of contract & payment of compensation to land owners shall be as per final outcome of court order in said CWP. Accordingly, the auction was conducted subject to outcome of above case, hence this acceptance /LoI is being issued subject to the outcome in CWP No. 27700 of 2013 pending before Hon'ble Punjab & Haryana High Court.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/ Dated: **19.06.2015**

A copy is forwarded to the following for information and necessary action please:-

1. The Chairman, Haryana State Pollution Control Board, Panchkula.
2. The Deputy Commissioner, Yamuna Nagar.
3. The Mining Officer, Mines & Geology Department, Yamuna Nagar.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/**3920** Dated: **19.06.2015**

A copy is forwarded to Sh. Bharat Wadhwa S/o Sh. Radhey Shyam, R/o House No. 676, Sector-13, Urban Estate, Karnal, the authorized person/Director who gave highest bid on behalf of **'JSM Foods Private Limited'** for information and necessary action please.

Mining Officer,
for Director General Mines & Geology, Haryana.

ANNEXURE R 16/2B

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

Registered
From

The Director General,
Mines & Geology Department, Haryana
30 Bays building, Sector-17,
Chandigarh.

To

JSM Foods Private Limited,
W Z/ 932, Basie Darapur, 1st Floor,
Near Senior Secondary School,
New Delhi-110015.

Memo No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/**3918**
Dated Chandigarh, the **19.06.2015**

Subject: **Acceptance of the highest bid/ in respect of the Sand minor mineral mines of "Mandoli Ghaggar West Block/YNR B 4" having Tentative Area of 25.56 hectares in the district Yamuna Nagar, offered in e-auction held on 10.06.2015 and 11.06.2015 and issue of Letter of Intent (LoI) – regarding.**

You participated in the in the **e- auction** held on **10.06.2015 and 11.06.2015 on the State Government web portal https://haryanaeprocurement.gov.in after accepting the terms and conditions of the auction notice DMG/HY/e Auction/YNR/2015/2150 dated 27.04.2015 and Corrigendum DMG/HY/e-Auction/YNR/Corr./2015/3358 dated 19.05.2015 in order to obtain mining contracts of minor mineral mines of the district Yamuna Nagar.** You offered the highest bid of **Rs. 04,20,50,000/-** [Rs. Four crore twenty lakh fifty thousand only] per annum, against the Reserve Price of **Rs. 04,20,00,000/-** per annum, for obtaining the Mining Contract of Minor Mineral Mines namely **'Mandoli Ghaggar West Block/YNR B 4'** for extraction of Sand having tentative area of **25.56** hectares. The details of the khasra numbers of the tentative area under above said Mining Block is attached as **Annexure 'A'**.

2. You are hereby informed that the State Government has accepted the highest bid of **Rs. 04,20,50,000/-** [Rs. Four crore twenty lakh fifty thousand only] offered by you in respect of the above said minor mineral mines of **'Mandoli Ghaggar West Block/YNR B 4'** under the provisions of the Haryana Minor Mineral Concession, Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules-2012 (State Rules). Accordingly, you have become the successful bidder in respect of **Mandoli Ghaggar West Block/YNR B 4** of the district Yamuna Nagar.

3. The State Government having accepted the aforementioned highest bid offered by you, the Department is pleased to issue this Letter of Intent (LoI) in your favour in respect of the Mining Block/area namely **'Mandoli Ghaggar West Block/YNR B 4'** subject to the following terms and conditions:

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

(i) The period of contract shall be **07 years** and the same shall commence with effect from the date of grant of environmental clearance by competent authority or on expiry of a period of 12 months from the date of this communication of acceptance of highest bid/ issuance of **"Letter of Intent"**, whichever is earlier;

(ii) You may note that the detail of the area of the mining blocks is tentative and was notified "on as is where is basis" **(refer condition no. 4 of the notice)**. In case of any inadvertent mistake, if any, the same would be rectified/ corrected before execution of the agreement **(refer condition no. 3 of the notice)**.;

(iii) No request regarding reduction in bid amount on account of reduction in land/area of the Mining block, including due to change in description of khasra numbers/location etc. at any stage will be entertained on any ground including loss/reduction of area for mining on account of compliance of applicable laws/restrictions. Needless to state that this also includes the changes, if any, as per condition no. 3 of auction notice.

(iv) The amount of the highest successful bid i.e. **Rs. 04,20,50,000/-** [Rs. Four crore twenty lakh fifty thousand only] per annum shall be the "Annual Contract Money" payable by you as the contractor in the manner prescribed in the contract agreement to be executed on form MC-1 appended to State Rules;

(v) The above said annual contract money shall be increased at the rate of 25% on completion of each block of three years. Accordingly, the year-wise amount of the annual contract money shall be as per details given below:

Sr. No.	Year of the Contract Period	Annual contract Money
1	First Year	Rs. 04,20,50,000 /-
2	Second Year	Rs. 04,20,50,000 /-
3	Third Year	Rs. 04,20,50,000 /-
4	Fourth Year	Rs. 05,25,62,500/-
5	Fifth Year	Rs. 05,25,62,500/-
6	Sixth Year	Rs. 05,25,62,500/-
7	Seventh Year	Rs. 06,57,03,125/-

(vi) As per the terms and conditions of the grant, you are liable to deposit **Rs. 01,05,12,500/-** i.e. equal to 25% of the annual bid amount as "security deposit" out of which you have already deposited an amount of **Rs. 42,05,000/-** (Rs. Forty two lakh five thousand only) i.e. equal to 10% of the annual bid amount as 'initial bid security' after the conclusion of e-auction. The balance amount of **Rs. 63,07,500/-** of the bid security i.e. 15% of the annual bid amount alongwith one month's advance contract money shall be deposited before commencement of the mining operations or before expiry of the period of 12 months, whichever is earlier;

(vii) You shall execute an Agreement Deed in Form MC-I appended to the Haryana Minor Mineral Concession, Stocking, Transportation of Mineral & Prevention of Illegal Mining Rules-2012 (the State Rules 2012) within a period of 90 days from the date of issuance of this communication/ grant of LoI;

(viii) It may be pointed out that as per existing applicable rates the contract agreement had to be executed on **Non Judicial Stamp papers worth Rs. 14,98,100/- (Rs. Fourteen lakh ninety eight thousand one hundred only)**. However, you are aware that M/s Om Minerals, one of the LoI holders (who participated in the auctions held in December 2013) has filed a CWP No.7991 of 2014, before the Hon'ble Punjab & Haryana High Court. Further a few other similarly situated LoI holders have also filed separate CWP's before the Hon'ble Punjab and Haryana High Court challenging demand/ levy of Stamp Duty on execution of 'Contract Agreement'. The said matter is still pending for adjudication. Accordingly, the present auction was conducted subject to outcome of said cases. **Therefore, the charging of stamp duty for the execution of contract agreement shall be as per final outcome of the said CWP's.**

(ix) The Contract Agreement would also be required to be got Registered on payment of the applicable Registration fee;

(x) In case you fail to execute the Agreement Deed within the prescribed period of 90 days, this LoI shall be deemed to have been revoked and the amount of initial bid security deposited at the time of auction shall be forfeited. Further, the balance amount of 15% towards the bid security, amounting to **Rs. 63,07,500/-**being the 15% of the annual bid amount, shall be recovered as arrears of land revenue and, you, as the LoI holder/ defaulter, shall be debarred from participation in any future auctions for a period of 5 years;

(xi) You shall also furnish a solvent surety for a sum equal to the amount of the annual bid for execution of the Agreement. In case the surety offered by the contractor(s) during the subsistence of the contract is not found solvent, the contractor(s) shall offer another solvent surety and a supplementary deed shall be executed to this effect;

(xii) After execution of Agreement, either before commencement of the mining operation or before expiry of the period of 12 months from the date of issuance of this LoI, whichever is earlier, in case of failure to deposit the balance 15% amount towards security [as required under clause (v) above] the acceptance of bid/issuance of LoI/execution of agreement shall be deemed to have been revoked and 10% amount

deposited towards as initial bid security at the time of auction shall stand forfeited. Further, un-paid 15% amount towards security shall be recovered as arrears of land revenue and you shall debarred from participation in any subsequent bids for a period of 5 years;

(xiii) You shall be liable to deposit the contract money in advance at monthly intervals as per provisions of Contract Agreement i.e. from the date of commencement of the contract Agreement;

(xiv) You shall also deposit/ pay an additional amount equal to 10% of the due contract money along with the monthly installments towards the **'Mines and Minerals Development, Restoration and Rehabilitation Fund'**.

(xv) You shall also be liable to pay advance income tax as per provisions of Section 206(c) of income tax act in addition to contract money, payable as per terms and conditions of contract agreement.

(xvi) On enhancement of the contract money with the expiry of every three years period, you shall deposit the balance amount of security so as to upscale the security amount equal to 25% of the revised annual contract money as applicable for one year with respect to the next block of three years. No interest, whatsoever, shall be payable on the security amount deposited under the prescribed security head of the government;

(xvii) You shall prepare a Mining Plan along with the Mine Closure Plan (Progressive & Final) as per chapter 10 of the State Rules for the "Mining Block" and shall not commence mining operations in any area except in accordance with such Mining Plan duly approved by an officer authorised by the Director, mines & Geology, in this behalf.

(xviii) Further, the actual mining will be allowed to be commenced only after prior Environmental Clearance is obtained by you as the LoI holder/mining contractor for the Mining Block from the Competent Authority as permitted by the competent Authority required under EIA notification dated 14/9/2006, as amended from time to time by the MoE&F, GoI and guidelines/ circulars issued in this behalf;

(xix) The Mining contractor to whom mining rights have been granted through this contract would also be liable to pay the following to the landowners to undertake mining operations:

(a) Annual rent in respect of the land area blocked under the concession but not being operated, and

(b) Rent plus compensation in respect of the area used for actual mining operations.

(xx) The amount of annual rent and the compensation shall be settled mutually between the landowner and the mining contractor. In case of non-settlement of the rent and compensation, the same shall be decided by the District Collector concerned in accordance with the provisions contained in Chapter 9 of the "Haryana Minor Mineral Concession, Stocking, and Transportation of Minerals and Prevention of Illegal Mining Rules, 2012";

(xxi) The total mineral excavated and stacked by the concession holder within the area granted on mining contract shall not exceed two times of the average monthly production as per approved Mining Plan at any point of time;

(xxii) The Mining Contractor shall not stock any mineral outside the concession area granted on mining contract, without obtaining a valid license as per provisions contained in Chapter 14 of the State Rules;

(xxiii) The contractor shall not carry out any mining operations in any reserved/ protected forest or any area prohibited by any law in force in India, or prohibited by any authority without obtaining prior permission in writing from such authority or officer authorized in this behalf. In case of refusal of permission by such authority or officer authorized in this behalf, contractor(s) shall not be entitled to claim any relief in payment of contract money on this account;

(xxiv) Following are the general/ special conditions applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas:

(a) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge structure on up-stream side and ten times the span of such bridge structure on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

(b) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorised by him;

(c) The maximum depth of mining in the river-bed shall not exceed three meters from the un-mined bed level at any point in time with proper bench formation;

(d) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

(e) No mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 meters in case of Tangri, Markanda and Ghaggar and 100 meters on either side of all other rivers/ rivulets. (This clause is applicable for mining outside river bed area);

(f) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology Department, may be made applicable to the mining operations in river-beds.

(xxv) A safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf. Further, the depth of excavation of mineral shall not exceed nine meters (9m) at any point of time.(This clause is applicable for mining outside river bed area);

(xxvi) The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws;

(xxvii) The contractor shall be under obligation to carry out mining in accordance with all other provisions as applicable under the Mines Act, 1952, Mines and Minerals (Development and Regulation) Act, 1957, Indian Explosives Act, 1884, Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986 and the rules made thereunder, Wild Life (Protection) Act, 1972, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981;

4. Accordingly, for the time being you are advised to submit the Draft Contract Agreement on Form MC-I (in Five copies) appended to the State Rules-2012, on **plain papers** along with other requisite documents including a solvent surety(s) for a sum equal to the amount of the annual bid for execution of the agreement, within a period of 90 days from the date of issue of this bid acceptance letter and the LoI. You should also furnish an affidavit to the effect that you will immediately deposit the requisite stamp duty as per out of the related Court cases as stated under para 3(viii) above.

5. Please note that one Sh. Rajbir Singh had filed a CWP bearing No. 27700 of 2013 before the Hon'ble Punjab & Haryana High Court challenging (i) commencement of contract period after 12 months from the date of acceptance of highest bid/issuance of "**Letter of Intent**" or from date of obtaining of environmental clearance from competent authority

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

which ever is earlier and (ii) payment of rent and compensation to surface right holder/land owners from where mining operations are to be carried out. Therefore, commencement of period of contract & payment of compensation to land owners shall be as per final outcome of court order in said CWP. Accordingly, the auction was conducted subject to outcome of above case, hence this acceptance /LoI is being issued subject to the outcome in CWP No. 27700 of 2013 pending before Hon'ble Punjab & Haryana High Court.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/ Dated: **19.06.2015**

A copy is forwarded to the following for information and necessary action please:-

1. The Chairman, Haryana State Pollution Control Board, Panchkula.
2. The Deputy Commissioner, Yamuna Nagar.
3. The Mining Officer, Mines & Geology Department, Yamuna Nagar.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/**3920** Dated: **19.06.2015**

A copy is forwarded to Sh. Bharat Wadhwa S/o Sh. Radhey Shyam, R/o House No. 676, Sector-13, Urban Estate, Karnal, the authorized person/Director who gave highest bid on behalf of **'JSM Foods Private Limited'** for information and necessary action please.

Mining Officer,
for Director General Mines & Geology, Haryana.

MINING PLAN AND PROGRESSIVE MINE CLOSURE PLAN

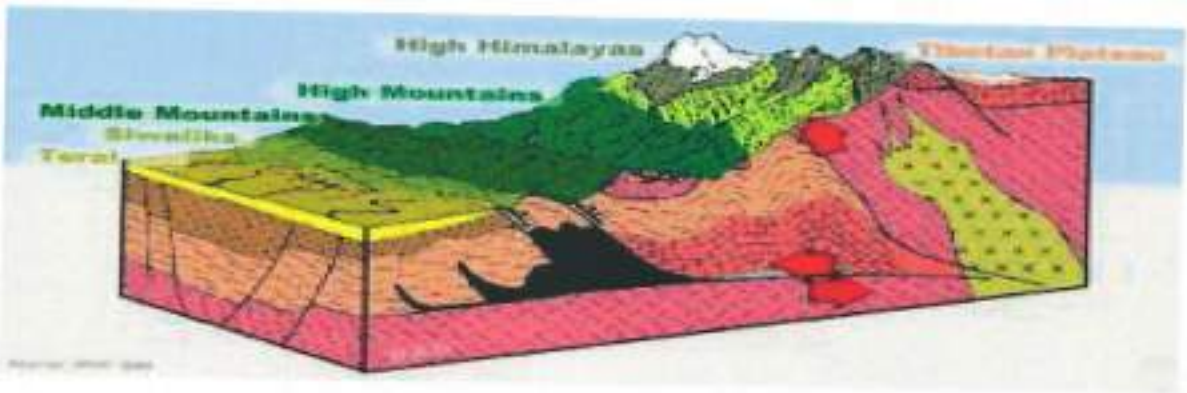
FOR

SAND MINE (MINOR MINERAL)

MANDOLI GHAGGAREAST BLOCK (YNR B-3)

खान एवं भूविज्ञान विभाग, हरियाणा, चण्डीगढ़
Department of Mines and Geology,
Haryana, Chandigarh
APPROVED
With Conditions
शर्तों के साथ अनुमोदित
Vide letter No. DMS/HY/me/MGR East/YNR B-3/2015/454-459
पत्रांक / Dated 03-01-2016
राज्य खनन अभियन्ता
State Mining Engineer

(Lease area: 20.18ha; Lease Period-10 years; Production –0.850 Million T/Annum)



SUBMITTED TO

JAN-2016

THE DIRECTOR GENERAL, MINES & GEOLOGY HARYANA

APPLICANT

M/s JSM FOODS PVT. LTD, NEW DELHI

PREPARED BY

S.N. SHARMA
RQP/DDN/0135/2001-A
House No. 282, sector 11-D,
Faridabad (Haryana)

flood plains. The different formations of the area belong to Shivalik Super group and are a mixture of boulders, pebbles, sand, silt and clay. The following sequences have been observed in the area.

Soil/Alluvium

Sand

Gravel

Boulder

There is no clear demarcation between the litho units. They have been deposit in a mixed form. The Litho- units exposed around the riverbed belong to Shivalik Super- Group. The mineral Boulders, Gravel and sand have formed by weathering of rocks and then deposition on the flood plains of the rivers originated from the Shivaliks. These have been washed by rainwater during rainy season and deposited in river bed in the form of boulders, gravels and sand of different sizes and shapes. These minerals are sorted by screening. The max depth of the minerals is not known.

Soil/ alluvium varying in thickness from 2-4m constitute the top horizons in the flood plain area suitable for agriculture. Yamuna River meanders through the area exposing the alluvium and soil at the banks. Boulder, gravel & sand is found in the river bed. Boulder, gravel &sand is deposited up to great depths. There is no soil in the river bed. This bed remains dry for major part of the year except only during the rainy season.The Sand exposed in the River bed of Yamuna and surrounding areas is the product of the deposition of the sediments brought and deposited in the flood plains of River Yamuna. These sediments are of recent geological formation. The litho-units exposed within the river and surrounding areas have formed as water borne sediments brought by flood water during rainy season every year and deposited in riverbed. Geological map and section are enclosed as **Plate – 03)**

2.2 Reserves

The reserves of Boulder,Graval& Sand calculated by volumetric methode and are summarized here below:



Sr no.	Nature of land	Lease area In ha	Total proved Geological reserves MT=Area x depth x BD (A)	Blocked area of 50m strip after each km, 25% blocked in river banks, /lease boundary etc= hectares	Blocked Geological Reserves in blocked area (B)	Total Mineable reserves A-B=C (FOR10Yrs)	Minable Reserve (Per Year)
1	River bed	20.18	12,10,800 x 010 years =1,21,08,000 MT	6.0	3,60,000x 010 years= 36,00,000 MT	85,08,000MT	8,50,000 MT

A) GEOLOGICAL PROVED RESERVES AS PER UNFC CODE (111)

Total Reserves = 1, 21, 08,000 MT

B) BLOCKED RESERVES AS PER UNFC CODE (211 & 222) =36, 00,000MT

C) MINEABLE RESERVES = A-B = 85, 08,000 MT

D) TARGETED PRODUCTION

8, 50,000 MT per Year in the River bed (Maximum- which is supposed to be replenished every year)

E) Life of the mine

For Balance reserves in River bed it is presumed that the mineral will be replenished every year during the rainy season. New mineral will be added every year in the river bed.

2.3 Mining Method

Mining method to be followed is described in chapter of mining at 7.0 in mining plan.

2.4 Mineral Beneficiation

No mineral beneficiation is envisaged.

3.0 Review of implementation of mining plan including five years progressive closure plan upto the final closure plan

Mining Plan and Progressive mine closure plan are being submitted for the first time. It will be reviewed after five years and review of implementation will be given with next mining scheme.

4.0 CLOSURE PLAN

4.1 Mined - out land

About 14.18 hectare area is available for mining. Land use at various stages is given in the table below:

Table: PRESENT LAND USE PLANING

Sr.No.	Particulars		Present Land Use (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	6.0
2	Infrastructure (Office,temp. Shelters etc.		0.00
3	Area available for mining in river bed		14.18
			20.18

Table: LAND USE PLANING AT THE END OF LEASE PERIOD

Sr.No.	Particulars		AT THE END OF 5th YEAR (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	6.0
2	Infrastructure (Office,temp. Shelters etc.		0.02*
3	Naturally reclaimed in river bed		10.16
6	Unworked river bed		0.00
7	Plantation*		4.00*
	Total		20.18

*Plantation in 4.0 ha land will be done under social forestry on land available from Panchayat by the end of mine life

* Plantation & infrastructure In restricted area only

4.2 Water quality management

The area constitutes almost alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The elevation of the area above mean sea level

ranges from 297 mamsl in the north to 296 m.amsl in the south with an average elevation of 296.5 m.amsl.The general slope of the area is southwards. There is little flow of water in the river bed in post monsoon period. Area is having 1076 mm rainfall in a year. During rainy season, catchment water flows in the river. During dry period the Boulder,Graval& Sand is excavated which gets replenished to some extent during this period. No mining activities will be carried out during rainy season when there is water flowing in the working area.

There will be no intersection of water table as working will be carried out upto 3.0 m depth only from surface of river bed .

4.3 Air Quality Management:

The proposed mining method is not likely to produce much of dust and fugitive emissions to cause damage to ambient air quality of the area. Workers will be provided with personnel protective equipment like face mask, ear plug/ muffs.

Forairpollutionmanagementattheprogressivemineclosureofmine, greenbelt will be developed to prevent and control air pollution.

4.4 Waste Management:

As stated in mining method, there will be no waste of any kind. Therefore no waste management s required.

4.5 Top Soil Management

No top soil will be needed to be handled. Therefore no top soil management is required.

4.6 Tailing dam management

There is no proposal of beneficiation of minera l. No tailing dam is envisaged.

4.7 Infrastructure:

The infrastructure facilities like site office, first-aid station, rests helter/ store, drinking water etc. will be established temporarily. At the time of closure there will be no problem to remove the same from the lease area..

4.8 Disposal of mining machinery:

Machinery is proposed on hire basis. Hence no decommissioningof mining machinery

is proposed.

4.9 Safety &Security:

Safety measures will be implemented to prevent access to excavation area by un-authorized persons as per Mine Act 1952, MMR 1961.

i. Safety measures willbeimplementedasperMineAct1952,MMR,1961, Mines Rules1955.
ii. Excavation will be not more than 3 m in river bed ..
iii. Width of bench will be kept around 20.0 m for ease of operations and provide sufficient room for the movement of equipments.
iv. Protective equipment like dust masks, earplugs/ muffs and other equipments shall be provided for use by the work persons.
v. Notices giving warning to prevent inadvertent entry of persons shall be displayed at all conspicuous places and in particular near mine entries.
vi. Danger signs shall be displayed near the excavations.
vii. Security guards will be posted.
viii. In the event of temporary closer, approaches will be fenced off and notice displayed.

4.10 Disaster Management and Risk Assessment:

This should deal with action plan for high risk accidents like landslides, subsidence, flood, inundation in underground mines, fire, seismic activities, tailing dam failures etc. and emergency plan proposed for quick evacuation, ameliorative measures to be taken etc. The capability of lessee to meet such eventualities and the assistance to be required from the local authorities should be described.

- The shallow depth of activities in river bed mining will not involve any high risk accident due to side falls/collapse.
- There will be no mining whenever there is flow of water in the river bed
- The complete mining operation will be carried out under the Management and control of experienced and qualified Mines Manager having Certificate of Competency to manage the mines granted by DGMS.
- All the provisions of Mines Act 1952, MMR 1961 and Mines Rules 1955, and other laws applicable to mine will strictly be complied with.
- During heavy rainfall the mining activities will be closed in the river bed.

- All persons in supervisory capacity will be provided with proper communication facilities.

  Competent persons will be provided FIRST AID kits which they will always carry.

4.11 Care and Maintenance during Temporary Discontinuance:

In case of any temporary discontinuance due to court order or due to statutory requirement or any other unforeseen circumstance following measures shall be taken for care, maintenance and monitoring of conditions.

- Notice of temporary discontinuance of work in mine shall be given to the DGMS as per the MMR 1961.
- All the mining machinery shall be shifted to a safe place.
- Entrance to the mine or part of the mine, to be discontinued shall be fenced off. Fencing shall be as per the circular 11/1959 from DGMS.
- Security Guards shall be posted for the safety and to prevent any unauthorized entry to the area.
- Carry out regular maintenance of the facilities/area detailed below in such a way as would have been done as if the mines were operation:

  Mine roads and approach roads,

  Fencing on approach roads,

  Checking and maintenance of machines and equipment,

  Drinking water arrangements,

  Mine office, first aid stations etc.

- Competent persons shall inspect the area regularly.
- Air, water and other environmental monitoring shall be carried out as per CPCB and IBM Guideline.
- Care and upkeep of plantation shall be carried out on regular basis.
- Status of the working and status monitoring for re-opening of the mines shall be discussed daily.



In case of discontinuance due to any natural calamities/abnormal conditions, mining operation will be restarted as early as possible after completing rescue work, restoring safety and security, repairs of roads etc.



5.0 ECONOMIC REPERCUSSION OF CLOSURE OF MINE AND MANPOWER RETRENCHMENTS

Mining contract area will be granted for a period of 10 years only. As per the production programme envisaged, at the end of contract period, still sufficient un-worked area would be left available for continuing production activities further. Hence, no closure is planned. There will be no affect on the man power as the persons belong to nearby villages and will have an option either to be available for employment for the next contract or do the agriculture in their fields.

6.0 TIME SCHEDULING FOR ABANDONMENT

The mining area has enormous potential for continuance of operations even after the expiry of the awarded period. The details of time schedule of all abandonment will be given at the time of final closer plan. Mining activities are confined to river bed, up to 3.0 m. depth, relatively shallow depth of workings. Replenishment of the Boulder, Gravel & Sand being removed from the river bed is a natural process particularly during monsoon periods.

7.0 ABANDONMENT COST

As at present mining is not going to be closed so abandonment cost could not be assessed. However based on the progressive mine closure activities during the plan period, cost is assessed as given below:

Abandonment Cost

ACTIVITY	YEAR					Rate	Amount (in Lakhs)
	First	Second	Third	Fourth	Fifth		
Plantation (in no.)	800	800	800	800	800	@ 20 Rs per sapling+30 Rs maintenancecost	2.00
Plantation cost in Rs	40,000	40,000	40,000	40,000	40,000		
Wire fencing (meter)	500	500	500	500	500	@ of 1200s per meter	3.00
Wire fencing cost	60,000	60,000	60,000	60,000	60,000		
							5.00



8.0 FINANCIAL ASSURANCE

Total 14.18 ha area will be put in use upto the end of the plan period. Details of area put to use as given below (As per circular No.4/2006 issued by CCOM, Nagpur following table has been considered for calculation for financial assurance).

Calculation for Financial Assurance

S. No.	Item	Area put on use at start of plan (Ha) (A)	Requirement at the end of plan period (Ha)	Total area put to use (Ha) (B)	Area considered as fully reclaimed & rehabilitation (Ha) (C)	Net area considered for calculation (Ha) D = (B-C)
1.	Area to be excavated	0.0	14.18	14.18	0.0	14.18
2.	Storage for topsoil	0.0	0.0	0.0	0.0	0.0
3.	Overburden/ dumps	0.0	0.0	0.0	0.0	0.0
4.	Mineral storage	0.0	0.0	0.0	0.0	0.0
5.	Infrastructure *(Workshop, Adm. Building & Road)	0.00	0.50	0.50	0.50	0.0
6.	Green belt*	0.0	4.00	4.0	4.0	0.0
7	Tailing pond	0.0	0.0	0.0	0.0	0.0
8.	Effluent treatment plan	0.0	0.0	0.0	0.0	0.0
9.	Mineral separation plant	0.0	0.0	0.0	0.0	0.0
10.	Township area	0.0	0.0	0.0	0.0	0.0
11.	Others to specify	0.0	0.0	0.0	0.0	0.0
Total		**0.0**	**18.68**	**18.68**	**4.5**	**14.18**

Total 14.18 ha area will be put in use. Against this mined out area the total financial assurance (@15000/- per ha. Comes out to Rs2, 12,700/ which is part of the 'Mines and Minerals Development, Restoration and Rehabilitation fund.

9.0 CERTIFICATE

It is enclosed with the report.

10.0 PLAN AND SECTION

Plan and section are prepared and enclosed with the mining plan.

S.N. SHARMA
RECOGNISED QUALIFIED PERSON (RQP)
INDIAN BUREAU OF MINES (IBM)
RQP No. RQP/DDN/135/2001/A
VALID UPTO : 29TH MARCH 2021

APPROVED
P. K. Sharma
S.N.E.

Certificate

I, S.N.Sharma, duly Recognized Qualified Person to prepare Mining Plan under Rule 22 C of the Mineral Concession Rules, 1960 (Revised 1987) has prepared the Mining Plan & Progressive Mine Closure Plan of Boulder, Gravel & Sand (Minor Mineral) mine over an area of 20.18 hectares in Mandoli Ghaggar East Block/YNR B-3 of M/s J S M Foods Pvt. Ltd. , New Delhi . The various data and write up enclosed have been complied and verified by us. The working plan and all other details given in the plan have been prepared under my guidance and duly verified by me. The Mining Plan and Progressive Mine Closure Plan complies all statutory Rules, Regulations, orders made by the Central or State Government, statutory organizations etc. have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities

S.N. Sharma

RQP/DDN/0135/2001-A.

S.N. SHARMA
RECOGNISED QUALIFIED PERSON (RQP)
INDIAN BUR[illegible] (IBM)
RQP No. RQP[illegible]
VALID UP[illegible]

APPROVED
P. K. Sharma
S.M.E.

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

Annex 1

Registered
From

The Director General,
Mines & Geology Department, Haryana
30 Bays building, Sector-17,
Chandigarh.

To

JSM Foods Private Limited,
W Z/ 932, Basie Darapur, 1st Floor,
Near Senior Secondary School,
New Delhi-110015.

Memo No. DMG/HY/Cont/M. G. East Block/YNR B 3/2015/3915
Dated Chandigarh, the 19.06.2015

Subject: **Acceptance of the highest bid/ in respect of the Sand minor mineral mines of "Mandoli Ghaggar East Block/YNR B 3" having Tentative Area of 20.18 hectares in the district Yamuna Nagar, offered in e-auction held on 10.06.2015 and 11.06.2015 and issue of Letter of Intent (LoI) - regarding.**

You participated in the in the e- auction held on 10.06.2015 and 11.06.2015 on the State Government web portal https://haryanaeprocurement.gov.in after accepting the terms and conditions of the auction notice DMG/HY/e Auction/YNR/2015/2150 dated 27.04.2015 and Corrigendum DMG/HY/e-Auction/YNR/Corr./2015/3358 dated 19.05.2015in order to obtain mining contracts of minor mineral mines of the district Yamuna Nagar. You offered the highest bid of Rs. 03,30,50,000/- [Rs. Three crore thirty lakh fifty thousand only] per annum, against the Reserve Price of Rs. 03,30,00,000/- per annum, for obtaining the Mining Contract of Minor Mineral Mines namely 'Mandoli Ghaggar East Block/YNR B 3' for extraction of Sand having tentative area of 20.18 hectares. The details of the khasra numbers of the tentative area under above said Mining Block is attached as **Annexure 'A'**.

2. You are hereby informed that the State Government has accepted the highest bid of **Rs. 03,30,50,000/-** [Rs. Three-crore thirty lakh fifty thousand only] offered by you in respect of the above said minor mineral mines of **'Mandoli Ghaggar East Block/YNR B 3'** under the provisions of the Haryana Minor Mineral Concession, Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules-2012 (State Rules). Accordingly, you have become the successful bidder in respect of **Mandoli Ghaggar East Block/YNR B 3** of the district Yamuna Nagar.

3. The State Government having accepted the aforementioned highest bid offered by you, the Department is pleased to issue this Letter of Intent (LoI) in your favour in respect of the Mining Block/area namely **'Mandoli Ghaggar East Block/YNR B 3'** subject to the following terms and conditions:

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P. K. Sharma
S.M.E.

(i) The period of contract shall be **10 years** and the same shall commence with effect from the date of grant of environmental clearance by competent authority or on expiry of a period of 12 months from the date of this communication of acceptance of highest bid/ issuance of "**Letter of Intent**", whichever is earlier;

(ii) You may note that the detail of the area of the mining blocks is tentative and was notified "on as is where is basis" **(refer condition no. 4 of the notice)**. In case of any inadvertent mistake, if any, the same would be rectified/ corrected before execution of the agreement **(refer condition no. 3 of the notice)**.;

(iii) No request regarding reduction in bid amount on account of reduction in land/area of the Mining block, including due to change in description of khasra numbers/location etc. at any stage will be entertained on any ground including loss/reduction of area for mining on account of compliance of applicable laws/restrictions. Needless to state that this also includes the changes, if any, as per condition no. 3 of auction notice.

(iv) The amount of the highest successful bid i.e. **Rs. 03,30,50,000/-** [Rs. Three crore thirty lakh fifty thousand only] per annum shall be the "Annual Contract Money" payable by you as the contractor in the manner prescribed in the contract agreement to be executed on form MC-1 appended to State Rules;

(v) The above said annual contract money shall be increased at the rate of 25% on completion of each block of three years. Accordingly, the year-wise amount of the annual contract money shall be as per details given below:

Sr. No.	Year of the Contract Period	Annual contract Money
1	First Year	Rs. 03,30,50,000 /-
2	Second Year	Rs. 03,30,50,000 /-
3	Third Year	Rs. 03,30,50,000 /-
4	Fourth Year	Rs. 04,13,12,500/-
5	Fifth Year	Rs. 04,13,12,500/-
6	Sixth Year	Rs. 04,13,12,500/-
7	Seventh Year	Rs. 05,16,40,625/-
8	Eighth Year	Rs. 05,16,40,625/-
9	Ninth Year	Rs. 05,16,40,625/-
10	Tenth Year	Rs. 06,45,50,790/-

(vi) As per the terms and conditions of the grant, you are liable to deposit **Rs. 82,62,500/-** i.e. equal to 25% of the annual bid amount as "security deposit" out of which you have already deposited an amount of **Rs. 33,05,000/-** (Rs. Thirty three lakh five thousand only) i.e. equal to 10% of the annual bid amount as 'initial bid security' after the conclusion of e-auction. The balance amount of **Rs. 49,57,500/-** of the bid security i.e.15% of the annual bid amount alongwith one month's advance

Department of Mines & Geology Haryana, Chandigarh
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contract money shall be deposited before commencement of the mining operations or before expiry of the period of 12 months, whichever is earlier;

(vii) You shall execute an Agreement Deed in Form MC-I appended to the Haryana Minor Mineral Concession, Stocking, Transportation of Mineral & Prevention of Illegal Mining Rules-2012 (the State Rules 2012) within a period of 90 days from the date of issuance of this communication/ grant of LoI;

(viii) It may be pointed out that as per existing applicable rates the contract agreement had to be executed on **Non Judicial Stamp papers worth Rs. 13,27,700/- (Rs. Thirteen lakh twenty seven thousand seven hundred only)**. However, you are aware that M/s Om Minerals, one of the LoI holders (who participated in the auctions held in December 2013) has filed a **CWP No.7991 of 2014**, before the Hon'ble Punjab & Haryana High Court. Further a few other similarly situated LoI holders have also filed separate CWP's before the Hon'ble Punjab and Haryana High Court challenging demand/ levy of Stamp Duty on execution of 'Contract Agreement'. The said matter is still pending for adjudication. Accordingly, the present auction was conducted subject to outcome of said cases. **Therefore, the charging of stamp duty for the execution of contract agreement shall be as per final outcome of the said CWP's.**

(ix) The Contract Agreement would also be required to be got Registered on payment of the applicable Registration fee;

(x) In case you fail to execute the Agreement Deed within the prescribed period of 90 days, this LoI shall be deemed to have been revoked and the amount of initial bid security deposited at the time of auction shall be forfeited. Further, the balance amount of 15% towards the bid security, amounting to **Rs. 49,57,500/-** being the 15% of the annual bid amount, shall be recovered as arrears of land revenue and, you, as the LoI holder/ defaulter, shall be debarred from participation in any future auctions for a period of 5 years;

(xi) You shall also furnish a solvent surety for a sum equal to the amount of the annual bid for execution of the Agreement. In case the surety offered by the contractor(s) during the subsistence of the contract is not found solvent, the contractor(s) shall offer another solvent surety and a supplementary deed shall be executed to this effect;

(xii) After execution of Agreement, either before commencement of the mining operation or before expiry of the period of 12 months from the date of issuance of this LoI, whichever is earlier, in case of failure to deposit the balance 15% amount towards

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security (as required under clause (v) above) the acceptance of bid/issuance of LoI/execution of agreement shall be deemed to have been revoked and 10% amount deposited towards as initial bid security at the time of auction shall stand forfeited. Further, un-paid 15% amount towards security shall be recovered as arrears of land revenue and you shall debarred from participation in any subsequent bids for a period of 5 years;

(xiii) You shall be liable to deposit the contract money in advance at monthly intervals as per provisions of Contract Agreement i.e. from the date of commencement of the contract Agreement;

(xiv) You shall also deposit/ pay an additional amount equal to 10% of the due contract money along with the monthly installments towards the **'Mines and Minerals Development, Restoration and Rehabilitation Fund'.**

(xv) You shall also be liable to pay advance income tax as per provisions of Section 206(c) of income tax act in addition to contract money, payable as per terms and conditions of contract agreement.

(xvi) On enhancement of the contract money with the expiry of every three years period, you shall deposit the balance amount of security so as to upscale the security amount equal to 25% of the revised annual contract money as applicable for one year with respect to the next block of three years. No interest, whatsoever, shall be payable on the security amount deposited under the prescribed security head of the government;

(xvii) You shall prepare a Mining Plan along with the Mine Closure Plan (Progressive & Final) as per chapter 10 of the State Rules for the "Mining Block" and shall not commence mining operations in any area except in accordance with such Mining Plan duly approved by an officer authorised by the Director, mines & Geology, in this behalf.

(xviii) Further, the actual mining will be allowed to be commenced only after prior Environmental Clearance is obtained by you as the LoI holder/mining contractor for the Mining Block from the Competent Authority as permitted by the competent Authority required under EIA notification dated 14/9/2006, as amended from time to time by the MoEF&F, GoI and guidelines/ circulars issued in this behalf;

(xix) The Mining contractor to whom mining rights have been granted through this contract would also be liable to pay the following to the landowners to undertake mining operations:

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P. K. Sharma
S.M.E.

(a) Annual rent in respect of the land area blocked under the concession but not being operated, and

(b) Rent plus compensation in respect of the area used for actual mining operations.

(xx) The amount of annual rent and the compensation shall be settled mutually between the landowner and the mining contractor. In case of non-settlement of the rent and compensation, the same shall be decided by the District Collector concerned in accordance with the provisions contained in Chapter 9 of the "Haryana Minor Mineral Concession, Stocking and Transportation of Minerals and Prevention of Illegal Mining Rules, 2012";

(xxi) The total mineral excavated and stacked by the concession holder within the area granted on mining contract shall not exceed two times of the average monthly production as per approved Mining Plan at any point of time;

(xxii) The Mining Contractor shall not stock any mineral outside the concession area granted on mining contract without obtaining a valid license as per provisions contained in Chapter 14 of the State Rules;

(xxiii) The contractor shall not carry out any mining operations in any reserved/protected forest or any area prohibited by any law in force in India, or prohibited by any authority without obtaining prior permission in writing from such authority or officer authorized in this behalf. In case of refusal of permission by such authority or officer authorized in this behalf, contractor(s) shall not be entitled to claim any relief in payment of contract money on this account;

(xxiv) Following are the general/ special conditions applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas:

(a) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge structure on up-stream side and ten times the span of such bridge structure on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

(b) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorised by him;

(c) The maximum depth of mining in the river-bed shall not exceed three meters from the un-mined bed level at any point in time with proper bench formation;

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P. K. Sharma
S.M.E.

(d) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

(e) No mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 meters in case of Tangri, Markanda and Ghaggar and 100 meters on either side of all other rivers/ rivulets. (This clause is applicable for mining outside river bed area);

(f) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology Department, may be made applicable to the mining operations in river-beds.

(xxv) A safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf. Further, the depth of excavation of mineral shall not exceed nine meters (9m) at any point of time.(This clause is applicable for mining outside river bed area);

(xxvi) The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws;

(xxvii) The contractor shall be under obligation to carry out mining in accordance with all other provisions as applicable under the Mines Act, 1952, Mines and Minerals (Development and Regulation) Act, 1957, Indian Explosives Act, 1884, Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986 and the rules made thereunder, Wild Life (Protection) Act, 1972, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981;

4. Accordingly, for the time being you are advised to submit the Draft Contract Agreement on Form MC-I (in Five copies) appended to the State Rules-2012, on plain papers along with other requisite documents including a solvent surety(s) for a sum equal to the amount of the annual bid for execution of the agreement, within a period of 90 days from the date of issue of this bid acceptance letter and the LoI. You should also furnish an affidavit to the effect that you will immediately deposit the requisite stamp duty as per out of the related Court cases as stated under para 3(viii) above.

5. Please note that one Sh. Rajbir Singh had filed a CWP bearing No. 27700 of 2013 before the Hon'ble Punjab & Haryana High Court challenging (i) commencement of contract

P. K. Sharma
S.M.E.

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

period after 12 months from the date of acceptance of highest bid/issuance of "Letter of Intent" or from date of obtaining of environmental clearance from competent authority which ever is earlier and (ii) payment of rent and compensation to surface right holder/land owners from where mining operations are to be carried out. Therefore, commencement of period of contract & payment of compensation to land owners shall be as per final outcome of court order in said CWP. Accordingly, the auction was conducted subject to outcome of above case, hence this acceptance /LoI is being issued subject to the outcome in CWP No. 27700 of 2013 pending before Hon'ble Punjab & Haryana High Court.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. East Block/YNR B 3/2015/ Dated: 19.06.2015

A copy is forwarded to the following for information and necessary action please:-

1. The Chairman, Haryana State Pollution Control Board, Panchkula.
2. The Deputy Commissioner, Yamuna Nagar.
3. The Mining Officer, Mines & Geology Department, Yamuna Nagar.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. East Block/YNR B 3/2015/ Dated: 19.06.2015

A copy is forwarded to Sh. Bharat Wadhwa S/o Sh. Radhey Shyam, R/o House No. 676, Sector-13, Urban Estate, Karnal, the authorized person/Director who gave highest bid on behalf of **'JSM Foods Private Limited'** for information and necessary action please.

Mining Officer,
for Director General Mines & Geology, Haryana.

P. K. Sharma
S.M.E.

(Annexure-2)

CONSENT LETTER FROM APPLICANT

The Mining Plan & Progressive Mine Closure Plan in respect of Mandoli Ghaggar East Block/ YNR B-3 Sand Mine over an area of 20.18 hectares in District- Yamunanagar State –Haryana of M/s JSM Foods Private Limited , WZ/932, Basie Darapur, 1st floor, New Delhi. is being prepared by S.N. Sharma bearing registration no. RQP/DDN/0135/2001-A.

We request The Director Mines and Geology, Haryana to make further correspondence regarding modification of the mining plan with the said RQP on the following address:-

S.N. Sharma

RQP/DDN/0135/2001-A.

First Floor, 282 sector 11 D, DLF , Faridabad -114206 (Haryana)

(09560848579) snsharma@jbbtechnocrat.com

I also authorize Shri S.N. Sharma to make correspondence with your office.

I hereby undertake that the Mining Plan in respect of this area prepared by RQP be deemed to have been made with my knowledge and consent and shall be acceptable to me and binding on me in all respects.

This is to declare that the Mining Plan & Progressive Mine Closure Plan complies all statutory Rules, Regulations, orders made by the Central or State Government, statutory organizations, court etc. have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities. It is also undertaken that all the measures proposed in the Progressive Mine Closure Plan will be implemented in a time bound manner as proposed.

Place:- DELHI

Date :- 12/12/15

APPROVED

P. K. Sharma

E.M.E.

SIGNATURE OF APPLICANT

Annexy 3

Renewed/नवीनीकृत up to 29/3/2021

खनन योजना तैयार करने हेतु
योग्य व्यक्ति के रूप में
मान्यता का प्रमाणपत्र

क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines

(खनिज रियायत नियमावली 1960 के नियम 22(सी) के अंतर्गत)

श्री एस. एन. शर्मा

पत्नी श्री के. सी. शर्मा

निवासी हाउस नं 2181, सेक्टर-16, फरीदाबाद, हरियाणा

द्वारा अपनी योग्यताओं और अनुभव का संतोषप्रद प्रमाण प्रस्तुत करने के फलस्वरूप खनिज रियायत नियमावली, 1960 के नियम 22(सी) के अंतर्गत उन्हें एतद्द्वारा खनन योजना तैयार करने हेतु योग्य व्यक्ति के रूप में मान्यता प्रदान की जाती है ।

उनका पंजीयन क्रमांक REP/DDN/135/2001/A है ।

यह मान्यता दिनांक 29.03.2011 को समाप्त होने वाली ~~इस~~ वर्ष की अवधि के लिए वैध है ।

स्थान : देहरादून
दिनांक : 30.03.2001

क्षेत्रीय खान नियंत्रक
भारतीय खान ब्यूरो
क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines

APPROVED
R.K. Sharma
S.M.E.

sediments during rainy season.

Greenbelt

In order to restore the environment and ecological balance in the area affected by mining, a forestation is considered to be an effective measure. Afforestation is a major thrust area in pollution control of mining. Afforestation is suitable for detecting, recognizing and reducing air pollution effects. Tree functions as sinks of air pollutants, besides their bio-aesthetical values, owing to its large surface area. The green belt supplements Oxygen to the atmosphere and combat air pollution effectively and aesthetic beauty and landscape of the area improves. It also checks soil erosion and make eco-system and climate more conducive.

Following factors will be considered while selecting species for plantation:-

i) Fast growing plant species shall be preferred.
ii) The plant will be of deep rooting system.
iii) The plant will be perennially green to improve aesthetic beauty of the area.
iv) The plant species will be adoptable to the local climatic conditions.
v) Native plant species will be planted.

Forestation programme shall be carried out basically, along the mine boundaries and roads as permitted by land owners. The mining area in the river bed is devoid of any vegetation, will not cause any harm to riparian vegetation cover. It is proposed to have plantation on both sides of the roads as greenbelt to provide cover against dust dissemination. Plantation will also be carried out as social forestry programme in villages, school and the areas allocated by the Panchayat/ State authorities.

Native plants like Neem, shisham, , Mango and other local species will be planted. A suitable combination of trees that can grow fast and also have good leaf cover shall be adopted to develop the greenbelt. It is proposed to plant 4,000 no's of native species along with some fruit bearing and medicinal trees during the plan period.

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P. K. Sharma
S.M.E.

Table: Greenbelt Programme

Year	Saplings to be planted	Survival 80 %	Species	Place of Plantation
I	800	640	Neem, , Mango, Shisham, Sirish, Babool, Gulmohasr	Along the roads, in schools and public building and other social forestry programme.
II	800	640		
III	800	640		
IV	800	640		
V	800	640		
Total	**4,000**	**3200**		



11.0 MEASURES TAKEN AND TO BE TAKEN FOR PROTECTION OF ENVIRONMENT IN AND AROUND MINING AREA

- Mining activities will be confined to 3.0 m depth in river bed .
- All link roads from the mining area to the tar road will be properly sprayed with water for dust suppression.
- Greenbelt and plantation on road side will help in dust suppression and will also reduce noise level.
- Plantation will improve ecology and aesthetic beauty of the area
- Measures will be taken to prevent the workings from extending in safety zones, cutting the banks and exceeding 3.0 m depth limit from the river bed surface.



12.0 MEASURES TAKEN AND TO BE TAKEN FOR DUMPING OVERBURDEN, STACKING OF TOP SOIL AND UTILIZATION OF TOP SOIL

There is no top soil in the river bed mining. If any soil is required to be removed the same will be used to strengthen the river banks.

13.0 MEASURES TAKEN AND TO BE TAKEN FOR THE CONTROL OF WATER, NOISE AND AIR POLLUTION

Air Pollution:

Emission of gases and dust takes place due to movement of vehicles. Spraying of water and plantation along the road side prevents the spread of dust. Plantation also acts as barrier for restricting pollution. Impact on air environment has been assessed taking in to consideration the proposed production and increase emissions. The sources of air pollution are given below:

- Operation of mining machinery/ loading operations
- Transportation of mineral
- Wind erosion from barren area and river bed
- Emission of gases and dust due to movement of vehicles

MEASURES FOR DUST SUPPRESSION & CONTROL OF AIR POLLUTION:

Control of Air Pollution Due To Dust, Exhaust Emissions or Fumes During Mining or Processing Operations For Minor Mineral & Related Activities and Containing the Same Within Permissible Limits Specified Under : -

1. Plantation on road side will be undertaken to prevent the spreading of dust.
2. Water spraying will be done twice in a day over the haul road & roads leading to adjoining state roads.
3. Dust respirators will be provided to the operators of the heavy earth moving machineries.
4. Preventive maintenance shall be carried out of equipment.

5. At every work place where, the air borne dust generated, to be sampled and the concentration of the respirable dust will be determined regularly. If any measurement at any workplace and at source, the concentration in excess of 50% or 75% of the available concentration of permissible limit then measurements shall be carried on, at intervals not exceeding 3 months or 1 month respectively.
6. Silencers will be fitted to the dumpers.

The following table indicates the concentration of Ambient Air as per the CPCB guidelines:

National Ambient Air Quality Standards

S. No.	Pollutants	Time weighted Average	Concentration of Ambient Air	
			Industrial, Residential, Rural and Other Areas	Ecologically Sensitive Area (notified by central Government)
1.	2.	3.	4.	5.
1	Sulphur Dioxide (SO^2), µg/m^3	Annual*	50	20
		24 hours**	80	80
2	Nitrogen Dioxide (NO_x), µg/m^3	Annual*	40	30
		24 hours**	80	80
3	Particulate Matter (Size less than 10 im) or PM_{10}, µg/m^3	Annual*	60	60
		24 hours**	100	100
4	Particulate Matter (Size less than 2.5 im) or $PM_{2.5}$, µg/m^3	Annual*	40	40
		24 hours**	60	60
5	Ozone (O_3), µg/m^3	8 hours**	100	100
		1 hours**	180	180
6	Lead (Pb), µg/m^3	Annual*	0.50	0.50
		24 hours**	1.0	1.0
7	Carbon Monoxide (CO), mg/ m^3	8 hours**	02	02
		1 hours**	04	04
8	Ammonia (NH_3), µg/m^3	Annual*	100	100
		24 hours**	400	400
9	Benzene (C_6H_6), µg/m^3	Annual*	05	05
10	Benzo(O) Pyerene Particulate Phae only ng/ m^3	Annual*	01	01
11	Arsenic (As), ng/ m^3	Annual*	06	06
12	Nickel (Ni), ng/ m^3	Annual*	20	20

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 8 hourly or 1 hourly monitored values, as applicable, shall be compiled with 98% of the time in a year. 2% of the time, they may exceed the limits but not on to two consecutive days of monitoring.

(Source: CPCB notification Dated 18th November 2009)

Air pollutants released during production can be checked by:

- Dust suppression system/ water spraying would be adopted at mine working and loading points
- Excavation operations to be suspended during very strong wind conditions
- Afforestation will be carried out for control of dust
- Plantation with wide canopy trees along approach road will help in dust suppression
- Persons to be provided with dust mask and other personal protective equipments, particularly during summer months and dust storm periods

Transportation

- Regular water spraying on haulage roads during mineral transportation by water sprinklers,
- Avoid over loading of tippers & consequent spillage on the roads,
- Mineral carrying trucks will be effectively covered by tarpaulin to avoid escape of fines to atmosphere,
- Air quality shall be regularly monitored both in the core zone and the buffer zone.

Controlling of NOx level

The source of NOx is due to vehicular emission. This can be controlled by proper maintenance and servicing of vehicles. Only P.U.C. certificated vehicles will be permitted

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Noise Pollution

There is no drilling and blasting for mineral extraction. Noise pollution due to transportation will not cause any problem to the inhabitants of this area because there is no human settlement in close proximity to the link roads in miningarea.Effective steps will be taken to keep the noise level well below the DGMS prescribed limit of 85 dBA.

Noise control is achieved by the following:

- Proper care and maintenance of the equipments will be carried out.
- Personal protective equipments will be provided to the workers.



14.0 DEMOGRAPHIC DETAILS OF THE STUDY AREA

Total number of villages in which miningarea falls is 1. Main occupation is agriculture. The details of these and other nearby village and their population are given below:-

Table: Demographic Details

Name of village	THH	Tot Pop	Tot Male	Tot female
MandauliGagar (103)	122	695	368	327
Alipur (102)	16	114	66	48
Dammunpur Bara (101)	61	439	221	218
MeharMajra (105)	238	1609	889	720
DammunpurChhota (99)	92	478	256	222
JairampurKhalsa (98)	192	1323	722	601
Telipura (96)	137	798	405	393
Rampur Khadar (94)	158	1117	600	517
Hal-dariGujar(95)	90	564	313	251
Nawazpur (93)	85	652	354	298
Lakar-maiPratappur (92)	239	1554	863	691
Kaniawala (74)	51	273	147	126
Bhilpura (76)	173	1112	584	528
Bichpari (77)	54	360	179	181
Nathanpur (91)	131	803	450	353
Hal-dariMaru (88)	86	516	275	241
Lahoriwala (89)	44	318	178	140
Hasanpur (90)	63	335	174	161
Khadri (97)	589	3731	1989	1742
Nandgarh (87)	119	740	396	344
Ismailpur (86)	237	1489	823	666
Harewa (83)	84	535	312	223
Singh Pura (205)	99	574	304	270
Jaidhar (82)	440	2650	1423	1227
BhulKheri (85)	62	407	205	202
Jaidhari (81)	277	1735	929	806
Manbharwala (79)	80	445	239	206
Fatehgarh (107)	365	2136	1127	1009
Shahzadpur (109)	96	544	287	257
Kanalsi (104)	213	1317	883	634

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15.0 DETAILS OF HEALTH CHECKUP AND INSURANCE OF ALL THE EMPLOYED PERSONS (FOR EXISTING MINING AREA)

All workers will be subjected to medical examination as per Mines Rule 1955 both at times of appointment and at least once in five years. Medical camps will be organized for this activity. Insurance of all employees as per the rules will be carried out.

15.1 Corporate Social Responsibility

As a corporate responsibility following measures along with budget provision is proposed for improving the conditions of persons in and around the project area:

The Yamuna agar district ofHaryana State is relatively less developed in respect of employment and facilities. Thus, it can be seen that the proposed project offers good potential for the local people for employment directly and indirectly. The Project Affected Persons, if any, of the lease area will be provided with compensation or job or indirect employment such as business, contract works etc. With the starting of mining operation, employment/business opportunity will increase and welfare amenities such as free medical facilities, conveyance, school, free education, drinking water supply etc will be available for the area.
The details of benefits to the people in the adjoining villages are discussed here under:

a) Employment

From the study of socio economic environment at the study area it is quite evident that the area is not quite developed as far as job opportunities and living standard of the population is concerned. Apart from cultivation, agriculture, etc mining, industries and ancillary activities play an important source of livelihood in this as well as adjoining districts.

With the start of mining operations, various employment opportunities will be generated. Several persons will be benefited with mining works, employment through contractor, running of jeep and buses, canteens, different kind of shops and transport related business avenues.

The Project Affected Persons, if any, will be provided with either compensation or direct employment or indirect employment. They would be mostly recruited in unskilled, semi skilled categories etc. This will improve the economic condition of the local people. The employment of local people in primary and secondary sectors of project shall upgrade the prosperity of the region.

(b) Educational facilities

Industrial on-job training will be provided to the interested local people and the trained people will be absorbed in jobs as per the requirement of the project. Proponent will also provide full cooperation and monitory assistance for adult education programme. Other activities proposed are :

1. Targeted programmes for primary education for specially girl child
2. Augmentation of infrastructure and equipments, furniture, blackboard, toilets etc in schools
3. Scholarships to meritorious students
4. Adult education & awareness about saving & investment plans.
5. Partnerships in state sponsored education programmes
6. School wall boundary maintenance
7. Existing govt. school strengthening by boundary wall construction, construction of toilets, roof repair, drinking water taps, etc.
8. Monetary contribution for expansion of govt. school from 6^{th} to 12^{th} class (construction of classrooms, field, toilets, taps etc.)

Capacity building activities such as following will be undertaken:

1. Scholarship for ITI training outside for 20 persons
2. Sponsorship of land losers / wards for full term courses
3. Short term courses for skill up gradation
4. Vocational training (dairy, poultry, bee keeping, sericulture)
5. Specific Programmes for Ladies (stitching, embroidery, tailoring etc)



(c) Medical facilities

Project shall provide aid to improve the existing medical facilities in the villages and also improve awareness and provide sufficient training in hygiene, sanitation and proper diet. Some of the activities that can be carried out are as follows:

1. Mobile Clinic with testing and diagnostic facilities
2. Health Camps for Family Planning, HIV/AIDS and other communicable diseases.
3. Addressing local health related issues through audio visuals and group meetings
4. Subsidized treatment in hospital with which tie-up will be there
5. Specific Programmes for hygiene and sanitation
6. Helping aids to each category of physically challenged as per requirement
7. Eye camps to address the issue of cataracts specially

(d) Infrastructure facilities

Infrastructure facilities like road, Post & Telegraph, Telephone, Banks etc are basics for each and every area. These facilities are already well developed in the surrounding areas. The lessee will take various steps for upliftment of the basic amenities of the area by providing drinking water, communication facilities, etc. Construction of roads, drainage, community halls, school buildings, health centers, street lighting, equipments to educational institutions, public utilities, sanitation facilities, etc in nearby area will be undertaken.

As a corporate responsibility following measures along with budget provision is proposed for improving the conditions of persons in and around the project area:

Sr No	Description	1st Year	2nd Year	3rd Year	4th Year	5th Year
1	Health check up camps	1.00	1.0	1.00	1.50	1.50
2	Insurance cover of workers	2.0	2.00	2.00	2.50	3.00
3	Assistance to local schools, scholarship to students	1.00	1.00	1.75	2.00	2.00
4	Sanitations and drinking water facilitites	1.75	1.75	1.75	1.75	1.75
5	Vocational training to persons for income generation	0.75	0.75	0.75	0.75	0.75
6	Assistance to self help groups	1.00	1.50	1.50	2.00	2.00
Total		7.50	8.0	8.75	10.5	11.00

15.2 Fund Provision for EMP Measures: following provisions are proposed to be taken for improving, control and monitoring of environment protection measures



Sr. No.	Particulars	Amount (in lacs)
1	Pollution monitoring – Air, Water, Noise	3.0
2	Pollution monitoring – Water sprinkling	3.0
3	Wire fencing at plantation sites	0.6
4	Plantation including maintinance	1.50
5	Rainwater harvesting	3.0
6	Haul road and other roads repair and maintinance	3.0
7	Pre-moonsoon and post monsoon survey for sedimentation in the river bed	2.0
	Total	16.10



PART –II

PROGRESSIVE MINE CLOSURE PLAN

1.0 Introduction

(A) Name & address of the Mining Contractor

M/s J S M Foods Pvt. Ltd. , New Delhi

(B) LOCATION OF THE MINING AREA

Mining Contract of Boulder,Graval& Sand (Minor Mineral) over an area of 20.18 ha is located in District – YamunanagarMandoliGhaggar East Block/YNR B-3Boulder,Graval & Sand unit.

(C) EXTENT OF THE MINING AREA

20.18ha in MandoliGhaggar village /YNR B-3 as explained at 2.0 in the main mining plan

(D) PRESENT LAND USE PATTERN and At the end of lease period

Table: PRESENT LAND USE PLANING

Table: LAND USE PLANING AT THE END OF lease period

Sr.No.	Particulars		Present Land Use (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	6.0
2	Infrastructure (Office,temp. Shelters etc.		0.00
3	Area available for mining in river bed		14.18
			20.18

Table: LAND USE PLANING AT THE END OF LEASE PERIOD

Sr.No.	Particulars		AT THE END OF 5th YEAR (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	6.0
2	Infrastructure (Office,temp. Shelters etc.		0.02*
3	Naturally reclaimed in river bed		10.16
6	Un worked river bed		0.00
7	Plantation*		4.00*
	Total		20.18

*Plantation in 4.0 ha land will be done under social forestry on land available from Panchayat by the end of mine life

* Plantation & infrastructure In restricted area only

(E) **METHOD OF MINING:**

Mining activity will be carried out by open cast semi-mechanized method.

- No overburden/ waste material will be produced in river bed. No drilling/ blasting are required as the material is loose in nature.
- Light weight excavators will be used for loading of mineral in tippers/dupers.
- Proper benching of 3.0 m height will be maintained and width of the bench will be around 20 m. The benches shall be maintained in the form of slices/strips parallel to the banks of river.
- Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season.
- Roads will be properly made and sprayed by water for suppression of dust.
- Roads in the mining area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20.
- Extraction activities will start in the blocks from the upstream side to downstream side. This will not obstruct the movement of water, if any, during monsoon period in the river course.
- In case during any period, the replenishment was found less than 3 m or depth of extraction, the mining during said period would restrict to depth which would not be more than 3 m of the original level of the river bed.

(F) **MINERAL PROCESSING OPERATION:**

No mineral processing is envisaged for Boulder,Graval& Sand (minor mineral) produced during the mining activity.

1.1 **Reasons for closure:**

The progressive mine closure plan has been prepared in compliance of Haryana Minor Mineral Concession Rules 2012 under MMCR 1986. No immediate closure is

planned as sufficient reserves are available to carry on the activities. There is market potential in domestic demands.

1.2 Statutory Obligations:

The mining contractor is bound to submit the Progressive mine closure plan either with Mining plan or Scheme of Mining.

Mining contractor is bound to follow the terms and conditions as will be stipulated in the mining contract.

In addition to it the rules pertaining to the Protection of Environment i.e Environment Act. Environment Rules and other associated rules for the protection of environment will have to be followed.

The contractor shall pay/deposit required amount as per provisions of "Mines and Minerals Development, Restoration & Rehabilitation Fund".

1.3 Closure plan preparations

Name, address and registration number of the recognized persons who prepared the progressive closure plan and name and address of the executing agency who is involved in the preparation of progressive mine closure plan.

S.N.S Sharma

Regd. No RQP/DDN/0135/2001/A **(Annexure-III)**

Lessee will himself implement the closure plan; no outside agency will be involved.

2.0 MINE DESCRIPTION

2.1 General Geology and Local Geology

2.1.1 Regional Geology

The north-eastern part of Haryana is predominantly characterized by sedimentary lithology in the Sub-Himalayan zone comprising Subathus, Dagshais, Kasaulis and Siwaliks. A general Regional stratigraphic sequence in the area is given in Table. Tertiary sequence of Haryana

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Age	Super group	group	Formation	litho logy
Holocene			Newer alluvium and Newer Aeolian Deposits	Gravel, Sand, silt, clay, limestone, gypsum
Lower to upper Pleistocene			older alluvium and Older Aeolian Deposits	Gravel, grey sand, silt, clay, brown sand, calcrete
Lower to Middle Pleistocene	S I W A L I K	Upper Siwalik	Boulder Conglomerates formation	Conglomerate, sandstone, silt, clay
Upper Pliocene			Pinjore Formation	Coarse grit,red sand stone and clay, conglomerate
			Tatrot Formation	Friable Sandstone and variegated clay
		Middle Siwalik	Dhokpathan Formation	Brown sandstone and orange clay
Middle Miocene			Nagri Formation	Hard grey sand stone, mudstoneand minor shale
		Lower Siwalik	Nahan Formation	Coarse grity ,clay and red sandstone often calcareous, brownish shale with lignite lenticles, greenish white Quartzite
Lower Miocene		Sirmur	Kausauli Formation	Grey and green stone,green shale and grey clay
			Dagsai Formation	Purple and green sand stone, deep red gritty,clay,whiteandstone with ferruginous concretions
Upper Eocene			Subathu formation	Sandstone with gritu clay. Impure fossiliferous limestone calcareous slate,greenish shale and dark brown quartzite
Pre-proterozoic			Tundapathar	Thickly bedded, coarse stromatolite limestone with carboniferous shale and quartzite

2.1.2 LOCAL GEOLOGY

The litho units encountered in the riverbed and surrounding areas belongs to the Shivalik super groups. The sediments are river borne and has deposited in the riverbed and the

CONTENTS

S.NO	DESCRIPTION	PAGE NO
	Introduction	1-4
1.0	General	4
2.0	Details of the Mining lease area	5
3.0	Details of Existing Mining pits, their dimensions etc	7
3.1	Physiography, Drainage and Climate	9-13
3.2	Geology of the Area	13
3.2.1	Regional Geology	13-15
3.2.2	Local Geology	15
3.2.3	Description of formation	16
3.2.4	Boulder, Gravel & Sand	16-18
3.2.5	Physical & Chemical Characteristics of mineral	18
3.2.6	Original & control of mineralisation (Annual replenishment of mineral in river bed area vis-a-vis-sedimentation	19-25
3.2.7	Grade and use of Boulder, Gravel & Sand	25
3.3	Reserves	26
3.3.1	Method of estimation of reserves	26-29
4.0	Details of production & dispatches of five years	29
5.0	Physical and Geological Characters of the deposit	30
6.0	Details of Mining Machinery Deployed/ to be deployed	30
6.1	Fuel consumption Per Day	30
7.0	Method of mining	31
7.1	Proposed year wise development for five years	32
7.2	Proposed rate of production when the mine is fully developed	32

Department of Mines & Geology Haryana, Chandigarh
APPROVED
P. K. Sharma
S.M.E.
Bhujal Bhawan, Sector-6, Panchkula

7.3	Mineable reserves and anticipated life of the mine	32
7.4	Proposed method of mining	32-38
7.5	Conceptual Mining Plan	38-39
7.7	Mine Drainage	40
7.8	Water requirement	40
7.9	Site services	41
8.0	Year wise Annual Program me of mining for the next 5 years	42
9.0	Details of Employment	43
	Environment Management Plan	
10.0	Measures taken and to be taken for land restoration, reclamation and plantation in/ or nearby lease area	44-46
11.0	Measures taken/ to be taken for protection of Environment in and around mining areal	47
12.0	Measures taken/ to be taken for dumping overburden, stacking of top soil.	48
13.0	Measures taken/ to be taken for the control of water, noise and air pollution	48-51
14.0	Demographic details of the study area	52
15.0	Details of health checkups and insurance of all the employed person	53
15.1	Corporate Social Responsibility	53-55
15.2	Fund Provision for Environmental Management	55-56
15.3	Fund Provision for E M P measures	
	Part II **Progressive Mine Closure Plan**	
1.0	Introduction	57
1.1	Reason for closure	58

Department of Mines & Geology Haryana, Chandigarh
APPROVED
R.L. Sharma
S.M.E.

1.2	Statutory obligations	59
1.3	Closure plan preparations	59
2	Mine description	59
2.1	General Geology and Local Geology	59
2.1.2	Local geology	60
2.2	Reserves	61
2.3	Mining Method	62
2.4	Mineral beneficiation	62
3.0	Review of implementation of mining plan including five years progressive closure plan up to the final closure plan	62
4.0	Closure plan	63
4.1	Mined out land	63
4.2	Water quality management	63
4.3	Air Quality Management:	64
4.4	Waste management	64
4.5	Top soil management	64
4.6	Tailing dam management	64
4.7	Infrastructure	64
4.8	Disposal of mining Machinery	64
4.9	Safety and security	65
4.10	Disaster management and risk assessment	65
4.11	Care and Maintenance during temporary discontinuance	66-67
5.0	Economic Repercussion of closure of mine and manpower retrenchment	68
6.0	Time scheduling for abandonment	68
7.0	Abandonment cost	68

Department of Mines & Geology Haryana, Chandigarh
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P. K. Sharma
S.M.E.

8.0	Financial assurance	69
9.0	Certificate	70
10	Plans & sections(Enclosed with the report)	70

LIST OF ANNEXURE

Sr.no.	Description
1	A copy of LOI
2	Consent letter from applicant to prepare the Mining Plan
3	RQP Certificate



LIST OF PLATES

Plate. No.	Description
1	Location Plan
2	Key plan
3	Surface Geological plan and section
4	Plan showing the position of Mine Workings at the end of Each Year.
5	Reclamation Map
6	Environmental Plan



INTRODUCTION

M/s J S M Foods Pvt. Ltd. , New Delhi was the highest bidder for the boulder, gravel and Sand of Mandoli Ghaggar East Block/YNR B-3 for which e-auction was held on 10-06-15 and 11-06-2015. A Letter of Intent has been issued by the Director General Mines & Geology Department, Haryana vide letter no DMG/Hy/Cot/Mandoli Ghaggar East Block/YNR B-3/YNR B-1/2015/ /dated 19-06-2015 for Mining of Boulder, Gravel & Sand (Minor Mineral) in revenue village Mandoli Ghaggar East Block/YNR B-3, over an area of 20.18 hectares in District- Yamunanagar , Haryana for a period of 10 years

Name of Block	Nme of Village	Details of Khasra No/Kila Nos	Area of block in ha
MandoliGhaggar East Block/YNR B-3	Mandoli Ghaggar	**52//2**, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 18, 23, 24, 25 **53//1**, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24 **58//1**, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 18, 19, 20 **59//3**, 4, 5, 6, 7, 8, 13, 14, 15, 16, 17,18	20.18

The applicant is involved in the Construction & infrastructure development business for last many years. They can invest necessary funds for the scientific and systematic development of mines including land rejuvenation and progressive reclamation programme and other measures necessary to protect the quality of the environment and human health etc.

The objective of preparation of this Mining Plan and Progressive Mine Closure Plan is to fulfill the conditions stipulated by the Department of Mines & Geology, Haryana required under Haryana Minor Mineral Concession Rules, 2012. The conditions which are related to the mining plan are reproduced here below.

- The period of contract shall commence w.e.f the date of grant of environmental clearance by competent authority as required under EIA notification dated 14.09.2006 and as amended from time to time by the MOEF,G o I or on expiry of a period of 12 months from

the date of acceptance of highest bid/issuance of "**Letter of Intent**",(L o I) whichever is earlier;

- The contractor shall also deposit/pay an additional amount equal to 10% of the due contract money along with installments towards the **'Mines and Minerals Development, Restoration and Rehabilitation Fund'**;
- The mining contractor shall got prepare a "Mining Plan" along with the Mine Closure Plan (Progressive & Final) from the Recognized Qualified Person as per chapter 10 of the "Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012" for mining area granted on contract. The contractor shall not commence mining operations in any area except in accordance with such Mining Plan duly approved by an officer authorized by the Director, Mines & Geology, in this behalf. Further, the actual mining will be allowed to be commenced only after prior Environmental Clearance is obtained by the LoI holder/mining contractor for the Mining blocks area from Competent Authority as required under notification dated 14/9/2006 issued by the MoE&F, GoI or as amended from time to time.
- The total mineral excavated and stacked by the concession holder within the area granted on mining contract shall not exceed two times of the average monthly production as per approved Mining Plan at any point of time.
- The Mining contractor shall not stock any mineral outside the concession area granted on mining contract, without obtaining a valid mineral dealer license as per provisions contained in Chapter 14 of the "Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012".
- The contractor shall not carry out any mining operations in any reserved/protected forest or any area prohibited by any law in force in India, or prohibited by any authority without obtaining prior permission in writing from such authority or officer authorized in this behalf. In case of refusal of permission by such authority or officer authorized in this behalf, contractor(s) shall not be entitled to claim any relief in payment of contract money on this account.

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- Following special conditions shall be applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas:

  (i) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge on up-stream side and ten times the span of such bridge on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

  (ii) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorized by him;

  (iii) The maximum depth of mining in the river-bed shall not exceed three meter from the un-mined bed level at any point in time with proper bench formation;

  (iv) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

  (v) In case of areas permitted for excavation outside river/rivulets i.e. areas adjoining to rivers/rivulets, no mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 metres in case of Tangri, Yamuna and Ghaggar and 100 meters on either side of all other rivers/ rivulets;

  (vi) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology Department, may be made applicable to the mining operations in river-beds.

- That no mining operation shall be allowed in the urbansizable zone of area notified by Town and Country Planning Department. Further, in case of the agriculture zone notified by Town and Country Planning Department mining shall be permissible only after obtaining prior permission from the competent authority.

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- A safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf.
- The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws.
- The contractor shall be under obligation to carryout mining in accordance with all other provisions applicable as per Mines Act, 1952, Mines and Minerals (Development and Regulation) Act, 1957, Indian Explosive Act, 1884, Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986 and the rules made there under Wild Life (Protection) Act, 1972, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.

1.0. GENERAL:

a) **Name and address of the Lessee/applicant:**

M/s J S M Foods Pvt. Ltd. , New Delhi

b) **Status of the Applicant**;-The applicant is a Pvt. Co.

c) **Name, Address and registration number of the RQP preparing the Mining Plan**

The applicant has assigned the work of preparation of mining plan to S.N.Sharma

(Consent letter enclosed as Annexure -2 and copy of RQP certificate as Annexure-3)

Regd. No RQP/DDN/0135/2001/A

House No. 282 Sector 11-D Faridabad (Haryana)

Mobile no.09560848579

Email- sn_sharma1959@rediffmail.com



2.0 Details of the Mining Area

a) Details of the land covered in the 'Area' notified by Hr. Govt. on 15-12-2014 are as under:-

Mining Contract of Mandoli Ghaggar East Block/YNR B-3 Boulder, Gravel & Sand unit (Minor Mineral) over an area of 20.18ha is located in District – Yamunanagar , containing one mining block namely(i) Mandoli Ghaggar East Block/YNR B-3 River bed block ,

Table -1: Block wise, village wise & Khasra wise details of proposed mining area

Name of Block	Nme of Village	Details of Khasra No/KilaNos	Area of block in ha
Mandoli Ghaggar East Block/YNR B-3	Mandoli Ghaggar	52//2, 3, 4, 5, 6, 7, 8, 9, 13, 14,15, 16, 17, 18, 23, 24, 25 53//1, 2, 3, 4, 7, 8, 9, 10, 11, 12,13, 14, 17, 18, 19, 20, 21, 22, 23,24 58//1, 2, 3, 4, 7, 8, 9, 10, 11, 12,13, 14, 18, 19, 20 59//3, 4, 5, 6, 7, 8, 13, 14, 15, 16,17,18	20.18



b) **Name of Mineral**

Boulder, Gravel & Sand (minor mineral)

c) **Description report of the mining contract/ quarry license with plan (copy of sanction order/ lease deed/ license)**

Based on the details published vide Haryana Government Gazette notification dated 27-04-2015 issued by DMG, Haryana and the Khasra map submitted by the applicant, survey of the area was carried out in the proposed area. The area falls in Mandoli Ghaggar East Block/YNR B-3 revenue village. Workings will be restricted within the mining area/ khasra's allotted. Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season. Copy of Letter of Intent issued is enclosed as **Annexure – 1.**

d) **Key plan of the area**

Key plan is enclosed as **Plate – 02**. Showing mining area and 5km surrounding areas.

e) **Location map of the mining area showing the details of the approach roads up to the mine (Location plan Shown on Plate no.1)**

Mining area is shown on the Key Plan.

Topo sheet is enclosed as **Plate – 02.**

Co-ordinates of the lease area as under

N30^{0}08' 10" to N30^{0}08' 28"

E 77^{0}24' 41" to E77^{0}25'01"

The area is approachable from various nearest towns as detailed below

Village Mandoli Ghaggar is very well connected with Metalled road. Yamunanagar Railway Terminus is about 15 km from the mining area.

Delhi ISBT is about 230 Km and Yamunanagar is about 15 km NW from the mining area. State Headquarters Chandigarh is about 90 km in the North West of the mining area.

f) **Infrastructure facilities:**

Nearest Railway station	**Yamunanagar** Railway station
Police station	**Yamunanagar**
Post office	**All the nearby villages**
Medical facilities	**Yamunanagar**
Electricity	Electrical supply is available in all nearby villages.
Education facilities	Most of the nearby villages have secondary schools and for higher education institutes are available at **Chhachroli Jagadhri, Yamunanagar** and, Kurukshetra,
Mode of transportation of	Mineral Boulder, Gravel & Sand will be transported by

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mineral	trucks. Loaded trucks will travel on Kuccha road made for plying of trucks. No. of such temporary road will provide access to the river bed and the movement of loaded trucks. As the mining area is spread over an area of 20.18ha working will be carried out in River bed. Each block has its outlet meeting the tar road on the nearby villages and from where the mineral is sent to various destinations. Similarly, mineral will be transported on the other side through approach roads which finally merge with tar roads for final destinations.
River/ canal/ port	Yamuna.



3) DETAILS OF EXISTING MINING PITS, THEIR DIMENSION AND LOCATIONS

Mineral Boulder, Gravel & Sand is the critical component in construction activities. Presently there is no pit available in the river bed. The past 2-3 years floods/ monsoon waters have peneplained the earlier worked river bed. Earlier Boulder, Gravel & Sand from this area used to be transported from the road network ultimately to various destinations in NCR. Surface & geological plan & sections enclosed as **Plate – 03**

Present Land use Pattern :- (in hectares)

Sl. No.	Type of Land Use	Total Value (in Hectares)
1	Quarry Area	0.0
2	Infrastructure (road)	0.00
3	Agriculture	0.00
4	Plantation	0.00
5	Habitation	0.00
6	Soil dump	0.00
7	OB dump	0.00
9	River bed area	20.18
10	Total	20.18
	Restricted area	**6.0**
	Available area for mining	**14.18**
	Total	**20.18**



3.1 Physiography, Drainage and Climate

INTRODUCTION

Yamuna Nagar district of Haryana located in north-eastern part of Haryana State and lies between 29o 55': 30o 31' North latitudes and 77o 00': 77o 35' East longitudes. The district is bounded, in north by Himachal Pradesh, in the east by Uttar Pradesh, in west by Ambala district, in south by Karnal and Kurukshetra districts. Total geographical area of the district is 1768 sq.km and comprises 4% of total area of State. Yamuna Nagar district is divided into one sub-division and six-development blocks viz. Bilaspur, Chachrauli, Jagadhri, Mustafa bad, Radaur and Sadhaura. Yamuna Nagar is thickly populated district and density of population is 589 persons per Km2, which is higher than State average of 478 persons per Km2. The population of the district is 1214162 as per 2011 census.

The district is mainly drained by the rivers Yamuna and its tributaries. The high land between Markanda River and small rivulets of River Yamuna acts as basin boundary between west flowing rivers of Indus system and east flowing rivers of Ganga basin. River Yamuna drains eastern part of the district and acts as boundary between Haryana and Uttar Pradesh State.

Yamuna Nagar district is bestowed with rich water resources, both surface as well as ground water resources. The ground water is major sources of irrigation in the district. Nearly 40% of area is irrigated by canal water. Distributaries in the district are 21.45 Km long. Two major canals passing through the district are Western Yamuna Canal and Augmentation Canal. Length of unlined WJC is 63.64km whereas augmentation canal is 22.54 km long. Net irrigated area is 1130Km2 whereas, gross irrigated area 1860Km2. Percentage of gross area irrigated to total cropped area is 91.6%. Systematic hydro geological surveys in the district was carried out by Geological Survey of India during 1956-61.Re-Appraisal Hydro Geological Surveys in the district were carried out by Central Ground Water Board, during 1975-77,1981- 82 and 1988-89.detailed hydro geological and water balance studies were carried out under Ghaggar and Upper Yamuna Projects. Ground water exploration has been carried out in various phases and so far 5 exploratory wells, 15 slim holes and 15 piezometers have been constructed in the district.



Phygiography

The district is divided into four Physiographic units

- Siwaliks
- Dissected Rolling Plains
- Interfluvial Plains

Active And Recent Flood Plains

- Relict Plains

Siwaliks hills - Siwalik hill ranges occupy the northern fringe of Yamuna Nagar district and attain the height up to 950m AMSL. The hills are about 500m high with respect to the adjacent alluvial plains. These are characterized by the broad tableland topography that has been carved into quite sharp slopes by numerous ephemeral streams come down to the outer slopes of the Siwaliks and spread much of gravels boulders, pebbles in the beds of these streams.

Kandi Belt - A dissected rolling plain in the northern parts of district is a transitional tract between Siwaliks hills and alluvial plains. It is about 25 km wide and elevation varies between 250 and 375m AMSL.

Interfluvial plains - This tract is part of higher ground between Ghaggar and Chautang and includes high mounds and valleys. In general, the slope is from northeast to southwest.

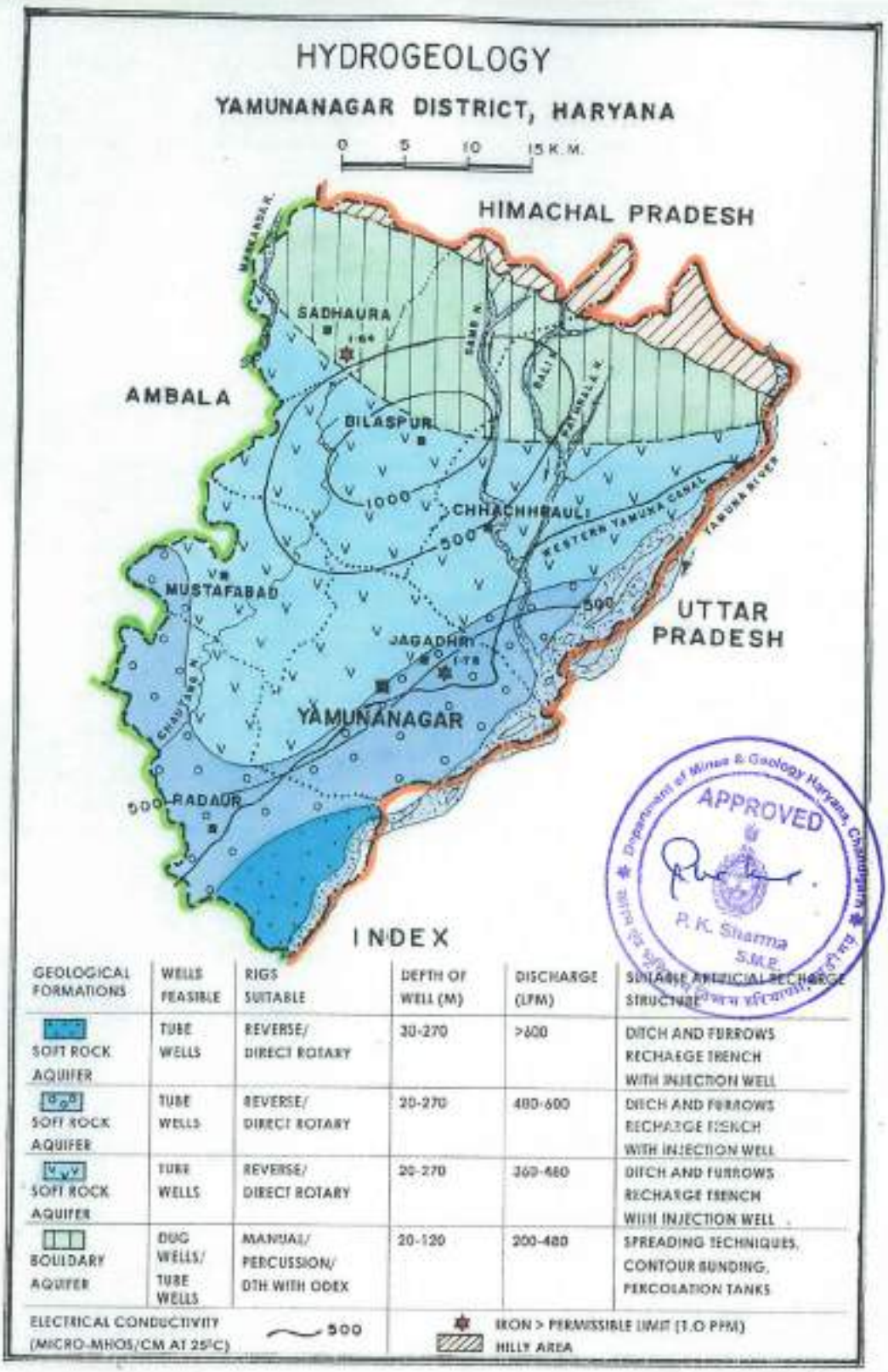
Active and recent flood plains - This plain is narrow tract along river Yamuna in the district.

Relict wedge plain - This is almost in alignment to the surface water divide between the westward flowing Ghaggar and eastward flowing Yamuna River.

Hydrogeology

The ground water exploration in the district reveals that clay group of formations dominates over the sand group in the district area. Ground water in the district occurs in the alluvium under water

table and semi-confined to confined conditions. These aquifers consist of sand, silt, gravels and kankar associated with clay and form highly potential aquifers. In alluvium, the permeable granular zones comprise fine to medium grained sand and occasionally coarse sand and gravel. Their lateral and as well as vertical extent is extensive. In Kandi belt, which has not been explored fully boulders cobbles and pebbles, constitutes the major aquifer horizon. Siwalik Hills occupy marginal areas in the northeastern parts of the district constitute a low potential zone.



GEOLOGICAL FORMATIONS	WELLS FEASIBLE	RIGS SUITABLE	DEPTH OF WELL (M)	DISCHARGE (LPM)	SUITABLE ARTIFICIAL RECHARGE STRUCTURE
SOFT ROCK AQUIFER	TUBE WELLS	REVERSE/ DIRECT ROTARY	30-270	>600	DITCH AND FURROWS RECHAEGE TRENCH WITH INJECTION WELL
SOFT ROCK AQUIFER	TUBE WELLS	REVERSE/ DIRECT ROTARY	20-270	480-600	DITCH AND FURROWS RECHARGE TRENCH WITH INJECTION WELL
SOFT ROCK AQUIFER	TUBE WELLS	REVERSE/ DIRECT ROTARY	20-270	360-480	DITCH AND FURROWS RECHARGE TRENCH WITH INJECTION WELL
BOULDARY AQUIFER	DUG WELLS/ TUBE WELLS	MANUAL/ PERCUSSION/ DTH WITH ODEX	20-120	200-480	SPREADING TECHNIQUES, CONTOUR BUNDING, PERCOLATION TANKS

ELECTRICAL CONDUCTIVITY (MICRO-MHOS/CM AT 25°C) ~500

IRON > PERMISSIBLE LIMIT (1.0 PPM)

HILLY AREA

In Kandi areas, the shallow aquifers are isolated lenses embedded in clay beds whereas aquifers in alluvial areas occur on regional scale and have pinching and swelling disposition and are quite extensive in nature. These aquifers generally consists sands (fine to coarse grained) and gravels and are often intercepted by clay and kankar. These aquifers are under unconfined.

Under ground water exploration programme nine exploratory wells were drilled in the district. On average 3-12 of granular zones were deciphered in the depth range down to 450 m bgl. Exploratory wells drilled in depth range of 130 and 180 m bgl yield discharge in the range of 2700 to 4900 lpm for drawdown of 6.0 m to 12.0 m and Transmissivity of aquifers range between 1500 to 4900 m2/day. The yield potentials of aquifer below 200.0m bgl are yet to be evaluated.

Depth to water level

The depth to water level during pre-monsoon period in the district ranges between 2.07m bgl at Choli and 15.32m bgl at Khizrabad. However, in major part of district water level ranges between 5.0m bgl and 10.0m bgl. The Depth to water level during pre-monsoon period in the district ranges between 1.57m bgl at Choli and 18.41m bgl at Bahadurpur. However, in major part of district water level ranges between 5.0m bgl and 15.0m bgl. Appraisal of water level data of May and November reveals that some parts of the district have experienced water level decline whereas in other parts rise in water level has been recorded. Maximum decline of – 0.43m has been observed in area around Khizrabad and maximum rise of 0.39m was recorded at Sabri village. During last ten years, majority of observation points in the district have shown declining trends ranging from 0.00013 m/yr to 0.389m/yr, however, area as not recorded any significant rise during last ten years.

The discharge of the shallow tube wells tapping unconfined aquifers e tube wells ranges from 100 lpm to 500 lpm with moderate Drawdown values. Near Manakpur, a phreatic aquifer extending down to 88.0m bgl has Transmissivity value of 2500m2/day, lateral hydraulic conductivity of 31m /day.

CLIMATE

The climate of Yamunanagar district can be classified as subtropical monsoon, mild dry winter, hot summer and sub-humid which is mainly dry with very hot summer and cold winter except during monsoon season when moist air of oceanic origin penetrate into the district. The hot

weather season starts from mid March to last week of the June followed by the south west monsoon which lasts up to September. The transition period from September to November forms the post monsoon season. The winter season starts late in November and remains up to first week of March.

Rainfall: The normal annual rainfall of the district is 1076 mm, and is unevenly distributed over the area. The average rainy days are 44. The south west monsoon sets in from last week of June and withdraws in the end of September, contributing about 81% of normal annual rainfall. July and August are the wettest months. Rest 19% rainfall is received during non-monsoon period in the wake of western disturbances and thunderstorms. Generally rainfall in the district increases from southwest to northeast .The mean maximum temperature is 40.8◦ C(May &June)and mean minimum is 6.8◦ C (January) of the district.

Normal Annual Rainfall: 1076 mm

Normal monsoon Rainfall: 879 mm

Temperature

Mean Maximum: 40.8°C(May & June)

Mean Minimum: 6.8 °C(January)

Normal Rain days: 44

. *(Source: District Groundwater Brochure CGWB).*

3.2 Geology of the Area

3.2.1 Regional Geology

The north-eastern and central part of Haryana is predominantly characterized by sedimentary litho logy in the Sub-Himalayan zone comprising Subathus, Dagshais, Kasaulis and Siwaliks. A general Regional stratigraphic sequence in the area is given in Table

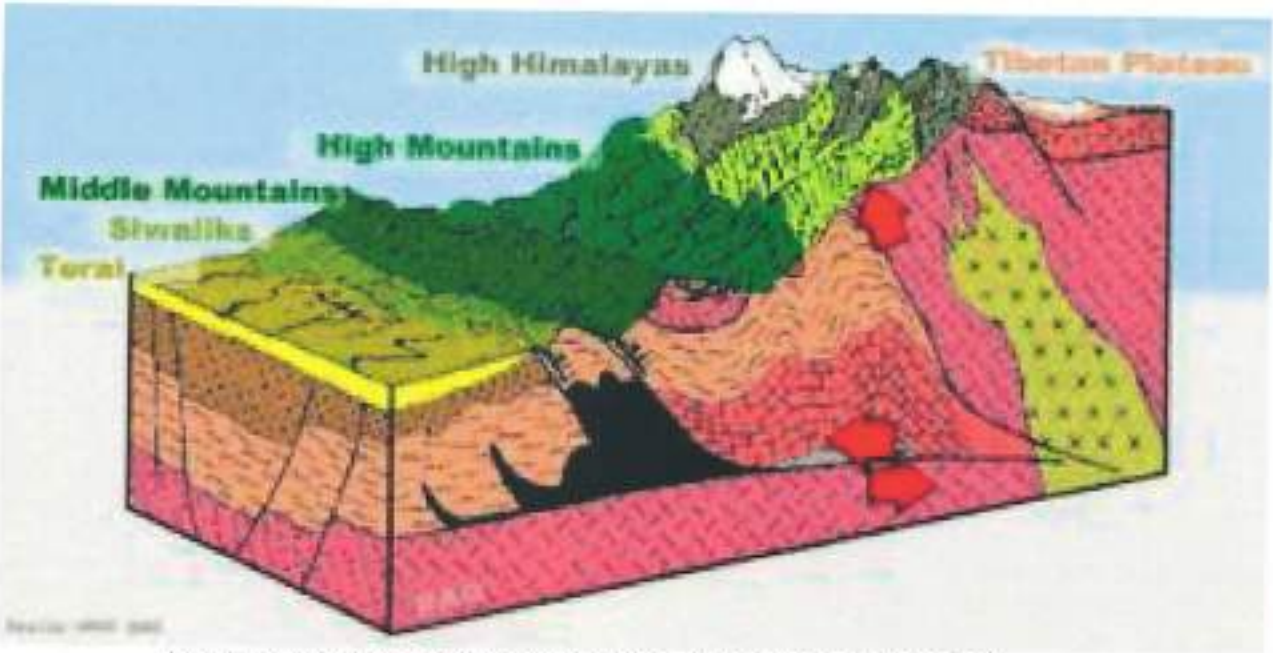


Table: Regional stratigraphic sequence

Age	Super group	group	Formation	litho logy
Holocene			Newer alluvium and Newer Aeolian Deposits	Gravel, Sand, silt, clay, limestone, gypsum
Lower to upper Pleistocene			older alluvium and Older Aeolian Deposits	Gravel, grey sand, silt, clay, brown sand, calcrete
Lower to Middle Pleistocene	SIWALIK	Upper Siwalik	Boulder Conglomerates formation	Conglomerate, sandstone, silt, clay
Upper Pliocene			Pinjore Formation	Coarse grit,red sand stone and clay, conglomerate
			Tatrot Formation	Friable Sandstone and variegated clay
		Middle Siwalik	Dhokpathan Formation	Brown sandstone and orange clay
Middle Miocene			Nagri Formation	Hard grey sand stone, mudstoneand minor shale
		Lower Siwalik	Nahan Formation	Coarse grity ,clay and red sandstone often calcareous, brownish shale with lignite lenticles, greenish white Quartzite
Lower Miocene		Sirmur	Kausauli Formation	Grey and green stone,green shale and grey clay
			Dagsai Formation	Purple and green sand stone, deep red gritty,clay,whiteandstone with ferruginous concretions
Upper Eocene			Subathu formation	Sandstone with gritu clay. Impure fossiliferous limestone calcareous slate,greenish shale and dark brown quartzite
Pre-proterozoic			Tundapathar	Thickly bedded ,sstromatolite limestone with carboniferous shale and quartzite

A schematic diagramme of Himalayas showing higher, middle and lower Himalayas including Shiwaliks is shown here below





(A Sketch/section showing the position of Himalayas & Siwaliks)

3.2.2 LOCAL GEOLOGY

The litho units encountered in the riverbed and surrounding areas belongs to the Shivalik super groups. The sediments are river borne and has deposited in the riverbed and the flood plains. The different formations of the area belong to Shivalik Super group and are a mixture of boulders, pebbles, sand, silt and clay. The following sequences have been observed in the area.

Soil/Alluvium

Sand, Gravel, Boulder (Mixed form)

There is no clear demarcation between the litho units. They have been deposit in a mixed form. The Litho- units exposed around the riverbed belong to Shivalik Super- Group. The mineral Boulders, Gravel and sand have formed by weathering of rocks and then deposition on the flood plains of the rivers originated from the Shivaliks. These have been washed by rainwater during rainy season and deposited in river bed in the form of boulders, gravels and sand of different sizes and shapes. These minerals are sorted by screening. The max depth of the minerals is not known.

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Soil/ alluvium varying in thickness from 0.50-1.50 m constitute the top horizons in the area suitable for agriculture. Yamuna River meanders through the area exposing the alluvium and soil at the banks. Boulder, gravel & sand is found in the river bed. Boulder, gravel &sand is deposited up to great depths. This bed is presently dry and water flows only during the rainy season The Sand exposed in the River bed of Yamuna and surrounding areas is the product of the deposition of the sediments brought and deposited in the flood plains of River Yamuna. These sediments are of recent geological formation. The litho-units exposed within the river and surrounding areas have formed as water borne sediments brought by flood water during rainy season every year and deposited in riverbed. Geological map and section are enclosed as **Plate – 03)**

3.2.3 DESCRIPTION OF FORMATION

The description of Boulder, gravel & sand found in the lease area as minor mineral have been as under:

3.2.4 (Boulder, gravel & sand)

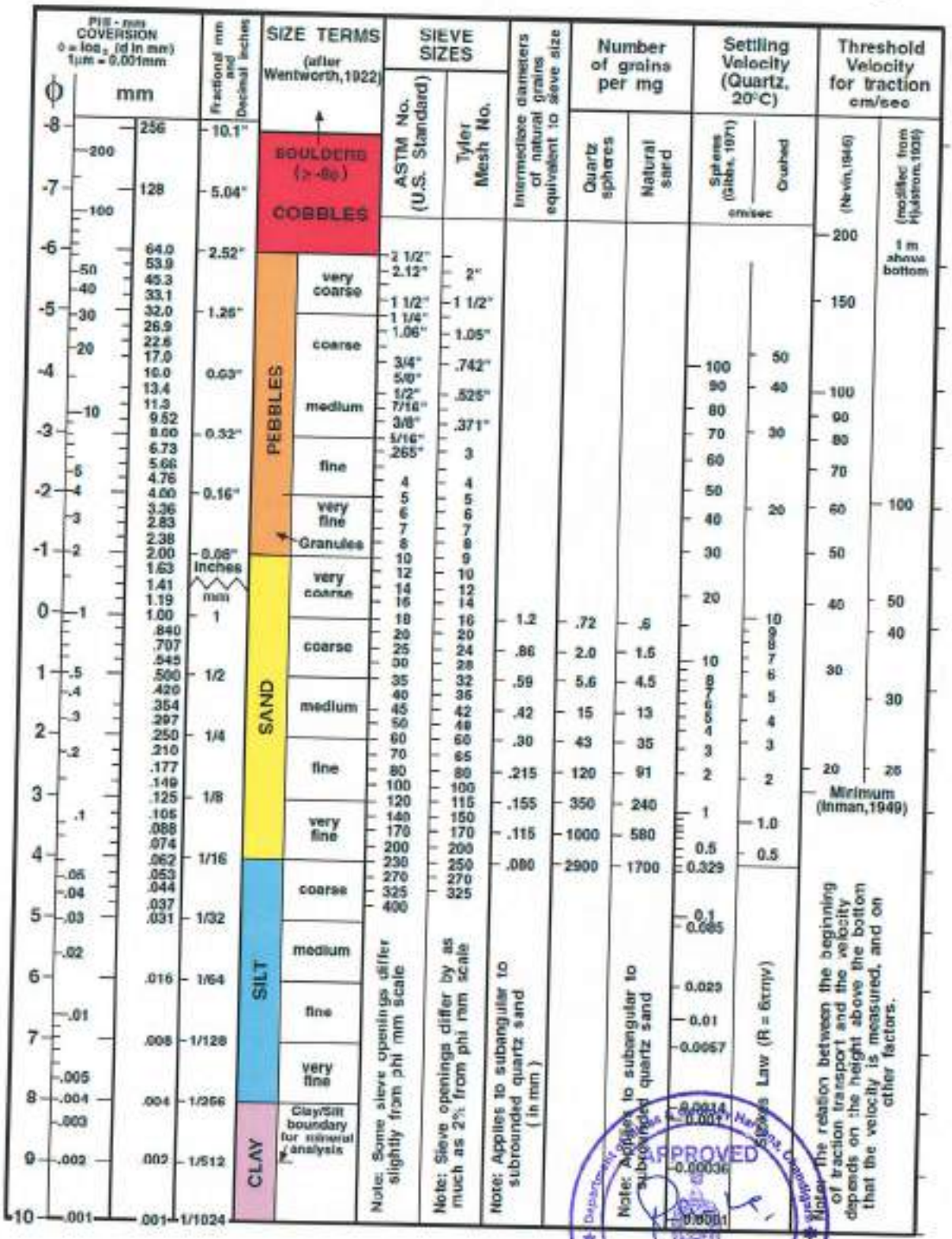
Sediments of various sizes and in mixed form are predominantly deposited in the river bed and outside the river bed as well in the central part. There is no perfect classification between boulders, cobbles, pebbles and sand. They are deposited in a mixed state.sand is merely a size category. Sand is particulate matter that's larger than silt and smaller than gravel. Different specialists set different limits for sand: Engineers call sand anything between 0.074 and 2 millimeter, or between a U.S. standard #200 sieve and a #10 sieve.

The classification is done by grab mining and the sediments are passed through different sieves in the screening plants.

Technically, the size of boulders vary from 2.52 inches to up to 10.1 inches & pebbles range from 0.08 inches to 2.52 inches which is clear from ***the table of classification of sediments by Wentworth.***

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Classification of Sediments (Wentworth -Grain Size-Chart)



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Sediments of various sizes and in mixed form are predominantly deposited in the river bed and there is no perfect classification between sediments. These may be called as coarse sand, medium sand and fine sand.

The term sand is used to denote an aggregate of mineral or rock grains greater than 1/16mm and less than 2 mm in diameter.

3.2.5 PHYSICAL & CHEMICAL CHARACTERISTICS OF MINERAL

Technically, sand is merely a size category. Sand is particulate matter that's larger than silt and smaller than gravel. Different specialists set different limits for sand:

Engineers call sand anything between 0.074 and 2 millimeter, or between a U.S. standard #200 sieve and a #10 sieve.

Soil scientists classify grains between 0.05 and 2 mm as sand, or between sieves #270 and #10.

Sedimentologists put sand between 0.062 mm (1/16 mm) and 2 mm on the Wentworth scale, or 4 to −1 unit on the phi scale, or between sieves #230 and #10. In some other nations a metric definition is used instead, between 0.1 and 1 mm.

From a geological viewpoint, sand is anything small enough to be carried by the wind but big enough that it doesn't stay in the air, roughly 0.06 to 1.5 millimeters. It indicates a vigorous environment.

Composition and Shape of minerals

Most sand, boulders &, gravel is made of quartz or its microcrystalline cousin chalcedony, because that common mineral is resistant to weathering. The farther from its source rock sand is, the closer it is to impure quartz. But Yamuna sands contain quartz grains, tiny bits of rock (lithics), or dark minerals like limestone and ferruginous concretions.

The size of the sediments is variable. The grains whether small or large are rounded in shape. Sand is grey, brown in color, coarse to fine grained. The present deposits are of

good quality and can be used for building industries. There is no other use of this material.

3.2.6 ORIGIN & CONTROL OF MINERALISATION(ANNUAL REPLENISHMENT OF MINERAL IN RIVER BED AREA vis-à-vis SEDIMENTATION)

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs. The term is commonly used as a synonym for sedimentary petrology and sediment logy.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits lay down in different geographic and geomorphic environments.

The factors which affects the "Computation of Sediment":

a) Geomorphology & Drainage Pattern : The following geomorphic units plays important role :

- Structural Plain
- Structural Hill
- Structural Ridge
- Denudation Ridge & Valley
- Plain & Plateau of Gangetic plain
- Highly Dissected pediment
- Un dissected pediment



b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)

c) Drainage System/Pattern of the area (Drainage Density = ...Km/Sq. Km of Yamuna River

d) Rainfall & Climate : Year wise Rainfall data for previous 8 years of Yamuna Basin/River

e) As per Dandy & Bolton study "Sediment Yield" can be related to

i) Catchment Area and

ii) Mean Annual Run-off

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin.

The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance. River Yamuna near Dakpathar barrage leaves Uttarakhand and enters Himachal Pradesh.

The YAMUNA RIVER is the biggest tributary of the river Ganga in North India. Its source in the Yamunotry glacier at an elevation of 6387 mtrs on South western sides of Banderpooch crests in the lower Himalayan ranges. The overall span of the Yamuna river is 1376 Kms (855 miles) with catchment area of 366223 square km (141,399 square mile). This encompasses 40.2 % of the whole Ganga valley, prior to joining Ganga at TriveniSangam in Allahabad (UP)

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Itinerary of Yamuna River:and its tributries

The river passes through many states such as Uttrakhand, UP, Haryana, going across to HP and then Delhi. With yearly discharge of around 10,000 cubic billion meters (cbm) and consumption of 4400 cbm (of which irrigation comprises 96%), the river represents above

70% of water provision of Delhi. Yamuna water are fairly good quality for its entire span from Yamunotri in Himalayan ranges to Wazirabad in Delhi, the length of which is around 375 Kms.

Itinerary of Drainage area of Yamuna:

The origin of Yamuna is situated in the Yamunotri glacier at an elevation of 6387 mtrs on SE sides of Banderpooch crests, which are located in the Mussoorie range of lower Himalayan range in Uttrakashi district of Uttrakhand, to the North of Haridwar. From this place Yamuna runs to South around 200 Kms across the Shivalik mountain ranges and lower Himalayan ranges. A significant portion of its beginning of Drainage basin (with total area of 217.00 square km) is situated in HP and a major tributary sapping the upper drainage basin in the Tons, which is also biggest and most extensive tributary of the Yamuna. Other tributaries in the area are the Rishi Ganga, Giri, Hanuman Ganga, Kunta& Bata, which sap the upper drainage basin of the huge Yamuna river. Subsequently, the river moves down the terrains of Doon basin at DakPathar close to Dehradun, in this place water is redirected into a channel for the purpose of electricity generation. Once it goes across the sikh religious place of Ponta Sahib, the river arrives at Tajewala in the YAMUNANAGAR district of Haryana where a dam was constructed in 1873. This dam is the origin of the two major channels or water courses – Eastern Yamuna Canal and Western Yamuna Canal and both drain in UP & Haryana. The Western Yamuna Canal (WYC) traverses Karnal, Yamunanagar and Panipat prior to arriving at the Haiderpur water treatment plant, which provides a portion of municipal water provisions of Delhi. The Yamuna also forms natural boundary between the states of Uttrakhand& HP and also amid the states of UP and Haryana. Together with the Ganga to which it flows almost parallel once it meets the Indo-Gangetic plateau, the biggest Alluvial productive area in the World, it forms the Ganges-Yamuna Doab are stretched across 69,000 square Km which is 33% of the whole area.



Table of Drainage Basin area of River Yamuna (square KM/square mile) with % of Drainage Basin

1. HP 5799/2240 (1.6)
2. UP &Uttrakhand 74208/142 (21.50)
3. Rajasthan 102883/39739 (29.80%)
4. Haryana 21265/8214(6.5%)
5. Delhi 1485/574(0.4%)
6. MP 14023/5416 (40.6%)

Dandy &Boltan formula for calculation of Sediment Yield:

Dandy Bolton formula is often used to check whether the sedimentation yield exceeds the replenishment rate but the whole question is whether there is adequate monitoring of the river basin, the answer is no as hydrological stations are sparsely spread. The formula uses catchment area and mean annual runoff as key determinants to give a yield value. It does not differentiate in basin wide smaller streams and their characteristics. CWC distinguishes river basins as classified and non-classified, as per the latest hydrological data for unclassified River basins; there are 122 GDSW (Gauge, Discharge, Sediment & Water Quality) sites in 12 such basins, the number was 147 in 2005. This brings in context the whole issue of scientific mining, thereby indicating that the monitoring of sediment yield in rivers / streams within the river basins is essential to arrive at extraction rates and express and conduct environmental studies based on these basin wide characteristics which should become part of the 'Terms of Reference'.

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Sediment Yield versus Drainage Area

Dandy and Bolton studied sedimentation data from about 1500 reservoirs, ponds, and sediment detention basins. In developing their formulas, they used data from about 800 of these reservoirs with drainage areas greater than or equal to 1 mi2. The smaller

watersheds-those of drainage area less than 1 mi2-were excluded because of their large variability of sediments yield, reflecting the diverse effects of soils, local terrain, vegetation, land use, and agricultural practices.

For drainage areas between 1 and 30,000 mi2, Dandy and Bolton found that the annual sediment yield per unit area was inversely related to the 0.16 power of the drainage area:
In which S= sediment yield in tons per square mile per year; SR = Reference sediment yield Corresponding to a 1-mi2 drainage area, equal to 1645 tons per year; A = drainage area in square
miles; and AR = reference drainage area (1 mi2)

Sediments Yield versus Mean Annual Runoff

Dandy and Bolton studied sedimentation data from 505 reservoirs having mean annual runoff data. Annual sediment yield per unit area was shown to increase sharply as mean annual runoff Q in- creased from 0 to 2 in. Thereafter, for mean annual runoff from 2 to 50 in. annual sediment yield per unit area decreased exponentially.

This led to the following equations.
For Q <2 in.:
For Q >2 in.:
In which QR = reference mean annual runoff QR = 2 in.
Dandy and Bolton combined Eqs. 15-10 and 15-11 into a set of equations to express sediment
yield in terms of drainage area and mean annual runoff.
For Q <2 in.:
For Q >2 in.:
Sec: 15.2 Sediment Productions.
For SR = 1645 tons/mi2/y, QR = 2 in., and AR = 1 mi2, Eq. 15-12 reduces to the followings:

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For Q <2 in.: S = 1280 Q0.46 (1.43 – 0.26 log A)

For Q >2 in.: S = 1965e-0.055Q (1.43 – 0.26 log A)

Equations 5-12 and 5-13 are based on average values of grouped data; therefore, they should be used with caution. In Certain cases, local factors such as soils, geology, topography, land use, and vegetation may have greater influence on sediment yield than either mean annual runoff or drainage area. Nevertheless, these equations provide a first approximation to be of sediment yield for watershed planning purposes.

Calculation of Sediment Yield for boulder, gravel &Sand Mine of Mandoli Ghaggar East unit.

Mandoli Ghaggar East total production proposed is 8.50 Lakh MT/year

- Area under riverbed : 20.18
- Drainage basin area of river Yamuna and is tributaries in Haryana : 8214 square miles
- Normal Annual Rainfall of Yamunanagar district (1978 to 2005) :1076mm or 42.36 inch

With above inputs, the calculation of the sediment yield by the Dandy and Bolton formula is illustrated below:

Sample Set	S.No.	Q (in inches)	A (in square mile)	S
	1	3.5	150	1400.823
	2	27.4	8214	179.4756

$$S = 1965\, e^{-0.055Q}[1.43 - 0.26 \log(A)]$$

With above formula the value of S = 76.40 T/mile square/annum

Therefore the Total Sediment Yield for drainage basin of 8214 square mile will be = 8214 x 76.40= 6.27 lac T per annum.

Dandy &Boltan formula also says that actual sediments yield from individual drainage basins may vary 10-fold or even 100 fold from computed yields. Since itinerary of river Yamuna indicates that its basis comprises of sediment rocks with good average rainfall therefore there are fair chances of yield of sediments to be 50 fold of computed results hence Actual Sediment Yield will be : 627000 T x 50 fold = 3,13,50,000 T / Annum

The equations express the general relationships between sediment yield runoff and drainage area.

They may provide a quick rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Because Dandy & Bolton have derived the equation form average values computed sediment yields normally would be low for highly erosive area and high for well stabilized drainage basins with high plant density. Factors which have direct bearing on sediments yield & limitations of Dandy & Bolton equation.

Sediment yield of a sediment basin has direct impact of local terrain, climate, vegetation, soils, agricultural practices & land use pattern of catchment area of the sediment basin aforesaid factors varies from basin to basin therefore, Dandy & Bolton has category stated that use of the equation to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation development. Actual sediment yield form individual drainage basins may vary 10-fold or even 100-fold from computed yields.

3.2.7 Grade & Use of Boulder, Gravel & Sand

Most Boulder, Gravel& Sand is made of quartz or quartzite/its microcrystalline cousin chalcedony, because that common mineral is resistant to weathering. River Boulder, Gravel & Sands contain quartz, feldspar grains, tiny bits of rock (lithics), or dark minerals like illminite and magnetite.

The size of the sediments is variable. The grains whether small or large are rounded in shape. Boulder, Gravel& Sand is yellow brown in color, coarse to fine grained. The present

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deposits are of good quality and can be used for building industries. There is no other use of this material.

3.3 RESERVE

3.3.1 METHOD OF ESTIMATION OF RESERVE

PROVED RESERVES

- Survey was conducted in the proposed area of Yamuna river bed and area outside river bed as per the area allocated by DMG, Haryana, a document provided by the authorities to the contractor. The Khasra plan was provided by the applicant.
- Following special conditions those are applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas are considered while calculating the reserves of this area:

(i) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge on up-stream side and ten times the span of such bridge on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

(ii) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorized by him;

(iii) The maximum depth of mining in the river-bed shall not exceed three meter from the un-mined bed level at any point in time with proper bench formation;

(iv) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

(v) In case of areas permitted for excavation outside river/rivulets i.e. areas adjoining to rivers/rivulets, no mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 metres in case of Tangri, and Ghaggar river and 100 meters on either side of all other rivers/ rivulets;

(vi) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology, a safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf.

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vii) The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws.

ix) A barrier of 7.5 m width will be left from the mining area boundary, .

Basics of Mineral Reserves Calculation – River Bed Area

- Mineral Reserves falling in the river bed area has been calculated taking the maximum permissible depth of 3 m from the river bed surface RL.
- The bulk density of Boulder, Gravel & Sand is considered 2.0
- Volumetric method is adopted for calculating reserves of Boulder, Gravel & Sand.
- The mineable reserves are calculated by deducting "Blocked Geological Reserves on account of river banks, lease boundary, railway line, highways, bridges, anicuts (where ever applicable) from total proved Geological Reserves".
- It is considered that river bed Boulder, Gravel & Sand shall be replenished every year as evident from preceding paragraph (3.2.6) on " Annual Replenishment of Mineral in River Bed Area vis-à-vis Sedimentation"

UNFC classification – Codes of UNFC are followed for reserve calculation

- UNFC is a three digit code based system, the economic viability axis representing the first digit, the feasibility axis the second digit and the geological axis the third digit. Each digit provided.
- Codes 1, 2 and 3 in decreasing order. The highest category of resources under UNFC system has code (111) and for lowest category the code is (334).
- Code (111): This code is provided for the economically mineable part of the measured mineral resources (proved category reserves).
- Code (121): This code is provided for the economically mineable part of the indicated mineral resources (probable category reserves).



- Code (211): The part of the measured mineral resources (proved category), which as per feasibility study has not found economically mineable. The reserves blocked in 7.5 meters buffer zone and 50 meters from permanent structure.
- Code (222): The part of the indicated mineral resources (probable category), which as per feasibility study has not found economically mineable. The reserves blocked in 7.5 meters buffer zone and 50 meters from permanent structure.
- Code (480): Tonnage, Grade and mineral contents can be estimated with low level of confidence and resources are also inferred from geological.

The reserves of Boulder, Gravel & Sand calculated by volumetric method and are summarized here below:

Table: Geological Reserves

Sr no.	Nature of land	Lease area In ha	Total proved Geological reserves MT=Area x depth x BD (A)	Blocked area of 50m strip after each km, 25% blocked in river banks, /lease boundary etc= hectares	Blocked Geological Reserves in blocked area (B)	Total Mineable reserves A-B=C (FOR10Yrs)	Minable Reserve (Per Year)
1	River bed	20.18	12,10,800 x 010 years =1,21,08,000 MT	6.0	3,60,000x 010 years= 36,00,000 MT	85,08,000MT	8,50,000 MT

A) GEOLOGICAL PROVED RESERVES AS PER UNFC CODE (111)

Total Reserves = 1, 21, 08,000 MT

B) BLOCKED RESERVES AS PER UNFC CODE (211 & 222) =36, 00,000MT

C) MINEABLE RESERVES = A-B = 85, 08,000 MT

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D) **TARGETED PRODUCTION**

8, 50,000 MT per Year in the River bed (Maximum- which is supposed to be replenished every year)

E) **Life of the mine**

For Balance reserves in River bed it is presumed that the mineral will be replenished every year during the rainy season. New mineral will be added every year in the river bed.

4.0 DETAILS OF PRODUCTION & DISPATCHES OF FIVE YEARS

This is a new mining area allotted to the applicant. Future production programme has been planned as per the details given below:

Production Programme (Plate no.4 for river bed.

Mining Contract has been allotted for a period of 10 years only. Mining area consist of 20.18 ha area in Mandoli Ghaggar East Block/YNR B-3 village (Khasra) out of which about 6.0 hectares area is under restricted zone. About 14.18 hectare area is free from restriction and the mining is proposed in this area only.

Daily production proposed = 2833 MT from River bed/day

Production programme is 113 trips/ day @ 25 ton per trip.

Working days have been taken as 300 days per annum.

Projected Production per Year = 300 x2833.3= 8,50,000 Tons **(0.85 Million MT)**

Table: Five Years Proposed Production Details (MT/A)

	Production From River bed		Area (ha)
Year	Trips/ day	MTPA	Needed per year
I	113	8,50,000	14.18
II	113	8,50,000	14.18
III	113	8,50,000	14.18
IV	113	8,50,000	14.18
V	113	8,50,000	14.18



5.0 PHYSICAL AND GEOLOGICAL CHARACTERISTICS OF THE DEPOSIT

Deposit is moderate to good quality Boulder, Gravel& Sand. It is widely used in construction, buildings, bridges and other infrastructure. It is free from clay and non sticky in nature.

6.0 DETAILS OF MINING MACHINERY DEPLOYED OR TO BE DEPLOYED AND THE DETAIL SPECIFICATIONS

This is a new mining contract. Following equipments are proposed to be deployed for the desired production.

Table: List of Machinery

S. No.	Name of machinery	Capacity	Nos.
1	JCB	1.0 m^3	4
2	Tippers/ Trucks	25 tons	38
3	Water Tanker	4000 liters	1
4	Light vehicles /jeep	--	1
5	Maintenance Van		1
6			

6.1 Fuel Consumption

Quantity of Diesel / Energy fuel Consumption per day: -

S. No.	Machine	Details of Diesel requirements	Consumption of Diesel (in ltr.)
1.	Dumper	(Considering diesel consumption by the dumper is 3 km / ltr.) Total Diesel consumption for 55 Dumper = 380 x50 = 1900 Ltr	1900
2.	JCB	- Diesel consumption 10ltr / hr working of 10 hrs diesel consumption = 10 x10x4 =400 ltr	400
3.	Water Tankers	Diesel consumption 10 ltr/Hour x10 x 1=100	100
6.	Light Vehicles	Diesel consumption 8 ltr/Hour x 10 x1=80 ltr	80
7.	Maintenance Van	Diesel Consumption 10 ltr/hr x 10 x1=100 ltrs	100
		Total diesel requirements per day	2580



7.0 METHOD OF MINING

Mining is proposed up to 3.0m in river bed.

River bed mining is for extracting Boulder, Gravel & Sand from Yamuna River bed. As per Haryana Minor Mineral Concession Rules, 2012 extraction is limited to 3.0 m depth only in river bed Mining area allotted is 20.18ha in district – Yamunanagar . Mining activity will be carried out in allocated areas only, enclosed as **Annexure–I.**

Mining in River Bed (Plate no. 4)

Light weight excavators/JCB will be deployed for extraction. Mineral will be removed in 3.0 m layer only forming one bench. This is as per the digging depth of the equipments and maximum permitted depth. Mineral will be loaded in trucks of 25 tons capacity. There will be no OB or waste generation as the Boulder, Gravel& Sand is exposed in the river bed.

Bench will advance parallel to the banks of the river. Height of bench will be 3.0 m. Width of the bench will be around 20.0 m. Workings will be restricted within the mining area/ khasra as per the description report given by Mining Department. Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season. The bench will be in the form of slices/ strips parallel to the banks of the river. Roads in the mining area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20. Pre-development activities like repairing/pitching or making new way for transport of sand from river bed. However, movement of trucks after mineral loading will be towards both sides through approach roads connecting to tar roads. Every block will have its own approach roads, well connected to main highways. No processing of mineral will be done.

Total production envisaged is 2833 TPD (113 trips @25 Mt/trip) from River bed

7.1 Proposed year wise development for five years

Boulder, Gravel & Sand mining contract has been granted for a period of 10 years only. No pre-production development is required except making excess road.

Ultimate limit will be 3.0 m below existing bed level as indicated in the working section.

7.2 Proposed rate of production when the mine is fully developed

Work will be carried out for 300 days in year. Year wise production during the plan period will be as follows:

Table: Proposed Production

Year	Total Targeted Production MT/annum
1	8,50,000
2	8,50,000
3	8,50,000
4	8,50,000
5	8,50,000

7.3 Mineable reserves and anticipated life of the mine

It is presumed that the mineral will be replenished every year in River bed during the rainy season. New mineral will be added every year in the river bed. However the present reserves are sufficient for 1 year in "river bed" .

7.4 Proposed method of mining

a) River Bed

Mining activity will be carried out by open cast semi-mechanized method.

- No overburden/ waste material will be produced in river bed. No drilling/ blasting are required as the material is loose in nature.

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- Light weight excavators will be used for loading of mineral in tippers.
- Proper benching of 3.0 m height will be maintained and width of the bench will be around 20 m. The benches shall be maintained in the form of slices/strips parallel to the banks of river.
- Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season.
- Roads will be properly made and sprayed by water for suppression of dust.
- Roads in the mining area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20.
- Extraction activities will start in the blocks from the upstream side to downstream side. This will not obstruct the movement of water, if any, during monsoon period in the river course.
- In case during any period, the replenishment was found less than 3 m or depth of exaction, the mining during said period would restrict to depth which would not be more than 3 m of the original level of the river bed.

As per MMR 1961, following precautions shall be undertaken during operations of HEMM.

Shovel/ excavator: -

1. Excavators will be provided with efficient warning devices, front & rear lights and efficient brakes.
2. Excavator will be under the charge of a competent person authorized in writing by the manager designated as operator.
3. No person other than the operator or his helper if any will ride on the excavator or even enter the excavator's cabin.
4. No person will be permitted to ride in the bucket of a Shovel/ excavator.
5. No inflammable material will be stored in the excavator housing or cab.
6. Shovel/ excavator dippers will be lowered to the ground during greasing operation.

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7. When a Shovel/ excavator is to be moved from one point to another its boom shall be kept in strict alignment with direction of travel while the bucket/ dipper shall be held m above the ground.
8. No Shovel/ excavator will be operated in the position where any part of the machines, suspended loads or lines are brought closer than 3 m to the exposed high voltage line.
9. Every movement of a Shovel/ excavator shall be preceded by warning signals.
10. When not in use, the Shovel/ excavator will be moved to and stood on stable ground, the bucket shall be kept resting on stable ground and will never be left hanging.
11. The Shovel/ excavator will be so spaced that there will be no danger of accident from flying & falling objects.
12. Safety appliances, booms will be examined thoroughly once in a year.
13. Emergency switches, safety limit switches will be examined and tested once in four months.
14. All brakes will be tested for their operation worthiness once in a week.
15. The following signboards will be carried in and around the machine: -
    (i) "Warning— Do Not Enter The Working Range Of The Machine".
    (ii) "Lubricating Prohibited While the Machine in Running Condition".

Duties of Shovel/ excavator operator: -

1. At the commencement of every shift the operator will personally inspect and test the machine, paying special attention to the following details: -
    (i) The brakes and every warning device are in working order.
    (ii) Lights are in working order.
    (iii) The operator will neither take out the machine for work nor will he work the machine unless he is satisfied that it is mechanically shown and in efficient working order.

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(iv) The operator will maintained a record of every inspection made in a bond paged book, kept for the purpose and shall sign every entry made there in.

(v) The operator will keep the cab window clean so as to ensure clear vision at all times.

(vi) The operator will not operate the machine when persons are in such proximity as to be endangered.

(vii) Before leaving the machine, the operator will lower the bucket to the ground.

(viii) The operator will not leave his machine during the shift. Whenever, he finishes his work, he will hand over the machine to his relief or lock the excavators cab.

(ix) The operator will not allow any unauthorized person to ride on the machine.

Dumper: -

1. Every dumper will be provided with efficient brakes.
2. Efficient audible warning devices will be provided with the dumpers.
3. The dumper, if required to work after daylight hours, efficient headlights and taillights will be used.
4. Every dumper will be under the charge of a competent person, authorized in writing by the manager.
5. No person, other than the driver or his helper, if any, will ride on a dumper.
6. No person will be permitted to ride in the running board of a dumper.
7. The loaded dumpers will not be reversed on gradients.
8. Sufficient stop blocks will be provided at every tipping point and these will be used on every occasion when material is dumped.

9. Standard traffic rules shall be adopted and followed during movement of all dumpers. They shall be prominently displayed at relevant places in the opencast workings and haulm roads.
10. When not in use, every dumper will be moved to and stood on proper parking places.
11. No person will be permitted to work on a chassis of a dumper, with the body in rest position, until after the dumper body has been securely blocked in position.
12. The mechanical wised mechanism will not be depended upon to whole the body of a dumper in a rest position.
13. No unauthorized person will be permitted to enter or remain in any turning points.
14. While inflating tyres, suitable protective cages shall be used.
15. Tyres will never be inflated by sitting either in the front or on the top of the same.
16. While the vehicle is being loaded / unloaded on gradient, the same will be secured stationary by the parking brake, and other means suitably designed stopper block, which could be placed below the tyres.
17. At least once in every two weeks the brakes of every dumper will be tested as below: -
    (a) Service Brake test: - The brake will be tested on a specified gradient and speed when the vehicle is fully loaded. The vehicle should stop within the specified distance when the brake is applied.
    (b) Parking brake test: - The parking brake shall be capable to hold the vehicle when it is fully loaded and placed at the maximum gradient. Maximum gradient of the roadway which is permitted only for a period of at least 10 minutes.

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(c) A record of such test will be maintained in a bound paged book and will be signed by the competent person carrying out the test. These records will be countered signed by the engineer and manager.

(d) All vehicles shall be tested and examined once at least in every 6 months.

(e) A notice shall be displayed outside every vehicle that **"No Unauthorized Travelling Allowed".**

(f)

Duties of dumper operators: -

1. At the commencement of every shift, the operator shall personally inspect and test the machine, paying special attention to the following details: -

(i) Tyre pressure, brakes, horn and the Lights are in working order.

(ii) The driver will neither take out the machine for work nor will he work the machine unless he is satisfied that it is mechanically shown and in efficient working order.

(iii) The driver will maintained a record of every inspection made in a bound paged book, kept for the purpose and shall sign every entry made there in.

(iv) The driver will keep the cab window clean so to ensure clear vision at all times.

(v) Driver will ensure that the gear is in neutral position before stopping the engine. He will park the vehicle: -

(a) In reverse gear, on level roads and down gradients.

(b) In low gear, on up gradients.

(vi) The driver will negotiate downhill gradients in low gear, so that minimum of braking is required.

(vii) The driver will not drive too fast, avoid distractions and drive defensively.

(viii) Before crossing a road / railway line he will reduce his speed looking both directions along the road or railway line and will proceed across the road or line only if it is safe to do so.

(ix) The driver will not operate the dumper in reverse unless he has a clear view of the area behind the vehicle.

(x) The driver will see that : -

(a) The vehicle is not overloaded.

(b) The material is not loaded in a dumper so as to project horizontally beyond the sides of its body.

(xi) The driver will not allow any unauthorized person to ride on the vehicle.

(xii) When there is a poor visibility, the speed of a vehicle will be restricted in a manner that the braking distance is maintained shorter the distance of visibility.

(xiii) The driver will not leave his machine during the shift. When he finishes his work, he will hand over the machine to his reliever or lock the excavators cab.

7.5 Conceptual Mining Plan

River Bed: Mine area will be worked in blocks for ease of operation. However, as the digging depth will be restricted to 3.0 m or 2 m above the ground water table in river bed and material will still be available below. This will be further replenished during rainy season. Blocks will be worked systematically as the width is limited while length is much more.

Sequence of working has been shown on **Plate no –4.** As the mining contract period is only 10 years, some of the area will be left un-worked at the end of contract period.

(i) Final Slope Angle To Be Adopted

Thickness of the bench is limited to 3.0 m only in river bed and width will be more than the height of the bench. River bank side will be protected by working in 3/4 part of middle of the river. Bank side natural slope will not be disturbed. This will prevent collapse of bank

and erosion. However, the height of the bank with respect to river bed is varying from 2-3 m only.

(ii) During plan period workings will be carried out in the designated villages at a time of the mining area simultaneously. Scattered workings will ensure safety, remove congestion of vehicles and will have better control and management.

(iii) **Ultimate Capacity Of Dumps**

There will be over burden removal / generation during the plan period. The same will be dumped at designated site and will be utilized for reclamation simultaneously. No outside material will be filled up in the extracted zone.

a) **Land use Pattern of Mining Area at Various Stages**

Land use pattern will be as follows:

Table: PRESENT LAND USE PLANING

Sr.No.	Particulars		Present Land Use (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	6.0
2	Infrastructure (Office,temp. Shelters etc.		0.00
3	Area available for mining in river bed		14.18
			20.18

Table: LAND USE PLANING AT THE END OF lease period

Sr.No.	Particulars		AT THE END OF 5th YEAR (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	6.0
2	Infrastructure (Office,temp. Shelters etc.		0.02*
3	Naturally reclaimed in river bed		10.16
6	Unworked river bed		0.00
7	Plantation*		4.00*
	Total		20.18

*Plantation in 2.0 ha land will be done under social forestry on land available from Panchayat by the end of mine life

* Plantation & infrastructure In restricted area only

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7.7 (i) Mine Drainage in river bed mining

The River Yamuna flow from N to S which originates from the Himalayas provides the major drainage in the mining area. The general slope of the land surface is From NE to S and elevation of the mining area varies from 274mRL in the north end side of the mining area to 273.5mRL in south end side of the mining area.

There is flow of water in the river bed in a narrow area in post monsoon period. Area is having 1067 mm rainfall in a year. During rainy season, catchment water flows in the river. During dry period the Boulder, Gravel & Sand is excavated which gets replenished during rainy period. No mining activities will be carried out during rainy season when there is water flowing in the working area. There will be no intersection of water table as working will be carried out up to 3.0 m depth only from surface of river bed while the water level is 5 -10 m below the surface of river bed.

- **MINE DRAINAGE**

- Drainage Around And Within Mine:

The mining area will become a depression, which warrants accumulation of water during rainy season. The pit will become a depression and will help in faster recharge of water in the aquifer

- **DEWATERING:**

Since the depth of mining proposed is only 3.0 meters in the river bed, the same being above the water table of the area, there will be no chance of encountering the ground water table during the mining operations. No dewatering of the ground water is proposed.

7.8 Water Requirement

The requirement of water for the project will be as under



Sr.no	Activity	Requirment in KLD	Source
1	Dust suppression	10.0	Hired Tankers
2	Drinking	2.0	Hired Tankers
3	Green belt	3.00	Hired Tankers
	Total	**15.00**	

7.9 SITE SERVICE: -

Manager's Office:

One competent Manager and statutory personnel shall be deployed as per the requirement of the Mines Act, 1952 and as allowed by DGMS, will be required to supervise the mining operations. An office for Manager 5 x 3 meters shall be provided at the central location of quarry. An additional room for other supervisory staff is also proposed at each mine.

Canteen -cum-rest shelter:

In order to provide the rest shelter for the workers working in the mine and also to provide tea etc. the arrangement shall be made to install a rest shelter-cum-canteen at each quarry and shall be utilized by the workers. The rest shelter will be for having rest during the lunch hours by the workers/ labor. The size of rest shelter shall be about 10 x 3 meter to accommodate the workers.

First Aid Room:

To provide the first aid for any sort of injuries encountered during the mining operation, one small first aid room shall be provided at each sub block. First aid kit and sufficient stock of material/medicines needed for first aid shall be provided as per requirement. As

the Mining Engineer/Manager and Mining Mates are qualified first aides, they can provide first aid to the labor on the spot.

Crèche:

No woman employment is proposed in mine operation. However, in case of women workers are employed for other ancillary works like minor road repair, plantation etc, arrangement for a small crèche shall be made as per the requirement.

Electricity Supply:

Electric connection shall be taken for office and security purpose from the near bye sub-station of Haryana Electricity Board.

Water Supply:

The water supply for drinking purpose proposed will be made available by hired tanker.

8.0 YEAR WISE ANNUAL PROGRAMME OF MINING FOR NEXT 5 YEARS

Boulder, Gravel & Sand mineral is targeted for 2833 tons per day i.e. 0.85 million tons per annum (maximum). Production programme is given below:

Table: Production Programme

Year	Targeted Production (in MMTA)	Overburden handling M^3 Per year
1	*0.85*	*Nil*
2	*0.85*	*Nil*
3	*0.85*	*Nil*
4	*0.85*	*Nil*
5	*0.85*	*Nil*



9.0 DETAILS OF EMPLOYMENT

Total estimate Man power would be about 50 persons as per the details given below:

Table: Employment Details (To be deployed as per requirement of the Mines Act,1952)

S. No.	Category	Numbers
1	Manager 1st class/II Class Manager	1
2	Foreman/Mates	2
3	Skilled personnel	4
4	Semi-skilled personnel	40
5	Unskilled	3
Total		50

खान एवं भूविज्ञान विभाग, हरियाणा, चण्डीगढ़
Department of Mines and Geology,
Haryana, Chandigarh
APPROVED
With Conditions
शर्तों के साथ अनुमोदित
Vide letter No. DMG/HQ/RP/YNR B-4/2015
दिनांक / Dated 4441 to 4444 KB 1/2016
राज्य खनन अभियन्ता
State Mining Engineer

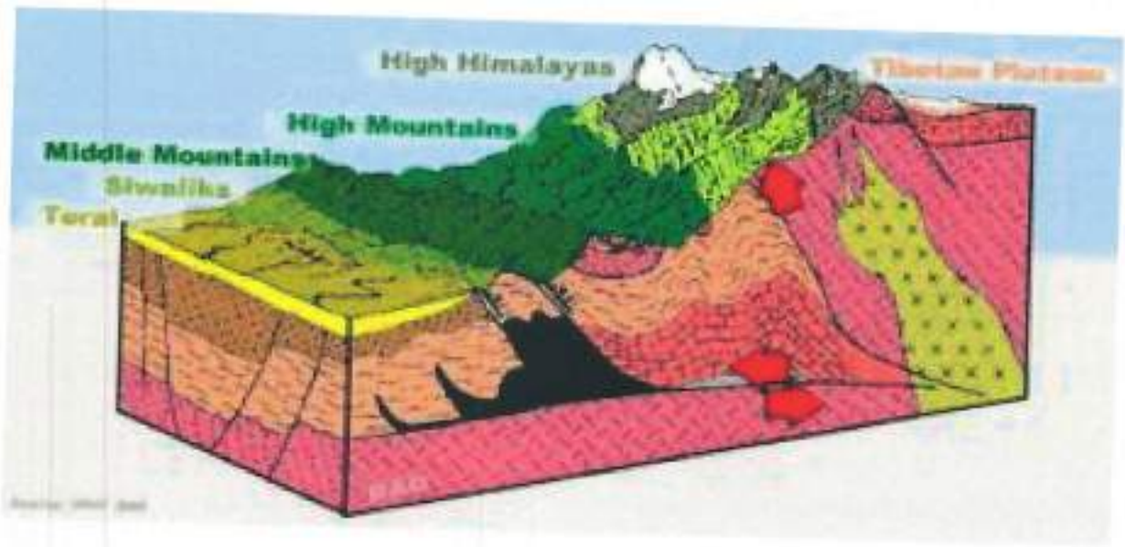
MINING PLAN AND PROGRESSIVE MINE CLOSURE PLAN

FOR

SAND MINE (MINOR MINERAL)

MANDOLI GHAGGAR WEST BLOCK (YNR B-4)

(Lease area: 25.56 ha; Lease Period-7 years; Production –1.191 Million T/Annum)



SUBMITTED TO

JAN-2016

THE DIRECTOR GENERAL, MINES & GEOLOGY DEPARTMENT, HARYANA

APPLICANT	PREPARED BY
M/s JSM Foods Pvt., Ltd., WZ/932-Basie Darapur,1st floor near Senior Secondary school New Delhi-110015	S.N. SHARMA RQP/DDN/0135/2001-A House No. 282, sector 11-D, Faridabad (Haryana)

1. HP 5799/2240 (1.6)
2. UP &Uttrakhand 74208/142 (21.50)
3. Rajasthan 102883/39739 (29.80%)
4. Haryana 21265/8214(6.5%)
5. Delhi 1485/574(0.4%)
6. MP 14023/5416 (40.6%)

Dandy &Boltan formula for calculation of Sediment Yield:

Dandy bolton formula is often used to check whether the sedimentation yield exceeds the replenishment rate but the whole question is whether there is adequate monitoring of the river basin, the answer is no as hydrological stations are sparsely spread. The formula uses catchment area and mean annual runoff as key determinants to give a yield value. It does not differentiate in basin wide smaller streams and their characteristics. CWC distinguishes river basins as classified and non-classified, as per the latest hydrological data for unclassified River basins; there are 122 GDSW (Gauge, Discharge, Sediment & Water Quality) sites in 12 such basins, the number was 147 in 2005. This brings in context the whole issue of scientific mining, thereby indicating that the monitoring of sediment yield in rivers / streams within the river basins is essential to arrive at extraction rates and express and conduct environmental studies based on these basin wide characteristics which should become part of the 'Terms of Reference'.

Sediment Yield versus Drainage Area

Dandy and Bolton studied sedimentation data from about 1500 reservoirs, ponds, and sediment detention basins. In developing their formulas, they used data from about 800 of these reservoirs with drainage areas greater than or equal to 1 mi2. The smaller watersheds-those of drainage area less than 1 mi2-were excluded because of their large

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P. K. Sharma

variability of sediments yield, reflecting the diverse effects of soils, local terrain, vegetation, land use, and agricultural practices.

For drainage areas between 1 and 30,000 mi2, Dandy and Bolton found that the annual sediment yield per unit area was inversely related to the 0.16 power of the drainage area:
In which S= sediment yield in tons per square mile per year; SR = Reference sediment yield Corresponding to a 1-mi2 drainage area, equal to 1645 tons per year; A = drainage area in square
miles; and AR = reference drainage area (1 mi2)

Sediments Yield versus Mean Annual Runoff

Dandy and Bolton studied sedimentation data from 505 reservoirs having mean annual runoff data. Annual sediment yield per unit area was shown to increase sharply as mean annual runoff Q in- creased from 0 to 2 in. Thereafter, for mean annual runoff from 2 to 50 in. annual sediment yield per unit area decreased exponentially.

This led to the following equations.
For Q <2 in.:
For Q >2 in.:

In which QR = reference mean annual runoff QR = 2 in.
Dandy and Bolton combined Eqs. 15-10 and 15-11 into a set of equations to express sediment
yield in terms of drainage area and mean annual runoff.
For Q <2 in.:
For Q >2 in.:
Sec: 15.2 Sediment Production.
For SR = 1645 tons/mi2/y, QR = 2 in., and AR = 1 mi2, Eq. 15-12 reduces to the followings:

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P. K. Sharma
S.M.E.

For Q <2 in.: S = 1280 Q0.46(1.43 – 0.26 log A)

For Q >2 in.: S = 1965e-0.055Q(1.43 – 0.26 log A)

Equations 5-12 and 5-13 are based on average values of grouped data; therefore, they should be used with caution. In Certain cases, local factors such as soils, geology, topography, land use, and vegetation may have greater influence on sediment yield than either mean annual runoff or drainage area. Nevertheless, these equations provide a first approximation to be of sediment yield for watershed planning purposes.

Calculation of Sediment Yield for boulder, gravel &Sand Mine of Mandoli Ghaggar West unit.

Mandoli Ghaggar West total production proposed is 11.91 Lakh MT/year

- Area under riverbed : 25.56
- Drainage basin area of river Yamuna and is tributaries in Haryana : 8214 square miles
- Normal Annual Rainfall of Yamunanagar district (1978 to 2005) :1076mm or 42.36 inch

With above inputs, the calculation of the sediment yield by the Dandy and Bolton formula is illustrated below :

	S.No.	Q (in inches)	A (in square mile)	S
Sample Set	1	3.5	150	1400.823
	2	27.4	8214	179.4756

$$S = 1965\, e^{-0.055Q}[1.43 - 0.26 \log(A)]$$

With above formula the value of S = 76.40 T/mile square/annum

Therefore the Total Sediment Yield for drainage basin of 8214 square mile will be = 8214 x 76.40= 6.27 lac T per annum.

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Dandy &Boltan formula also says that actual sediments yield from individual drainage basins may vary 10-fold or even 100 fold from computed yields. Since itinerary of river Yamuna indicates that its basis comprises of sediment rocks with good average rainfall therefore there are fair chances of yield of sediments to be 50 fold of computed results hence Actual Sediment Yield will be : 627000 T x 50 fold = 3,13,50,000 T / Annum

The equations express the general relationships between sediment yield runoff and drainage area.

They may provide a quick rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Because Dandy & Bolton have derived the equation form average values computed sediment yields normally would be low for highly erosive area and high for well stabilized drainage basins with high plant density. Factors which have direct bearing on sediments yield & limitations of Dandy & Bolton equation.

Sediment yield of a sediment basin has direct impact of local terrain, climate, vegetation, soils, agricultural practices & land use pattern of catchment area of the sediment basin aforesaid factors varies from basin to basin therefore, Dandy & Bolton has category stated that use of the equation to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation development. Actual sediment yield form individual drainage basins may vary 10-fold or even 100-fold from computed yields.

3.2.7 Grade & Use of Boulder, Gravel & Sand

Most Boulder, Gravel & Sand is made of quartz or quartzite/its microcrystalline cousin chalcedony, because that common mineral is resistant to weathering. River Boulder, Graval& Sands contain quartz, feldspar grains, tiny bits of rock (lithics), or dark minerals like ilmenite and magnetite.

The size of the sediments is variable. The grains whether small or large are rounded in shape. Boulder,Graval& Sand is yellow brown in color, coarse to fine grained. The present deposits

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are of good quality and can be used for building industries. There is no other use of this material.

3.3 RESERVE

3.3.1 METHOD OF ESTIMATION OF RESERVE

PROVED RESERVES

- Survey was conducted in the proposed area of Yamuna river bed and area outside river bed as per the area allocated by DMG, Haryana, a document provided by the authorities to the contractor. The Khasra plan was provided by the applicant.
- Following special conditions those are applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas are considered while calculating the reserves of this area:

(i) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge on up-stream side and ten times the span of such bridge on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

(ii) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorized by him;

(iii) The maximum depth of mining in the river-bed shall not exceed three meter from the un-mined bed level at any point in time with proper bench formation;

(iv) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

(v) In case of areas permitted for excavation outside river/rivulets i.e. areas adjoining to rivers/rivulets, no mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 metres in case of Tangri, and Ghaggar river and 100 meters on either side of all other rivers/ rivulets;

(vi) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology, a safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf.

vii) The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws.

ix) A barrier of 7.5 m width will be left from the mining area boundary, .

Basics of Mineral Reserves Calculation – River Bed Area

- Mineral Reserves falling in the river bed area has been calculated taking the maximum permissible depth of 3 m from the river bed surface RL.
- The bulk density of Boulder, Graval& Sand is considered 2.0
- Volumetric method is adopted for calculating reserves of Boulder, Gravel & Sand.
- The mineable reserves are calculated by deducting "Blocked Geological Reserves on account of river banks, lease boundary, railway line, highways, bridges, anicuts (where ever applicable) from total proved Geological Reserves".
- It is considered that river bed Boulder, Gravel& Sand shall be replenished every year as evident from preceding paragraph (3.2.6) on " Annual Replenishment of Mineral in River Bed Area vis-à-vis Sedimentation"

UNFC classification – Codes of UNFC are followed for reserve calculation

- UNFC is a three digit code based system, the economic viability axis representing the first digit, the feasibility axis the second digit and the geological axis the third digit. Each digit provided.
- Codes 1, 2 and 3 in decreasing order. The highest category of resources under UNFC system has code (111) and for lowest category the code is (334).
- Code (111): This code is provided for the economically mineable part of the measured mineral resources (proved category reserves).
- Code (121): This code is provided for the economically mineable part of the indicated mineral resources (probable category reserves).

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R.K. Sharma
S.D.E.

- Code (211): The part of the measured mineral resources (proved category), which as per feasibility study has not found economically mineable. The reserves blocked in 7.5 meters buffer zone and 50 meters from permanent structure.
- Code (222): The part of the indicated mineral resources (probable category), which as per feasibility study has not found economically mineable. The reserves blocked in 7.5 meters buffer zone and 50 meters from permanent structure.
- Code (480): Tonnage, Grade and mineral contents can be estimated with low level of confidence and resources are also inferred from geological.

The reserves of Boulder, Gravel& Sand calculated by volumetric method and are summarized here below: **Table: Geological Reserves**

Sr no.	Nature of land	Lease area In ha	Total proved Geological reserves MT=Area x depth x BD (A)	Blocked area of 50m strip after each km, 25% blocked in river banks, /lease boundary etc= hectares	Blocked Geological Reserves in blocked area (B)	Total Mineable reserves A-B=C (FOR10Yrs)	Minable Reserve (Per Year)
1	River bed	25.56	15,33,600 x 07 years =1,07,35,200 MT	5.70	3,42,000x 07 years= 23,94,000 MT	83,41,200MT	11,91,600 MT

A) GEOLOGICAL PROVED RESERVES AS PER UNFC CODE (111)

Total Reserves = 1,07,35,200 MT

B) BLOCKED RESERVES AS PER UNFC CODE (211 & 222) =23,94,000MT

C) MINEABLE RESERVES = A-B = 83,41,200 MT

D) TARGETED PRODUCTION

Department of Mines & Geology Haryana, Chandigarh APPROVED P.K. Sharma S.M.E

11,91,000 MT per Year in the River bed (Maximum- which is supposed to be replenished every year)

E) Life of the mine

For Balance reserves in River bed it is presumed that the mineral will be replenished every year during the rainy season. New mineral will be added every year in the river bed.

4.0 DETAILS OF PRODUCTION & DISPATCHES OF FIVE YEARS

This is a new mining area allotted to the applicant. Future production programme has been planned as per the details given below:

Production Programme (Plate no.4 for river bed .

Mining Contract has been allotted for a period of 7 years only. Mining area consist of 25.56 ha area in Mandoli Ghaggar West Block/YNR B-4 village (Khasra) out of which about 5.70 hectares area is under restricted zone. About 19.86 hectare area is free from restriction and the mining is proposed in this area only.

Daily production proposed = 3970 MT /day

Production programme is 159 trips/ day @ 25 ton per trip.

Working days have been taken as 300 days per annum.

Projected Production per Year = 300 x3970= 11,91,000 Tons **(1.191 Million MT)**

Table: Five Years Proposed Production Details (MT/A)

	Production From River bed		Area (ha)
Year	Trips/ day	MTPA	Needed per year
I	159	11,91,000	19.85
II	159	11,91,000	19.85
III	159	11,91,000	19.85
IV	159	11,91,000	19.85
V	159	11,91,000	19.85

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5.0 PHYSICAL AND GEOLOGICAL CHARACTERISTICS OF THE DEPOSIT

Deposit is moderate to good quality Boulder, Gravel & Sand. It is widely used in construction, buildings, bridges and other infrastructure. It is free from clay and non sticky in nature.

6.0 DETAILS OF MINING MACHINERY DEPLOYED OR TO BE DEPLOYED AND THE DETAIL SPECIFICATIONS

This is a new mining contract. Following equipments are proposed to be deployed for the desired production.

Table: List of Machinery

S. No.	Name of machinery	Capacity	Nos.
1	JCB	1.0 m^3	5
2	Tippers/ Trucks	25 tons	53
3	Water Tanker	4000 liters	1
4	Light vehicles /jeep	--	1
5	Maintenance Van		1
6			

6.1 Fuel Consumption

Quantity of Diesel / Energy fuel Consumption per day: -

S. No.	Machine	Details of Diesel requirements	Consumption of Diesel (in ltr.)
1.	Dumper	(Considering diesel consumption by the dumper is 3 km / ltr.) Total Diesel consumption for 55 Dumper = 55 x50 = 2700 Ltr	2700
2.	JCB	Diesel consumption 10ltr / hr working of 10 hrs diesel consumption = 10 x10x5 =500 ltr	500
3.	Water Tankers	Diesel consumption 10 ltr/Hour x10 x 1=100	100
6.	Light Vehicles	Diesel consumption 8 ltr/Hour x10 x1=80 ltr	80
7.	Maintenance Van	Diesel Consumption 10 ltr/hr x 10 x1=100 ltrs	100
		Total diesel requirements per day	3480



7.0 METHOD OF MINING

Mining is proposed up to 3.0m in river bed.

River bed mining is for extracting Boulder, Gravel & Sand from Yamuna River bed. As per Haryana Minor Mineral Concession Rules, 2012 extraction is limited to 3.0 m depth only in river bed Mining area allotted is 25.56ha in district – Yamunanagar . Mining activity will be carried out in allocated areas only, enclosed as **Annexure–I.**

Mining in River Bed (Plate no. 4)

Light weight excavators/JCB will be deployed for extraction. Mineral will be removed in 3.0 m layer only forming one bench. This is as per the digging depth of the equipments and maximum permitted depth. Mineral will be loaded in trucks of 25 tons capacity. There will be no OB or waste generation as the Boulder, Gravel & Sand is exposed in the river bed.

Bench will advance parallel to the banks of the river. Height of bench will be 3.0 m. Width of the bench will be around 20.0 m. Workings will be restricted within the mining area/ khasra as per the description report given by Mining Department. Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season. The bench will be in the form of slices/ strips parallel to the banks of the river. Roads in the mining area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20. However, movement of trucks after mineral loading will be towards both sides through approach roads connecting to tar roads. Every block will have its own approach roads, well connected to main highways. No processing of mineral will be done.

Total production envisaged is 3970 TPD (159 trips @25 Mt/trip) from River bed

7.1 Proposed year wise development for five years

Boulder, Gravel & Sand mining contract has been granted for a period of 7 years only. No pre-production development is required except making excess road.

Ultimate limit will be 3.0 m below existing bed level as indicated in the working section.

7.2 Proposed rate of production when the mine is fully developed

Work will be carried out for 300 days in year. Year wise production during the plan period will be as follows:

Table: Proposed Production

Year	Total Targeted Production MT/annum
1	11,91,000
2	11,91,000
3	11,91,000
4	11,91,000
5	11,91,000

7.3 Mineable reserves and anticipated life of the mine

It is presumed that the mineral will be replenished every year in River bed during the rainy season. New mineral will be added every year in the river bed. However the present reserves are sufficient for 1 year in "river bed" .

7.4 Proposed method of mining

a) River Bed

Mining activity will be carried out by open cast semi-mechanized method.

- No overburden/ waste material will be produced in river bed. No drilling/ blasting are required as the material is loose in nature.
- Light weight excavators will be used for loading of mineral in tippers.
- Proper benching of 3.0 m height will be maintained and width of the bench will be around 20 m. The benches shall be maintained in the form of slices/strips parallel to the banks of river.

- Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season.
- Roads will be properly made and sprayed by water for suppression of dust.
- Roads in the mining area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20.
- Extraction activities will start in the blocks from the upstream side to downstream side. This will not obstruct the movement of water, if any, during monsoon period in the river course.
- In case during any period, the replenishment was found less than 3 m or depth of excavation, the mining during said period would restrict to depth which would not be more than 3 m from the original level of the river bed.

As per MMR 1961, following precautions shall be undertaken during operations of HEMM.

Shovel/ excavator: -

1. Excavators will be provided with efficient warning devices, front & rear lights and efficient brakes.
2. Excavator will be under the charge of a competent person authorized in writing by the manager designated as operator.
3. No person other than the operator or his helper if any will ride on the excavator or even enter the excavator's cabin.
4. No person will be permitted to ride in the bucket of a Shovel/ excavator.
5. No inflammable material will be stored in the excavator housing or cab.
6. Shovel/ excavator dippers will be lowered to the ground during greasing operation.
7. When a Shovel/ excavator is to be moved from one point to another its boom shall be kept in strict alignment with direction of travel while the bucket/ dipper shall be held m above the ground.



8. No Shovel/ excavator will be operated in the position where any part of the machines, suspended loads or lines are brought closer than 3 m to the exposed high voltage line.
9. Every movement of a Shovel/ excavator shall be preceded by warning signals.
10. When not in use, the Shovel/ excavator will be moved to and stood on stable ground, the bucket shall be kept resting on stable ground and will never be left hanging.
11. The Shovel/ excavator will be so spaced that there will be no danger of accident from flying & falling objects.
12. Safety appliances, booms will be examined thoroughly once in a year.
13. Emergency switches, safety limit switches will be examined and tested once in four months.
14. All brakes will be tested for their operation worthiness once in a week.
15. The following signboards will be carried in and around the machine: -
    (i) "Warning— Do Not Enter The Working Range Of The Machine".
    (ii) "Lubricating Prohibited While the Machine in Running Condition".

Duties of Shovel/ excavator operator: -

1. At the commencement of every shift the operator will personally inspect and test the machine, paying special attention to the following details: -
    (i) The brakes and every warning device are in working order.
    (ii) Lights are in working order.
    (iii) The operator will neither take out the machine for work nor will he work the machine unless he is satisfied that it is mechanically shown and in efficient working order.

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P. K. Sharma
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(iv) The operator will maintained a record of every inspection made in a bond paged book, kept for the purpose and shall sign every entry made there in.

(v) The operator will keep the cab window clean so as to ensure clear vision at all times.

(vi) The operator will not operate the machine when persons are in such proximity as to be endangered.

(vii) Before leaving the machine, the operator will lower the bucket to the ground.

(viii) The operator will not leave his machine during the shift. Whenever, he finishes his work, he will hand over the machine to his relief or lock the excavators cab.

(ix) The operator will not allow any unauthorized person to ride on the machine.

Dumper: -

1. Every dumper will be provided with efficient brakes.
2. Efficient audible warning devices will be provided with the dumpers.
3. The dumper, if required to work after daylight hours, efficient headlights and taillights will be used.
4. Every dumper will be under the charge of a competent person, authorized in writing by the manager.
5. No person, other than the driver or his helper, if any, will ride on a dumper.
6. No person will be permitted to ride in the running board of a dumper.
7. The loaded dumpers will not be reversed on gradients.
8. Sufficient stop blocks will be provided at every tipping point and these will be used on every occasion when material is dumped.



9. Standard traffic rules shall be adopted and followed during movement of all dumpers. They shall be prominently displayed at relevant places in the opencast workings and haulm roads.

10. When not in use, every dumper will be moved to and stood on proper parking places.

11. No person will be permitted to work on a chassis of a dumper, with the body in rest position, until after the dumper body has been securely blocked in position.

12. The mechanical wised mechanism will not be depended upon to whole the body of a dumper in a rest position.

13. No unauthorized person will be permitted to enter or remain in any turning points.

14. While inflating tyres, suitable protective cages shall be used.

15. Tyres will never be inflated by sitting either in the front or on the top of the same.

16. While the vehicle is being loaded / unloaded on gradient, the same will be secured stationary by the parking brake, and other means suitably designed stopper block, which could be placed below the tyres.

17. At least once in every two weeks the brakes of every dumper will be tested as below: -

(a) Service Brake test: - The brake will be tested on a specified gradient and speed when the vehicle is fully loaded. The vehicle should stop within the specified distance when the brake is applied.

(b) Parking brake test: - The parking brake shall be capable to hold the vehicle when it is fully loaded and placed at the maximum gradient. Maximum gradient of the roadway which is permitted only for a period of at least 10 minutes.

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S.M.E.

(c) A record of such test will be maintained in a bound paged book and will be signed by the competent person carrying out the test. These records will be countered signed by the engineer and manager.

(d) All vehicles shall be tested and examined once at least in every 6 months.

(e) A notice shall be displayed outside every vehicle that **"No Unauthorized Travelling allowed".**

(f)

Duties of dumper operators: -

1. At the commencement of every shift, the operator shall personally inspect and test the machine, paying special attention to the following details: -

(i) Tyre pressure, brakes, horn and the Lights are in working order.

(ii) The driver will neither take out the machine for work nor will he work the machine unless he is satisfied that it is mechanically shown and in efficient working order.

(iii) The driver will maintained a record of every inspection made in a bound paged book, kept for the purpose and shall sign every entry made there in.

(iv) The driver will keep the cab window clean so to ensure clear vision at all times.

(v) Driver will ensure that the gear is in neutral position before stopping the engine. He will park the vehicle: -

(a) In reverse gear, on level roads and down gradients.

(b) In low gear, on up gradients.

(vi) The driver will negotiate downhill gradients in low gear, so that minimum of braking is required.

(vii) The driver will not drive too fast, avoid distractions and drive defensively.

Mines & Geology Haryana, Chandigarh
APPROVED
P. K. Sharma
S.M.E.

(viii) Before crossing a road / railway line he will reduce his speed looking both directions along the road or railway line and will proceed across the road or line only if it is safe to do so.

(ix) The driver will not operate the dumper in reverse unless he has a clear view of the area behind the vehicle.

(x) The driver will see that : -

(a) The vehicle is not overloaded.

(b) The material is not loaded in a dumper so as to project horizontally beyond the sides of its body.

(xi) The driver will not allow any unauthorized person to ride on the vehicle.

(xii) When there is a poor visibility, the speed of a vehicle will be restricted in a manner that the braking distance is maintained shorter the distance of visibility.

(xiii) The driver will not leave his machine during the shift. When he finishes his work, he will hand over the machine to his reliever or lock the excavators cab.

7.5 Conceptual Mining Plan

River Bed: Mine area will be worked in blocks for ease of operation. However, as the digging depth will be restricted to 3.0 m only in river bed and material will still be available below. This will be further replenished during rainy season. Blocks will be worked systematically as the width is limited while length is much more.

Sequence of working has been shown on **Plate no –4.** As the mining contract period is only 7 years, some of the area will be left un-worked at the end of contract period.

(i) Final Slope Angle To Be Adopted

Thickness of the bench is limited to 3.0 m only in river bed and width will be more than the height of the bench. River bank side will be protected by working in 3/4 part of middle of the river. Bank side natural slope will not be disturbed. This will prevent collapse of bank

Department of Mines & Geology Haryana Chandigarh APPROVED P. K. Sharma S.M.E.

and erosion. However, the height of the bank with respect to river bed is varying from 2-3 m only.

(ii) During plan period workings will be carried out in the designated villages at a time of the mining area simultaneously. Scattered workings will ensure safety, remove congestion of vehicles and will have better control and management.

(iii) **Ultimate Capacity Of Dumps**

There will be over burden removal / generation during the plan period. The same will be dumped at designated site and will be utilized for reclamation simultaneously. No outside material will be filled up in the extracted zone.

a) **Land use Pattern of Mining Area at Various Stages**

Land use pattern will be as follows:

Table: PRESENT LAND USE PLANING

Sr.No.	Particulars		Present Land Use (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	5.70
2	Infrastructure (Office, temp. Shelters etc.		0.00
3	Area available for mining in river bed		19.86
			25.56

Table: LAND USE PLANING AT THE END OF lease period

Sr.No.	Particulars		AT THE END OF 5TH YEAR (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	5.70
2	Infrastructure (Office, temp. Shelters etc.		0.02*
3	Naturally reclaimed in river bed		15.84
6	Un worked river bed		0.00
7	Plantation*		4.0*
	Total		25.56

*Plantation in 4.0 ha land will be done under social forestry on land available from Panchayat by the end of mine life

* Plantation & infrastructure In restricted area only



7.7 (i) Mine Drainage in river bed mining

The River Yamuna flows from N to S which originates from the Himalayas provides the major drainage in the mining area. The general slope of the land surface is From NE to S and elevation of the mining area varies from 277mRL in the north end side of the mining area to 276mRL in south end side of the mining area.

There is flow of water in the river bed in a narrow area in post monsoon period. Area is having 1067 mm rainfall in a year. During rainy season, catchment water flows in the river. During dry period the Boulder, Gravel & Sand is excavated which gets replenished during rainy period. No mining activities will be carried out during rainy season when there is water flowing in the working area. There will be no intersection of water table as working will be carried out up to 3.0 m depth only from surface of river bed while the water level is 5 -10 m below the surface of river bed.

- **MINE DRAINAGE**

- Drainage Around And Within Mine:

  The mining area will become a depression, which warrants accumulation of water during rainy season. The pit will become a depression and will help in faster recharge of water in the aquifer

- **DEWATERING:**

  Since the depth of mining proposed is only 3.0 meters in the river bed, the same being above the water table of the area, there will be no chance of encountering the ground water table during the mining operations. No dewatering of the ground water is proposed.



7.8 Water Requirement

The requirement of water for the project will be as under

various phases and so far 5 exploratory wells, 15 slim holes and 15 piezometers have been constructed in the district.

Phygiography

The district is divided into four Physiographic units

- Siwaliks
- Dissected Rolling Plains
- Interfluvial Plains

Active And Recent Flood Plains

- Relict Plains

Siwaliks hills - Siwalik hill ranges occupy the northern fringe of Yamuna Nagar district and attain the height up to 950m AMSL. The hills are about 500m high with respect to the adjacent alluvial plains. These are characterized by the broad tableland topography that has been carved into quite sharp slopes by numerous ephemeral streams come down to the outer slopes of the Siwaliks and spread much of gravels boulders, pebbles in the beds of these streams.

Kandi Belt - A dissected rolling plain in the northern parts of district is a transitional tract between Siwaliks hills and alluvial plains. It is about 25 km wide and elevation varies between 250 and 375m AMSL.

Interfluvial plains - This tract is part of higher ground between Ghaggar and Chautang and includes high mounds and valleys. In general, the slope is from northeast to southwest.

Active and recent flood plains - This plain is narrow tract along river Yamuna in the district.

Relict wedge plain - This is almost in alignment to the surface water divide between the westward flowing Ghaggar and eastward flowing Yamuna River.

Hydrogeology

The ground water exploration in the district reveals that clay group of formations dominates over the sand group in the district area. Ground water in the district occurs in the alluvium under water

P. K. Sharma
S.M.E.

table and semi-confined to confined conditions. These aquifers consist of sand, silt, gravels and kankar associated with clay and form highly potential aquifers. In alluvium, the permeable granular zones comprise fine to medium grained sand and occasionally coarse sand and gravel. Their lateral and as well as vertical extent is extensive. In Kandi belt, which has not been explored fully boulders cobbles and pebbles, constitutes the major aquifer horizon. Siwalik Hills occupy marginal areas in the northeastern parts of the district constitute a low potential zone.




HYDROGEOLOGY
YAMUNANAGAR DISTRICT, HARYANA
0 5 10 15 K.M.
HIMACHAL PRADESH
SADHAURA
AMBALA
BILASPUR
CHHACHHRAULI
WESTERN YAMUNA CANAL
YAMUNA RIVER
MUSTAFABAD
JAGADHRI
YAMUNANAGAR
RADAUR
UTTAR PRADESH
1000
500
INDEX
GEOLOGICAL FORMATIONS
WELLS FEASIBLE
RIGS SUITABLE
DEPTH OF WELL (M)
DISCHARGE (LPM)
SUITABLE ARTIFICIAL RECHARGE STRUCTURE
SOFT ROCK AQUIFER
TUBE WELLS
REVERSE/ DIRECT ROTARY
30-270
>600
DITCH AND FURROWS RECHARGE TRENCH WITH INJECTION WELL
SOFT ROCK AQUIFER
TUBE WELLS
REVERSE/ DIRECT ROTARY
20-270
480-600
DITCH AND FURROWS RECHARGE TRENCH WITH INJECTION WELL
SOFT ROCK AQUIFER
TUBE WELLS
REVERSE/ DIRECT ROTARY
20-270
360-480
DITCH AND FURROWS RECHARGE TRENCH WITH INJECTION WELL
BOULDARY AQUIFER
DUG WELLS/ TUBE WELLS
MANUAL/ PERCUSSION/ DTH WITH ODEX
20-120
200-480
SPREADING TECHNIQUES, CONTOUR BUNDING, PERCOLATION TANKS
ELECTRICAL CONDUCTIVITY (MICRO-MHOS/CM AT 25°C)
500
IRON > PERMISSIBLE LIMIT (1.0 PPM)
HILLY AREA
Department of Mines & Geology Haryana, Chandigarh
APPROVED
P. K. Sharma
S.M.E.

In Kandi areas, the shallow aquifers are isolated lenses embedded in clay beds whereas aquifers in alluvial areas occur on regional scale and have pinching and swelling disposition and are quite extensive in nature. These aquifers generally consists sands (fine to coarse grained) and gravels and are often intercepted by clay and kankar. These aquifers are under unconfined.

Under ground water exploration programme nine exploratory wells were drilled in the district. On average 3-12 of granular zones were deciphered in the depth range down to 450 m bgl. Exploratory wells drilled in depth range of 130 and 180 m bgl yield discharge in the range of 2700 to 4900 lpm for drawdown of 6.0 m to 12.0 m and Transmissivity of aquifers range between 1500 to 4900 m_2/day. The yield potentials of aquifer below 200.0m bgl are yet to be evaluated.

Depth to water level

The depth to water level during pre-monsoon period in the district ranges between 2.07m bgl at Choli and 15.32m bgl at Khizrabad. However, in major part of district water level ranges between 5.0m bgl and 10.0m bgl. The Depth to water level during pre-monsoon period in the district ranges between 1.57m bgl at Choli and 18.41m bgl at Bahadurpur. However, in major part of district water level ranges between 5.0m bgl and 15.0m bgl. Appraisal of water level data of May and November reveals that some parts of the district have experienced water level decline whereas in other parts rise in water level has been recorded. Maximum decline of – 0.43m has been observed in area around Khizrabad and maximum rise of 0.39m was recorded at Sabri village. During last ten years, majority of observation points in the district have shown declining trends ranging from 0.00013 m/yr to 0.389m/yr, however, area as not recorded any significant rise during last ten years.

The discharge of the shallow tubewells tapping unconfined aquifers e tubewells ranges from 100 lpm to 500 lpm with moderate Drawdown values. Near Manakpur, a phreatic aquifer extending down to 88.0m bgl has Transmissivityvalue of 2500m^2/day, lateral hydraulic conductivity of 31m /day, and specific yield of

CLIMATE

The climate of Yamunanagar district can be classified as subtropical monsoon, mild dry winter, hot summer and sub-humid which is mainly dry with very hot summer and cold winter except during monsoon season when moist air of oceanic origin penetrate into the district. The hot

weather season starts from mid March to last week of the June followed by the south west monsoon which lasts up to September. The transition period from September to November forms the post monsoon season. The winter season starts late in November and remains up to first week of March.

Rainfall: The normal annual rainfall of the district is 1076 mm, and is unevenly distributed over the area. The average rainy days are 44. The south west monsoon sets in from last week of June and withdraws in the end of September, contributing about 81% of normal annual rainfall. July and August are the wettest months. Rest19% rainfall is received during non-monsoon period in the wake of western disturbances and thunderstorms. Generally rainfall in the district increases from southwest to northeast .The mean maximum temperature is 40.8₀ C(May &June)and mean minimum is 6.8₀C (January) of the district.

Normal Annual Rainfall:1076 mm

Normal monsoon Rainfall:879 mm

Temperature

Mean Maximum: 40.8°C(May & June)

Mean Minimum: 6.8 °C(January)

Normal Rainy days: 44

. (*Source: District Groundwater Brochure CGWB*).

3.2 Geology of the Area

3.2.1 Regional Geology

The north-eastern and central part of Haryana is predominantly characterized by sedimentary litho logy in the Sub-Himalayan zone comprising Subathus, Dagshais, Kasaulis and Siwaliks. A general Regional stratigraphic sequence in the area is given in Table.

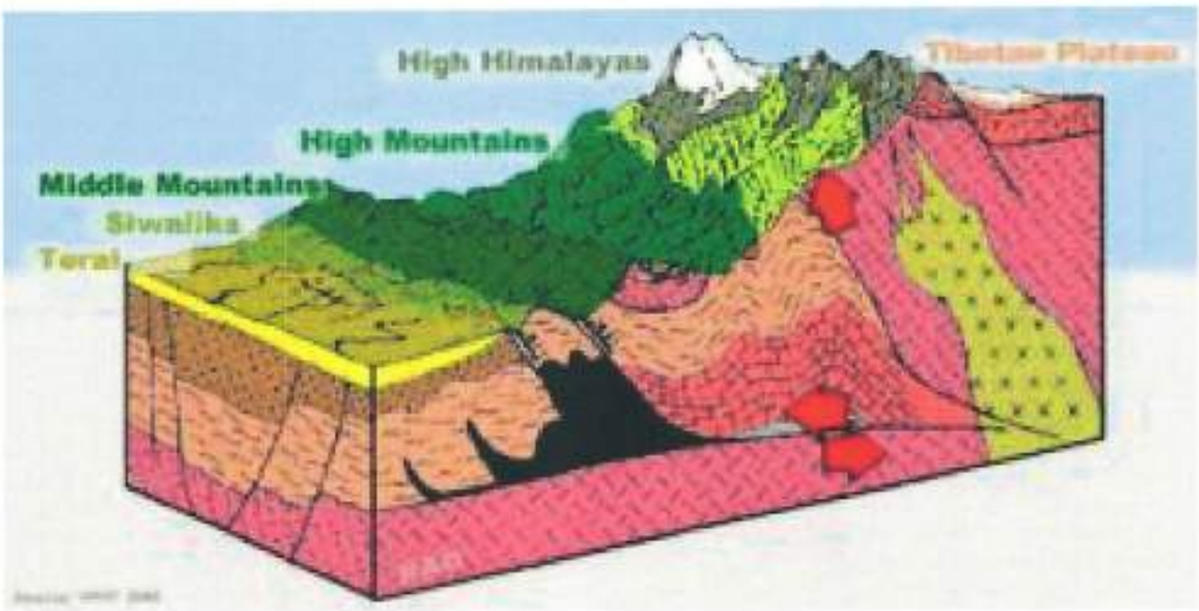


Table: Regional stratigraphic sequence

Age	Super group	group	Formation	litho logy
Holocene			Newer alluvium and Newer Aeolian Deposits	Gravel, Sand, silt, clay, limestone, gypsum
Lower to upper Pleistocene			older alluvium and Older Aeolian Deposits	Gravel, grey sand, silt, clay, brown sand, calcrete
Lower to Middle Pleistocene	S I W A L I K	Upper Siwalik	Boulder Conglomerates formation	Conglomerate, sandstone, silt, clay
Upper Pliocene			Pinjore Formation	Coarse grit,red sand stone and clay, conglomerate
			Tatrot Formation	Friable Sandstone and variegated clay
		Middle Siwalik	Dhokpathan Formation	Brown sandstone and orange clay
Middle Miocene			Nagri Formation	Hard grey sand stone, mudstoneand minor shale
		Lower Siwalik	Nahan Formation	Coarse grity ,clay and red sandstone often calcareous, brownish shale with lignite lenticles, greenish white Quartzite
Lower Miocene		Sirmur	Kausauli Formation	Grey and green stone,green shale and grey clay
			Dagsai Formation	Purple and green sand stone, deep red gritty,clay,whiteandstone with ferruginous concretions
Upper Eocene			Subathu formation	Sandstone with gritu clay. Impure fossiliferous limestone calcareous slate,greenish shale and dark brown quartzite
Pre-proterozoic			Tundapathar	Thickly bedded ,sstromatolite limestone with carboniferous shale and quartzite

A schematic diagramme of Himalayas showing higher, middle and lower Himalayas including Shiwaliks is shown here below





3.2.2 LOCAL GEOLOGY

The litho units encountered in the riverbed and surrounding areas belongs to the Shivalik super groups. The sediments are river borne and has deposited in the riverbed and the flood plains. The different formations of the area belong to Shivalik Super group and are a mixture of boulders, pebbles, sand, silt and clay. The following sequences have been observed in the area.

Soil/Alluvium

Sand, Gravel, Boulder(Mixed form)



There is no clear demarcation between the litho units. They have been deposit in a mixed form. The Litho- units exposed around the riverbed belong to Shivalik Super- Group. The mineral Boulders, Gravel and sand have formed by weathering of rocks and then deposition on the flood plains of the rivers originated from the Shivaliks. These have been washed by rainwater during rainy season and deposited in river bed in the form of boulders, gravels and sand of different sizes and shapes. These minerals are sorted by screening. The max depth of the minerals is not known.

Soil/ alluvium varying in thickness from 0.50-1.50 m constitute the top horizons in the area suitable for agriculture. Yamuna River meanders through the area exposing the alluvium and soil at the banks. Boulder, gravel & sand is found in the river bed. Boulder, gravel &sand is deposited up to great depths. This bed is presently dry and water flows only during the rainy season The Sand exposed in the River bed of Yamuna and surrounding areas is the product of the deposition of the sediments brought and deposited in the flood plains of River Yamuna. These sediments are of recent geological formation. The litho-units exposed within the river and surrounding areas have formed as water borne sediments brought by flood water during rainy season every year and deposited in riverbed. Geological map and section are enclosed as **Plate – 03)**

3.2.3 DESCRIPTION OF FORMATION

The description of Boulder, gravel & sand found in the lease area as minor mineral have been as under:

3.2.4 (Boulder, gravel & sand)

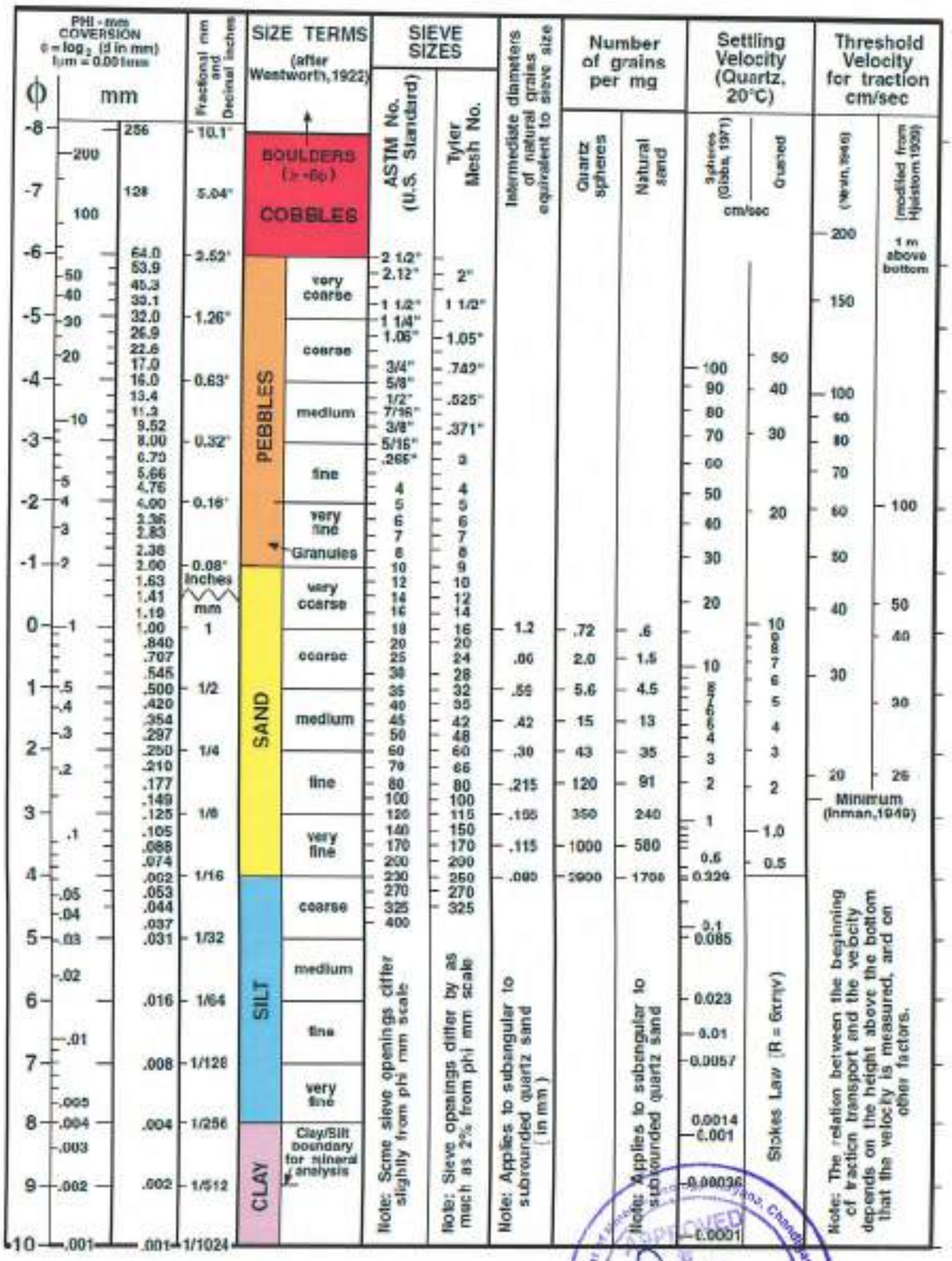
Sediments of various sizes and in mixed form are predominantly deposited in the river bed and outside the river bed as well in the central part. There is no perfect classification between boulders, cobbles, pebbles and sand. They are deposited in a mixed state.sand is merely a size category. Sand is particulate matter that's larger than silt and smaller than gravel. Different specialists set different limits for sand: Engineers call sand anything between 0.074 and 2 millimeter, or between a U.S. standard #200 sieve and a #10 sieve.

The classification is done by grab mining and the sediments are passed through different sieves in the screening plants.

Technically, the size of boulders vary from 2.52 inches to up to 10.1 inches & pebbles range from 0.08 inches to 2.52 inches which is clear from ***the table of classification of sediments by Wentworth.***



Classification of Sediments (Wentworth -Grain Size-Chart)



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Sediments of various sizes and in mixed form are predominantly deposited in the river bed and there is no perfect classification between sediments.

3.2.5 PHYSICAL & CHEMICAL CHARACTERISTICS OF MINERAL

Technically, sand is merely a size category. Sand is particulate matter that's larger than silt and smaller than gravel. Different specialists set different limits for sand:

Engineers call sand anything between 0.074 and 2 millimeter, or between a U.S. standard #200 sieve and a #10 sieve.

Soil scientists classify grains between 0.05 and 2 mm as sand, or between sieves #270 and #10.

Sedimentologists put sand between 0.062 mm (1/16 mm) and 2 mm on the Wentworth scale, or 4 to −1 unit on the phi scale, or between sieves #230 and #10. In some other nations a metric definition is used instead, between 0.1 and 1 mm.

From a geological viewpoint, sand is anything small enough to be carried by the wind but big enough that it doesn't stay in the air, roughly 0.06 to 1.5 millimeters. It indicates a vigorous environment.

Composition and Shape of minerals

Most sand, boulders&, gravel is made of quartz or its microcrystalline cousin chalcedony, because that common mineral is resistant to weathering. The farther from its source rock sand is, the closer it is to impure quartz. But Yamuna sands contain quartz grains, tiny bits of rock (lithics), or dark minerals like limestone and ferruginous concretions.

The size of the sediments is variable. The grains whether small or large are rounded in shape. Sand is grey, brown in color, coarse to fine grained. The present deposits are of good quality and can be used for building industries. There is no other use of this material.

3.2.6 ORIGIN & CONTROL OF MINERALISATION(ANNUAL REPLENISHMENT OF MINERAL IN RIVER BED AREA vis-à-vis SEDIMENTATION)

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs. The term is commonly used as a synonym for sedimentary petrology and sediment logy.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits lay down in different geographic and geomorphic environments.

The factors which affects the "Computation of Sediment":

a) Geomorphology & Drainage Pattern : The following geomorphic units plays important role :

- Structural Plain
- Structural Hill
- Structural Ridge
- Denudation Ridge & Valley
- Plain & Plateau of Gangetic plain
- Highly Dissected pediment
- Un dissected pediment



b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)

c) Drainage System/Pattern of the area (Drainage Density = ...Km/Sq. Km of Yamuna River

d) Rainfall & Climate : Year wise Rainfall data for previous 8 years of Yamuna Basin/River

e) As per Dandy & Bolton study "Sediment Yield" can be related to

i) Catchment Area and

ii) Mean Annual Run-off

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin.

The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance. River Yamuna near Dakpathar barrage leaves Uttarakhand and enters Himachal Pradesh.

The YAMUNA RIVER is the biggest tributary of the river Ganga in North India. Its source in the Yamunotry glacier at an elevation of 6387 mtrs on South western sides of Banderpooch crests in the lower Himalayan ranges. The overall span of the Yamuna river is 1376 Kms (855 miles) with catchment area of 366223 square km (141,399 square mile). This encompasses 40.2 % of the whole Ganga valley, prior to joining Ganga at TriveniSangam in Allahabad (UP)

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Itinerary of Yamuna River:and its tributries

The river passes through many states such as Uttrakhand, UP, Haryana, going across to HP and then Delhi. With yearly discharge of around 10,000 cubic billion meters (cbm) and consumption of 4400 cbm (of which irrigation comprises 96%), the river represents above 70% of water provision of Delhi. Yamuna water are fairly good quality for its entire span

from Yamunotri in Himalayan ranges to Wazirabad in Delhi, the length of which is around 375 Kms.

Itinerary of Drainage area of Yamuna:

The origin of Yamuna is situated in the Yamunotri glacier at an elevation of 6387 mtrs on SE sides of Banderpooch crests, which are located in the Mussoorie range of lower Himalayan range in Uttrakashi district of Uttrakhand, to the North of Haridwar. From this place Yamuna runs to South around 200 Kms across the Shivalik mountain ranges and lower Himalayan ranges. A significant portion of its beginning of Drainage basin (with total area of 217.00 square km) is situated in HP and a major tributary sapping the upper drainage basin in the Tons, which is also biggest and most extensive tributary of the Yamuna. Other tributaries in the area are the Rishi Ganga, Giri, Hanuman Ganga, Kunta& Bata, which sap the upper drainage basin of the huge Yamuna river. Subsequently, the river moves down the terrains of Doon basin at DakPathar close to Dehradun, in this place water is redirected into a channel for the purpose of electricity generation. Once it goes across the sikh religious place of Ponta Sahib, the river arrives at Tajewala in the YAMUNANAGAR district of Haryana where a dam was constructed in 1873. This dam is the origin of the two major channels or water courses – Eastern Yamuna Canal and Western Yamuna Canal and both drain in UP & Haryana. The Western Yamuna Canal (WYC) traverses Karnal, Yamunanagar and Panipat prior to arriving at the Haiderpur water treatment plant, which provides a portion of municipal water provisions of Delhi. The Yamuna also forms natural boundary between the states of Uttrakhand& HP and also amid the states of UP and Haryana. Together with the Ganga to which it flows almost parallel once it meets the Indo-Gangetic plateau, the biggest Alluvial productive area in the World, it forms the Ganges-Yamuna Doab are stretched across 69,000 square Km which is 33% of the whole area.



Table of Drainage Basin area of River Yamuna (square KM/square mile) with % of Drainage Basin

"MINING PLAN FOR MANDOLI GHAGGAR WEST BLOCK (YNR-B-4) - SAND MINOR MINERAL MINES"

CONTENTS

S.NO	DESCRIPTION	PAGE NO
	Introduction	1-4
1.0	General	5
2.0	Details of the Mining lease area	6-8
3.0	Details of Existing Mining pits, their dimensions etc	9
3.1	Physiography, Drainage and Climate	10-15
3.2	Geology of the Area	15
3.2.1	Regional Geology	15-17
3.2.2	Local Geology	17-18
3.2.3	Description of formation	18
3.2.4	Boulder, Gravel& Sand	18-20
3.2.5	Physical & Chemical Characteristics of mineral	20
3.2.6	Original & control of mineralisation (Annual replenishment of mineral in river bed area vis-a-vis-sedimentation	21-27
3.2.7	Grade and use of Boulder,Graval& Sand	27
3.3	Reserves	28
3.3.1	Method of estimation of reserves	28-31
4.0	Details of production & dispatches of five years	31
5.0	Physical and Geological Characters of the deposit	32
6.0	Details of Mining Machinery Deployed/ to be deployed	32
6.1	Fuel consumption Per Day	32
7.0	Method of mining	33
7.1	Proposed year wise development for five years	33
7.2	Proposed rate of production when the mine is fully developed	34

Department of Mines & Geology Haryana, Chandigarh
APPROVED
S.M.E.

7.3	Mineable reserves and anticipated life of the mine	34
7.4	Proposed method of mining	34-40
7.5	Conceptual Mining Plan	40
7.7	Mine Drainage	42
7.8	Water requirement	42
7.9	Site services	43-44
8.0	Year wise Annual Program me of mining for the next 5 years	44
9.0	Details of Employment	45
	Environment Management Plan	
10.0	Measures taken and to be taken for land restoration, reclamation and plantation in/ or nearby lease area	46-48
11.0	Measures taken/ to be taken for protection of Environment in and around mining areal	48
12.0	Measures taken/ to be taken for dumping overburden, stacking of top soil.	48
13.0	Measures taken/ to be taken for the control of water, noise and air pollution	49-52
14.0	Demographic details of the study area	53
15.0	Details of health checkups and insurance of all the employed person	54
15.1	Corporate Social Responsibility	54-56
15.2	Fund Provision for Environmental Management	57
15.3	Fund Provision for E M P measures	57
	Part II **Progressive Mine Closure Plan**	
1.0	Introduction	58-60
1.1	Reason for closure	60

Department of Mines & Geology Haryana, Chandigarh
APPROVED
P. K. Sharma
S.M.E.

1.2	Statutory obligations	60
1.3	Closure plan preparations	56
2	Mine description	61
2.1	General Geology and Local Geology	61
2.1.1	Regional Geology	61
2.1.2	Local geology	62
2.2	Reserves	63
2.3	Mining Method	64
2.4	Mineral beneficiation	64
3.0	Review of implementation of mining plan including five years progressive closure plan up to the final closure plan	64
4.0	Closure plan	64
4.1	Mined out land	64
4.2	Water quality management	65
4.3	Air Quality Management:	65
4.4	Waste management	65
4.5	Top soil management	65
4.6	Tailing dam management	65
4.7	Infrastructure	66
4.8	Disposal of mining Machinery	66
4.9	Safety and security	66
4.10	Disaster management and risk assessment	66
4.11	Care and Maintenance during temporary discontinuance	67
5.0	Economic Repercussion of closure of mine and manpower retrenchment	68
6.0	Time scheduling for abandonment	68

Director of Mines & Geology Haryana, Chandigarh
APPROVED
P. K. Sharma
S.M.E.

7.0	Abandonment cost	69
8.0	Financial assurance	70
9.0	Certificate	71
10	Plans & sections(Enclosed with the report)	71

LIST OF ANNEXURE

Sr.no.	Description
1	A copy of LOI
2	Consent letter from applicant to prepare the Mining Plan
3	RQP Certificate



"MINING PLAN FOR MANDOLI GHAGGAR WEST BLOCK (YNR-B-4) - SAND MINOR MINERAL MINES"

LIST OF PLATES

Plate. No.	Description
1	Location Plan
2	Key plan
3	Surface Geological plan and section
4	Plan showing the position of Mine Workings at the end of Each Year.
5	Reclamation Map
6	Environmental Plan



INTRODUCTION

M/s JSM Foods Pvt., Ltd., WZ/932-Basie Darapur,1st floor near Senior Secondary school New Delhi-110015were the highest bidder for the boulder, gravel and Sand of Mandoli Ghaggar West Block/YNR B-4 for which e-auction was held on 10-06-15 and 11-06-2015. A Letter of Intent has been issued by the Director General Mines & Geology Department, Haryana vide letter no DMG/Hy/Cont/Mandoli Ghaggar West Block/YNR B-4//2015/ /dated 19-06-2015 for Mining of Boulder, Gravel& Sand (Minor Mineral) in revenue village Mandoli Ghaggar West Block/YNR B-4, over an area of 25.56 hectares in District- Yamunanagar , Haryana for a period of 7 years

Name of Block	Nme of Village	Details of Khasra No/KilaNos	Area of block in ha
MandoliGhaggarWest Block/YNR B-4/	Mandoli Ghaggar	**53//5,** 6, 15, 16/1, 16/2, 25 **54//1 to 25** **55//1,** 2, 9, 10, 11,20 **57//1 to 4**, 7 to 13 **58//5,** 6, 15	25.56

The applicant is involved in the Construction & infrastructure development business for last many years. They can invest necessary funds for the scientific and systematic development of mines including land rejuvenation and progressive reclamation programme and other measures necessary to protect the quality of the environment and human health etc.

The objective of preparation of this Mining Plan and Progressive Mine Closure Plan is to fulfill the conditions stipulated by the Department of Mines & Geology, Haryana required under Haryana Minor Mineral Concession Rules, 2012. The conditions which are related to the mining plan are reproduced here below.

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- The period of contract shall commence w.e.f the date of grant of environmental clearance by competent authority as required under EIA notification dated 14.09.2006 and as amended from time to time by the MOEF,G o I or on expiry of a period of 12 months from

the date of acceptance of highest bid/issuance of "**Letter of Intent**",(L o I) whichever is earlier;

- The contractor shall also deposit/pay an additional amount equal to 10% of the due contract money along with instalments towards the **'Mines and Minerals Development, Restoration and Rehabilitation Fund'**;
- The mining contractor shall got prepare a "Mining Plan" along with the Mine Closure Plan (Progressive & Final) from the Recognized Qualified Person as per chapter 10 of the "Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012" for mining area granted on contract. The contractor shall not commence mining operations in any area except in accordance with such Mining Plan duly approved by an officer authorized by the Director, Mines & Geology, in this behalf. Further, the actual mining will be allowed to be commenced only after prior Environmental Clearance is obtained by the LoI holder/mining contractor for the Mining blocks area from Competent Authority as required under notification dated 14/9/2006 issued by the MoE&F, GoI or as amended from time to time.
- The total mineral excavated and stacked by the concession holder within the area granted on mining contract shall not exceed two times of the average monthly production as per approved Mining Plan at any point of time.
- The Mining contractor shall not stock any mineral outside the concession area granted on mining contract, without obtaining a valid mineral dealer license as per provisions contained in Chapter 14 of the "Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012".
- The contractor shall not carry out any mining operations in any reserved/protected forest or any area prohibited by any law in force in India, or prohibited by any authority without obtaining prior permission in writing from such authority or officer authorized in this behalf. In case of refusal of permission by such authority or officer authorized in this behalf, contractor(s) shall not be entitled to claim any relief in payment of contract money on this account.

- Following special conditions shall be applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas:

  (i) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge on up-stream side and ten times the span of such bridge on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

  (ii) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorized by him;

  (iii) The maximum depth of mining in the river-bed shall not exceed three meter from the un-mined bed level at any point in time with proper bench formation;

  (iv) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

  (v) In case of areas permitted for excavation outside river/rivulets i.e. areas adjoining to rivers/rivulets, no mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 metres in case of Tangri, Yamuna and Ghaggar and 100 meters on either side of all other rivers/ rivulets;

  (vi) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology Department, may be made applicable to the mining operations in river-beds.

- That no mining operation shall be allowed in the urbansizable zone of area notified by Town and Country Planning Department. Further, in case of the agriculture zone notified by Town and Country Planning Department mining shall be permissible only after obtaining prior permission from the competent authority.

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- A safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf.
- The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws.
- The contractor shall be under obligation to carryout mining in accordance with all other provisions applicable as per Mines Act, 1952, Mines and Minerals (Development and Regulation) Act, 1957, Indian Explosive Act, 1884, Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986 and the rules made there under Wild Life (Protection) Act, 1972, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.



1.0. GENERAL:

a) Name and address of the Lessee/applicant:

M/s JSM Foods Pvt., Ltd., WZ/932-Basie Darapur,1st floor near Senior Secondary school New Delhi-110015

b) Status of the Applicant;-The applicant is a Pvt. Co.

c) Name, Address and registration number of the RQP preparing the mining plan

The applicant has assigned the work of preparation of mining plan to S.N.Sharma

(Consent letter enclosed as Annexure -2 and copy of RQP certificate as Annexure-3)

Regd. No RQP/DDN/0135/2001/A

House No. 282 Sector 11-D Faridabad (Haryana)

Mobile no.09560848579

Email- sn_sharma1959@rediffmail.com



2.0 Details of the Mining Area

a) Details of the land covered in the 'Area' notified by Hr. Govt. on 15-12-2014 are as under:-

Mining Contract of Mandoli Ghaggar West Block/YNR B-4Boulder,Graval& Sand unit (Minor Mineral) over an area of 25.56ha is located in District – Yamunanagar , containing one mining block namely(i) Mandoli Ghaggar West Block/YNR B-4 River bed block ,

Table -1: Block wise, village wise&Khasra wise details of proposed mining area

Name of Block	Nme of Village	Details of Khasra No/KilaNos	Area of block in ha
MandoliGhaggarWest Block/YNR B-4	MandoliGhaggar	**53//5,** 6, 15, 16/1, 16/2, 25 **54//1 to 25** **55//1,** 2, 9, 10, 11,20 **57//1 to 4,** 7 to 13 **58//5,** 6, 15	25.56

b) **Name of Mineral**

Boulder, Gravel& Sand (minor mineral)

c) **Description report of the mining contract/ quarry license with plan (copy of sanction order/ lease deed/ license)**

Based on the details published vide Haryana Government Gazette notification dated 27-04-2015 issued by DMG, Haryana and the Khasra map submitted by the applicant, survey of the area was carried out in the proposed area. The area falls in MandoliGhaggarWest Block/YNR B-4 revenue village. Workings will be restricted within the mining area/ khasra's allotted. Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season. Copy of Letter of Intent issued is enclosed as **Annexure – 1.**

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d) **Key plan of the area**

Key plan is enclosed as **Plate – 02**. Showing mining area and 5km surrounding areas.

e) **Location map of the mining area showing the details of the approach roads up to the mine (Location plan Shown on Plate no.1)**

Mining area is shown on the Key Plan. It forms a part of G. T. Sheet No's –53F/ 8

Topo sheet is enclosed as **Plate – 02.**

Co-ordinates of the lease area as under

N30^{0}08' 12" to N30^{0}08' 28"

E 77^{0}25' 01" to E77^{0}25'21"

The area is approachable from various nearest towns as detailed below

Village Mandoli Ghaggar is very well connected with Metalled road. Yamunanagar Railway Terminus is about 15 km from the mining area.

Delhi ISBT is about 230 Km and Yamunanagar is about 15 km NW from the mining area. State Headquarters Chandigarh is about 90 km in the North West of the mining area.



f) Infrastructure facilities:

Nearest Railway station	Yamunanagar
Police station	Jagadhari&Yamunanagar
Post office	All the nearby villages
Medical facilities	Yamunanagar
Electricity	Electrical supply is available in all nearby villages.
Education facilities	Most of the nearby villages have secondary schools and for higher education institutes are available at **ChhachroliJagadhri, Yamunanagar** and, Kurukshetra,
Mode of transportation of mineral	Mineral Boulder,Graval& Sandwill be transported by trucks. Loaded trucks will travel on Kuccha road made for plying of trucks. No. of such temporary road will provide access to the river bed and the movement of loaded trucks. As the mining area is spread over an area of 25.56ha working will be carried out in River bed . Each block has its outlet meeting the tar road on the nearby villages and from where the mineral is sent to various destinations. Similarly, mineral will be transported on the other side through approach roads which finally merge with tar roads for final destinations.
River/ canal/ port	Yamuna.



3) DETAILS OF EXISTING MINING PITS, THEIR DIMENSION AND LOCATIONS

Mineral Boulder, Gravel& Sand is the critical component in construction activities. Presently there is no pit available in the river bed. The past 2-3 years floods/ monsoon waters have peneplained the earlier worked river bed. Earlier Boulder, Gravel & Sand from this area used to be transported from the road network ultimately to various destinations in NCR. Surface & geological plan & sections enclosed as **Plate – 03**

Present Land use Pattern :- (in hectares)

Sl. No.	Type of Land Use	Total Value (in Hectares)
1	Quarry Area	0.0
2	Infrastructure (road)	0.00
3	Agriculture	0.00
4	Plantation	0.00
5	Habitation	0.00
6	Soil dump	0.00
7	OB dump	0.00
9	River bed area	25.56
10	Total	25.56
	Restricted area	**5.70**
	Available area for mining	**19.86**
	Total	**25.56**

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Sr.no	Activity	Requirment in KLD	Source
1	Dust suppression	15.0	Hired Tankers
2	Drinking	2.0	Hired Tankers
3	Green belt	3.00	Hired Tankers
	Total	**20.00**	

7.9 SITE SERVICE: -

. **Manager's Office:**

One competent Manager and statutory personnel shall be deployed as per requirement of the Mines Act,1952 and as allowed by DGMS, will be required to supervise the mining operations. An office for Manager 5 x 3 meters shall be provided at the central location of quarry. An additional room for other supervisory staff is also proposed at each mine.

. **Canteen -cum-rest shelter:**

In order to provide the rest shelter for the workers working in the mine and also to provide tea etc. the arrangement shall be made to install a rest shelter-cum-canteen at each quarry and shall be utilized by the workers. The rest shelter will be for having rest during the lunch hours by the workers/ labor. The size of rest shelter shall be about 10 x 3 meter to accommodate the workers.

First Aid Room:

To provide the first aid for any sort of injuries encountered during the mining operation, one small first aid room shall be provided at each sub block. First aid kit and sufficient stock of material/medicines needed for first aid shall be provided as per requirement. As

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the Mining Engineer/Manager and Mining Mates are qualified first aides, they can provide first aid to the labor on the spot.

Crèche:

No woman employment is proposed in mine operation. However, in case of women workers are employed for other ancillary works like minor road repair, plantation etc, arrangement for a small crèche shall be made as per the requirement.

Electricity Supply:

Electric connection shall be taken for office and security purpose from the near bye sub-station of Haryana Electricity Board.

Water Supply:

The water supply for drinking purpose proposed will be made available by hired tanker.

8.0 YEAR WISE ANNUAL PROGRAMME OF MINING FOR NEXT 5 YEARS

Boulder, Gravel & Sand mineral is targeted for 3970 tons per day i.e. 1.191 million tons per annum (maximum). Production programme is given below:

Table: Production Programme

Year	Targeted Production (in MMTA)	Overburden handling M^3 Per year
1	*1.191*	*Nil*
2	*1.191*	*Nil*
3	*1.191*	*Nil*
4	*1.191*	*Nil*
5	*1.191*	*Nil*

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9.0 DETAILS OF EMPLOYMENT

Total estimate Man power would be about 69 persons as per the details given below:

Table: Employment Details (As per requirement of Mines Act, 1952 and allowed by DGMS)

S. No.	Category	Numbers
1	Manager 1st class/II Class Manager	1
2	Foreman/Mates	5
3	Skilled personnel	4
4	Semi-skilled personnel	55
5	Unskilled	5
Total		70



ENVIRONMENT MANAGEMENT PLAN

10.0 MEASURES TAKEN AND TO BE TAKEN FOR LAND RESTORATION, RECLAMATION AND PLANTATION IN/ OR NEARBY MININGAREA

- Envisaged mining operation will be carried out in the River bed only. The excavation in the river bed areas are proposed to be undertaken only during the period the same remains dry. There will be no mining activities when there is flow of water in the working zones. During rainy season, the activities will be stopped, if there is flow in the river.
- Besides resource extraction, following activities will be kept in view:
  a) Protection and restoration of ecological system
  b) Prevent damages to the river regime
  c) Protect riverine configuration such as bank erosion, change of water course gradient, flow regime etc.
  d) Prevent contamination of ground water

Safeguard Measures

While carrying out mining activity following measures will be taken:

- Mining activities will be carried out only in dry bed. No in stream mining will be practiced.
- Identification of river stretches for mining will be completed.
- There will be no mining near the banks and same would be restricted with central $3/4^{th}$ of the river bed. This is to protect the bank erosion and river migration.
- Mineral Boulder, Gravel & Sand from river will be restricted to a maximum depth of 3.0 m from the existing bed level. This is for safety and sustainability.
- As the mining area is quite large and long in length, systematic extraction will be carried out to prevent seasonal scouring and enhanced erosion.
- Extraction will be carried out in a manner that there is no obstruction to flow of water, if any, during rainy season.
- Mining on the concave side of the river channel would be avoided to prevent bank erosion. Similarly meandering segment of river will be selected to prevent natural eroding banks and to promote mining on natural building (aggrading) meanders

component

Reclamation of Mined out Area (plate no.5)

There is no generation of OB/ waste material in case of river bed mining. No backfilling has been proposed in the excavated zone in river bed. River bed will be replenished by sediments during rainy season.

Greenbelt

In order to restore the environment and ecological balance in the area affected by mining, a forestation is considered to be an effective measure. Afforestation is a major thrust area in pollution control of mining. Afforestation is suitable for detecting, recognizing and reducing air pollution effects. Tree functions as sinks of air pollutants, besides their bio-aesthetical values, owing to its large surface area. The green belt supplements Oxygen to the atmosphere and combat air pollution effectively and aesthetic beauty and landscape of the area improves. It also checks soil erosion and make eco-system and climate more conducive.

Following factors will be considered while selecting species for plantation:-

i) Fast growing plant species shall be preferred.
ii) The plant will be of deep rooting system.
iii) The plant will be perennially green to improve aesthetic beauty of the area.
iv) The plant species will be adoptable to the local climatic conditions.
v) Native plant species will be planted.

Forestation programme shall be carried out basically, along the mine boundaries and roads as permitted by land owners. The mining area in the river bed is devoid of any vegetation, will not cause any harm to riparian vegetation cover. It is proposed to have plantation on both sides of the roads as greenbelt to provide cover against dust dissemination. Plantation will also be carried out as social forestry programme in villages, school and the areas allocated by the Panchayat/ State authorities.

Native plants like Neem, shisham, , Mango and other local species will be planted. A suitable combination of trees that can grow fast and also have good leaf cover shall be

adopted to develop the greenbelt. It is proposed to plant 4,000 no's of native species along with some fruit bearing and medicinal trees during the plan period.

Table: Greenbelt Programme

Year	Saplings to be planted	Survival 80 %	Species	Place of Plantation
I	800	640	Neem, , Mango, Shisham, Sirish, Babool, Gulmohasr	Along the roads, in schools and public building and other social forestry programme.
II	800	640		
III	800	640		
IV	800	640		
V	800	640		
Total	**4,000**	**3200**		

11.0 MEASURES TAKEN AND TO BE TAKEN FOR PROTECTION OF ENVIRONMENT IN AND AROUND MINING AREA

- Mining activities will be confined to 3.0 m depth in river bed .
- All link roads from the mining area to the tar road will be properly sprayed with water for dust suppression.
- Greenbelt and plantation on road side will help in dust suppression and will also reduce noise level.
- Plantation will improve ecology and aesthetic beauty of the area
- Measures will be taken to prevent the workings from extending in safety zones, cutting the banks and exceeding 3.0 m depth limit from the river bed surface.

12.0 MEASURES TAKEN AND TO BE TAKEN FOR DUMPING OVERBURDEN, STACKING OF TOP SOIL AND UTILIZATION OF TOP SOIL

There is no top soil in the river bed mining. If any soil is required to be removed the same will be used to strengthen the river banks.

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13.0 MEASURES TAKEN AND TO BE TAKEN FOR THE CONTROL OF WATER, NOISE AND AIR POLLUTION

Air Pollution:

Emission of gases and dust takes place due to movement of vehicles. Spraying of water and plantation along the road side prevents the spread of dust. Plantation also acts as barrier for restricting pollution. Impact on air environment has been assessed taking in to consideration the proposed production and increase emissions. The sources of air pollution are given below:

- Operation of mining machinery/ loading operations
- Transportation of mineral
- Wind erosion from barren area and river bed
- Emission of gases and dust due to movement of vehicles

MEASURES FOR DUST SUPPRESSION & CONTROL OF AIR POLLUTION:

Control of Air Pollution Due To Dust, Exhaust Emissions or Fumes During Mining or Processing Operations For Minor Mineral & Related Activities and Containing the Same Within Permissible Limits Specified Under : -

1. Plantation road side as it will prevent the spreading of dust.
2. Water spraying will be done twice in a day over the haul road & roads leading to adjoining state roads.
3. Dust respirators will be provided to the operators of the heavy earth moving machineries.
4. Preventive maintenance shall be carried out of equipment.
5. At every work place where, the air borne dust generated, to be sampled and the concentration of the respirable dust will be determined regularly. If any measurement at any workplace and at source, the concentration in excess of 50% or 75% of the available concentration of permissible limit then

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measurements shall be carried on, at intervals not exceeding 3 months or 1 month respectively.

6. Silencers will be fitted to the dumpers.

The following table indicates the concentration of Ambient Air as per the CPCB guidelines:

National Ambient Air Quality Standards

S. No.	Pollutants	Time weighted Average	Concentration of Ambient Air	
			Industrial, Residential, Rural and Other Areas	Ecologically Sensitive Area (notified by central Government)
1.	2.	3.	4.	5.
1	Sulphur Dioxide (SO^2), µg/m^3	Annual*	50	20
		24 hours**	80	80
2	Nitrogen Dioxide (NO_x), µg/m^3	Annual*	40	30
		24 hours**	80	80
3	Particulate Matter (Size less than 10 lm) or PM_{10}, µg/m^3	Annual*	60	60
		24 hours**	100	100
4	Particulate Matter (Size less than 2.5 lm) or $PM_{2.5}$, µg/m^3	Annual*	40	40
		24 hours**	60	60
5	Ozone (O_3), µg/m^3	8 hours**	100	100
		1 hours**	180	180
6	Lead (Pb), µg/m^3	Annual*	0.50	0.50
		24 hours**	1.0	1.0
7	Carbon Monoxide (CO), mg/ m^3	8 hours**	02	02
		1 hours**	04	04
8	Ammonia (NH_3), µg/m^3-	Annual*	100	100
		24 hours**	400	400
9	Benzene (C_6H_6), µg/m^3	Annual*	05	05
10	Benzo(O) Pyerene Particulate Phae only ng/ m^3	Annual*	01	01
11	Arsenic (As), ng/ m^3	Annual*	06	06
12	Nickel (Ni), ng/ m^3	Annual*	20	20

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

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** 24 hourly or 8 hourly or 1 hourly monitored values, as applicable, shall be compiled with 98% of the time in a year. 2% of the time, they may exceed the limits but not on to two consecutive days of monitoring.

(Source: CPCB notification Dated 18th November 2009)

Air pollutants released during production can be checked by:

- Dust suppression system/ water spraying would be adopted at mine working and loading points
- Excavation operations to be suspended during very strong wind conditions
- Afforestation will be carried out for control of dust
- Plantation with wide canopy trees along approach road will help in dust suppression
- Persons to be provided with dust mask and other personal protective equipments, particularly during summer months and dust storm periods

Transportation

- Regular water spraying on haulage roads during mineral transportation by water sprinklers,
- Avoid over loading of tippers & consequent spillage on the roads,
- Mineral carrying trucks will be effectively covered by tarpaulin to avoid escape of fines to atmosphere,
- Air quality shall be regularly monitored both in the core zone and the buffer zone.

Controlling of NOx level

The source of NOx is due to vehicular emission. This can be controlled by proper maintenance and servicing of vehicles. Only P.U.C. certificated vehicles will be permitted

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Noise Pollution

There is no drilling and blasting for mineral extraction. Noise pollution due to transportation will not cause any problem to the inhabitants of this area because there is no human settlement in close proximity to the link roads in mining area. Effective steps will be taken to keep the noise level well below the DGMS prescribed limit of 85 dBA.

Noise control is achieved by the following:

- Proper care and maintenance of the equipments will be carried out.
- Personal protective equipments will be provided to the workers.



14.0 DEMOGRAPHIC DETAILS OF THE STUDY AREA

Total number of villages in which miningarea falls is 1. Main occupation is agriculture. The details of these and other nearby village and their population are given below:-

Table: Demographic Details

Name of village	THH	Tot Pop	Tot Male	Tot female
MandauliGagar (103)	122	695	368	327
Alipur (102)	16	114	66	48
Dammunpur Bara (101)	61	439	221	218
MeharMajra (105)	238	1609	889	720
DammunpurChhota (99)	92	478	256	222
JairampurKhalsa (98)	192	1323	722	601
Telipura (96)	137	798	405	393
Rampur Khadar (94)	158	1117	600	517
Hal-dariGujar(95)	90	564	313	251
Nawazpur (93)	85	652	354	298
Lakar-maiPratappur (92)	239	1554	863	691
Kaniawala (74)	51	273	147	126
Bhilpura (76)	173	1112	584	528
Bichpari (77)	54	360	179	181
Nathanpur (91)	131	803	450	353
Hal-dariMaru (88)	86	516	275	241
Lahoriwala (89)	44	318	178	140
Hasanpur (90)	63	335	174	161
Khadri (97)	589	3731	1989	1742
Nandgarh (87)	119	740	396	344
Ismailpur (86)	237	1489	823	666
Harewa (83)	84	535	312	223
Singh Pura (205)	99	574	304	270
Jaidhar (82)	440	2650	1423	1227
BhulKheri (85)	62	407	205	202
Jaidhari (81)	277	1735	929	806
Manbharwala (79)	80	445	239	206
Fatehgarh (107)	365	2136	1127	1009
Shahzadpur (109)	96	544	287	257
Kanalsi (104)	213	1317	683	634

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15.0 DETAILS OF HEALTH CHECKUP AND INSURANCE OF ALL THE EMPLOYED PERSONS (FOR EXISTING MINING AREA)

All workers will be subjected to medical examination as per Mines Rule 1955 both at times of appointment and at least once in five years. Medical camps will be organized for this activity. Insurance of all employees as per the rules will be carried out.

15.1 Corporate Social Responsibility

As a corporate responsibility following measures along with budget provision is proposed for improving the conditions of persons in and around the project area:

The Yamuna Nagar district of Haryana State is relatively less developed in respect of employment and facilities. Thus, it can be seen that the proposed project offers good potential for the local people for employment directly and indirectly. The Project Affected Persons, if any, of the lease area will be provided with compensation or job or indirect employment such as business, contract works etc. With the starting of mining operation, employment/business opportunity will increase and welfare amenities such as free medical facilities, conveyance, school, free education, drinking water supply etc will be available for the area.
The details of benefits to the people in the adjoining villages are discussed here under:

a) Employment

From the study of socio economic environment at the study area it is quite evident that the area is not quite developed as far as job opportunities and living standard of the population is concerned. Apart from cultivation, agriculture, etc mining, industries and ancillary activities play an important source of livelihood in this as well as adjoining districts.

With the start of mining operations, various employment opportunities will be generated. Several persons will be benefited with mining works, employment through contractor, running of jeep and buses, canteens, different kind of shops and transport related business avenues.

The Project Affected Persons, if any, will be provided with either compensation or direct employment or indirect employment. They would be mostly recruited in unskilled, semi skilled categories etc. This will improve the economic condition of the local people. The employment of local people in primary and secondary sectors of project shall upgrade the prosperity of the region.

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(b) Educational facilities

Industrial on-job training will be provided to the interested local people and the trained people will be absorbed in jobs as per the requirement of the project. Proponent will also provide full cooperation and monitory assistance for adult education programme. Other activities proposed are :

1. Targeted programmes for primary education for specially girl child
2. Augmentation of infrastructure and equipments, furniture, blackboard, toilets etc in schools
3. Scholarships to meritorious students
4. Adult education & awareness about saving & investment plans.
5. Partnerships in state sponsored education programmes
6. School wall boundary maintenance
7. Existing govt. school strengthening by boundary wall construction, construction of toilets, roof repair, drinking water taps, etc.
8. Monetary contribution for expansion of govt. school from 6th to 12th class (construction of classrooms, field, toilets, taps etc.)

Capacity building activities such as following will be undertaken:

1. Scholarship for ITI training outside for 20 persons
2. Sponsorship of land losers / wards for full term courses
3. Short term courses for skill up gradation
4. Vocational training (dairy, poultry, bee keeping, sericulture)
5. Specific Programmes for Ladies (stitching, embroidery, tailoring etc)

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(c) Medical facilities

Project shall provide aid to improve the existing medical facilities in the villages and also improve awareness and provide sufficient training in hygiene, sanitation and proper diet. Some of the activities that can be carried out are as follows:

1. Mobile Clinic with testing and diagnostic facilities
2. Health Camps for Family Planning, HIV/AIDS and other communicable diseases.
3. Addressing local health related issues through audio visuals and group meetings
4. Subsidized treatment in hospital with which tie-up will be there
5. Specific Programmes for hygiene and sanitation
6. Helping aids to each category of physically challenged as per requirement
7. Eye camps to address the issue of cataracts specially

(d) Infrastructure facilities

Infrastructure facilities like road, Post & Telegraph, Telephone, Banks etc are basics for each and every area. These facilities are already well developed in the surrounding areas. The lessee will take various steps for upliftment of the basic amenities of the area by providing drinking water, communication facilities, etc. Construction of roads, drainage, community halls, school buildings, health centers, street lighting, equipments to educational institutions, public utilities, sanitation facilities, etc in nearby area will be undertaken.

As a corporate responsibility following measures along with budget provision is proposed for improving the conditions of persons in and around the project area:

Sr No	Description	1st Year	2nd Year	3rd Year	4th Year	5th Year
1	Health check up camps	1.00	1.0	1.00	1.50	1.50
2	Insurance cover of workers	2.0	2.00	2.00	2.50	3.00
3	Assistance to local schools, scholarship to students	1.00	1.00	1.75	2.00	2.00
4	Sanitations and drinking water facilitites	1.75	1.75	1.75	1.75	1.75
5	Vocational training to persons for income generation	0.75	0.75	0.75	0.75	0.75
6	Assistance to self help groups	1.00	1.50	1.50	2.00	2.00
	Total	**7.50**	**8.0**	**8.75**	**10.5**	**11.00**



15.2 Fund Provision for Environmental Management

It is proposed to create an Environment Management Fund. The contractor shall deposit/pay an amount equal to 10% of the due contract money along with installments towards the **'Mines and Minerals Development, Restoration and Rehabilitation fund.**

15.3 Fund Provision for EMP Measures: following provisions are proposed to be taken for improving, control and monitoring of environment protection measures

Sr. No.	Particulars	Amount (in lacs)
1	Pollution monitoring – Air, Water, Noise	3.0
2	Pollution monitoring – Water sprinkling	3.0
3	Wire fencing at plantation sites	0.6
4	Plantation including maintinance	1.50
5	Rainwater harvesting	3.0
6	Haul road and other roads repair and maintinance	3.0
7	Pre-moonsoon and post monsoon survey for sedimentation in the river bed	2.0
	Total	16.10



PART –II

PROGRESSIVE MINE CLOSURE PLAN

1.0 Introduction

(A) Name & address of the Mining Contractor

M/s JSM Foods Pvt., Ltd., WZ/932-Basie Darapur,1st floor near Senior Secondary school New Delhi-110015

(B) LOCATION OF THE MINING AREA

Mining Contract of Boulder,Graval& Sand (Minor Mineral) over an area of 25.56 ha is located in District – YamunanagarMandoliGhaggarWest Block/YNR B-4Boulder,Graval & Sand unit.

(C) EXTENT OF THE MINING AREA

25.56ha in MandoliGhaggar village /YNR B-3 as explained at 2.0 in the main mining plan

(D) PRESENT LAND USE PATTERN and At the end of lease period

Table: PRESENT LAND USE PLANING

Table: LAND USE PLANING AT THE END OF lease period

Sr.No.	Particulars		Present Land Use (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	5.70
2	Infrastructure (Office,temp. Shelters etc.		0.00
3	Area available for mining in river bed		19.86
			25.56



Table: LAND USE PLANING AT THE END OF LEASE PERIOD

Sr.No.	Particulars		AT THE END OF 5th YEAR (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	5.70
2	Infrastructure (Office,temp. Shelters etc.		0.02*
3	Naturally reclaimed in river bed		15.84
6	Unworked river bed		0.00
7	Plantation*		4.00*
	Total		25.56

*Plantation in 4.0 ha land will be done under social forestry on land available from Panchayat by the end of mine life

* Plantation & infrastructure in restricted area only

(E) METHOD OF MINING:

Mining activity will be carried out by open cast semi-mechanized method.

- No overburden/ waste material will be produced in river bed. No drilling/ blasting are required as the material is loose in nature.
- Light weight excavators will be used for loading of mineral in tippers/dupers.
- Proper benching of 3.0 m height will be maintained and width of the bench will be around 20 m. The benches shall be maintained in the form of slices/strips parallel to the banks of river.
- Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season.
- Roads will be properly made and sprayed by water for suppression of dust.
- Roads in the mining area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20.
- Extraction activities will start in the blocks from the upstream side to downstream side. This will not obstruct the movement of water, if any, during monsoon period in the river course.

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- In case during any period, the replenishment was found less than 3 m or depth of extraction, the mining during said period would restrict to depth which would not be more than 3 m of the original level of the river bed.

(F) MINERAL PROCESSING OPERATION:

No mineral processing is envisaged for Boulder, Gravel& Sand (minor mineral) produced during the mining activity.

1.1 Reasons for closure:

The progressive mine closure plan has been prepared in compliance of Haryana Minor Mineral Concession Rules 2012 under MMCR 1986. No immediate closure is planned as sufficient reserves are available to carry on the activities. There is market potential in domestic demands.

1.2 Statutory Obligations:

The mining contractor is bound to submit the Progressive mine closure plan either with Mining plan or Scheme of Mining.

Mining contractor is bound to follow the terms and conditions as will be stipulated in the mining contract.

In addition to it the rules pertaining to the Protection of Environment i.e Environment Act. Environment Rules and other associated rules for the protection of environment will have to be followed.

The contractor shall pay/deposit required amount as per provisions of " Mines and Minerals Development, Restoration & Rehabilitation Fund".

During the course of mining the rules stipulated in Mines Act, Mines rules Metalliferous Mines Regulation 1961 and HMMCR.2012 will be followed.

All other rules pertaining to the mining existing at that time will be followed during the course of mining activities.



1.3 Closure plan preparations

Name, address and registration number of the recognized persons who prepared the progressive closure plan and name and address of the executing agency who is involved in the preparation of progressive mine closure plan.

S.N.S Sharma

Regd. No RQP/DDN/0135/2001/A **(Annexure-III)**

Lessee will himself implement the closure plan; no outside agency will be involved.

2.0 MINE DESCRIPTION

2.1 General Geology and Local Geology

2.1.1 Regional Geology

The north-eastern part of Haryana is predominantly characterized by sedimentary lithology in the Sub-Himalayan zone comprising Subathus, Dagshais, Kasaulis and Siwaliks. A general Regional stratigraphic sequence in the area is given in Table. Tertiary sequence of Haryana

Age	Super group	group	Formation	litho logy
Holocene			Newer alluvium and Newer Aeolian Deposits	Gravel, Sand, silt, clay, limestone, gypsum
Lower to upper Pleistocene			older alluvium and Older Aeolian Deposits	Gravel, grey sand, silt, clay, brown sand, calcrete
Lower to Middle Pleistocene	SIWALIK	Upper Siwalik	Boulder Conglomerates formation	Conglomerate, sandstone, silt, clay
Upper Pliocene			Pinjore Formation	Coarse grit,red sand stone and clay, conglomerate
			Tatrot Formation	Friable Sandstone and variegated clay
		Middle Siwalik	Dhokpathan Formation	Brown sandstone and orange clay
Middle Miocene			Nagri Formation	Hard grey sand stone, mudstoneand minor shale
		Lower Siwalik	Nahan Formation	Coarse grity ,clay and red sandstone often calcareous, brownish shale with lignite lenticles, greenish white Quartzite
Lower Miocene			Kausauli Formation	Grey and green stone green shale and grey clay
			Dagsai	Purple and green sand stone, deep

		Sirmur	Formation	red gritty,clay,whiteandstone with ferruginous concretions
Upper Eocene			Subathu formation	Sandstone with gritu clay. Impure fossiliferous limestone calcareous slate,greenish shale and dark brown quartzite
Pre-proteroz oic			Tundapathar	Thickly bedded ,sstromatolite limestone with carboniferous shale and quartzite

2.1.2 LOCAL GEOLOGY

The litho units encountered in the riverbed and surrounding areas belongs to the Shivalik super groups. The sediments are river borne and has deposited in the riverbed and the flood plains. The different formations of the area belong to Shivalik Super group and are a mixture of boulders, pebbles, sand, silt and clay. The following sequences have been observed in the area.

Soil/Alluvium

Sand

Gravel

Boulder

There is no clear demarcation between the litho units. They have been deposit in a mixed form. The Litho- units exposed around the riverbed belong to Shivalik Super- Group. The mineral Boulders, Gravel and sand have formed by weathering of rocks and then deposition on the flood plains of the rivers originated from the Shivaliks. These have been washed by rainwater during rainy season and deposited in river bed in the form of boulders, gravels and sand of different sizes and shapes. These minerals are sorted by screening. The max depth of the minerals is not known.

Soil/ alluvium varying in thickness from 2-4m constitute the top horizons in the flood plain area suitable for agriculture. Yamuna River meanders through the area exposing the alluvium and soil at the banks. Boulder, gravel & sand is found in the river bed. Boulder, gravel &sand is deposited up to great depths. There is no soil in the river bed. This bed remains dry for major part of the year except only during the rainy season. The Sand exposed in the River bed of Yamuna and surrounding areas is the product of the deposition of the sediments brought and deposited in the flood plains of River Yamuna. These sediments are of recent geological formation. The litho-units exposed within the

river and surrounding areas have formed as water borne sediments brought by flood water during rainy season every year and deposited in riverbed. Geological map and section are enclosed as **Plate – 03)**

2.2 Reserves

The reserves of Boulder, Gravel& Sand calculated by volumetric method and are summarized here below:

Sr no.	Nature of land	Lease area In ha	Total proved Geological reserves MT=Area x depth x BD (A)	Blocked area of 50m strip after each km, 25% blocked in river banks, /lease boundary etc= hectares	Blocked Geological Reserves in blocked area (B)	Total Mineable reserves A-B=C (FOR10Yrs)	Minable Reserve (Per Year)
1	River bed	25.56	15,33,600 x 07 years =1,07,35,200 MT	5.70	3,60,000x 07 years= 23,94,000 MT	83,41,200MT	11,91,600 MT

A) GEOLOGICAL PROVED RESERVES AS PER UNFC CODE (111)

Total Reserves = 1,07,35,200 MT

B) BLOCKED RESERVES AS PER UNFC CODE (211 & 222) =23,94,000MT

C) MINEABLE RESERVES = A-B = 83,41,200 MT

D) TARGETED PRODUCTION

11, 91,000 MT per Year in the River bed (Maximum- which is supposed to be replenished every year)

E) Life of the mine

For Balance reserves in River bed it is presumed that the mineral will be replenished every year during the rainy season. New mineral will be added every year in the river bed.

2.3 Mining Method

Mining method to be followed is described in chapter of mining at 7.0 in mining plan.

2.4 Mineral Beneficiation

No mineral beneficiation is envisaged.

3.0 Review of implementation of mining plan including five years progressive closure plan up to the final closure plan

Mining Plan and Progressive mine closure plan are being submitted for the first time. It will be reviewed after five years and review of implementation will be given with next mining scheme.

4.0 CLOSURE PLAN

4.1 Mined - out land

About 19.86 hectare area is available for mining. Land use at various stages is given in the table below:

Table: PRESENT LAND USE PLANING

Sr.No.	Particulars		Present Land Use (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	5.70
2	Infrastructure (Office,temp. Shelters etc.		0.00
3	Area available for mining in river bed		19.86
			25.56

Table: LAND USE PLANING AT THE END OF LEASE PERIOD

Sr.No.	Particulars		AT THE END OF 5th YEAR (ha)
1	Safety Zone	7.5m mining area boundry,25% restricted area of river banks,50m barrier at each km	5.70
2	Infrastructure (Office,temp. Shelters etc.		0.02*
3	Naturally reclaimed in river bed		15.84
6	Unworked river bed		0.00
7	Plantation*		4.00*
	Total		25.56

*Plantation in 4.0 ha land will be done under social forestry on land available from Panchayat by the end of mine life

* Plantation & infrastructure In restricted area only

4.2 Water quality management

The area constitutes almost alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The elevation of the area above mean sea level ranges from 297 mamsl in the north to 296 m.msl in the south with an average elevation of 296.5 m.amsl. The general slope of the area is southwards. There is little flow of water in the river bed in post monsoon period. Area is having 1076 mm rainfall in a year. During rainy season, catchment water flows in the river. During dry period the Boulder, Gravel & Sand is excavated which gets replenished to some extent during this period. No mining activities will be carried out during rainy season when there is water flowing in the working area.

There will be no intersection of water table as working will be carried out up to 3.0 m depth only from surface of river bed .

4.3 Air Quality Management:

The proposed mining method is not likely to produce much of dust and fugitive emissions to cause damage to ambient air quality of the area. Workers will be provided with personnel protective equipment like face mask, ear plug/ muffs.

For air pollution management at the progressive mine closure of mine, green belt will be developed to prevent and control air pollution.

4.4 Waste Management:

As stated in mining method, there will be no waste of any kind. Therefore no waste management s required.

4.5 Top Soil Management

No top soil will be needed to be handled. Therefore no top soil management is required.

4.6 Tailing dam management

There is no proposal of beneficiation of mineral. No tailing dam is envisaged.

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4.7 Infrastructure:

The infrastructure facilities like site office, first–aid station, rest shelter/ store, drinking water etc. will be established temporarily. At the time of closure there will be no problem to remove the same from the lease area..

4.8 Disposal of mining machinery:

Machinery is proposed on hire basis. Hence no decommissioning of mining machinery is proposed.

4.9 Safety &Security:

Safety measures will be implemented to prevent access to excavation area by un-authorized persons as per Mine Act 1952, MMR 1961.

i. Safety measures willbeimplementedasperMineAct1952,MMR 1961, Mines Rules1955.
ii. Provisions of MMR, 1961 shall be followed strictly.
iii. Excavation will be not more than 3 m in river bed ..
iv. Width of bench will be kept around 20.0 m for ease of operations and provide sufficient room for the movement of equipments.
v. Protective equipment like dust masks, earplugs/ muffs and other equipments shall be provided for use by the work persons.
vi. Notices giving warning to prevent inadvertent entry of persons shall be displayed at all conspicuous places and in particular near mine entries.
vii. Danger signs shall be displayed near the excavations.
viii. Security guards will be posted.
ix. In the event of temporary closer, approaches will be fenced off and notice displayed.

4.10 Disaster Management and Risk Assessment:

This should deal with action plan for high risk accidents like landslides, subsidence, flood, inundation in underground mines, fire, seismic activities, tailing dam failures etc. and emergency plan proposed for quick evacuation, ameliorative measures to be taken etc. The capability of lessee to meet such eventualities and the assistance to be required from the local authorities should be described.

- The shallow depth of activities in river bed mining will not involve any high risk accident due to side falls/collapse.

- There will be no mining whenever there is flow of water in the river bed
- The complete mining operation will be carried out under the Management and control of experienced and qualified Mines Manager having Certificate of Competency to manage the mines granted by DGMS.
- All the provisions of Mines Act 1952, MMR 1961 and Mines Rules 1955, Std/c rules 2012 and other laws applicable to mine will strictly be complied with.
- During heavy rainfall the mining activities will be closed in the river bed.
- All persons in supervisory capacity will be provided with proper communication facilities.
- In Case of any disaster like floods etc. State Disaster Management department along with local district Administration will be informed immediately for help
- Competent persons will be provided FIRST AID kits which they will always carry.

4.11 Care and Maintenance during Temporary Discontinuance:

In case of any temporary discontinuance due to court order or due to statutory requirement or any other unforeseen circumstance following measures shall be taken for care, maintenance and monitoring of conditions.

- Notice of temporary discontinuance of work in mine shall be given to the DGMS as per the MMR 1961.
- All the mining machinery shall be shifted to a safe place.
- Entrance to the mine or part of the mine, to be discontinued shall be fenced off. Fencing shall be as per the circular 11/1959 from DGMS.
- Security Guards shall be posted for the safety and to prevent any unauthorized entry to the area.
- Carry out regular maintenance of the facilities/area detailed below in such a way as would have been done as if the mines were operation:

  Mine roads and approach roads,

  Fencing on approach roads,

  Checking and maintenance of machines and equipment,

  Drinking water arrangements,

Mine office, first aid stations etc.

- Competent persons shall inspect the area regularly.
- Air, water and other environmental monitoring shall be carried out as per CPCB and IBM Guideline.
- Care and upkeep of plantation shall be carried out on regular basis.
- Status of the working and status monitoring for re-opening of the mines shall be discussed daily.

In case of discontinuance due to any natural calamities/abnormal conditions, mining operation will be restarted as early as possible after completing rescue work, restoring safety and security, repairs of roads etc.

5.0 ECONOMIC REPERCUSSION OF CLOSURE OF MINE AND MANPOWER RETRENCHMENTS

Mining contract area will be granted for a period of 7 years only. As per the production programme envisaged, at the end of contract period, still sufficient un-worked area would be left available for continuing production activities further. Hence, no closure is planned. There will be no affect on the man power as the persons belong to nearby villages and will have an option either to be available for employment for the next contract or do the agriculture in their fields.

6.0 TIME SCHEDULING FOR ABANDONMENT

The mining area has enormous potential for continuance of operations even after the expiry of the awarded period. The details of time schedule of all abandonment will be given at the time of final closer plan. Mining activities are confined to river bed, up to 3.0 m. depth, relatively shallow depth of workings. Replenishment of the Boulder, Gravel& Sand being removed from the river bed is a natural process particularly during monsoon periods.



7.0 ABANDONMENT COST

As at present mining is not going to be closed so abandonment cost could not be assessed. However based on the progressive mine closure activities during the plan period, cost is assessed as given below:

Abandonment Cost

ACTIVITY	YEAR					Rate	Amount (in Lakhs)
	First	Second	Third	Fourth	Fifth		
Plantation (in no.)	800	800	800	800	800	@ 20 Rs per sapling+30 Rs maintenance cost	2.00
Plantation cost in Rs	40,000	40,000	40,000	40,000	40,000		
Wire fencing (meter)	500	500	500	500	500	@ of 120Rs per meter	3.00
Wire fencing cost	60,000	60,000	60,000	60,000	60,000		
							5.00



8.0 FINANCIAL ASSURANCE

Total 19.85 ha area will be put in use up to the end of the plan period. Details of area put to use as given below (As per circular No.4/2006 issued by CCOM, Nagpur following table has been considered for calculation for financial assurance).

Calculation for Financial Assurance

S. No.	Item	Area put on use at start of plan (Ha) (A)	Requirement at the end of plan period (Ha)	Total area put to use (Ha) (B)	Area considered as fully reclaimed & rehabilitation (Ha) (C)	Net area considered for calculation (Ha) D = (B-C)
1.	Area to be excavated	0.0	19.85	19.85	0.0	19.85
2.	Storage for topsoil	0.0	0.0	0.0	0.0	0.0
3.	Overburden/ dumps	0.0	0.0	0.0	0.0	0.0
4.	Mineral storage	0.0	0.0	0.0	0.0	0.0
5.	Infrastructure *(Workshop, Adm. Building & Road)	0.00	0.50	0.50	0.50	0.0
6.	Green belt*	0.0	4.00	4.0	4.0	0.0
7	Tailing pond	0.0	0.0	0.0	0.0	0.0
8.	Effluent treatment plan	0.0	0.0	0.0	0.0	0.0
9.	Mineral separation plant	0.0	0.0	0.0	0.0	0.0
10.	Township area	0.0	0.0	0.0	0.0	0.0
11.	Others to specify	0.0	0.0	0.0	0.0	0.0
Total		0.0	24.35	24.35	4.5	19.85



Total 19.85 ha area will be put in use. Against this mined out area the total financial assurance (@15000/- per ha. Comes out to Rs2, 97,750/ which is part of the 'Mines and Minerals Development, Restoration and Rehabilitation fund.

9.0 CERTIFICATE

It is enclosed with the report.

10.0 PLAN AND SECTION

Plan and section are prepared and enclosed with the mining plan.

S.N. SHARMA
RECOGNISED QUALIFIED PERSON (RQP)
INDIAN BUREAU OF MINES (IBM)
RQP No. RQP/DDN/135/2001/A
VALID UPTO : 29TH MARCH 2021

APPROVED

Certificate

I, S.N.Sharma, duly Recognized Qualified Person to prepare Mining Plan under Rule 22 C of the Mineral Concession Rules, 1960 (Revised 1987) has prepared the Mining Plan & Progressive Mine Closure Plan of Boulder, Gravel & Sand (Minor Mineral) mine over an area of 25.56 hectares in Mandoli GhaggarWest Block/YNR B-4 of M/s JSM Foods Pvt., Ltd., WZ/932-Basie Darapur,1st floor near Senior Secondary school New Delhi-110015. The various data and write up enclosed have been complied and verified by us. The working plan and all other details given in the plan have been prepared under my guidance and duly verified by me. The Mining Plan and Progressive Mine Closure Plan complies all statutory Rules, Regulations, orders made by the Central or State Government, statutory organizations etc. have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities

S.N. Sharma

S.N. SHARMA
RECOGNISED QUALIFIED PERSON (RQP)
(MINING & GEOLOGY) (IBM)
RQP No. RQP/DDN/135/2001/A
VALID UPTO : 29TH MARCH 2021

Annec-1

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

Registered
From

The Director General,
Mines & Geology Department, Haryana
30 Bays building, Sector-17,
Chandigarh.

To

JSM Foods Private Limited,
W Z/ 932, Basle Darapur, 1st Floor,
Near Senior Secondary School,
New Delhi-110015.

Memo No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/3918
Dated Chandigarh the 19.06.2015

Subject: **Acceptance of the highest bid/ in respect of the Sand minor mineral mines of "Mandoli Ghaggar West Block/YNR B 4" having Tentative Area of 25.56 hectares in the district Yamuna Nagar, offered in e-auction held on 10.06.2015 and 11.06.2015 and issue of Letter of Intent (LoI) - regarding.**

You participated in the in the e- auction held on 10.06.2015 and 11.06.2015 on the State Government web portal https://haryanaeprocurement.gov.in after accepting the terms and conditions of the auction notice DMG/HY/e Auction/YNR/2015/2150 dated 27.04.2015 and Corrigendum DMG/HY/e-Auction/YNR/Corr./2015/3358 dated 19.05.2015 in order to obtain mining contracts of minor mineral mines of the district Yamuna Nagar. You offered the highest bid of Rs. 04,20,50,000/- [Rs. Four crore twenty lakh fifty thousand only] per annum, against the Reserve Price of Rs. 04,20,00,000/- per annum, for obtaining the Mining Contract of Minor Mineral Mines namely 'Mandoli Ghaggar West Block/YNR B 4' for extraction of Sand having tentative area of 25.56 hectares. The details of the khasra numbers of the tentative area under above said Mining Block is attached as Annexure 'A'.

2. You are hereby informed that the State Government has accepted the highest bid of Rs. 04,20,50,000/- [Rs. Four crore twenty Lakh fifty thousand only] offered by you in respect of the above said minor mineral mines of 'Mandoli Ghaggar West Block/YNR B 4' under the provisions of the Haryana Minor Mineral Concession, Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules-2012 (State Rules). Accordingly, you have become the successful bidder in respect of Mandoli Ghaggar West Block/YNR B 4 of the district Yamuna Nagar.

3. The State Government having accepted the aforementioned highest bid offered by you, the Department is pleased to issue this Letter of Intent (LoI) to you hereby in respect of the Mining Block/area namely 'Mandoli Ghaggar West Block/YNR B 4' subject to the following terms and conditions:

Department of Mines & Geology Haryana, Chandigarh APPROVED P. K. Sharma S.M.E.

Page 1 of 7

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

(i) The period of contract shall be **07 years** and the same shall commence with effect from the date of grant of environmental clearance by competent authority or on expiry of a period of 12 months from the date of this communication of acceptance of highest bid/ issuance of "**Letter of Intent**", whichever is earlier;

(ii) You may note that the detail of the area of the mining blocks is tentative and was notified "on as is where is basis" (**refer condition no. 4 of the notice**). In case of any inadvertent mistake, if any, the same would be rectified/ corrected before execution of the agreement (**refer condition no. 3 of the notice**);

(iii) No request regarding reduction in bid amount on account of reduction in land/area of the Mining block, including due to change in description of khasra numbers/location etc. at any stage will be entertained on any ground including loss/reduction of area for mining on account of compliance of applicable laws/restrictions. Needless to state that this also includes the charges, if any, as per condition no. 3 of auction notice;

(iv) The amount of the highest successful bid i.e. **Rs. 04,20,50,000/-** (Rs. Four crore twenty lakh fifty thousand only) per annum shall be the "Annual Contract Money" payable by you as the contractor in the manner prescribed in the contract agreement to be executed on form MC-1 appended to State Rules;

(v) The above said annual contract money shall be increased at the rate of 25% on completion of each block of three years. Accordingly, the year-wise amount of the annual contract money shall be as per details given below:

Sr. No.	Year of the Contract Period	Annual contract Money
1	First Year	Rs. 04,20,50,000 /-
2	Second Year	Rs. 04,20,50,000 /-
3	Third Year	Rs. 04,20,50,000 /-
4	Fourth Year	Rs. 05,25,62,500/-
5	Fifth Year	Rs. 05,25,62,500/-
6	Sixth Year	Rs. 05,25,62,500/-
7	Seventh Year	Rs. 06,57,03,125/-

(vi) As per the terms and conditions of the grant, you are liable to deposit **Rs. 01,05,12,500/-** i.e. equal to 25% of the annual bid amount as "security deposit" out of which you have already deposited an amount of **Rs. 42,05,000/-** (Rs. Forty two lakh five thousand only) i.e. equal to 10% of the annual bid amount as 'initial bid security' after the conclusion of e-auction. The balance amount of **Rs. 63,07,500/-** of the bid security i.e. 15% of the annual bid amount alongwith one month's advance contract money shall be deposited before commencement of the mining operations or before expiry of the period of 12 months, whichever is earlier.

Department of Mines & Geology Haryana, Chandigarh
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S.M.E.

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

(vii) You shall execute an Agreement Deed in Form MC-I appended to the Haryana Minor Mineral Concession, Stocking, Transportation of Mineral & Prevention of Illegal Mining Rules-2012 (the State Rules 2012) within a period of 90 days from the date of issuance of this communication/ grant of Lol;

(viii) It may be pointed out that as per existing applicable rules the contract agreement had to be executed on **Non Judicial Stamp papers worth Rs. 14,98,100/- (Rs. Fourteen lakh ninety eight thousand one hundred only)**. However, you are aware that M/s Om Minerals, one of the Lol holders (who participated in the auctions held in December 2013) has filed a CWP No.7991 of 2014, before the Hon'ble Punjab & Haryana High Court. Further a few other similarly situated Lol holders have also filed separate CWP's before the Hon'ble Punjab and Haryana High Court challenging demand/ levy of Stamp Duty on execution of 'Contract Agreement'. The said matter is still pending for adjudication. Accordingly, the present auction was conducted subject to outcome of said cases. **Therefore, the charging of stamp duty for the execution of contract agreement shall be as per final outcome of the said CWP's.**

(ix) The Contract Agreement would also be required to be got Registered on payment of the applicable Registration fee;

(x) In case you fail to execute the Agreement Deed within the prescribed period of 90 days, this Lol shall be deemed to have been revoked and the amount of initial bid security deposited at the time of auction shall be forfeited. Further, the balance amount of 15% towards the bid security, amounting to **Rs. 63,07,500/-** being the 15% of the annual bid amount, shall be recovered as arrears of land revenue and, you, as the Lol holder/ defaulter, shall be debarred from participation in any future auctions for a period of 5 years;

(xi) You shall also furnish a solvent surety for a sum equal to the amount of the annual bid for execution of the Agreement. In case the surety offered by the contractor(s) during the subsistence of the contract is not found solvent, the contractor(s) shall offer another solvent surety and a supplementary deed shall be executed to this effect;

(xii) After execution of Agreement, either before commencement of the mining operation or before expiry of the period of 12 months from the date of issuance of this Lol, whichever is earlier, in case of failure to deposit the balance 15% amount towards security (as required under clause (v) above), the allotment of bid/issuance of Lol/execution of agreement shall be deemed having been rescinded and 10% amount

Department of Mines & Geology Haryana, Chandigarh
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P. K. Sharma
S.M.E.

deposited towards as initial bid security at the time of auction shall stand forfeited. Further, un-paid 15% amount towards security shall be recovered as arrears of land revenue and you shall debarred from participation in any subsequent bids for a period of 5 years;

(xiii) You shall be liable to deposit the contract money in advance at monthly intervals as per provisions of Contract Agreement i.e. from the date of commencement of the contract Agreement;

(xiv) You shall also deposit/ pay an additional amount equal to 10% of the due contract money along with the monthly installments towards the **'Mines and Minerals Development, Restoration and Rehabilitation Fund**

(xv) You shall also be liable to pay advance income tax as per provisions of Section 206(c) of income tax act in addition to contract money, payable as per terms and conditions of contract agreement.

(xvi) On enhancement of the contract money with the expiry of every three years period, you shall deposit the balance amount of security so as to upscale the security amount equal to 25% of the revised annual contract money as applicable for one year with respect to the next block of three years. No interest, whatsoever, shall be payable on the security amount deposited under the prescribed security head of the government;

(xvii) You shall prepare a Mining Plan along with the Mine Closure Plan (Progressive & Final) as per chapter 10 of the State Rules for the "Mining Block" and shall not commence mining operations in any area except in accordance with such Mining Plan duly approved by an officer authorised by the Director, mines & Geology, in this behalf.

(xviii) Further, the actual mining will be allowed to be commenced only after prior Environmental Clearance is obtained by you as the Lessee holder/mining contractor for the Mining Block from the Competent Authority as permitted by the competent Authority required under EIA notification dated 14/9/2006, as amended from time to time by the MoE&F, GoI and guidelines/ circulars issued in this behalf.

(xix) The Mining contractor to whom mining rights have been granted through this contract would also be liable to pay the following to the landowners to undertake mining operations:

(a) Annual rent in respect of the land area blocked under lease/concession but not being operated, and

Department of Mines & Geology Haryana, Chandigarh
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P. K. Sharma
S.M.G

(b) Rent plus compensation in respect of the area used for actual mining operations.

(xx) The amount of annual rent and the compensation shall be settled mutually between the landowner and the mining contractor. In case of non-settlement of the rent and compensation, the same shall be decided by the District Collector concerned in accordance with the provisions contained in Chapter 9 of the "Haryana Minor Mineral Concession, Stocking and Transportation of Minerals and Prevention of Illegal Mining Rules, 2012";

(xxi) The total mineral excavated and stashed by the concession holder within the area granted on mining contract shall not exceed two times of the average monthly production as per approved Mining Plan at any point of time;

(xxii) The Mining Contractor shall not stock any mineral outside the concession area granted on mining contract, without obtaining a valid license as per provisions contained in Chapter 14 of the State Rules;

(xxiii) The contractor shall not carry out any mining operations in any reserved/ protected forest or any area prohibited by any law in force in India, or prohibited by any authority without obtaining prior permission in writing from such authority or officer authorized in this behalf. In case of refusal of permission by such authority or officer authorized in this behalf, contractor(s) shall not be entitled to claim any relief in payment of contract money on this account;

(xxiv) Following are the general/ special conditions applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas:

(a) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge structure on up-stream side and ten times the span of such bridge structure on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

(b) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorised by him;

(c) The maximum depth of mining in the river bed shall not exceed three meters from the un-mined bed level at any point in time with proper bench formation;

(d) Mining shall be restricted within the certified [illegible] river/ rivulet;

Department of Mines & Geology Haryana, Chandigarh
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S.M.E.

Page 17

(e) No mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 meters in case of Tangri, Markanda and Ghaggar and 100 meters on either side of all other rivers/ rivulets. (This clause is applicable for mining outside river bed area);

(f) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology Department, may be made applicable to the mining operations in river-beds.

(xxv) A safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf. Further, the depth of excavation of mineral shall not exceed nine meters (9m) at any point of time.(This clause is applicable for mining outside river bed area);

(xxvi) The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws;

(xxvii) The contractor shall be under obligation to carry out mining in accordance with all other provisions as applicable under the Mines Act, 1952, Mines and Minerals (Development and Regulation) Act, 1957, Indian Explosives Act, 1884, Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986 and the rules made thereunder, Wild Life (Protection) Act, 1972, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.

4. Accordingly, for the time being you are advised to submit the Draft Contract Agreement on Form MC-I (in Five copies) appended to the State Rules-2012, on **plain papers** along with other requisite documents including a solvent surety(s) for a sum equal to the amount of the annual bid for execution of the agreement within a period of 90 days from the date of issue of this bid acceptance letter and the LoI. You should also furnish an affidavit to the effect that you will immediately deposit the requisite stamp duty as per out of the related Court cases as stated under para 3(viii) above.

5. Please note that one Sh. Rajbir Singh had filed a CWP bearing No. 27700 of 2013 before the Hon'ble Punjab & Haryana High Court challenging (i) commencement of contract period after 12 months from the date of acceptance of highest bid as per "**Letter of Intent**" or from date of obtaining of environmental clearance from competent authority

APPROVED
P. K. Sharma
S.M.E.

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

which ever is earlier and (ii) payment of rent and compensation to surface right holder/land owners from where mining operations are to be carried out. Therefore, commencement of period of contract & payment of compensation to land owners shall be as per final outcome of court order in said CWP. Accordingly, the auction was conducted subject to outcome of above case, hence this acceptance /LoI is being issued subject to the outcome in CWP No. 27700 of 2013 pending before Hon'ble Punjab & Haryana High Court.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/ Dated: **19.06.2015**

A copy is forwarded to the following for information and necessary action please:-

1. The Chairman, Haryana State Pollution Control Board, Panchkula.
2. The Deputy Commissioner, Yamuna Nagar.
3. The Mining Officer, Mines & Geology Department, Yamuna Nagar.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/ Dated: **19.06.2015**

A copy is forwarded to Sh. Bharat Wadhwa S/o Sh. Radhey Shyam, R/o House No. 676, Sector-13, Urban Estate, Karnal, the authorized person/Director who gave highest bid on behalf of **'JSM Foods Private Limited'** for information and necessary action please.

Mining Officer,
for Director General Mines & Geology, Haryana.

Department of Mines & Geology Haryana, Chandigarh
APPROVED
P. K. Sharma
S.R.O.

(Annexure-2)

CONSENT LETTER FROM APPLICANT

The Mining Plan & Progressive Mine Closure Plan in respect of Mandoli Ghaggar West Block/ YNR B-4 Sand Mine over an area of 25.56 hectares in District- Yamunanagar State –Haryana of M/s JSM Foods Private Limited , WZ/932, Basie Darapur, 1st floor, New Delhi. is being prepared by S.N. Sharma bearing registration no. RQP/DDN/0135/2001-A.

We request The Director Mines and Geology, Haryana to make further correspondence regarding modification of the mining plan with the said RQP on the following address:-

S.N. Sharma

RQP/DDN/0135/2001-A.

First Floor, 282 sector 11 D, DLF , Faridabad -114206 (Haryana)

(09560848579) snsharma@jbbtechnocrat.com

I also authorize Shri S.N. Sharma to make correspondence with your office.

I hereby undertake that the Mining Plan in respect of this area prepared by RQP be deemed to have been made with my knowledge and consent and shall be acceptable to me and binding on me in all respects.

This is to declare that the Mining Plan & Progressive Mine Closure Plan complies all statutory Rules, Regulations, orders made by the Central or State Government, statutory organizations, court etc. have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities. It is also undertaken that all the measures proposed in the Progressive Mine Closure Plan will be implemented in a time bound manner as proposed.

Place:- DELHI

Date :- 17/12/15

SIGNATURE OF APPLICANT

APPROVED
P. K. Sharma
S.M.E.

Annex-S

Renewed/नवीनीकृत up to 29/3/2021

खनन योजना तैयार करने हेतु
योग्य व्यक्ति के रूप में
मान्यता का प्रमाणपत्र

28/3/11
क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines

(खनिज रियायत नियमावली 1960 के नियम 22(सी) के अंतर्गत)

श्री एस. एन. शर्मा

पुत्र श्री के. सी. शर्मा

निवासी हाउस नं 2181, सेक्टर-16, फरीदाबाद, हरियाणा

द्वारा अपनी योग्यताओं और अनुभव का संतोषप्रद प्रमाण प्रस्तुत करने के फलस्वरूप खनिज रियायत नियमावली, 1960 के नियम 22(सी) के अंतर्गत उन्हें एतद्द्वारा खनन योजना तैयार करने हेतु योग्य व्यक्ति के रूप में मान्यता प्रदान की जाती है ।

उनका पंजीयन क्रमांक RQP/DDN/135/2001/A है ।

यह मान्यता दिनांक 29.03.2011 को समाप्त होने वाली पूर्ववर्ती की अवधि के लिए वैध है ।

स्थान : देहरादून
दिनांक : 30.03.2001

क्षेत्रीय खान नियंत्रक
भारतीय खान ब्यूरो
क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines

APPROVED

ANNEXURE R 16/5A

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY HARYANA
Bay No. 55-58, Prayatan Bhawan, Sector-2, PANCHKULA.

No. SEIAA/HR/2016/989 Dated 21.12.2016

To

M/s JSM ds Pvt. Ltd.
W2/93, Basie Darapur, 1st Floor,
Near Senior Secondary School,
New Delhi-110015.

Subject: Environmental Clearance for River Bed Mining of Minor Mineral "Mandoli Ghaggar East Block/YNR B3" at village Mandoli, Tehsil & District Yamuna Nagar Over an area of 20.18 Ha. By M/s JSM Foods Pvt. Ltd.

*****

This has reference to your online application no. nil dated 17.06.2016 addressed to Member Secretary, SEIAA Haryana for seeking prior environmental clearance for the above project under the EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., Form-1, Pre-feasibility report, copy of approved Mining Plan, EIA/EMP on the basis of approved TOR and the additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MoEF, GOI vide their Notification 21.08.2015, in its meetings held on 09.07.2016, 03.08.2016.

[2] The SEAC has examined the application and noted that the proposal is for River Bed Mining of Minor Mineral "Mandoli Ghaggar East Block/YNR B3" at village Mandoli, Tehsil & District Yamuna Nagar. The Letter of Intent (LOI) dated 19.06.2015. The lease has been granted for an area of 20.18 for 10 years out of which 6.0 Ha area is under restricted Zone. 14.18 Ha area free from restriction and the mining is proposed in this area only. The project proponent on 17.06.2016 submitted online application along with copy of approved Mining plan under category B-1(Now B-2) as no other mine lease area is also located within 500 mtr. The validity of Mining Scheme in the Mining plan is for 5 years. NOC from Forest Department has been

Obtained. The project proposal has been appraise as per proper processor of EIA Notification i.e approval of TOR and Public Hearing.

Brief details of the project:

<table>
<tr><td>1.</td><td>Category/Item no.
(in schedule):</td><td>1 (a) B-1 (Now B-2)</td></tr>
<tr><td>2.</td><td>Location of Project</td><td>Village Mandoli Ghagga, Tehsil & District Yamunanagar</td></tr>
<tr><td>3.</td><td>Project Details Khasra No.

“Mandoli Ghaggar West Block/YNR B-3”

Production capacity</td><td>River Bed Mining of Sand minor mineral at over an area of 20.18 Ha

52//2,3,4,5,6,7,8,9,13,14,15,16,17,18,23,24,25
53//1,2,3,4,7,8,9,10,11,12,13,14,17,18,19,20,21,22,23,24
58//1,2,3,4,7,8,9,10,11,12,13,14,18,19,20
59//3,4,5,6,7,8,13,14,15,16,17,18

8, 50, 000 TPA @ 113 Trips/day (25 Ton/Trip)</td></tr>
<tr><td>4.</td><td>Project Cost</td><td>1.2 crores</td></tr>
<tr><td>5.</td><td>Water Requirement & Source</td><td>52.82 KLD through Tankers<table><tr><td>Dust suppression</td><td>6.82 KLD</td></tr><tr><td>Plantation</td><td>4 KLD</td></tr><tr><td>Drinking</td><td>5 KLD</td></tr></table></td></tr>
<tr><td>6.</td><td>Environment Management Plan Budget</td><td>11.80 lakh</td></tr>
<tr><td>7.</td><td>CSR Activates Budget</td><td>7.5 Lakh</td></tr>
<tr><td>8.</td><td>Production</td><td>The proposed production for the five years is @ 8, 50, 000 TPA. The ultimate depth of Mining will be 3 meter. The alivation range of mine site is 269 armsl to 273 armsl.</td></tr>
<tr><td>9.</td><td>Corner Coordinates of the lease area</td><td><table><tr><td>Block</td><td>Latitude</td><td>Longitude</td></tr><tr><td rowspan="2">“Mandoli Ghaggar West Block/YNR B-3”</td><td>30°08'10"N</td><td>77°24 '41"E</td></tr><tr><td>30°08'28"N</td><td>77°25 '01"E</td></tr></table></td></tr>
<tr><td>10.</td><td>Green belt/ plantation</td><td><table><tr><th>Year of Plantation</th><th>Proposed Plantation</th></tr><tr><td>I Yr.</td><td>800 Trees</td></tr><tr><td>II Yr.</td><td>800 Trees</td></tr><tr><td>III Yr.</td><td>800 Trees</td></tr><tr><td>IV Yr.</td><td>800 Trees</td></tr><tr><td>V Yr.</td><td>800 Trees</td></tr></table></td></tr>
</table>

11.	Machinery required	Excavator/ JCB Tipers/Trucks, Water Tanker Light Vehicles/Geep and Maintaniance Van

The recommendation of SEAC and project details as given above was taken up for consideration in the 95th meeting held on 26.08.2016. It was observed by the Authority that Environment Clearance to this project on the following conditions:-

A. SPECIFIC CONDITIONS:

[1] This Environment Clearance is granted for the proposed production for the five years 8, 50, 000 TPA. The ultimate depth of Mining will be 3 meter. The alivation range of mine site is 269 armsl to 273 armsl. The Corner Coordinates of the leased area are:

Block	Latitude	Longitude
"Mandoli Ghaggar West Block/YNR B-3"	30°08'10"N	77°24 '41"E
	30°08'28"N	77°25 '01"E

[2] The project proponent shall carry out mining activity strictly as per the approved Mining Plan.

[3] Environmental Clearance is subject to obtaining clearance, under the Wildlife (Protection) Act, 1972 from the National Board of Wildlife, as applicable to the project.

[4] No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.

[5] The Project proponent shall obtain consent to Operate from the State Pollution control Board, Haryana and effectively implement all the conditions stipulated therein.

[6] Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the project and records maintained; also, Occupational health check-ups for workers having some aliments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken

accordingly. Recommendations of National Institute for labour for ensuring good occupational environment for mine workers would also be adopted.

[7] Project Proponent shall appoint a Monitoring Committee to monitor the replenishment study, traffic management, levels of production, River Bank erosion and maintenance of Road etc.

[8] The number of trips of the trucks shall not exceed the estimated quantity of 2833MT/day @ 113 Trips/day (25 Mt/Trip). Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/dumpers carrying the mineral should not be allowed to pass thought the villages.

[9] Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.

[10] Excavation will be carried out up to a maximum depth of 3 meters from surface of Mineral deposit and not less thanone meter from the water level of the river channel whichever is reached earlier.

[11] The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUCC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centre.

[12] Washing of all transport vehicles should be done inside the mining lease.

[13] Permanent pillars has to be constructed to demarcate width of extraction of Reserve of Minerals leaving 25% of River width from the bank with depth of 1.5m below the ground and 1.2 m above the ground to observe its stability.

[14] There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis in consultation with Regional Director, Central Groundwater Board and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.

[15] The Project Proponent shall also take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted in the study area.

[16] 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.

[17] Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

[18] No River sand mining shall be allowed in flowing water and no mining is allowed in rainy season.

[19] The project proponent shall submit annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity/ production levels shall be decreased/ stopped accordingly till the replenishment is completed.

[20] In River flood plain mining a buffer of 3 meter to be left from river bank for mining.

[21] The project proponent shall ensure that no natural water course/water body shall be obstructed due to any operations.

[22] The dumping site selected and proposed shall used for OB dump at the designated site within the lease area per as per the approved time plan. In no case the overburden should be dumped outside the lease area.

[23] Garland drains shall be constrcuted to prevent the flow of the water in the dump.

[24] Green belt should be developed as per the proposed plantation as given in the proposal. Plantation should be carried out in phased manner.

[25] Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading

and unloading point and transfer points. It shall be ensured that the Ambient Air Quality Parameters conform to the norms prescribed by the CPCB.

[26] Regular monitoring of ground water level and quality shall be carried out in and around the mine lease. The monitoring shall be carried out four times in a year-pre monsoon (April-May), monsoon (August), post monsoon (November); winter (January) and the data thus collected may be sent regularly to MOEF Regional Office, Chandigarh and Regional Director CGWB.

[27] Data on ambient air quality and stack emissions shall be submitted to Haryana Pollution Control Board once in six months carried out by MOEF/NABL/CPCB/ Government approved lab.

[28] Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded. The project proponent shall ensure that the vehicle must have pollution under control certificate.

[29] The project proponent shall take all precautionary measures during mining operations for conservation and protection of endangered fauna, if any, spotted in the study area. A plan for conservation shall be drawn and got approved from the Chief Wildlife Warden of the State before start of mining operations. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the wildlife conservation plan so prepared specific to the project site shall be effectively implemented. A copy of action plan may be submitted to the HSPCB and MOEF, Regional Office, Chandigarh within 3 months..

[30] As envisaged, the Project Proponent shall invest at least an amount of Rs 11.80 Lakhs/annum as cost for implementing various environmental protection measures including recurring expenses per year.

[31] A sum of Rs. 7.5 Lakhs/annum shall be earmarked by the Project proponent for investment as CSR on socio economic up-liftment activities of the area

particularly in the area of habitat, health or education, training programme of rural women & man provide the kit for employment generation. The proposal should contain provision for monthly medical camps, distributions of medicines and improvement in educational facilities in the nearby schools. Details of such activity along with time bound action plan be submitted to HSPCB/SEIAA Haryana before the start of operation.

[32] Budgetary provision of Rs. 1.5 Lakhs/annum per year earmarked for the labours working in the Mine for all necessary infrastructure facilities such as health facility, sanitation facility, fuel for cooking, along with safe drinking water, medical camps and toilets for women, crèche for infants should be made and submitted to HSPCB at the time of CTE/CTO/SEIAA Haryana. The housing facilities should be provided for mining labours.

[33] A Final Mine Closure Plan along with details of corpus fund shall be submitted to the SEIAA well within the stipulated period as prescribed in the minor mineral concession rules 2012.

[34] The project proponent shall ensure that the EC letter as well as the status of compliance of EC conditions and the monitoring data are placed on company's website and displayed at the project site.

[35] The project proponent shall ensure that loading in Trucks do not exceed the norms fixed by the Transport Department as per relevant rules.

[36] The project proponent shall ensure approach roads are widened and strengthened as per requirements fixed by PWD and district administration before the start of the work.

[37] The project proponent shall ensure supply of drinking water through RO.

[38] The project proponent shall Strictly adhere to the sustainable sand mining management guidelines 2016, issued by MoEF &CC GoI on 15.03.2016 and shall ensure the complaince of the standard environmental conditions prescribed for the sand mining in the said guidelines; in addition to the conditions imposed in the environment clearance letter.

[39] The project proponent shall carry out mining in semi mechanized manner using manpower, Excavator / Tipers / Trucks / Water Tanker / light vechicles/Jeep / Maintaniance Van.

GENERAL CONDITIONS:

[i] Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

[ii] Any change in mining technology/scope of working shall not be made without prior approval of the SEIAA.

[iii] Any change in the calendar plan including excavation, quantum of mineral and waste shall not be made.

[iv] Periodic monitoring of ambient air quality shall be carried out for PM10, PM2.5,SO2 and NOx monitoring. Location of the stations (minimum 6) shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring shall be decided in consultation with the Haryana State Pollution Control Board (HSPCB). Six monthly reports of the data so collected shall be regularly submitted to the HSPCB/CPCB including the MOEF, Regional office, Chandigarh.

[v] Personnel working in dusty areas shall wear protective respiratory devices they shall also be provided with adequate training and information on safety and health aspects.

[vi] Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

[vii] The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the HSPCB and the Regional office of MOEF located at Chandigarh.

[viii] The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the northern Regional Office of MoEF, the respective Office of CPCB, HSPCB and SEIAA Haryana.

[ix] The above conditions will be enforced, inter alia, under the provision of the Water (Prevention & Control of Pollution) Act, 1974 the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act 1991 (all amended till date) and rules made hereunder and also any other orders passed by the Honb'le Supreme Court of India/High Court of Haryana and other Court of law relating to the subject matter.

[x] The Project proponent should inform the public that the project has been accorded Environment Clearance by the SEIAA and copies of the clearance letter are available with the Haryana State Pollution Control Board & SEIAA. This should be advertised within 7 days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region and the copy of the same should be forwarded to SEIAA Haryana. A copy of Environment Clearance conditions shall also be put on project proponent's web site for public awareness.

[xi] All the other statutory clearances such as the approvals for storage of diesel from the Chief Controller of Explosives, Fire department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (protection) Act, 1972 etc. shall be obtained, as may be applicable, by Project proponent from the competent authority before the start of mining operation.

[xii] That the grant of this EC is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility, to comply with the conditions laid down in all other laws for the time being in force, rests with the industry/unit/project proponent. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of National Green Tribunal Act, 2010.

[xiii] The methodology of mining shall be strictly as per orders passed by Hon'ble NGT/ Hon'ble Supreme Court from time to time.

[xiv] The PP shall not disturb/damage the position of studs in river bed and also not to damage the river banks and not to degrade the river bed in any manner.

[xv] Any area which have been banned by any authority/courts shall not be used for mining activity.

[xvi] Distance of mining to be maintained from Pucca Hydraulic structure/ Bridges shall be as per approved mining plan/ guideline issued by MoEF & CC/ Court Orders.

[xvii] The PP will not violate any judicial orders/pronouncements issued by the Hon'ble Supreme Court/High Courts/NGT.

-Sd-
Chairman,
State Level Environment Impact
Assessment Authority, Haryana,

Endst. No. SEIAA/HR/2016/990-93 Dated 21.12.2016

A copy of the above is forwarded to the following:

1. The Director (IA Division), MoEF&CC, GoI, Indra Paryavaran Bhavan, Zor bagh Road-New Delhi.

2. The Regional office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay's no. 24-25, Sector 31-A, Dakshin Marg, Chandigarh.

3. The Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Pkl.

4. The Director General, Mines & Geology Department Haryana, Chandigarh.

-Sd-
Chairman,
State Level Environment Impact
Assessment Authority, Haryana,

ANNEXURE R 16/5B

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY HARYANA
Bay No. 55-58, Prayatan Bhawan, Sector-2, PANCHKULA.

No. SEIAA/HR/2016/984 Dated21.12.2016

To

M/s JSM Foods Pvt. Ltd.
W2/93, Basie Darapur, 1st Floor,
Near Senior Secondary School,
New Delhi-110015.

Subject: Environmental Clearance for River Bed Mining of Minor Mineral "Mandoli Ghaggar West Block/YNR B-4" at village Mandoli, Tehsil & District Yamuna Nagar Over an area of 25.56 Ha. By M/s JSM Foods Pvt. Ltd.

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This has reference to your online application no. nil dated 17.06.2016 addressed to Member Secretary, SEIAA Haryana for seeking prior environmental clearance for the above project under the EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., Form-1, Pre-feasibility report, copy of approved Mining Plan, EIA/EMP on the basis of approved TOR and the additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MoEF, GOI vide their Notification 21.08.2015, in its meetings held on 09.07.2016, 03.08.2016.

[2] The SEAC has examined the application and noted that the proposal is for River Bed Mining of Minor Mineral "Mandoli Ghaggar East Block/YNR B-4" at village Mandoli, Tehsil & District Yamuna Nagar. The Letter of Intent (LOI) dated 19.06.2015. The lease has been granted for an area of 25.56 for 7 years out of which 5.70 Ha area is under restricted Zone. About 19.86 Ha area free from restriction and the mining is proposed in this area only. The project proponent on 17.06.2016 submitted online application along with copy of approved Mining plan under category B-1. The validity of Mining Scheme in the Mining plan is for 5 years. NOC from

Forest Department has been Obtained. The project proposal has been appraise as per proper processor of EIA Notification i.e approval of TOR and Public Hearing.

Brief details of the project:

<table>
<tr><td>1.</td><td>Category/Item no. (in schedule):</td><td>1 (a) B-1</td></tr>
<tr><td>2.</td><td>Location of Project</td><td>Village Mandoli, Tehsil & District Yamunanagar</td></tr>
<tr><td>3.</td><td>Project Details Khasra No.

“Mandoli Ghaggar West Block/YNR B-4”

Production capacity</td><td>River Bed Mining of Sand minor mineral at over an area of 25.56 Ha

53//5,6,15,16/1,16/2,25
54//1 to 25
55//1,2,9,10,11,20
57//1 to 4, 7 to 13
58//5,6,15

11, 91, 000 TPA @ 159 Trips/day (25 Ton/Trip)</td></tr>
<tr><td>4.</td><td>Project Cost</td><td>1.5 crores</td></tr>
<tr><td>5.</td><td>Water Requirement & Source</td><td>18.77 KLD through Tankers<table><tr><td>Dust suppression</td><td>13 KLD</td></tr><tr><td>Plantation</td><td>3 KLD</td></tr><tr><td>Drinking</td><td>2.77 KLD</td></tr></table></td></tr>
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<tr><td>8.</td><td>Production</td><td>The proposed production for the five years is @ 11, 91, 000 TPA. The ultimate depth of Mining will be 3 meter. The alivation range of mine site is 268 armsl to 272 armsl.</td></tr>
<tr><td>9.</td><td>Corner Coordinates of the lease area</td><td><table><tr><td>Block</td><td>Latitude</td><td>Longitude</td></tr><tr><td rowspan="2">“Mandoli Ghaggar West Block/YNR B-4”</td><td>30°08'12"N</td><td>77°25 '01"E</td></tr><tr><td>30°08'28"N</td><td>77°25 '21"E</td></tr></table></td></tr>
<tr><td>10.</td><td>Green belt/ plantation</td><td><table><tr><th>Year of Plantation</th><th>Proposed Plantation</th></tr><tr><td>I Yr.</td><td>800 Trees</td></tr><tr><td>II Yr.</td><td>800 Trees</td></tr><tr><td>III Yr.</td><td>800 Trees</td></tr><tr><td>IV Yr.</td><td>800 Trees</td></tr><tr><td>V Yr.</td><td>800 Trees</td></tr></table></td></tr>
</table>

11.	Machinery required	Excavator/ JCB Tipers/Trucks, Water Tanker Light Vehicles/Geep and Maintaniance Van

The recommendation of SEAC and project details as given above was taken up for consideration in the 95th meeting held on 26.08.2016. It was observed by the Authority that Environment Clearance to this project on the following conditions:-

A. SPECIFIC CONDITIONS:

[1] This Environment Clearance is granted for the proposed production for the five years 11, 91, 000 TPA. The ultimate depth of Mining will be 3 meter. The alivation range of mine site is 268 armsl to 272 armsl. The Corner Coordinates of the leased area are:

Block	Latitude	Longitude
"Mandoli Ghaggar West Block/YNR B-4"	30°08'12"N	77°25 '01"E
	30°08'28"N	77°25 '21"E

[2] The project proponent shall carry out mining activity strictly as per the approved Mining Plan.

[3] Environmental Clearance is subject to obtaining clearance, under the Wildlife (Protection) Act, 1972 from the National Board of Wildlife, as applicable to the project.

[4] No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.

[5] The Project proponent shall obtain consent to Operate from the State Pollution control Board, Haryana and effectively implement all the conditions stipulated therein.

[6] Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the project and records maintained; also, Occupational health check-ups for workers having some aliments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken

accordingly. Recommendations of National Institute for labour for ensuring good occupational environment for mine workers would also be adopted.

[7] Project Proponent shall appoint a Monitoring Committee to monitor the replenishment study, traffic management, levels of production, River Bank erosion and maintenance of Road etc.

[8] The number of trips of the trucks shall not exceed the estimated quantity of 3970MT/day @ 159 Trips/day (25 Mt/Trip). Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/dumpers carrying the mineral should not be allowed to pass thought the villages.

[9] Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.

[10] Excavation will be carried out up to a maximum depth of 3 meters from surface of Mineral deposit and not less thanone meter from the water level of the river channel whichever is reached earlier.

[11] The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUCC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centre.

[12] Washing of all transport vehicles should be done inside the mining lease.

[13] Permanent pillars has to be constructed to demarcate width of extraction of Reserve of Minerals leaving 25% of River width from the bank with depth of 1.5m below the ground and 1.2 m above the ground to observe its stability.

[14] There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis in consultation with Regional Director, Central Groundwater Board and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.

[15] The Project Proponent shall also take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted in the study area.

[16] 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.

[17] Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

[18] No River sand mining shall be allowed in flowing water and no mining is allowed in rainy season.

[19] The project proponent shall submit annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity/ production levels shall be decreased/ stopped accordingly till the replenishment is completed.

[20] In River flood plain mining a buffer of 3 meter to be left from river bank for mining.

[21] The project proponent shall ensure that no natural water course/water body shall be obstructed due to any operations.

[22] The dumping site selected and proposed shall used for OB dump at the designated site within the lease area per as per the approved time plan. In no case the overburden should be dumped outside the lease area.

[23] Garland drains shall be constrcuted to prevent the flow of the water in the dump.

[24] Green belt should be developed as per the proposed plantation as given in the proposal. Plantation should be carried out in phased manner.

[25] Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading

and unloading point and transfer points. It shall be ensured that the Ambient Air Quality Parameters conform to the norms prescribed by the CPCB.

[26] Regular monitoring of ground water level and quality shall be carried out in and around the mine lease. The monitoring shall be carried out four times in a year-pre monsoon (April-May), monsoon (August), post monsoon (November); winter (January) and the data thus collected may be sent regularly to MOEF Regional Office, Chandigarh and Regional Director CGWB.

[27] Data on ambient air quality and stack emissions shall be submitted to Haryana Pollution Control Board once in six months carried out by MOEF/NABL/CPCB/ Government approved lab.

[28] Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded. The project proponent shall ensure that the vehicle must have pollution under control certificate.

[29] The project proponent shall take all precautionary measures during mining operations for conservation and protection of endangered fauna, if any, spotted in the study area. A plan for conservation shall be drawn and got approved from the Chief Wildlife Warden of the State before start of mining operations. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the wildlife conservation plan so prepared specific to the project site shall be effectively implemented. A copy of action plan may be submitted to the HSPCB and MOEF, Regional Office, Chandigarh within 3 months..

[30] As envisaged, the Project Proponent shall invest at least an amount of Rs 11.80 Lakhs/annum as cost for implementing various environmental protection measures including recurring expenses per year.

[31] A sum of Rs. 7.5 Lakhs/annum shall be earmarked by the Project proponent for investment as CSR on socio economic up-liftment activities of the area

particularly in the area of habitat, health or education, training programme of rural women & man provide the kit for employment generation. The proposal should contain provision for monthly medical camps, distributions of medicines and improvement in educational facilities in the nearby schools. Details of such activity along with time bound action plan be submitted to HSPCB/SEIAA Haryana before the start of operation.

[32] Budgetary provision of Rs. 1.5 Lakhs/annum per year earmarked for the labours working in the Mine for all necessary infrastructure facilities such as health facility, sanitation facility, fuel for cooking, along with safe drinking water, medical camps and toilets for women, crèche for infants should be made and submitted to HSPCB at the time of CTE/CTO/SEIAA Haryana. The housing facilities should be provided for mining labours.

[33] A Final Mine Closure Plan along with details of corpus fund shall be submitted to the SEIAA well within the stipulated period as prescribed in the minor mineral concession rules 2012.

[34] The project proponent shall ensure that the EC letter as well as the status of compliance of EC conditions and the monitoring data are placed on company's website and displayed at the project site.

[35] The project proponent shall ensure that loading in Trucks do not exceed the norms fixed by the Transport Department as per relevant rules.

[36] The project proponent shall ensure approach roads are widened and strengthened as per requirements fixed by PWD and district administration before the start of the work.

[37] The project proponent shall ensure supply of drinking water through RO.

[38] The project proponent shall Strictly adhere to the sustainable sand mining management guidelines 2016, issued by MoEF &CC GoI on 15.03.2016 and shall ensure the complaince of the standard environmental conditions prescribed for the sand mining in the said guidelines; in addition to the conditions imposed in the environment clearance letter.

[39] The project proponent shall carry out mining in semi mechanized manner using manpower, Excavator / Tipers / Trucks / Water Tanker / light vechicles/Jeep / Maintaniance Van.

GENERAL CONDITIONS:

[i] Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

[ii] Any change in mining technology/scope of working shall not be made without prior approval of the SEIAA.

[iii] Any change in the calendar plan including excavation, quantum of mineral and waste shall not be made.

[iv] Periodic monitoring of ambient air quality shall be carried out for PM10, PM2.5,SO2 and NOx monitoring. Location of the stations (minimum 6) shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring shall be decided in consultation with the Haryana State Pollution Control Board (HSPCB). Six monthly reports of the data so collected shall be regularly submitted to the HSPCB/CPCB including the MOEF, Regional office, Chandigarh.

[v] Personnel working in dusty areas shall wear protective respiratory devices they shall also be provided with adequate training and information on safety and health aspects.

[vi] Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

[vii] The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the HSPCB and the Regional office of MOEF located at Chandigarh.

[viii] The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the northern Regional Office of MoEF, the respective Office of CPCB, HSPCB and SEIAA Haryana.

[ix] The above conditions will be enforced, inter alia, under the provision of the Water (Prevention & Control of Pollution) Act, 1974 the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act 1991 (all amended till date) and rules made hereunder and also any other orders passed by the Honb'le Supreme Court of India/High Court of Haryana and other Court of law relating to the subject matter.

[x] The Project proponent should inform the public that the project has been accorded Environment Clearance by the SEIAA and copies of the clearance letter are available with the Haryana State Pollution Control Board & SEIAA. This should be advertised within 7 days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region and the copy of the same should be forwarded to SEIAA Haryana. A copy of Environment Clearance conditions shall also be put on project proponent's web site for public awareness.

[xi] All the other statutory clearances such as the approvals for storage of diesel from the Chief Controller of Explosives, Fire department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (protection) Act, 1972 etc. shall be obtained, as may be applicable, by Project proponent from the competent authority before the start of mining operation.

[xii] That the grant of this EC is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility, to comply with the conditions laid down in all other laws for the time being in force, rests with the industry/unit/project proponent. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of National Green Tribunal Act, 2010.

[xiii] The methodology of mining shall be strictly as per orders passed by Hon'ble NGT/ Hon'ble Supreme Court from time to time.

[xiv] The PP shall not disturb/damage the position of studs in river bed and also not to damage the river banks and not to degrade the river bed in any manner.

[xv] Any area which have been banned by any authority/courts shall not be used for mining activity.

[xvi] Distance of mining to be maintained from Pucca Hydraulic structure/ Bridges shall be as per approved mining plan/ guideline issued by MoEF & CC/ Court Orders.

[xvii] The PP will not violate any judicial orders/pronouncements issued by the Hon'ble Supreme Court/High Courts/NGT.

-Sd-
Chairman,
State Level Environment Impact Assessment Authority, Haryana, Panchkula.

Endst. No. SEIAA/HR/2016/985-988 Dated:. 21.12.2016

A copy of the above is forwarded to the following:

1. The Director (IA Division), MoEF&CC, GoI, Indra Paryavaran Bhavan, Zor bagh Road-New Delhi.

2. The Regional office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay's no. 24-25, Sector 31-A, Dakshin Marg, Chandigarh.

3. The Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Pkl.

4. The Director General, Mines & Geology Department Haryana, Chandigarh.

-Sd-
Chairman,
State Level Environment Impact Assessment Authority, Haryana, Panchkula.

ANNEXURE R 16/6

Director General, Mines & Geology, Haryana

ORDER

M/s JSM Foods Private Limited, W Z/932, Basie Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015 were granted mining contract for extraction of "**Sand**" a minor mineral for the period of 07 years through competitive bidding held on 10th-11th June, 2015 at the rate of **Rs. 04,20,50,000/-** [Rs. Four Crore twenty lakhs fifty thousand only] per annum. As per terms & conditions of the auction notice the actual mining operations were to be allowed only after prior Environmental Clearance by the competent authority as per requirement of Environment Impact Assessment (EIA)Notification dated 14.09.2006 of Ministry of Environment, Forest and Climate Change (MoEF&CC) Government of India as amended from time to time. Further, the period of contract was to commence from the date of grant of Environmental Clearance or after 12 months from the date of issuance of Letter of Intent (LoI) dated 19.06.2015, whichever is earlier. In the instant case LoI was issued on 19.06.2015.

2. M/s JSM Foods Private Limited obtained Environmental Clearance from State Environment Impact Assessment Authority (SEIAA) on 21.12.2016 for mining of 11,91,000MT per annum **sand a minor** mineral and after obtaining Consent to Operate from the Haryana State Pollution Control Board commenced mining operation on 18.06.2017.

3. As per terms of conditions of the contract agreement and Rule 56(17) of the State Rules, 2012 where any mineral concession holder finds any other minor mineral not granted under said concession, the discovery of same shall be reported without any delay to the Director or an officer authorized by him and shall not win or dispose of the same without obtaining a separate mineral concession from the Director. The Rule 56(19) further

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provides that where the newly discovered minor mineral is not available in sufficient quantity and the grant of a separate mining lease/ contract is not found justified, the Director may allow the lessee/ contractor to excavate and dispose of such newly discovered mineral by issuing a separate permit in Form 'PIM-8' on payment of advance royalty at the rates prescribed in the First Schedule. The royalty payable for the newly discovered minor mineral and prorated contribution to the R & R Fund shall be in addition to the dead rent/ contract money/ contribution to the R & R Fund for the mineral already granted on mining lease/ contract/ permit. The mineral concession holder shall also be liable to pay all other sums as prescribed for disposal of the mineral as if the same had been allowed under a regular mineral concession.

4. A similarly situated sand contractor, namely, M/s P.S. Buildtech having their mining area on the downstream side of the contractor firm namely M/s JSM Foods Private Limited informed that the mining area also has Boulder and Gravel along with Sand and sought permission for the grant of mineral concession for said newly discovered mineral for which they will pay all applicable dues/ royalty i.e for mining and disposal of boulder and gravel mineral.

5. Upon seeking detailed reports about the availability of new mineral (which was not part of existing grant) by a team of officers it was revealed that mixed material/ BGS was found in the contracted area of said contractor as also in the nearby upstream area held by M/s JSM foods Pvt. Ltd, in Mandoli Ghaggar (West) Block 4 and other area held by JSM foods Pvt. Ltd, in Mandoli Ghaggar (East) Block 3.

The areas held by M/s P.S Buildtech, Kanalsi mine / Block 5 had 34.95% Boulder gravel out of total mineral. In the case of mines in the

village Mandli Ghaggar [Mandoli Ghaggar (West) Block-4 and Mandoli Ghaggar (East) Block- 3] it was found that Boulder / Gravel was 27.45% of overall mineral.

6. The permission for mining and disposal of newly found mineral (BG) was accorded on **26.11.2020** to M/s P.S. Buildtech subject to condition that the contractor shall pay, an additional amount of Royalty for **35%** of the total production and also additional amount of **10%** of the same towards 'Mines and Minerals Development, Restoration and Rehabilitation Fund' for Boulder/ Gravel at the rate prescribe in the First Schedule of the State Rules, 2012. The same is to be paid over and above the contract money and other dues as applicable under contract. Further the overall quantity of mineral production [Boulder, Gravel and Sand] shall not exceed the maximum annual production of **11,91,000 MT** allowed under Environmental Clearance grant by the Competent authority. Keeping in view that they were disposing of the mineral as such along with Boulder gravel and were also issued a notice dated 14.08.2020 in this behalf- they were directed to pay additional royalty on the same proportional basis for the mineral excavated and disposed of from Jan, 2020 itself .

7. In the case of M/s JSM Foods Private Limited, though no application was submitted earlier, however, they vide letter dated 25.09.2020 submitted application for the grant of mineral concession for said newly discovered mineral for which they will pay all applicable dues/ royalty i.e for mining and disposal of boulder and gravel mineral.

8. It is also relevant to state here that in the past it was found with the help of e-Rawaana portal that a number of sand contractors (not having permission for BG) had been supplying/ selling sand to the Crushers and Screening plants. The sand found in river Yamuna being fine sand is not

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being entitled for grant of permission for addition of the mineral, as per the provisions of Rule 56(17) of the State Rules, 2012 is hereby granted the permission /mining contract for the period co-terminus with contract of existing mining contract granted for sand mineral subject to condition that:

A. The contractor shall pay for 27.45 % of the total production, as additional amount of Royalty and additional amount of 10% of the same towards 'Mines and Minerals Development, Restoration and Rehabilitation Fund' for Boulder/ Gravel at the rate prescribed in the First Schedule of the State Rules, 2012 i.e over and above the contract money and other dues as applicable under contract.

Note: To clarify the above they shall pay Royalty= total production of mineral during preceding month X 0.27.45 X applicable Rate of Royalty by 7th of each month along other applicable dues. Further 10% of total amount of additional royalty shall also be deposited as R&R Fund for newly discovered mineral.

B. The period of permission / contract for Boulder gravel shall be co-terminus with original contract granted for sand mineral;

C. The overall quantity of mineral production [Boulder, gravel and sand] shall not exceed the maximum annual production of 11,91,000 MT allowed under Environmental Clearance grant by the Competent authority and shall obtain separate EC for newly added mineral from competent authority.

D. The contractor shall execute a supplementary deed for additional mineral namely Boulder gravel.

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Director General, Mines & Geology, Haryana

12. Further, it is clear that M/s JSM Foods Private Limited had been disposing of the Boulder Gravel along with sand on e-Rawaana / bills issued for sand. The contention that mineral was being disposed of from sites not having BG was not found justified as it is not the case that BG was available only in part of the total area. It is clear beyond doubt that the BG is inextricably mixed with sand and sand alone could have been disposed off only after screening. It is admitted fact that within mining area no screening is/ was being carried out, so along with sand the mineral BG was disposed off.

To file the show cause notice dated14.08.2020 it was decided and was also agreed by the contractor during the course of the hearing that firm shall pay royalty at the rate of Rs 50 per MT and Rs 5 per MT towards R&R Fund for 27.45% of the mineral production since from 01.01.2020 to 31.01.2021. The amount of additional royalty and R& R fund for above period shall be deposited in 03 equal monthly installments. The first installment on this account shall be paid on or before 07.03.2021. Further, payment of additional royalty for February, 2021 shall be paid on regular basis from 7th March, 2021 onward. The show cause notice dated 14.08.2020 shall stand filed on payment of first installment.

(Amitabh Singh Dhillon, IPS)
Director General, Mines and Geology,
Haryana.

Place : Panchkula.
Dated: 05.02.2021.

Speed Post

Endst No.: DMG/HY/Cont./MG West Block/YNR B-4/2015/ 514 Dated: 05-02-2021

A copy is forwarded to **M/s JSM Foods Private Limited, Corr. Add. 676, Sector-13, Urban Estate, Karnal (Hr.)-132001** for information and necessary action.

Director General
Mines & Geology Department, Haryana.

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Director General, Mines & Geology, Haryana

Speed Post

Endst No.:DMG/HY/Cont./MG West Block/YNR B-4/2015/ Dated:

A copy is forwarded to the Assistant Mining Engineer, Department of Mines & Geology, Yamuna Nagar for information.

Sd/-
Director General
Mines & Geology Department, Haryana.

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Director General, Mines & Geology, Haryana

ORDER

M/s JSM Foods Private Limited, W Z/932, Basie Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015 were granted mining contract for extraction of **"Sand"** a minor mineral for the period of 10 years through competitive bidding held on 10th-11th June, 2015 at the rate of **Rs. 03,30,50,000/-** [Rs. Three Crore thirty lakhs fifty thousand only] per annum. As per terms & conditions of the auction notice the actual mining operations were to be allowed only after prior Environmental Clearance by the competent authority as per requirement of Environment Impact Assessment (EIA)Notification dated 14.09.2006 of Ministry of Environment, Forest and Climate Change (MoEF&CC) Government of India as amended from time to time. Further, the period of contract was to commence from the date of grant of Environmental Clearance or after 12 months from the date of issuance of Letter of Intent (LoI) dated 19.06.2015, whichever is earlier. In the instant case LoI was issued on 19.06.2015.

2. M/s JSM Foods Private Limited obtained Environmental Clearance from State Environment Impact Assessment Authority (SEIAA) on 21.12.2016 for mining of 8,50,000 MT per annum **sand a minor** mineral and after obtaining Consent to Operate from the Haryana State Pollution Control Board commenced mining operation on 18.06.2017.

3. As per terms of conditions of the contract agreement and Rule 56(17) of the State Rules, 2012 where any mineral concession holder finds any other minor mineral not granted under said concession, the discovery of same shall be reported without any delay to the Director or an officer authorized by him and shall not win or dispose of the same without obtaining a separate mineral concession from the Director. The Rule 56(19) further

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provides that where the newly discovered minor mineral is not available in sufficient quantity and the grant of a separate mining lease/ contract is not found justified, the Director may allow the lessee/ contractor to excavate and dispose of such newly discovered mineral by issuing a separate permit in Form 'PIM-8' on payment of advance royalty at the rates prescribed in the First Schedule. The royalty payable for the newly discovered minor mineral and prorated contribution to the R & R Fund shall be in addition to the dead rent/ contract money/ contribution to the R & R Fund for the mineral already granted on mining lease/ contract/ permit. The mineral concession holder shall also be liable to pay all other sums as prescribed for disposal of the mineral as if the same had been allowed under a regular mineral concession.

4. A similarly situated sand contractor, namely, M/s P.S. Buildtech having their mining area on the downstream side of the contractor firm namely M/s JSM Foods Private Limited informed that the mining area also has Boulder and Gravel along with Sand and sought permission for the grant of mineral concession for said newly discovered mineral for which they will pay all applicable dues/ royalty i.e for mining and disposal of boulder and gravel mineral.

5. Upon seeking detailed reports about the availability of new mineral (which was not part of existing grant) by a team of officers it was revealed that mixed material/ BGS was found in the contracted area of said contractor as also in the nearby upstream area held by M/s JSM foods Pvt. Ltd, in Mandoli Ghaggar (West) Block 4 and other area held by JSM foods Pvt. Ltd, in Mandoli Ghaggar (East) Block 3.

The areas held by M/s P.S Buildtech, Kanalsi mine / Block 5 had 34.95% Boulder gravel out of total mineral. In the case of mines in the

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village Mandli Ghaggar [Mandoli Ghaggar (West) Block-4 and Mandoli Ghaggar (East) Block- 3] it was found that Boulder / Gravel was 27.45% of overall mineral.

6. The permission for mining and disposal of newly found mineral (BG) was accorded on **26.11.2020** to M/s P.S. Buildtech subject to condition that the contractor shall pay, an additional amount of Royalty for **35%** of the total production and also additional amount of **10%** of the same towards 'Mines and Minerals Development, Restoration and Rehabilitation Fund' for Boulder/ Gravel at the rate prescribe in the First Schedule of the State Rules, 2012. The same is to be paid over and above the contract money and other dues as applicable under contract. Further the overall quantity of mineral production [Boulder, Gravel and Sand] shall not exceed the maximum annual production of **8,50,000 MT** allowed under Environmental Clearance grant by the Competent authority. Keeping in view that they were disposing of the mineral as such along with Boulder gravel and were also issued a notice dated 14.08.2020 in this behalf- they were directed to pay additional royalty on the same proportional basis for the mineral excavated and disposed of from Jan, 2020 itself.

7. In the case of M/s JSM Foods Private Limited, though no application was submitted earlier, however, they vide letter dated 25.09.2020 submitted application for the grant of mineral concession for said newly discovered mineral for which they will pay all applicable dues/ royalty i.e for mining and disposal of boulder and gravel mineral.

8. It is also relevant to state here that in the past it was found with the help of e-Rawaana portal that a number of sand contractors (not having permission for BG) had been supplying/ selling sand to the Crushers and Screening plants. The sand found in river Yamuna being fine sand is not

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the raw material of the screening plants/ crushers. All such contractors including applicant M/s JSM Foods Private Limited were issued notices to explain their position for disposing of BG without permission or providing e-Rawaana to be used to legitimize processing of BG illegally mined from other sources by the Screening Plant/ crushers. M/s JSM Foods Private Limited sold a total 10,60,504 MT during the period from 1.1.2020 to 21.07.2020 out of which 4,03,904 MT was sold to screening plants/ crushers.

9. In order to decide the application for allowing additional mineral namely BG, it was found necessary to decide action on the show cause notice dated 14.08.2020 for alleged volition of contract agreement. So in the interest of natural justice an opportunity of hearing was afforded on 11.12.2020 to the contractor.

10. Sh. Wadhwa appearing for the contractor firm stated that the Boulder Gravel were found in the area though they were not disposing of the mineral in river where notable quantity of BG was present but conceded that it cannot be stated that no BG may have gone along with sand as some of the quantity was purchased by the Screening plants/ crushers. He stated that they were seeking permission for addition of mineral and agreed pay additional royalty and other dues as may be applicable (over and above the contract money) for **27.45%** of production on account of intermixed BG and sought to file the show cause notice also.

11. After having considered all related facts of the case it has been established that in the area granted on contract to M/s JSM Foods Private Limited over an area of 20.18 hectares of land in village **Mandoli Ghaggar i.e for 'Mandoli Ghaggar East Block/YNR B-3' 27.45%** of mineral is Boulder and Gravel which is inextricably mixed with sand. The contractor firm

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being entitled for grant of permission for addition of the mineral, as per the provisions of Rule 56(17) of the State Rules, 2012 is hereby granted the permission /mining contract for the period co-terminus with contract of existing mining contract granted for sand mineral subject to condition that:

A. The contractor shall pay for 27.45 % of the total production, as additional amount of Royalty and additional amount of 10% of the same towards 'Mines and Minerals Development, Restoration and Rehabilitation Fund' for Boulder/ Gravel at the rate prescribed in the First Schedule of the State Rules, 2012 i.e over and above the contract money and other dues as applicable under contract.

Note: To clarify the above they shall pay Royalty= total production of mineral during preceding month X 0.27.45 X applicable Rate of Royalty by 7th of each month along other applicable dues. Further 10% of total amount of additional royalty shall also be deposited as R&R Fund for newly discovered mineral.

B. The period of permission / contract for Boulder gravel shall be co-terminus with original contract granted for sand mineral;

C. The overall quantity of mineral production [Boulder, gravel and sand] shall not exceed the maximum annual production of 8,50,000 MT allowed under Environmental Clearance grant by the Competent authority and shall obtain separate EC for newly added mineral from competent authority.

D. The contractor shall execute a supplementary deed for additional mineral namely Boulder gravel.

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12. Further, it is clear that M/s JSM Foods Private Limited had been disposing of the Boulder Gravel along with sand on e-Rawaana / bills issued for sand. The contention that mineral was being disposed of from sites not having BG was not found justified as it is not the case that BG was available only in part of the total area. It is clear beyond doubt that the BG is inextricably mixed with sand and sand alone could have been disposed off only after screening. It is admitted fact that within mining area no screening is/ was being carried out, so along with sand the mineral BG was disposed off.

To file the show cause notice dated14.08.2020 it was decided and was also agreed by the contractor during the course of the hearing that firm shall payroyalty at the rate of Rs 50 per MTand Rs 5 per MT towards R&R Fund for 27.45% of the mineral production since from 01.01.2020 to 31.01.2021. The amount of additional royalty and R& R fund for above period shall be deposited in 03 equal monthly installments. The first installment on this account shall be paid on or before 07.03.2021. Further, payment of additional royalty for February, 2021 shall be paid on regular basis from 7thMarch, 2021 onward. The show cause notice dated 14.08.2020 shall stand filed on payment of first installment.

(Amitabh Singh Dhillon, IPS)
Director General, Mines and Geology,
Haryana.

Place : Panchkula.
Dated: . .2021.

Speed Post

Endst No.: DMG/HY/Cont./MG East Block/YNR B-3/2015/ 516 Dated: 05.02.2021

A copy is forwarded to **M/s JSM Foods Private Limited, Corr. Add. 676, *Sector-13, Urban Estate,* Karnal (Hr.)-132001** for information and necessary *action.*

Director General
Mines & Geology Department, Haryana.

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Director General, Mines & Geology, Haryana

Speed Post

Endst No.:DMG/HY/Cont./MG East Block/YNR B-3/2015/ Dated:

A copy is forwarded to the Assistant Mining Engineer, Department of Mines & Geology, Yamuna Nagar for information.

-Sd/.
Director General
Mines & Geology Department, Haryana.

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ANNEXURE R 16/7A

State Environment Impact Assessment Authority, Haryana,
Bays No.55-58, PrayatanBhawan, Sector-2 Panchkula.

Tel: 0172-2565232, 4043956
E-mail Id: seiaa-21.env@hry.gov.in

Memo No: SEIAA/HR/2022/1581 Date: 07/10/2022

To

M/s JSM Foods Pvt. Ltd.
WZ/932, Basie Darapur, 1st floor,
Near Senior Secondary school, New Delhi -110015

Subject: **EC for Boulder, Gravel and Sand Minor Mineral Project located at Mandoli Ghaggar East Block / YNR B-3 located at Village Mandoli Ghaggar east Tehsil Chhachhrauli District Yamuna Nagar, Haryana over an area of 20.18 Ha. With production capacity of 08,50,000 TPA – Regarding addition of Boulder & Gravel in the earlier EC and Extension of validity of Environment Clearance (EC).**

1. This has reference to your Proposals No. SIA/HR/MIN/257342/2022 dated 08.03.2022 and SIA/HR/MIN/276004/2022 dated 02.06.2022 for obtaining **addition of Boulder & Gravel in the earlier EC** and **Extension of validity of EC** along with submission of required Scrutiny Fee amounting of Rs.1,50,000/- vide DD No. 000454 Dated 22.06.2022 **&** Rs. 1,50,000/- bearing No. 000663 dated 02.11.2021 in compliance of Haryana Government, Environment & Climate Change Notification No. DE&CCH/3060 dated 14th October, 2021. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz. Replenishment Study Report, Approved Mining Plan and additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MoEF& CC, GoI vide their Notification dated 21.02.2022, in its meeting held on 29.06.2022, 25.07.2022, 23.08.2022 & 30.08.2022.

2. It is inter-alia, noted that the project involves the addition of Boulder & Gravel in the earlier EC and Extension of validity of Environment Clearance (EC) for the project located at Mandoli Ghaggar East Block / YNR B-3 located at Village Mandoli Ghaggar East, Tehsil Chhachhrauli District Yamuna Nagar, Haryana over an area of 20.18 Ha. With production capacity of 08,50,000 TPA.

3. The State Expert Appraisal Committee, Haryana after due consideration of the relevant documents submitted by the project proponent and additional clarification

furnished in response to its observations, **have recommended proposals for Addition of (minor mineral) Boulder And Gravel" in earlier Environmental Clearance and for grant od Extension of validity in EC as per Director General, Mines and Geology Department letter No. DMG/ HY/Cont. /MG East Block/YNR B-3/2015/142 dated 05.01.2022 subject to the outcome of the decision of Hon'ble Punjab and Haryana High Court in CWP No. 10595 of 2022 as well as Hon'ble NGT in OA No. 423 of 2022 as well as any Court of Law and Hon'ble NGT.**

4. ***The recommendations of SEAC were taken up in the 146th meeting of SEIAA held on 20.09.2022; The Authority after perusal of relevant record & examination of facts, arrived at the conclusion that the project proponent to be granted extension of validity in the earlier Environment Clearance (dated 21.12.2016) as per the approved and accepted mining plan by DMG Haryana.***

It is pertinent to mention that one year Zero period conveyed by MoEF vide Notification No. S.O.221 (E) dated 18th January, 2021 for the Covid Period concession also stands included/covered.

Therefore, the Authority decided to extend the validity of the existing EC upto 20.12.2026 i.e. as per the approved Mining Plan dated 12.10.2021 issued by Mines & Geology Department, Haryana.

It is further relevant to place on the record that the Authority in its 145th Meeting held on 09.09.2022 in respect of Item No. 18, decided to allow addition of Boulder & Gravel in the EC dated 21.12.2016 of the Project Proponent, in pursuance to the letter dated 12.10.2021 & 05.01.2022 issued by Mines & Geology Department, Haryana and the recommendation made by SEAC in its 246th Meeting held on 23.08.2022.

Although, the decision of the Authority was uploaded on PARIVESH Web Portal, but letter for the same could not be issued till 13.09.2022 (process was under way), when Hon'ble Punjab & Haryana High Court in CWP No. 10588 of 2022 titled as M/s Ganga Yamuna Mining Co. V/s State of Haryana & Ors made certain observations vide order dated 13.09.2022 in regard to Mining of Boulders & Gravels at the site being used for Sand Mining by the Project Proponent.

In view of the above, The Authority decided to list again the Item No. 18 of 145th Meeting in its 146th Meeting held on 20.09.2022 to take a holistic & comprehensive view of the facts mentioned above.

The Authority keeping in view, the recommendations of the SEAC and

observation of Hon'ble Punjab & Haryana High Court in the above mentioned case alongwith perusal of record, details received from Mines & Geology Department, Haryana decided as under:

1. Proposal for the extension of validity of EC dated 21.12.2016 allowed to be extended till 20.12.2026 as per the approved Mining Plan issued by Mines & Geology Department, Haryana.
2. Decision to add Boulders & Gravels as allowed in 145th Meeting will stand allowed with the conditions as made in the CWP No. 10588 of 2022 titled as M/s Ganga Yamuna Mining Co. V/s State of Haryana & Ors made certain observations vide order dated 13.09.2022.

Order dated 13.09.2022 is reproduced for the information & strict compliance of the Project Proponent:

CM-14169-CWP-2022 in/& CWP-10588-2022

M/S GANGA YAMUNA MINING CO. V/S STATE OF HARYANA & ORS

On the asking of the Court, Mr. Deepak Bhardwaj, DAG, Haryana, accepts notice on behalf of the State of Haryana. Counsel for the State submits that in the light of the order passed by the National Green Tribunal, dated 31.05.2022, the contractors have been restrained from mining boulders and gravel in the three contact areas. They are, therefore, now required to extract only sand.

This fact is disputed by the learned senior counsel for the applicant – petitioner.

To put the things to rest especially in the light of the order passed by the National Green Tribunal, dated 31.05.2022, mining of boulders and gravel from the three contract sites shall remain stayed till further orders. Application stands disposed of accordingly.

CWP-10588-2022

Reply to the writ petition be filed within a period of four weeks with a copy in advance to the counsel for the petitioner.

Counsel for the petitioner has not file the process fee and therefore, respondents No.4 and 5 could not be served. Process dasti only to effect service upon the said respondents for 03.11.2022.

It is made clear that in case the private respondents are not served for the next date of hearing, the Court would consider vacating the stay granted today.

13.09.2022

(AUGUSTINE GEORGE MASIH)
JUDGE

(ALOK JAIN)
JUDGE

In view of the above, Project Proponent is directed to ensure strict compliance

of the directions made above without any exception, till the final outcome of the pending proceedings in the Hon'ble NGT & Hon'ble Punjab & Haryana High Court.

NOTE: The Authority deem it appropriate to again to clarify that the project proponent shall not undertake mining of Boulder & Gravel in the allotted mining areas, despite the facts that extension of validity in the earlier EC dated 21.12.2016 & addition of these items have been allowed by SEIAA to the Project Proponent.

(Pardeep Kumar, IAS)
Member Secretary,
State Level Environment Impact
Assessment Authority, Haryana, Panchkula.

Endst No: SEIAA/HR/2022/1582-1588 Dt: 07/10/2022

A copy of the above is forwarded to the following:

1. Director (IA Division), MoEF & CC, GoI, Indira Paryavaran Bhavan, Zor bagh Road-New Delhi-110003.
2. Chairman, State Environment Impact Assessment Authority, Bay No. 55-58, Prayatan Bhawan, Sector-2, Panchkula, Haryana
3. Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Panchkula.
4. Director, Environment & Climate Change Department, Haryana, Bay No. 55-58, Prayatan Bhawan, Sector-2, Panchkula, Haryana
5. Director General, Mines & Geology Department, Haryana
6. Regional Office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay's No. 24-25, Sector 31-A, Dakshin Marg, Chandigarh-160018.
7. Concerned File/ Office Copy

(Pardeep Kumar, IAS)
Member Secretary,
State Level Environment Impact
Assessment Authority, Haryana, Panchkula.

ANNEXURE R 16/7B

State Environment Impact Assessment Authority, Haryana,
Bays No.55-58, PrayatanBhawan, Sector-2 Panchkula.

Tel: 0172-2565232, 4043956
E-mail Id: seiaa-21.env@hry.gov.in

Memo No: SEIAA/HR/2022/1589 Date: 07/10/2022

To

M/s JSM Foods Pvt. Ltd.
WZ/932, Basie Darapur, 1st floor,
Near Senior Secondary school, New Delhi -110015

Subject: **EC for Boulder, Gravel and Sand Minor Mineral Project located at Mandoli Ghaggar West Block / YNR B-4 at Village Mandoli Ghaggar west Tehsil Chhachhrauli District YamunaNagar, Haryana over an area of 25.56 Ha With production capacity of 11,91,000 TPA - – Regarding addition of Boulder & Gravel in the earlier EC and Extension of validity of Environment Clearance (EC).**

1. This has reference to your Proposals No. SIA/HR/MIN/276111/2022 dated 02.06.2022 & SIA/ HR/MIN/258316/2022 dated 08.03.2022 for obtaining **addition of Boulder & Gravel in the earlier EC and Extension of validity of EC** under category 1(a) of EIA Notification dated 14.09.2006 along with submission of required Scrutiny Fee amounting of Rs.1,50,000/- vide DD No. 000455 Dated 22.06.2022 **&** Rs. 1,50,000/- bearing No. 000664 dated 02.11.2021 in compliance of Haryana Government, Environment & Climate Change Notification No. DE&CCH/3060 dated 14th October, 2021. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz. Replenishment Study Report, Approved Mining Plan and additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MoEF& CC, GoI vide their Notification dated 21.02.2022, in its meeting held on 29.06.2022, 25.07.2022, 23.08.2022 & 30.08.2022.

2. It is inter-alia, noted that the project involves the addition of Boulder & Gravel in the earlier EC and Extension of validity of Environment Clearance (EC) for the project located at Mandoli Ghaggar West Block / YNR B-4 at Village Mandoli Ghaggar West Tehsil Chhachhrauli District Yamuna Nagar, Haryana over an area of 25.56 Ha With production capacity of 11,91,000 TPA..

3. The State Expert Appraisal Committee, Haryana after due consideration of the

relevant documents submitted by the project proponent and additional clarification furnished in response to its observations, **have recommended proposals for Addition of (minor mineral) Boulder And Gravel" in earlier Environmental Clearance and for grant od Extension of validity in EC as per Director General, Mines and Geology Department letter No. DMG/ HY/Cont. /MG West Block/YNR B-4/2015/145 dated 05.01.2022 subject to the outcome of the decision of Hon'ble Punjab and Haryana High Court in CWP No. 10595 of 2022 as well as Hon'ble NGT in OA No. 423 of 2022 as well as any Court of Law and Hon'ble NGT**

4. ***The recommendations of SEAC were taken up in the 146th meeting of SEIAA held on 20.09.2022; The Authority after perusal of relevant record & examination of facts, arrived at the conclusion that the project proponent to be granted extension of validity in the earlier Environment Clearance (dated 21.12.2016) as per the approved and accepted mining plan by DMG Haryana.***

It is pertinent to mention that one year Zero period conveyed by MoEF vide Notification No. S.O.221 (E) dated 18th January, 2021 for the Covid Period concession also stands included/covered.

Therefore, the Authority decided to extend the validity of the existing EC upto 20.12.2026 i.e. as per the approved Mining Plan dated 12.10.2021 issued by Mines & Geology Department, Haryana.

It is further relevant to place on the record that the Authority in its 145th Meeting held on 09.09.2022 in respect of Item No. 19, decided to allow addition of Boulder & Gravel in the EC dated 21.12.2016 of the Project Proponent, in pursuance to the letter dated 12.10.2021 & 05.01.2022 issued by Mines & Geology Department, Haryana and the recommendation made by SEAC in its 246th Meeting held on 23.08.2022.

Although, the decision of the Authority was uploaded on PARIVESH Web Portal, but letter for the same could not be issued till 13.09.2022 (process was under way), when Hon'ble Punjab & Haryana High Court in CWP No. 10588 of 2022 titled as M/s Ganga Yamuna Mining Co. V/s State of Haryana & Ors made certain observations vide order dated 13.09.2022 in regard to Mining of Boulders & Gravels at the site being used for Sand Mining by the Project Proponent.

In view of the above, The Authority decided to list again the Item No. 18 of 145th Meeting in its 146th Meeting held on 20.09.2022 to take a holistic & comprehensive view of the facts mentioned above.

The Authority keeping in view, the recommendations of the SEAC and observation of Hon'ble Punjab & Haryana High Court in the above mentioned case alongwith perusal of record, details received from Mines & Geology Department, Haryana decided as under:

1. Proposal for the extension of validity of EC dated 21.12.2016 allowed to be extended till 20.12.2026 as per the approved Mining Plan issued by Mines & Geology Department, Haryana.
2. Decision to add Boulders & Gravels as allowed in 145th Meeting will stand allowed with the conditions as made in the CWP No. 10588 of 2022 titled as M/s Ganga Yamuna Mining Co. V/s State of Haryana & Ors made certain observations vide order dated 13.09.2022.

Order dated 13.09.2022 is reproduced for the information & strict compliance of the Project Proponent:

CM-14169-CWP-2022 in/& CWP-10588-2022
M/S GANGA YAMUNA MINING CO. V/S STATE OF HARYANA & ORS

On the asking of the Court, Mr. Deepak Bhardwaj, DAG, Haryana, accepts notice on behalf of the State of Haryana. Counsel for the State submits that in the light of the order passed by the National Green Tribunal, dated 31.05.2022, the contractors have been restrained from mining boulders and gravel in the three contact areas. They are, therefore, now required to extract only sand.

This fact is disputed by the learned senior counsel for the applicant – petitioner.

To put the things to rest especially in the light of the order passed by the National Green Tribunal, dated 31.05.2022, mining of boulders and gravel from the three contract sites shall remain stayed till further orders. Application stands disposed of accordingly.

CWP-10588-2022

Reply to the writ petition be filed within a period of four weeks with a copy in advance to the counsel for the petitioner.

Counsel for the petitioner has not file the process fee and therefore, respondents No.4 and 5 could not be served. Process dasti only to effect service upon the said respondents for 03.11.2022.

It is made clear that in case the private respondents are not served for the next date of hearing, the Court would consider vacating the stay granted today.

13.09.2022

(AUGUSTINE GEORGE MASIH)
JUDGE

(ALOK JAIN)
JUDGE

In view of the above, Project Proponent is directed to ensure strict compliance of the directions made above without any exception, till the final outcome of the pending proceedings in the Hon'ble NGT & Hon'ble Punjab & Haryana High Court.

NOTE: The Authority deem it appropriate to again to clarify that the project proponent shall not undertake mining of Boulder & Gravel in the allotted mining areas, despite the facts that extension of validity in the earlier EC dated 21.12.2016 & addition of these items have been allowed by SEIAA to the Project Proponent.

(Pardeep Kumar, IAS)
Member Secretary,
State Level Environment Impact
Assessment Authority, Haryana, Panchkula.

Endst No: SEIAA/HR/2022/1590-1596 Dt. 07/10/2022

A copy of the above is forwarded to the following:

1. Director (IA Division), MoEF & CC, GoI, Indira Paryavaran Bhavan, Zor bagh Road-New Delhi-110003.
2. Chairman, State Environment Impact Assessment Authority, Bay No. 55-58, Prayatan Bhawan, Sector-2, Panchkula, Haryana
3. Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Panchkula.
4. Director, Environment & Climate Change Department, Haryana, Bay No. 55-58, Prayatan Bhawan, Sector-2, Panchkula, Haryana
5. Director General, Mines & Geology Department, Haryana
6. Regional Office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay's No. 24-25, Sector 31-A, Dakshin Marg, Chandigarh-160018.
7. Concerned File/ Office Copy

(Pardeep Kumar, IAS)
Member Secretary,
State Level Environment Impact
Assessment Authority, Haryana, Panchkula.

ANNEXURE R 16/8

Speed Post/E-mail

From

The Director,
Mines & Geology, Haryana,
DHI, Square, Plot No. 9, IT Park, Sector- 22,
Panchkula.

To

M/s JSM Foods Private Limited,
Corr. Address:- # 676, Sector-13, Urban Estate,
Karnal-132001.

Memo No. DMG/HY/Cont./M. G. East Block/YNR B-3/2015/4390
Dated Panchkula, the 12-7-2022

Subject: Application on behalf of M/s JSM Foods Pvt. Ltd. seeking copy of order passed by this office in relation to hearing conducted in pursuance of this office letter dated 23.06.2022.

Reference your letter dated Nil received on 08.07.2022 on the above noted subject.

2. Vide letter under reference, you have requested to provide the copy of the order passed in hearing held on 01.07.2022.

3. It is to inform you that in compliance with the order dated 31.05.2022 passed by the Hon'ble National Green Tribunal at New Delhi in OA No. 423 of 2022 -Mohider Pal & Anr Vs State of Haryana & Ors., you vide letter dated 07.06.2022 were directed that no mining of Boulder and Gravels are undertaken in the 03 mining contract areas, till further orders/modified by the Hon'ble NGT and the IT Cell was directed to stop the e-Rawaana portal of Boulder and Gravels of M/s JSM Foods Pvt. Ltd., the contractor of 'Mandoli Ghaggar East Block/YNR B-3, M/s JSM Foods Pvt. Ltd., the contractor of 'Mandoli Ghaggar West Block/YNR B-4 and M/s P. S. Buildtech, the contractor of 'Kanalsi Block/YNR B-5'. But the Mining Officer, Yamuna Nagar vide letter dated 17.06.2022 has informed that during checking of the portal, it has been found that the e-Rawaana of Boulder-Gravel-Sand are still generated by all these contractors.

4. Accordingly, in the light of information received from the Mining Officer, Yamuna Nagar, you were afforded an opportunity of personal hearing on

28.06.2022, but due preoccupancy of DMG, the hearing was not held. The next date of hearing in this matter was fixed on 01.07.2022.

5. During the course of hearing, the matter was considered and the IT Cell of the department was directed to carry out corrections to change the e-Rawaan generation for Boulder and Gravel to Sand only of the contractor firm. The IT Cell has informed that in compliance with the order of the Hon'ble NGT, the Boulder, Gravel and Sand of 'Mandoli Ghaggar East Block/YNR B-3' was stopped. To accomplish this task on e-Rawaana Portal, necessary changes were made and only Sand option was given to the contractor firm. However, due to technical glitch, the modification would not updated properly in all tables of database pertaining to this matter on e-rawaana. IT Cell has also informed that the BGS of the above said mine will now be shown as Sand in their account w.e.f. **17.06.2022.**

Mining Engineer,
for Director, Mines & Geology,
Haryana.

Endst No. DMG/HY/Cont./M. G. East Block/YNR B-3/2015/ Dated:

A copy is forwarded to Mining Officer, Mines and Geology Department, Yamuna Nagar for information. He is directed to ensure that the contractor shall not undertake mining of boulder and Gravel till further order dated 31.05.2022 are modified by the Hon'ble NGT.

Mining Engineer
for Director, Mines & Geology
Haryana.

ANN. R-2/13.

हरियाणा सरकार

As per NGT orders dated 31.05.2022 in OA no. 423 of 2022 Mohinder Pal & others V/s State of Haryana & Others the sale of boulder and gravel of the contractor firm was stopped. On the same the contractor firm was afforded a course of hearing today. During the course of hearing, they submitted that after the orders of Hon'ble NGT, they have dispatched only sand but as there was no option available to contractor in the portal account to generate e-ravaana for sand only due to some technical glitch the bills/rawaana are showing BGS. The Mining Officer, Yamunanagar present during the course of hearing stated that on inspection, it has been verified that the Company has not sold any boulder and gravel after the orders passed by NGT and only sand has been sold.

Keeping in view the above facts and circumstances, The IT Cell of the Department shall carryout necessary corrections to change the e-ravaana generated for boulder, gravel and sand to sand only and the contractor firm shall be allowed to generate e-ravaana for sand only and the production of boulder & gravel (27.45% of total production) allowed to the firm vide Order dated 05.01.2022 shall be excluded from total production under EC.

DMG
1/7

D. K. BEHERA, IAS
DMG

ME(SS)

IT cell
9-9

1/7

GOVERNMENT OF HARYANA
KEEP HARYANA CLEAN AND POLLUTION FREE

ANNEXURE R2/13

हरियाणा सरकार

As per NGF orders dated 11.05.2022 in DA no. 423 of 2022 Mohinder Pal & others V/s State of Haryana & Others the sale of boulder and gravel of the contractor firm was stopped. On the same the contractor firm was afforded a course of hearing today. During the course of hearing they submitted that after the orders of Hon'ble NGT, they have dispatched only sand but as there was no option wailable to contractor in the portal account to generate eravaana for sand only due to som rechnical glitch the bills/rawaana are showing IGS. The Masing Oliver, Yatmasnagar present during the course of hearing stated that on pection, it has been verified that the Company has not sold any boulder and gravel after the orders pasted by NGT and only sand has been sold

Keeping in view the above facts and circumstances, the IT Cell of the Department shall carryout necessary corrections to change the e-ravaana generated for boulder, gravel and sand to sand only and the contractor firm shall be allowed to generate e- ravaana for sand only and the production of boulder & gravel (27.45% of total production) allowed to the firm vide Order dated 05.01.2022 shall be excluded from total production under EC.

D.K BEHERA,IAS

DMG

GOVERNMENT OF HARYANA

KEEP HARYANA CLEAN AND POLLUTION FREE

ANNEXURE R 16/9

जिला यमुना नगर

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District Survey Report

District Survey Report

District Survey Report

Title	Date	View / Download
Final District Survey Report	24/05/2018	View (196 KB)

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From

The Director,
Mines and Geology, Haryana,
30-Bays Building, Sector-17, Chandigarh.

To

The Deputy Commissioner,
Yamuna Nagar.

Memo No. DMG/HY/DSR/YNR/2017/
Dated Chandigarh, the

Sub:- Submission of 'District Survey Report' for sustainable Sand Mining-Regd.

Please Refer to the Mining Officer, Yamuna Nagar letter memo No. 2709 dated 11.08.2017 as well as a copy endorsed to your office on the subject noted above.

2. The 'District Survey Report' (DSR) are required to be prepared and finalized by the DEIAA in line with the procedure laid down by the Ministry of Environment & Forest, Climate Change, Government of India in its notification dated 15.01.2016. The draft DSR sent by MO, Yamunanagar after approval of the committee, as per said needs to be placed in the public domain by keeping its copy in the Collectorate and posting it on the district website for 21 days for seeking comments of the general public. The comments received if any, shall be considered and if found fit, shall be incorporated in the final report and the same be finalized by the 'District Level Environment Impact Assessment Authority (DEIAA).

3. Keeping in view the above position, it is requested that further necessary action to place the 'District Survey Report' duly approved by the Committee headed by you on the website of the district for seeking response of the public and, if any suggestion found fit, be incorporated in the final report.

Sd/-
Director, Mines and Geology,
Haryana.

Regd. / Speed Post.

Endst. No. DMG/HY/DSR/YNR/2017/ 4825 Dated: 30/8/2017.

A copy of 'District Survey Report' is forwarded to the Mining Officer, Yamuna Nagar for further necessary action.

State Mining Engineer,
for Director, Mines and Geology,
Haryana.

प्रेषक,

खनन अधिकारी,
खान एंव भू–गर्भ विभाग,
यमुनानगर।

सेवा में,

उपायुक्त,
यमुनानगर।

क्रमांक / खनन / यमुनानगर / ३६६७

दिनांक: 15/9/2017

विषय : जिला सर्वे रिपोर्ट को अपलोड करवाने बारे।

उपरोक्त विषय पर निदेशक खान एंव भू विज्ञान विभाग चण्डीगढ के पत्र क्रमांक DMG/HY/DSR/YNR/2017/4825 दिनांक 30.08.2017 के संदर्भ में।

इस सम्बन्ध मे आपको सूचित किया जाता है कि निदेशक, खान एंव भू विज्ञान विभाग, चण्डीगढ के पत्रानुसार जिला सर्वे रिपोर्ट को आम आदमी के सूझाव व आपत्ति के लिए जिले की वेबसाइट पर 21 दिन के लिए अपलोड की जानी है। अतः आपसे अनुरोध है कि खनन से सम्बन्धित उक्त जिला सर्वे रिपोर्ट वेबसाइट पर अपलोड करवाने की कृपा करे। यह आपको सूचनार्थ एंव आवश्यक कार्यवाही हेतु प्रेषित है। कृपया।

खनन अधिकारी
खान एवं भू–गर्भ विभाग
यमुनानगर।

From

The Director,
Mines and Geology,Haryana,
30-Bays Building, Sector-17, Chandigarh.

To

The Deputy Commissioner,
Yamunanagar.

Memo No. DMG/HY/DSR/YNR/2017/ 7214
Dated Chandigarh, the 27.11.2017

Sub : Submission of District Survey Report for Sustainable Sand mining-regd.

Reference this office memo No. DMG/HY/DSR/YNR/2017/4824 dated 30.08.2017 on the subject noted above.

2. Vide letter under reference duly approved 'District Survey Report' of district Yamunanagar was sent to you with request to place the same on website of the district for seeking response of the public so that suggestions received if any, and found fit, shall be incorporated in the final report. The stipulated period of 21 days has already been elapsed.

3. I have been directed to request you to intimate the objections/suggestions received, if any, so that District Survey Report could be finalized.

State Mining Engineer,
For Director, Mines and Geology,
Haryana.

Endst. No. DMG/HY/DSR/YNR/2017/ Dated:

A copy is forwarded to Mining Officer, Yamunanagar with direction to take up the matter with the Deputy Commissioner, Yamunanagar and ensure timely supply of objections/suggestions received, if any.

State Mining Engineer,
For Director, Mines and Geology,
Haryana.

प्रेषक,

उपायुक्त,
यमुनानगर।

सेवा में,

निदेशक,
खान एवं भू-गर्भ विभाग, हरियाणा,
चण्डीगढ़।

क्रमांक / खनन / यमुनानगर /

दिनांक:-

विषय : **Submission of District Survey Report for Sustainable sand Mining-Regd.**

उपरोक्त विषय पर आपके कार्यालय के पत्र क्रमांक DMG/HY/DSR/YNR/2017/7214 दिनांक 27.11.2017 के संदर्भ में।

इस सम्बन्ध में आपको सूचित किया जाता है कि District Survey Report को जिला प्रशासन यमुनानगर की वेब साइट पर अपलोड किया गया था जिसमें आम जनता से इस रिपोर्ट को फाइनल करने से पहले सुझाव / आपत्ति मांगी गई थी 21 दिन बीत जाने के बाद आम जनता द्वारा कोई सुझाव / आपत्ति नहीं आई है। इसलिए District Survey Report को फाइनल करके आपको आगामी कार्यवाही हेतु भेजा जाता है।

उपायुक्त,
यमुनानगर।

क्रमांक / खनन / यमुनानगर / 522 / MR / 20 दिनांक - 12-1-2018

इसकी एक प्रति खनन अधिकारी यमुनानगर को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है।

उपायुक्त,
यमुनानगर।

Registered

From

The Director,
Mines & Geology, Haryana,
30 Bays building, Sector-17, Chandigarh.

To

The Deputy Commissioner,
Yamuna Nagar.

Memo No. DMG/HY/DSR/YNR/2017/
Dated Chandigarh, the

24/11/18
M/
Uploaded
on 15/11/18

Subject: **Submission of District Survey Report for Sustainable Sand Mining-Reg.**

Reference your letter No. Mining/YNR/521/MA/200 dated 12.01.2018 on the subject cited above.

2. The draft 'District Survey Report' of district Yamunanagar was sent to you for placing the same on the website of the district for seeking suggestions/objections from the public, so that suggestion/objections received, if any and found fit, can be incorporated in the final report. However, vide letter under reference it has been informed that no suggestion/objections from the public have been received and the draft DSR has been finalized as such.

3. I have been directed to request you to place the final 'District Survey Report of district Yamuna Nagar on the website of the District Administration website for information of general public. A copy of the same is enclosed for your ready reference please.

DA: As above.

-sd
Mining Engineer,
for Director, Mines and Geology,
Haryana.

Endst. No. DMG/HY/DSR/YNR/2017/ 232 Dated 12.01.2018

A copy is forwarded to the Mining Officer, Department of Mines and Geology, Yamuna Nagar for information and necessary action. He is directed to ensure uploading of final DSR on the website of the District Administration.

R K Sharma
Mining Engineer,
for Director, Mines and Geology,
Haryana.

ANNEXURE R 16/10

DISTRICT SURVEY REPORT
(RIVER BED MINING)

As per Sustainable Sand Mining Management Guidelines, 2016;
Enforcement & Monitoring Guidelines for Sand Mining, 2020;
of Ministry of Environment, Forest and Climate Change, Govt. of India
and
Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012

YAMUNANAGAR DISTRICT, HARYANA

CONTENTS

Sr. No.	PARTICULARS	Page No.
1.	**CHAPTER 1: INTRODUCTION**	**1-4**
	1.0 General information	1
	1.2 Statutory framework	2-3
	1.3 Methodology for DSR Preparation	4
	1.3.1 Identification of data sources	4
	1.3.2 Drafting of District Survey Report	4
2.	**CHAPTER 2: OVERVIEW OF MINING ACTIVITY IN THE DISTRICT**	**5-16**
	2.0 Overview	5
	2.1 Mode of grant of mineral concession	5-6
	2.2 Method of mining and conditions in which mining in river bed areas is to be allowed	7-8
	2.3 Method of mining in areas outside river bed	8
	2.4 Method of mining in river bed areas (manual or semi-mechanized/mechanized)	9
	2.5 Areas selected for mining in district Yamuna Nagar	10-16
	2.5.1 Background	10-12
	2.5.2 Areas selected for mining in November/December, 2013 and thereafter (The areas at present on contracts or to be granted for mining contracts)	13-14
	2.5.3 Annual capacity of areas selected for mining of minor minerals	14-15
3.	**CHAPTER 3: PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT**	**17-21**
	3.0 Introduction	17-18
	3.1 Annual deposition factor	18
	3.2 Process of deposition	19-21
	3.2.1 Mode of sediment transport in rivers	20-21
	3.2.1.1 Dissolved Load	20
	3.2.1.2 Suspended Load	20
	3.2.1.3 Saltation Load	20
	3.2.1.4 Wash Load	20
	3.2.1.5 Bed Load	21

4.	**CHAPTER 4: GENERAL PROFILE OF THE DISTRICT**	**22-40**
	4.0 Profile of the district	22-24
	4.1 Land utilization pattern in the district	24
	4.2 Flora and fauna/Eco-sensitivity	25-27
	4.3 Physiography of district	28-29
	4.4 Soil	29
	4.5 Hydrogeology	30
	4.6 Drainage & Catchment	31-33
	4.7 Climate & Rainfall	33-34
	4.8 Seismicity	35
	4.9 Flood Hazard Zone	35-36
	4.10 Geology and Mineral Wealth	37-38
	4.11 Reclamation and restoration of mining area and provision of fund for the same	39-40
5.	**CHAPTER 5: ESTIMATION OF DEPOSITS AND REPLENISHMENT**	**41-52**
	5.0 General Information	41-42
	5.1 Common methods for replenishment	42-46
	5.1.1 Catchment yield calculation	42
	5.1.2 Peak flood discharge calculation	42-43
	5.1.3 Bed load transport calculation	43-45
	5.1.4 Sediment yield estimation	45-46
	5.2 Illustrative example for carrying out replenishment studies	47-50
	5.2.1 Identification of areas of aggradation/deposition	48-50
	5.2.1.1 Field data collection	48
	5.2.1.2 Criteria for identification of no mining zones	48-49
	5.2.1.3 Data Compilation	49-50
	5.3 Methodology for calculating the total potential of minor mineral in the river bed annual deposition	50
	5.4 No mining zone	50-51
	5.5 Details of potential sources/sites of river-bed material	52
6.	**CHAPTER 6: TRANSPORTATION OF ROUTE PLAN**	**53**
	6.0 General connectivity	53
	6.1 Transportation route plan for individual mining sites	53

7.	**CHAPTER 7: REMEDIAL MEASURES TO MITIGATE THE IMPACT OF MINING**	**54-60**
	7.0 Environment sensitivity	54
	7.1 Remedial measures	54-58
	7.1.1 Sustainable mining practices	54-55
	7.1.2 Monitoring the mining of the minerals and their transportation	56
	7.1.3 Noise management	56
	7.1.4 Air pollution and dust management	56
	7.1.5 Bio-diversity protection and compensation	56-57
	7.1.6 Management of instability and erosion	57
	7.1.7 Waste Management	57
	7.1.8 Baseline surveys and reclamation plan on completion of mining operation	57-58
	7.2 Risk assessment and disaster management plan	58-
	7.2.1 Identification of risks due to rover bed mining	58-59
	7.2.2 Mitigation measures to prevent accident during loading and transportation	59
	7.2.3 Measures to prevent accidents during inundation/flooding	59
	7.2.4 Measures for mitigation to quick sand condition	59
	7.2.5 Disaster Management Plan	60
8.	**CHAPTER 8: PUBLIC CONSULTATION**	**61**
	8.0 Public consultations	61
	8.1 Procedure for public consultation	61
9.	**CHAPTER 9: CONCLUSION**	**62-63**
	9.0 Conclusions	62-63

LIST OF FIGURES

Sr. No.	PARTICULARS	Page No.
1.	Figure 1: The Hjulstrom curve diagram	19
2.	Figure 2: Modes of sediment transport	21
3.	Figure 3: District map of Yamuna Nagar	23
4.	Figure 4: Land use & land cover map of Haryana	24
5.	Figure 5: Eco-sensitive zone map of Kalesar National Park & Wildlife Sanctuary, Yamunanagar	26
6.	Figure 6: Geomorphological map of Yamunanagar	28
7.	Figure 7: Soil texture map of Haryana	29
8.	Figure 8: Hydrogeological map of district Yamuna Nagar	30
9.	Figure 9: Drainage map of major rivers	31
10.	Figure 10: Drainage map of district Yamuna Nagar	32
11.	Figure 11: Flood hazard map of Haryana	35
12.	Figure 12: Flood zone map of district Yamuna Nagar	36
13.	Figure 13: Geological map of district Yamuna Nagar	37

LIST OF TABLES

Sr. No.	PARTICULARS	Page No.
1.	Table 1: Requirement of DSR and the year-wise modification of decisions/guidelines	2-3
2.	Table 2: Details of proposed mining blocks with estimated production capacity	15
3.	Table 3: Details of production of minerals during the last 03 years in the district Yamunanagar	16
4.	Table 4: Details of mineral based industry in the district Yamunanagar	16
5.	Table 5: Details of royalty/revenue received in last three years in the district Yamunanagar	16
6.	Table 6: General profile of the district Yamunanagar	23-24
7.	Table 7: Details of drainage system with description of main rivers	30
8.	Table 8: Details of major rivers/streams in the district Yamunanagar	32
9.	Table 9: Details of major drains in the district Yamunanagar	33
10.	Table 10: Distribution of rainfall (in mm), District Yamunanagar	34
11.	Table 11: Regional stratigraphic (Tertiary) sequence of Haryana	38
12.	Table 12: Estimation of few mineral reserves (Based on replenishment study: Pre-monsoon and Post-Monsoon surveys)	47
13.	Table 13: Details of potential mining sites in the district Yamunanagar	52

LIST OF ANNEXURES

Sr. No.	PARTICULARS	Annexure No.
1.	List of existing mining contracts of the district with area, location & period of each minor mineral	Annexure-I
2.	List of proposed river bed mining contracts of the district with area, location & period of each minor mineral	Annexure-II
3.	Cross-sectional maps of the deposition blocks/proposed mining sites	Annexure-III
4.	Mineral deposits of proposed mining sites are illustrated in satellite images	Annexure-IV

CHAPTER 1
INTRODUCTION

1.0 GENERAL INFORMATION

The District Survey Report of Yamuna Nagar District has been prepared in compliance of the guide line of Ministry of Environment, Forests & Climate Change (MoEF&CC), Government of India vide notification S.O. 1533 (E) dated 14th Sept., 2006 and subsequent MoEF&CC notification S.O. 141 (E) dated 15th Jan., 2016. This report shall guide systematic and scientific utilization of natural resources, so that present and future generation may be benefitted at large. Further, MoEF&CC published a notification S.O. 3611 (E) dated 25th July, 2018 and recommended the format for District Survey Report.

The objectives of the District Survey Report (DSR) are as following:

1. Identification and quantification of mineral resources and its optimal utilization.
2. To regulate the sand & gravel mining in the country, identification of site-specific end-use consumers and reduction in demand & supply gaps.
3. Use of information technology (IT) & latest scientific methods of mining for surveillance of the river bed mining at each step.
4. District Survey Report shall enable environmental clearance for cluster of sand & gravel mines. It shall assist concern department during post environmental clearance monitoring.
5. To control the instance of illegal mining and flood in the area.
6. To maintain the livelihood of aquatic habitat.
7. To protect the incursion of ground water in the area. Limiting extraction of material in floodplains to an elevation above the water table generally disturbs more surface area than allowing extraction of material below the water table.
8. To keep accumulated data records viz. details of mineral resources, potential areas, leases, approved mining plan, co-ordinates of a district at one place.
9. To maintain the records of revenue generation.

1.2 STATUTORY FRAMEWORK

Requirement of the District Survey Report and the year-wise modification of decisions and guidelines are furnished in the table below:

Table 1: Requirement of DSR and the year-wise modification of decisions/guidelines

Year	Particulars
1994	The Ministry of Environment, Forest & Climate Change (MoEF&CC) published Environmental Impact Assessment notification, 1994 which is only applicable for the major minerals more than 05 ha.
2006	Minerals more than 05 ha., In order to cover the minor minerals also into the preview of EIA, the MoEF&CC issued EIA notification SO 1533 (E), dated 14th September 2006, made mandatory to obtain environmental clearance (EC) for both major & minor minerals more than 05 ha.
2012	Further, the Hon'ble Supreme Court vide order dated the 27th February, 2012 in I.A. No. 12-13 of 2011 in Special Leave Petition (C) no. 19628-19629 of 2009, in the matter of Deepak Kumar etc. V/s State of Haryana and others etc., ordered that "leases of minor minerals including their renewal for an area of less than five hectares be granted by the States/Union Territories only after getting environmental clearance from MoEF&CC"; and Hon'ble National Green Tribunal, order dated the 13th January, 2015 in the matter regarding sand mining has directed for making a policy on environmental clearance for mining leases in cluster for minor minerals.
2016	The MoEF&CC in compliance of above Hon'ble Supreme Court's and NGT's order has prepared "Sustainable Sand Mining Guidelines (SSMG), 2016" in consultation with State Governments, detailing the provisions on environmental clearance for cluster, creation of District Environment Impact Assessment Authority, preparation of District Survey Report and proper

	monitoring of minor minerals. There by issued notification dated 15.01.2016 for making certain amendments in the EIA notification, 2006 and made mandatory to obtain EC for all minor minerals. Provisions have been made for the preparation of District Survey Report (DSR) of river bed mining and other minor minerals.
2018	MoEF&CC published a notification S.O. 3611 (E) dated 25th July, 2018 and recommended the format for District Survey Report. The notification stated about the objective of DSR i.e. "Identification of areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area".
2019	The main objective of Sand Mining Policy, 2019 to ensure that sand mining is done in an environmentally sustainable manner, to ensure availability of adequate quantity of sand, to increase the number of settles to ensure generation of employment.
2020	Enforcement & Monitoring Guidelines for Sand Mining (EMGSM), 2020 has been published modifying Sustainable Sand Mining Guidelines, 2016 by MoEF&CC for effective enforcement of regulatory provisions and their monitoring. The EMGSM, 2020 directed the states to carry out river audits, put detailed survey reports of all mining areas online and in the public domain, conduct replenishment studies of river beds, constantly monitor mining with drones, aerial surveys, ground surveys and set up dedicated task forces at district levels. The guidelines also push for online sale and purchase of sand and other river bed materials to make the process transparent. They propose night surveillance of mining activity through night-vision drones.

1.3 METHODOLOGY ADOPTED FOR DSR PREPARATION

The District Survey Report is comprised of primary data and secondary data published and endorsed by various departments & websites in respect of the geology of the area, mineral resources, climate, topography, landform, forest, rivers, soil and transportation etc. All the data has been reviewed, selected, and collated in order to prepare an authentic and reliable District Survey Report. Besides this, procedure as defined in the MoEF&CC notification dated 25.07.2018 has been followed for preparing the various chapters of this District Survey Report.

1.3.1 IDENTIFICATION OF DATA SOURCES

District Survey Report has been prepared based on the primary database through field surveys and secondary data base collected from different sources. Field study involves assessment of the mineral resources of the district by means of pitting/trenching for authentication of sand bar/riverine deposition at specific intervals. This provides a clear picture of the extent and distribution of minor minerals in the river beds and other deposition areas. Potential mineral resources have been identified based on DGPS field survey. All sand bars/other riverine deposit areas identified through satellite images will be accurately surveyed on ground to determine the pre monsoon and post monsoon mineral deposits from which the replenishment rates will be determined. The secondary data sources which are used in the survey report are mostly Government published data or scientific reports published in reputed journals. Mining lease details and the revenue generated from the mining of minor minerals have been determined on the basis of available data from the mining department.

1.3.2 DRAFTING OF DISTRICT SURVEY REPORT

The District Survey Report is prepared to accurately identify the potential mineralized zones with respect to minor minerals including river sand, boulder and gravel, their suitability for mining, and the anticipated environmental impacts on account of the permitted mining operations. The DSR provides details of the minor mineral potential zones after taking into consideration objections, if any, at public hearings.

CHAPTER 2
OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

2.0 OVERVIEW

The National Mineral Policy, 1993 facilitated the growth of mineral based industries through investment in the private sector. As per the policy, processing units which desire to develop captive mines to secure assured supplies of raw material are allowed foreign equity participation in the manner and to the extent applicable to such processing units. On one hand it is possible to excavate sand and gravel from sources located in or near river or stream channels within acceptable environmental limits provided that proper safeguards and practices are utilized. On the other hand, development of sand and gravel from sources located in or near river or stream channels may create far reaching environmental impacts if proper safeguard practices are not followed.

In Yamunanagar District, the rivers that pass through the district are Yamuna, Pathrala, Boli, Somb, Saraswati and Chautang. Fluvial deposits of boulder, gravel, sand, silt, and clay can be found in these channels.

2.1 MODE OF GRANT OF MINERAL CONCESSION

Before giving details of actual sites/number of sites or mineral concessions it would be appropriate to explain that the mineral concession in respect of minor minerals are granted as per the provisions of the State Mining Rules, framed by the State Government in exercise of powers conferred under section 15 of the Mines and Minerals (D&R) Act, 1957. The State of Haryana at the time of bifurcation opted prevailing Rules namely "Punjab Minor Mineral Concession Rules, 1964". These Rules were amended from time to time as per policy of the State Government. The Hon'ble Supreme Court vide its order dated Feb, 27 2012 directed all State Governments to revise their State Mining Rules making provisions in an accordance with various recommendations contained in a report of the MoEF&CC, GoI on mining of the minor minerals

and the model draft guidelines issued by the Ministry of Mines, GoI. Accordingly, the State of Haryana framed & notified on 20.06.2012 comprehensively revised Rules namely, the **"Haryana Minor Mineral Concession, Stocking, Transportation of Minerals, and Prevention of Illegal Mining Rules, 2012"**, repealing the prevailing Rules namely "Punjab Minor Mineral Concession Rules, 1964".

The mineral concessions in the Haryana are being granted in the form of **"Mining Contract"** or **"Mining Lease"** through competitive bidding process. The mining contracts are granted for a minimum period of 07 years and maximum period of 10 years whereas the mining leases are granted for a minimum period of 10 years and maximum period of 20 years. In district Yamuna Nagar mineral concessions are/were granted in the form of mining contracts for the period varying between 07 to 10 years. The contracts are being granted through open auction/e-auction mode. The mineral concessions are being granted subject to condition that actual mining operation shall be allowed only after environment clearance is/are obtained from the competent authority as per requirement of EIA notification dated 14.09.2006 of the MoEF&CC, GoI.

The mineral concession holders are required to prepare a detailed **"Mining Plan"** for their specific project through Registered Qualified Person (RQP) and get in approved from authorized officer of the State Government. The exhaustive mining plan are prepared interalia giving details of mineral reserves, method of mining, extent of proposed mining and other related details. Based on these details itself the project proponents/mineral concession holders obtain environmental clearances. After obtaining the environmental clearances, to comply with requirement of Air Act, 1981 the **"Consent to Establish"** and **"Consent to Operate"** from State Pollution Control Board are also obtained before actual mining. The above said provisions mainly relates to mineral conservation and environmental protection. With regards to provisions related to safety in mines and welfare of labours provisions under the Mines Act, 1952 are ensured by the Directorate General Mines Safety, a department under the Ministry of Labour, Government of India.

2.2 METHOD OF MINING AND CONDITIONS IN WHICH MINING IN RIVER BED AREAS IS TO BE ALLOWED

The river bed areas apart from other related conditions for mining are allowed to excavate minerals (Boulder, Gravel or Sand) to ensure safety of river bed structures and the adjoining areas on the following specific conditions:

- No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge on up-stream side and ten times the span of such bridge on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;
- There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorized by him;
- The maximum depth of mining in the river-bed shall not exceed three meters measured from the un-mined bed level at any point in time with proper bench formation;
- Mining shall be restricted within the central 3/4th width of the river/ rivulet;

  Note: The above said conditions have been decided after detailed discussions and recommendations of the PWD (B & R) department and Irrigation department, Haryana.

As the mining in river bed remains restricted in the central 3/4th part of the river bed, the area left on both side of the river bank not only ensures the safety of banks (bank cutting due to water stream) but also ensures that in the central part of river, water stream flows smoothly during rains and process of river meandering does not occur.

The excavator/JCBs are being deployed to remove mineral from river bed up to maximum depth of 03 meters layer from general level of the bed. The mining in the river bed are undertaken in mechanized manner. At times the RQPs do refers the excavation in river bed mining through excavators as "Semi Mechanized Mining".

The mineral excavated is directly loaded in the vehicles/dumpers and the vehicle owners & drivers take away the mineral directly to the stone crushers or screening plants or consumers. In certain cases mineral concession holders stacks mineral on the river bank in case are not able to sell the material on actual mining itself.

2.3 METHOD OF MINING IN AREAS OUTSIDE RIVER BED

- The excavation of minerals found outside river bed areas are also being permitted. The mining of Boulder-Gravel-Sand from areas outside river bed is similar to that of any kind of open cast mining.
- As the minerals are found in and adjoining river bed areas also, therefore, to ensure that mining from outside do not affect rivers, no mining is being permitted in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 meters in case of Tangri, Markanda and Ghaggar and 100 meters on either side of all other rivers/ rivulets.
- The mineral excavation from areas outside river bed is being permitted subject to condition that a safety margin of two meters **(2m)** shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf. Further the depth of excavation of mineral shall not exceed nine meters **(9m)** at any point of time.
- The method of excavation is such that the mining contractors deploys earth moving machineries and after removing the top layer of original soil, varying between 01 to1.5 meters, stack the same separately. Thereafter removes the minor mineral deposits. After undertaking the mining i.e. removing of mineral layer up to a maximum depth of 09 meters, the top stacked soil is again spread back into the pit. The mined out area/land is put to reuse for cultivation after spreading the top soil. The landowners/farmers give their land to the contractors for mining after getting compensation, mutually settled between the landowners and the mining contractor.

2.4 METHOD OF MINING IN RIVER BED AREAS (MANUAL OR SEMI-MECHANIZED/MECHANIZED)

- The Hon'ble NGT with regards to river bed mining has specifically desired to examine the mode of mining – shall the same be manual or semi mechanized/mechanized.
- There is no specific definition of **Semi-Mechanized Mining.** The term semi-mechanized mining in general is used where method of working in general are undertaken mechanically, however, some operations are also undertaken manually. Therefore, the semi mechanized mining or mechanized mining, is the same method of working. Sometime mechanized mining with light machines are also referred as semi- mechanized mining.
- Whereas **Manual** mining operations are undertaken using conventional hand tools and operations are only labor intensive. As per requirement in manual mining lifting of sand and directly loading it in the tractor trolleys etc. is being carried out through labors itself.
- The **Mechanized** mining operations in respect of river bed mining are undertaken with the help of excavator-cum-loaders. In this process mineral is lifted/excavated from the river bed through excavator-cum-loaders and directly loaded in dumpers or other mode of transport. The vehicles carrying the mineral from mines to site of use/site of construction or sale stocks outside lease hold areas (*an independent business than that of mining*).
- In the current scenario it is impractical to undertake manual mining because:-
  - The labours are not easily available;
  - Manual mining cannot be undertaken in systematic and scientific manner as compared to mechanical mining which can be undertaken systematic/scientific and controlled mining. In case of manual mining to achieve desired level of production more number of manpower would be required meaning thereby human interface within river bed area would increase and more ecological damage would be caused.
- The method of mining even otherwise cannot be uniform even for same area and all the methods have their own pros and cons, however, considering the current scenario wherever feasible mechanized (semi-mechanized or mechanized is same thing) mining should be preferred over manual method.

2.5 AREAS SELECTED FOR MINING IN DISTRICT YAMUNA NAGAR

2.5.1 BACKGROUND

As per rough estimate total area of rivers beds (all rivers and tributaries/rivulets) passing through district Yamuna Nagar is about 28 to 30 sq. km. and approximately about 90 sq. km. area outside river bed is also having mineral deposits; a larger part of which is otherwise under various uses including agriculture & horticulture. As regards selection of area for mining it may be pointed out that:-

- Earlier, (about 16-18 years back) mineral concession/mining contracts were being granted on revenue estate basis (without giving any specific details of areas), subject to various restrictions. The mineral concession holders used to undertake mining in areas after leaving restricted area.
- Initially about **120 villages** were being offered for mining, however, over a period of time the number of villages/quarries reduced to about **67**, as area of some of the villages came under other restrictions either because of construction of some bridges on river bed or due to other development projects including habitation.
- The mode of grant of mining contracts of individual quarries/revenue estates in Yamuna Nagar district was changed in late 90's and instead granting individual quarries on contract, numbers of adjoining quarries were clubbed for the purpose of granting mineral concessions. This mode was further changed and all minor mineral quarries of the district were given "as one unit". In this way their used to be a single contractor for all minor mineral quarries **"district as one unit".** In district Yamuna Nagar last such contract for "district as one unit" was granted on 11.04.2004 for a period up to 31.03.2009.
- Needless to state that such mineral concession areas used to have even the areas having no mineral deposits, the areas otherwise not permissible for mining. The mineral concession holders were under obligation to undertake mining only in the areas free from all restrictions and as per prevailing rules and regulations.

- Mineral concessions for minor mineral prior to 14.09.2006 were not required to obtain environmental clearance.
- The EIA notification dated 14.09.2006 became applicable for fresh contracts/leases and in the year 2008 for grant of mineral concessions in respect of other areas in the State. The fresh auctions were notified subject to condition that mining will be allowed to be undertaken only after prior environmental clearance is obtained as per requirement of EIA notification dated 14.09.2006 of MoEF&CC, GoI. However, said condition was challenged by some prospective bidders on the plea that the notification dated 14.09.2006 was not applicable for mining of minor minerals.
- The operation of notification dated 14.09.2006 for mining of minor mineral was stayed by the Hon'ble Punjab and Haryana High Court vide its interim order dated 07.04.2008 in CWP No. 4578 of 2008-Chandi Mandir Stone Crusher Consumer Company V/s Union of India and Others.
- The State could not have granted long term contracts during the pendency of said case because operation of the notification was under stay and in case long term contracts were granted the mineral concession holders would have claimed that at the time of grant the notification was not applicable for them or may have sought to cancel the contract.
- Subsequently, the Hon'ble High Court on 15.05.2009 while disposing of the above said writ petition (along with CWP No. 20134 of 2004 Vijay Bansal V/s State) upheld that notification dated 14.09.2006 was applicable for mining of minor minerals also.
- However, as regards the process of obtaining the prior environmental clearance, the Hon'ble High Court directed the process to be followed in two parts. In the first stage, it was directed that the state of Haryana would submit the ToRs to the EAC and the EIA report will be prepared by Expert Appraisal Committee (EAC) in the MoEF&CC, GoI before conducting the auctions. Subsequent to the holding of the auctions, the successful bidder shall obtain the prior environmental clearance from the competent authority.
- The Hon'ble High Court, considering that some time would be required for completing the process as per above, and the general public would face problems due to sudden closure of

mining, permitted mining without environmental clearance for the period up to 28.02.2010.

- Accordingly, no long term contact in Yamuna Nagar area could be granted due to above litigation and after expiry of the last contract the mining operations was allowed in district Yamuna Nagar (as well as in other part of the state) for the period of up to 28.02.2010 without environmental clearance as per orders of the Hon'ble High Court.
- However, the order dated 15.05.2009 of the Hon'ble High Court relating to preparation of EIA report by the State Government was not acceptable to the MoEF&CC, GoI. The MoEF&CC was of the view that state being regulating agency cannot prepare the said report at its own. Therefore, the applications submitted by State of Haryana for approval of ToRs were not considered.
- The MoEF&CC initially filed a review application before the Hon'ble High Court and thereafter SLP before the Hon'ble Supreme Court. During the pendency of said matter the State of Haryana neither could take further action relating to preparation of EIA report nor could auction its minor mineral areas for grant of mineral concessions subject to condition that environmental clearance shall be obtained by the project proponent.
- The mining in district Yamuna Nagar and other parts of the State came to a grinding halt on 01.03.2010. The mining in the district Yamuna Nagar remained closed. The mining operations prior to 01.03.2010 were either undertaken by the contractors to whom contract was granted prior to 14.09.2006 or under special dispensation granted by the Hon'ble High Court to operate mines without environment clearance till 01.03.2010.
- Subsequently, the Hon'ble Supreme Court on 28.10.2013 while disposing of the SLP No. 729 of 2011 of the MOEF&CC, GoI held that prior environmental clearance is to be obtained by the concerned mining lease holders and not by the State Government. In other words the process for obtaining prior environmental clearance was to be followed as prescribed by MoEF&CC, GoI under its notification dated 14.09.2006 as amended to time to time (uniformly applicable for country).
- In view of above the State of Haryana in November, 2013 issued notifications for grant of

mineral concessions in various parts of the State including district Yamuna Nagar through open auctions held in December, 2013.

- Recently, 08 mining sites have been auctioned in the Yamuna Nagar District.

2.5.2 AREAS SELECTED FOR MINING IN NOVEMBER/DECEMBER, 2013 AND THEREAFTER (THE AREAS AT PRESENT ON CONTRACTS OR TO BE GRANTED FOR MINING CONTRACTS)

- In November, 2013 it was decided that instead of the auctioning all of minor mineral quarries of a district as a single unit, the same should be granted in the form of big mining units. The mineral concessions for district as one unit were found to be resulting in monopoly of a few in the business of mining in a district.

  At the cost of repetition it is stated that mineral concession areas of large size blocks/units used to have even such areas which otherwise were not permissible for mining. The restricted areas were not meant to be used for actual mining operations but otherwise permissible for subsidiary activities like installation of check posts/weighbridges etc.
- In December, 2013 a total of 16 mining blocks having contiguous area were carved out and were auctioned as 06 separate units (one unit was having number of blocks) having total area of 3601.62 hectares. The said mineral concessions were granted subject to condition that mining would be allowed to be commenced only after prior environmental clearance is obtained by the concerned mining contracts/LoI holders.
- The areas of each of these mining units except that of Unit No. 1 & Unit No. 2 are very large. However, subsequently 04 of the LoI holders got their bids cancelled through the Hon'ble High Court. The area of such cancelled 04 large size contracts became available for fresh grant. It was decided to be auctioned afresh by carving our small size blocks as compared to large size areas auctioned in the December, 2013.
- The area available for actual mining out of area of above said 04 units and a few of other areas which earlier could not have been offered due to some issues relating to access road etc., were notified for fresh grant by carving out 33 mining blocks.

- While auctioning comparatively smaller blocks the total area available for grant of mineral concession got further reduced to 1221.91 hectares and details of the existing mining blocks are attached as **Annexure-I**.
- At present additional 08 proposed mining sites have attracted bids in auction/e-auctions and details of the same are attached as **Annexure-II.**

2.5.3 ANNUAL CAPACITY OF AREAS SELECTED FOR MINING OF MINOR MINERALS

- In order to make estimates of mineral deposits and mineable reserves of any mineral a detailed exploration is required to be undertaken. The economic life of a mine based on the mineral estimates including current mining production plans are made on the basis of study taking into consideration the quantity and quality of the minerals extracted during the reporting time, changes in economic viability due to changes in prices and costs, development of relevant technology and newly imposed environment or other regulations.
- The estimates can be made on the basis of mineral seen at surface or through the area operated in past and on the basis of permissible limits to excavate minerals.
- The minerals are non-renewable resources, however, minor minerals found in the river bed areas have peculiar condition relating to mineral reserves. The minerals removed from the river bed areas get replenished after every rainy season with minerals brought along with water from hilly areas. The mineral reserves for mining on replenishment remain almost same every year after rainy season.
- On the other hand in case of areas outside river bed or any area used for mining, the mineral reserves reduce after every year after mining operations. Hence, total mineable reserves after mining gets depleted and the life of any mine also reduces.
- The mineral reserves for river bed areas are calculated on the basis of maximum depth of 03 meters. The area multiplied with depth gives volume and volume multiplied with bulk density gives the quantity in M.T., in case of river bed areas, maximum availability of mineral for actual mining up to 03 m's is 60,000 M.T. per hectare. However, as explained

above the mineral excavated from river gets replenished after every year, therefore, the same quantity remains available for mining again and again.

- In case of areas outside river bed, the maximum depth of 09 meters from ground level is considered for calculation of capacity of a mine. The area multiplied with 09 gives the volume and volume multiplied with bulk density gives quantity of total mineral available in M.T. However, on an average half meter to 01 meter layer is of ordinary earth, so actual mineral can be excavated up to maximum depth of about 08 meters per hectares area outside river bed in general provides 1,60,000 M.T. of mineral.

Table 2: Details of proposed mining blocks with estimated production capacity

Sr. No.	Name of Mining Block	Area (in acres)	Area (in sq. m.)	Average Thickness (in m)	Approx. Volume (in MT)*
1.	Tajewala (BGS)	79.07	3,19,985	3	19,19,910
2.	Bailgarh North (BGS)	64.58	2,63,046	3	15,78,276
3.	Ranjitpur-Ranipur (BGS)	290.34	11,74,964	3	70,49,784
4.	Nagli-32-Pirthipur (BGS)	147.02	5,96,264	3	35,77,584
5.	Leda Khadar-Baroli Majra (BGS)	23.61	95,546	3	5,73,276
6.	Bailgarh South (BGS)	62.88	2,54,466	3	15,26,796
7.	Pobari (Sand)	164.10	6,64,089	3	39,84,534
8.	Gumthala North (Sand)	334.98	13,55,616	3	81,33,696
Total Estimated Reserve					**2,83,43,856**

Table 3: Details of production of minerals during the last 03 years in the district Yamunanagar

Sr. No.	Financial Year	Sand (in MT)	Boulder-Gravel-Sand (in MT)
1.	2020-21	1,10,94,225	1,14,62,708
2.	2021-22	90,42,103	63,68,830
3.	2022-23	1,70,01,469	67,89,833
	Total	**3,71,37,797**	**2,46,21,371**

Table 4: Details of mineral based industry in the district Yamunanagar

Sr. No.	Name of the Unit	Total Number of Units Installed
1.	Stone Crushers	215
2.	Screening Plants	395
	Total	**610**

Source: Data from departmental e-Rawaana portal; July, 2023.

Table 5: Details of royalty/revenue received in last three years in the district Yamunanagar

Sr. No.	Financial Year	Total revenue (in ₹)
1.	2020-21	222,42,02,933
2.	2021-22	152,93,98,839
3.	2022-23	115,47,54,868
	Total	**490,90,56,640**

CHAPTER 3

PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

3.0 INTRODUCTION

The deposition in a river bed is more pronounced during rainy season although the quantum of deposition varies from stream to stream depending upon numbers of factors such as catchment, lithology, discharge, river profile and geomorphology of the river course. It has been observed that during rainy season all of the pits created due to excavation of minerals are completely filled up and as such the excavated area is replenished with new harvest of minerals.

In order to calculate the mineral deposits in the stream beds, the mineral constituents have been categorized as Clay, Silt, Sand, Gravel and Boulder. However, during present calculation, the waste material i.e. silt, clay which vary from 10 to 20% in different streams have been included in the total production. The mineral reserves have been included only up to 1.00 meter depth although there are some portions in the river beds such as channel bars, point bars and central islands where the annual deposition is raising the level of river bed thus causing shifting of the rivers towards banks resulting in to cutting of banks and at such locations, removal of this material up to the bed level is essential to control the river flow in its central part to check the bank cutting. While calculating the mineral potentials, the mineral deposits lying in the sub-tributaries of that particular stream/river has not been taken into consideration. Since these mineral deposits are adding annually to the main river, the mineral deposits will be much more.

The important rivers/streams of the district are Yamuna, Pathrala, Boli, Somb, Saraswati, Chautang, Rakshi and Markanda. Yamuna River rises from the snow-clad peaks of the middle Himalayas at Yamunotri, enters the district from its northeastern corner though a narrow corridor in the Siwaliks. River Yamuna enters plain area for the first time from Yamuna Nagar and running through the district which forms the eastern boundary with the neighboring District Saharanpur and this boundary is also known as the state boundary. The Somb River originates in

Siwalik Hills near Aadi Badri in Yamuna Nagar district on the border of Haryana and Himachal Pradesh State. Boli River joins the Somb near the Dadupur and after combining both the rivers join the Yamuna River at Village Kanalsi. The Rakshi stream takes its birth in the rolling foot hill plains while the Chautang and Saraswati rivers originate in the lower hills. Generally, the slope of the district is from north-east to south-west, in which direction of most of rivers/rainfed torrents flow down. The higher area that is not flooded in rainy season is called Bangar and the lower flood prone area is called Khaddar.

3.1 ANNUAL DEPOSITION FACTOR

Rivers are important geological agents for erosion, transportation and deposition. Deposition and erosion in river valleys can strongly modulate the downstream delivery of sediment (Fan and Cai, 2005; Malmon et al., 2005). A riverine sediment budget provides an effective conceptual framework within which to quantify sediment mobility, transport, deposition, and storage within a drainage basin, as well as sediment output from the basin (Walling et al., 2002).

Annual deposition of river bed materials depends on various factors. Geological erosion and soil erosion are the two basic terms used to describe erosion processes. Geological erosion refers to regular or natural erosion brought on by long-term geological processes that wear down mountains and produce floodplains, coastal plains, and other landforms to develop.

Soil erosion happens gradually or at an alarming rate, but it is a continual process. It leads to various negative effects, including ongoing topsoil erosion, ecological harm, soil collapse, and many more. The soil fragments are loosening or being washed away in the valleys, oceans, rivers, streams, or far-off regions throughout this process. Human activities like agriculture and deforestation have contributed to this situation getting worse. Fluvial erosion is the direct removal of soil particles by moving water. The force of the flowing water and the resistance of the bank material to erosion both affect the pace of fluvial erosion.

3.2 PROCESS OF DEPOSITION

After erosion, the eroded materials get transported with running water. When a river losses its energy and velocity falls, the eroded material is being deposited. A river can lose its energy when rainfall reduces, evaporation increases, friction close to river banks and when enters a shallow area (flood plain) or towards its mouth where it meets another body of water. Hjulström curve showing the relationship between particle size and the tendency to be eroded, transported or deposited at different current velocities.

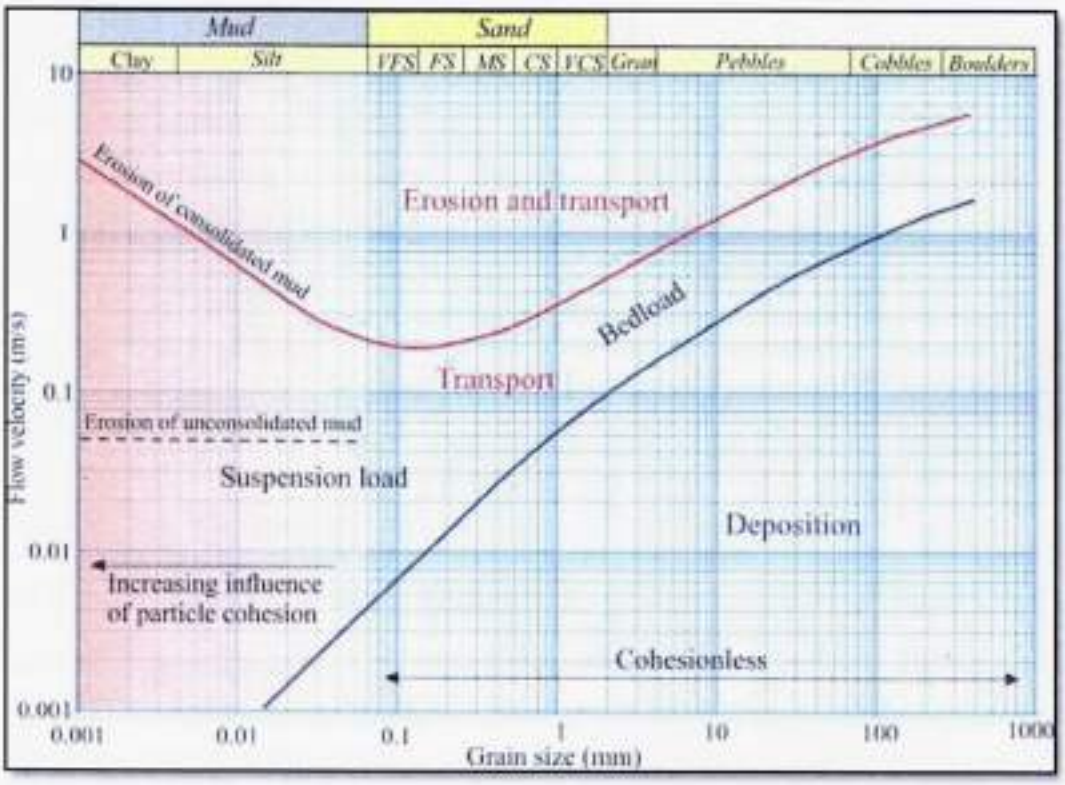


Figure 1: The Hjulström curve diagram (https://www.geological-digressions.com/fluid-flow-shields-and-hjulstrom-diagrams/)

3.2.1. MODE OF SEDIMENT TRANSPORT IN RIVERS

Sediment transport is the transportation of detrital particles via air, water, ice, or gravity. When transported by air and water (fluid transport), grains (which may be sand particles) travel as a bed load (by rolling, sliding, and saltation) or in suspension when the turbulence keeps the grains moving. The amount and size of sediment moving through a river channel are determined by three fundamental controls: competence, capacity and sediment supply. The sediment load of a river is transported in various ways such as Dissolved load, Suspended load, Saltation load, Wash load and Bed load.

3.2.1.1 DISSOLVED LOAD

The amount of sediment carried in solution by a stream's total sediment load, particularly ions from chemical weathering, is known as the dissolved load. Along with suspended load and bed load, it makes up a significant portion of the overall amount of debris removed from a river's drainage basin.

3.2.1.2 SUSPENDED LOAD

The term suspended load describes the portion of the total sediment transport that is kept suspended by turbulence in the flowing water for extended periods of time without contact with the stream bottom. It is nearly moving at the same speed as the flowing water.

3.2.1.3 SALTATION LOAD

The portion of the bed load that is moving, either directly or indirectly, as a result of the impact of bouncing, i.e., the intermittent jumping motion of the particles, along the stream bed.

3.2.1.4 WASH LOAD

It is conveyed through the stream without deposition since it is in almost permanent suspension. The discharge of the wash load through a reach is determined solely by the rate at which these particles become available in the catchment area, not by the flow's transport capacity.

3.2.1.5 BED LOAD

Particles that are too large to be carried as suspended load are bumped and pushed along the stream bed as bed load. Bed load sediments do not move continuously. While streams with high velocity and steep gradients do a great deal of down cutting into the stream bed, which is primarily accomplished by movement of particles that make up the bed load.

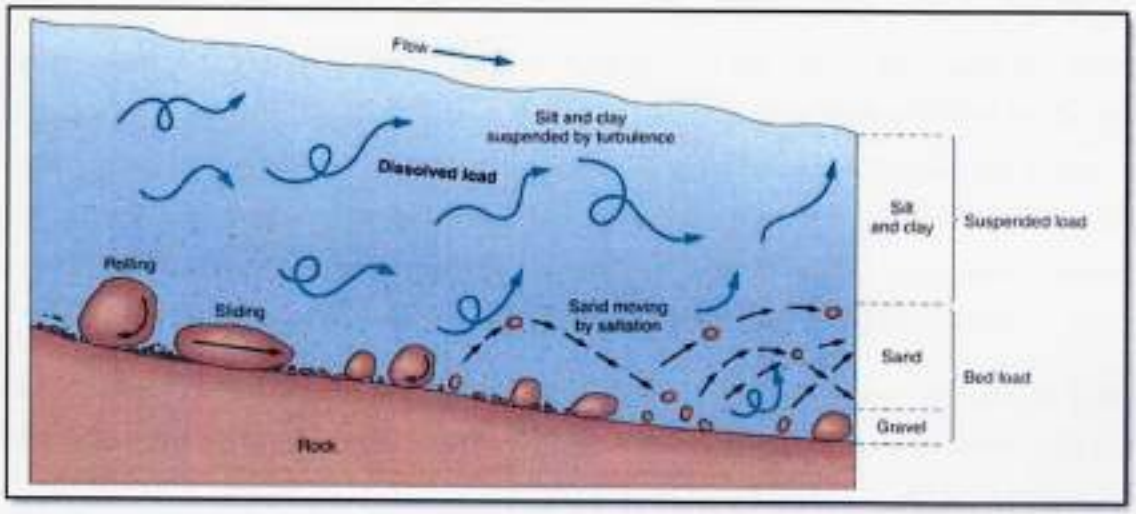


Figure 2: Modes of sediment transport (https://www3.nd.edu/~cneal/planetearth/Chapt-17-Marshak.pdf)

CHAPTER 4
GENERAL PROFILE OF THE DISTRICT

4.0 PROFILE OF THE DISTRICT

District Yamuna Nagar came into existence as District on 1st November, 1989. It occupies an area of 1756 square kilometers, in which 03 Sub-Divisions, 04 Tehsils, 03 Sub-Tehsils, 07 Development Blocks (Bilaspur, Sadhaura, Radaur, Jagadhri, Chhachhrauli, Saraswati Nagar and Partap Nagar), 471 Panchayats and 655 revenue villages have existed. Earlier the District Yamunanagar was known to Abdullapur. A large part of the district lies under the Siwalik foothills. Yamuna River flows from the district and Hathnikund barrage is located on the river. Sugarcane, wheat and rice are the main crops and being good potency & fertility, the farmers are also used to seed poplar (*Populus*) trees. The industrial environment is appraisable; it is an important industrial city having metal, conglomerate of brass & stainless steel utensil industry, plywood industry and blessed with Shree Gopal Paper Mills & Saraswati Sugar Mills.

Yamuna Nagar district is bounded by the state of Himachal Pradesh in the north, by the state of Uttar Pradesh in the east & south east, by the districts of Karnal & Kurukshetra in the south north and by Ambala District in the east. Yamunanagar District located at height of 255 m from the sea level. The district is located in Topo Sheet No. 53/F, 2,3,4,7,8,11 and 12 of Survey of India.

At a Glance:

- Latitude: 30.12; Longitude: 77.26
- Yamunanagar is 106 Km's from Chandigarh (Capital of Haryana).
- Linking Road: Situated on the National Highway No. 73
- Postal Code: 135001
- STD Code: 01732

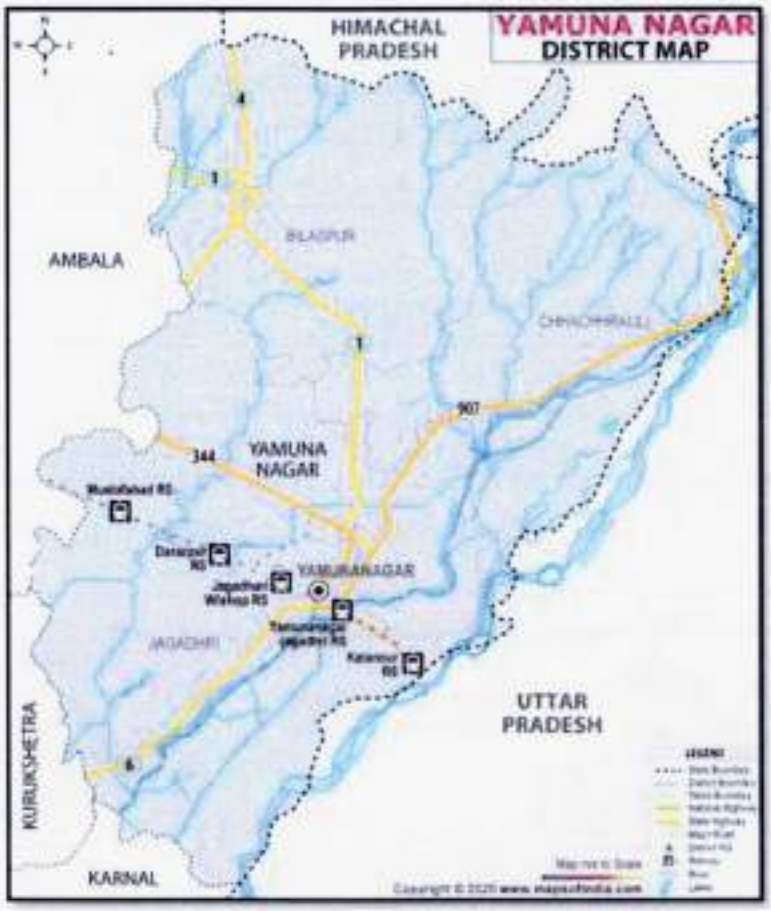


Figure 3: District map of Yamuna Nagar {Yamunanagar District Map (mapsofindia.com)}

Table 6: General profile of the district Yamuna Nagar

Headquarters	Yamuna Nagar
Sub Divisions	Jagadhri, Bilaspur, Radaur
Tehsils	Jagadhri, Chhachhrauli, Bilaspur, Radaur
Sub Tehsils	Sadhaura, Saraswati Nagar (Mustafabad), Partap Nagar (Khizrabad)
Altitude	255 m

Area	1,756 sq. km. (678 sq. mi.)
Total Population	12,14,162 (Census, 2011)
Population Density	687/sq. km. (1,780/sq. mi.)
Sex ratio	877
Literacy Rate	78.90 %
Website	Official website (https://yamunanagar.nic.in/)

4.1 LAND UTILIZATION PATTERN IN THE DISTRICT

In District Yamuna Nagar, most of the areas are utilized for agriculture and horticulture, some area is used for mining activities and rest of land is under forest cover.

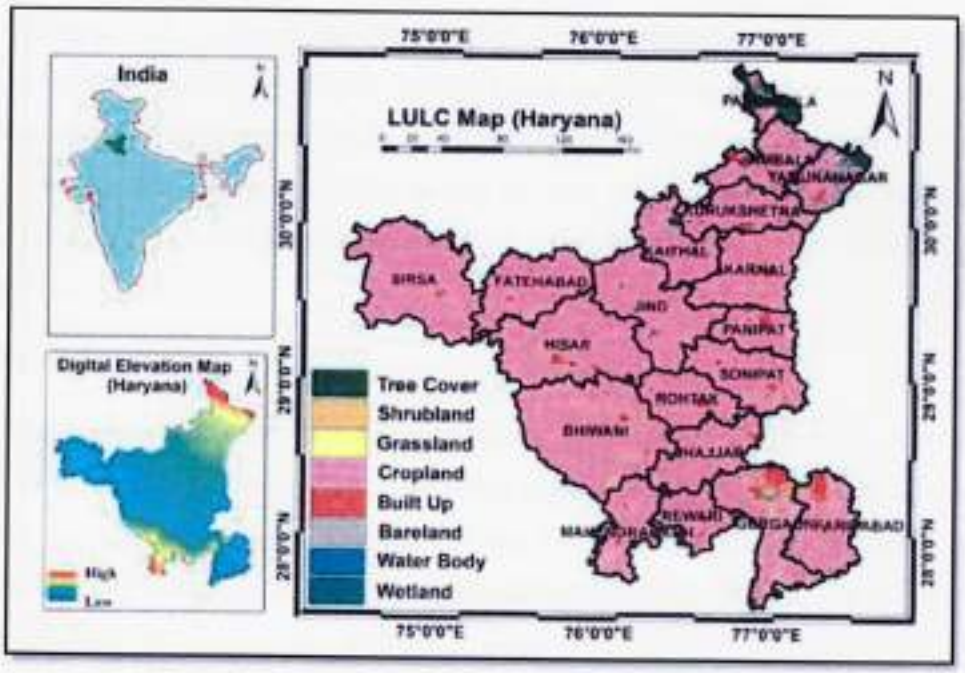


Figure 4: Land use & land cover map of Haryana (Appraisal of Climate Response to Vegetation Indices over Tropical Climate Region in India; Nitesh Awasthi et. al., 2023).

4.2 FLORA AND FAUNA/ECO-SENSITIVITY

Eco-sensitive Zone is the area up to 05 kilometers from the boundary of the protected area of Kalesar Wildlife Sanctuary situated in the district between latitude 30°18' to 30°26' N and longitude 77°25' to 77°37' E.

Kalesar National Park, District Yamunanagar

Kalesar National Park is situated in the foot hills of Siwalik ranges. On map it is located between 30°18' to 30°27' N & 77°18' to 77°35' E. It falls under Yamunanagar District of Haryana, sharing boundary with three States viz., Himachal Pradesh, Uttrakhand & Uttar Pradesh. The Yamuna River form the eastern boundary with Uttar Pradesh, the main Siwalik ridge separates state boundary among Haryana, Himachal Pradesh & Uttarakhand in the north.

Kalesar National Park is named after the Kalesar (Shiva) temple located in the protected area. The whole area is full of bio-diversity having dense Sal & Khair forests and patches of grass lands, which support an amazing variety of plants and animal species. The park was declared as National Park on 8th December, 2003 having an area of 11,570 acres. Just adjacent to the National Park is Kalesar Wildlife Sanctuary and it was notified on 13th December, 1996 having an area of 13,209 acres.

Statement of Significance

Kalesar National Park has got lot of significance in terms of bio-diversity and ecological stability. In terms of bio-diversity, it is store house of numerous medicinal plants. It houses many threatened animals like Leopard, Ghoral, Barking deer, Sambar, Chital, Python, King Cobra, Monitor lizard etc. Occasionally, Tigers and Elephants visit this park from Rajaji National Park, Uttrakhand.

The Siwaliks formed by debris from the older Himalayan ranges, are composed of sedimentary rocks such as sand stone, clays & conglomerates and is a highly fragile system. Extensive erosion takes place due to rapid run off during heavy rains. Gullies and landslides are common and the valley bottoms are mostly strewn with boulders & pebbles. During monsoon, the torrents

carry boulders & muddy water and cause flash floods in the plains. So this protected area plays vital role in preventing that kind of flash floods and helps in maintaining ecological stability. In Haryana, it is the only National Park having good natural forest supporting such a large biodiversity. So it has got a special significance in terms of conservation, education, tourism and research opportunities.

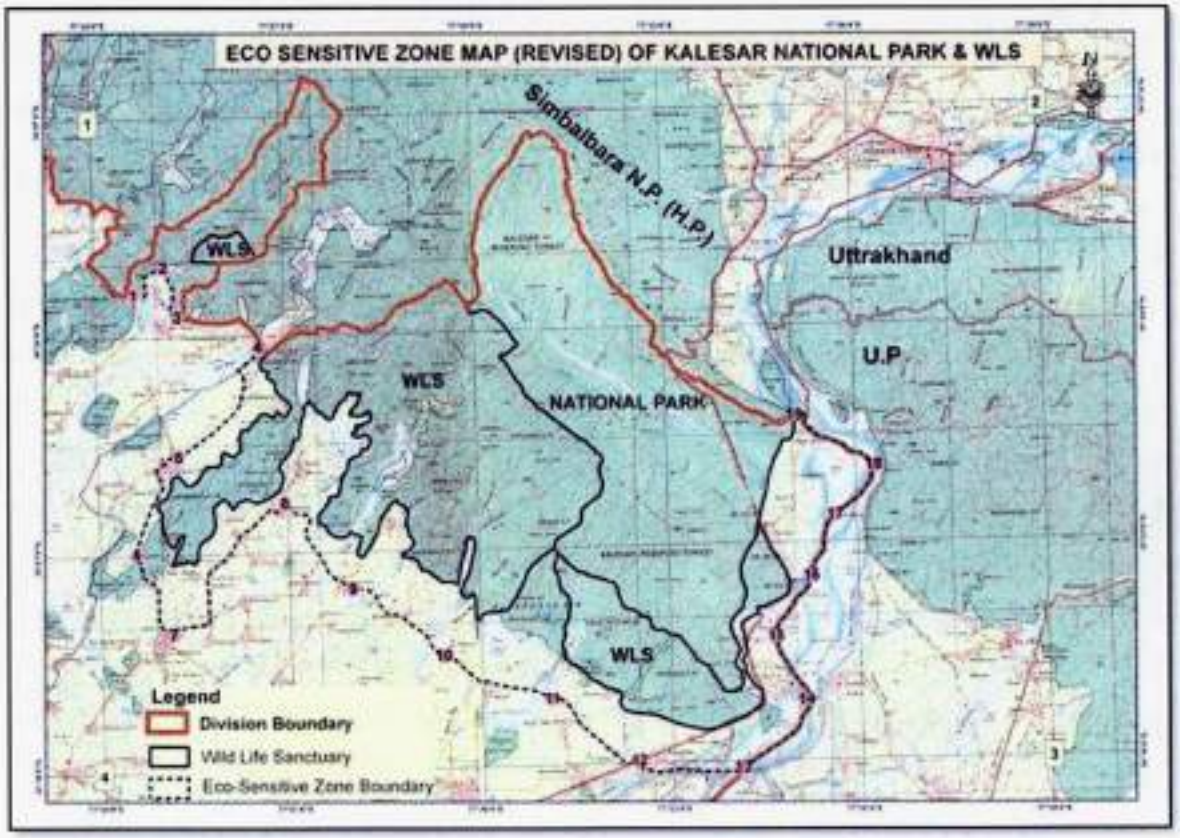


Figure 5: Eco-sensitive zone map of Kalesar National Park and Wildlife Sanctuary, Yamunanagar (Kalesar National Park, District Yamunanagar | Haryana Forest Department | India).

Boundaries

The entire national park and sanctuary area is duly notified and demarcated on the ground with the help of pillars & natural boundaries like rivers and torrents. To the north of national park Simbalwada Wildlife Sanctuary (Himachal Pradesh) is located which is separated by a ridge line and marked by pillars. To the east, Yamuna River makes boundary of park with Uttar Pradesh. To the south agriculture lands of village's viz., Tajewala, Arayianwala, Naggal, Tiberian, Khizri, Baghpat, Khillanwala, Kansli, Darpur, Chicken, Jattanwala and Kot are situated. The western side is bounded by the crop fields of villages Faqir majra and Ibrahimpur.

Animals

Among herbivores, Sambhar is common and Chital is another common herbivore found in open grassy patches and fire lines. Barking deer is found especially in forest areas with ample ground cover. The Goral is found in the park occupying a specialized niche on the relatively bare rocky slope at the top of Siwalik ridges. Antelopes are represented by the Rojh (Blue Bull) which occurs in the more open areas bordering Yamuna plain. Wild boar is also fairly common in the park and it also raids on crops. Elephant is an occasional visitor from Rajaji National Park. If good waterholes are made available, it may stay for longer duration. The Rhesus macaque is most common monkey in the park and these are also feed on eggs of Red Jungle fowl, so there is an apprehension that there is a decrease in Red Jungle Fowl number. Among the carnivores, there are about 20-22 leopard in the entire protected area. The tiger is also an occasional visitor from Rajaji National Park. If there is increase in prey base, it can permanently stay in the park.

Forest Eco-system

(a) The Siwalik Sal forests of Kalesar Wildlife Sanctuary are characterized by Panther, Cheetal, Wild boar, Sambhar, Red jungle Fowl, Peafowl, Blue jay, Hornbill, Treepie-woodpeckers.

(b) Northern tropical mixed deciduous forests are characterized by Leopard, Sambhar, Barking deer, Ghoral, Wild boar, Nilgai, Jackal, Hare, Fox Reptiles.

4.3 PHYSIOGRAPHY OF DISTRICT

The district is divided into four physiographic units i.e. Siwaliks, Dissected Rolling Plains, Interfluvial Plains, Active and Recent Flood Plains and Relict Plains.

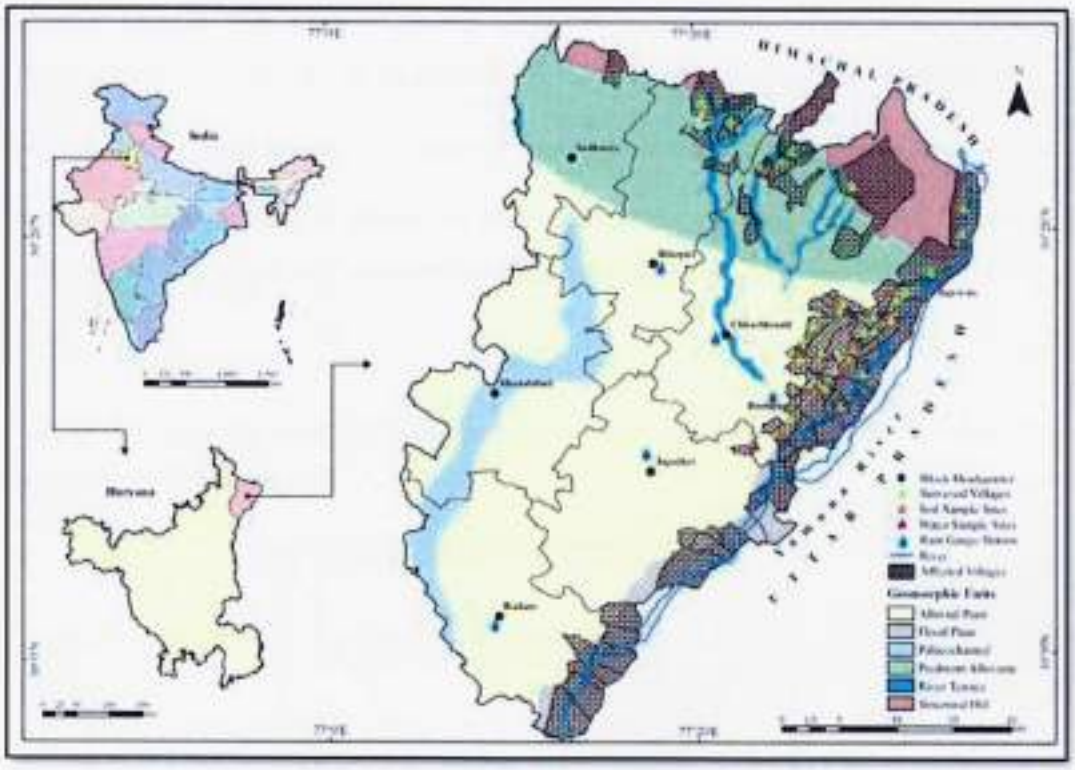


Figure 6: Geomorphological map of Yamunanagar (Sand and gravel extraction from piedmont and floodplain zones of Yamunanagar district in Haryana, India: Environmental Tragedy or Economic Gain?; Omvir Singh et. al., 2017).

Siwaliks: Siwalik Hills ranges occupy the northern fringe of the district and attain the height up to 950 m AMSL. The hills are about 500 m high with respect to the adjacent alluvial plains. These are characterized by the broad tableland topography that has been carved into quite sharp slopes by numerous ephemeral streams come down to the outer slopes of the Siwaliks and spread much of gravels boulders, pebbles in the beds of these streams.

Kandi Belt: A dissected rolling plain in the northern parts of district is a transitional tract between Siwalik Hills and alluvial plains. It is about 25 km wide and elevation varies between 250 and 375 m AMSL.

Interfluvial plains: This tract is part of higher ground between Ghaggar and Chautang. It includes high mounds and valleys. In general, the slope is from northeast to southwest.

Active and recent flood plains: This plain is narrow tract along river Yamuna in the district.

Relict wedge plains: This is almost in alignment to the surface water divide between the westward flowing Ghaggar and eastward flowing Yamuna River.

4.4 SOIL

The soil of the district is very fertile and are mainly silty loam (Khadar), clayey loam (Bhangar and Nardak), and loam (Seoti).

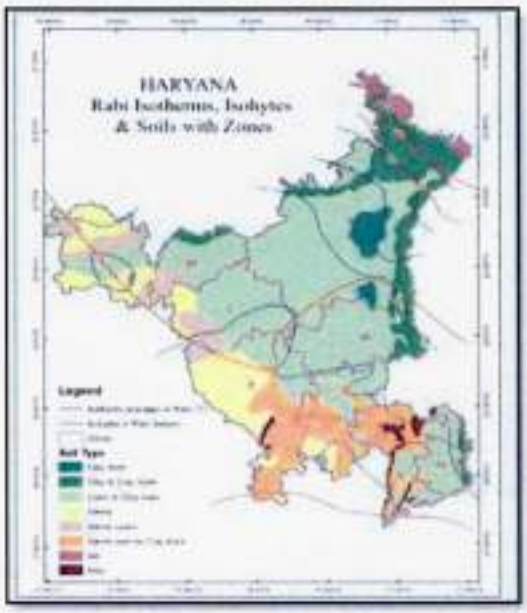


Figure 7: Soil texture map of Haryana (Productivity Zoning of Indian Mustard in Haryana State by Climatic and Physical Factors; Anurag Kumar et. al., 2017).

4.5 HYDROGEOLOGY

The ground water exploration in the district reveals that clay group of formations dominates over the sand group in the area. Ground water in the district occurs in the alluvium under water table and semi-confined to confined conditions. These aquifers consist of sand, silt and gravels associated with clay and form highly potential aquifers. In alluvium, the permeable granular zones comprise fine to medium grained sand, occasionally coarse sand and gravel whose lateral and as well as vertical extent are extensive. In Kandi belt, the boulders, cobbles and pebbles constitutes the major aquifer horizon.



Figure 8: Hydrogeological map of district Yamuna Nagar (www.cgwb.gov.in)

4.6 DRAINAGE & CATCHMENT

The district is mainly drained by the river Yamuna and its tributaries. However, the catchment area of rivers Somb & Pathrala totally depends on the seasonal flow. The watershed area of the river Saraswati is 642.16 sq. km. and the catchment is confined mostly to the southern slope of the Siwalik Hills, mainly Yamunanagar and Kurukshetra districts.

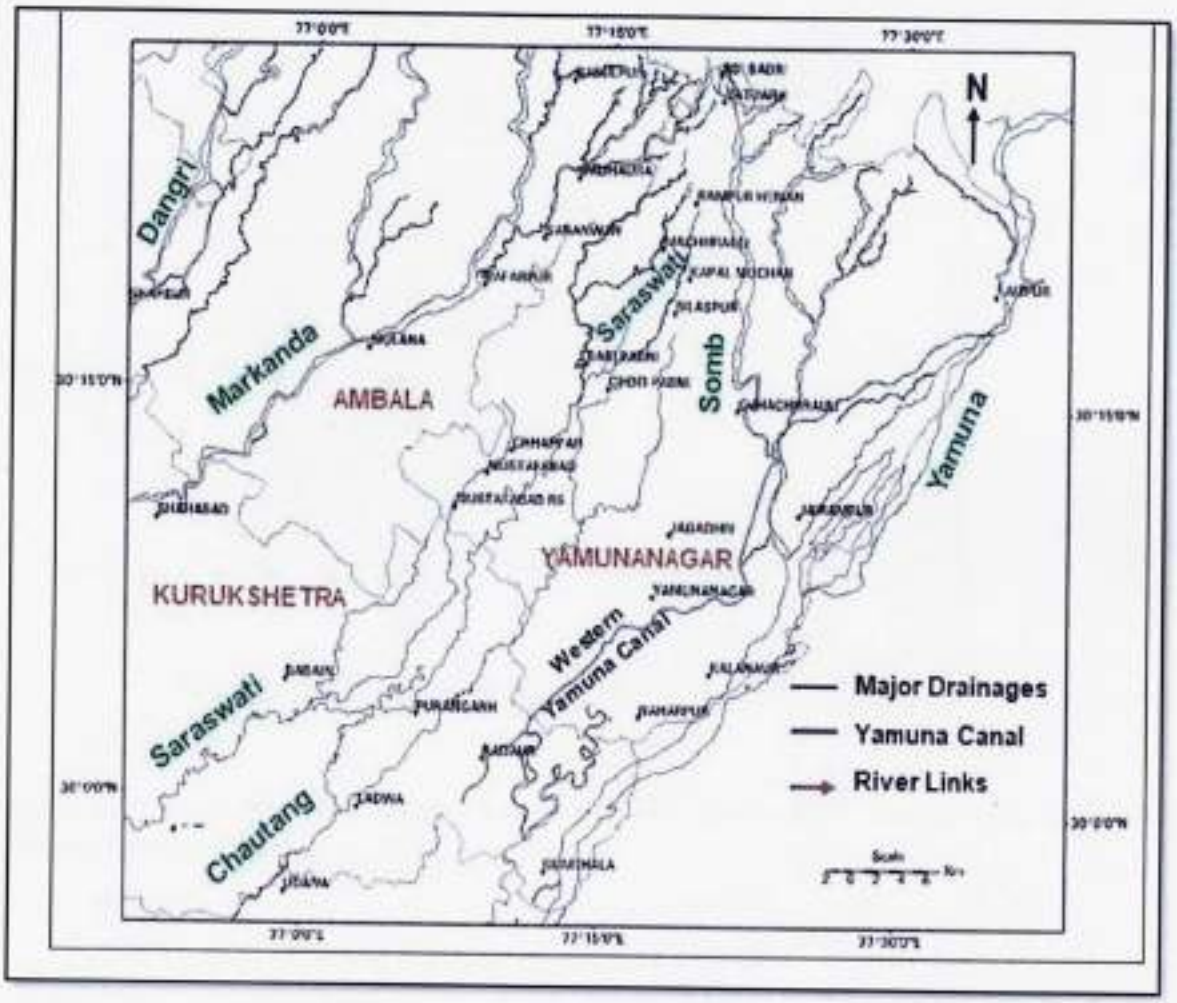


Figure 9: Drainage map of major rivers. (Saraswati: The River Par Excellence; S. K. Acharyya et. al., 2020).

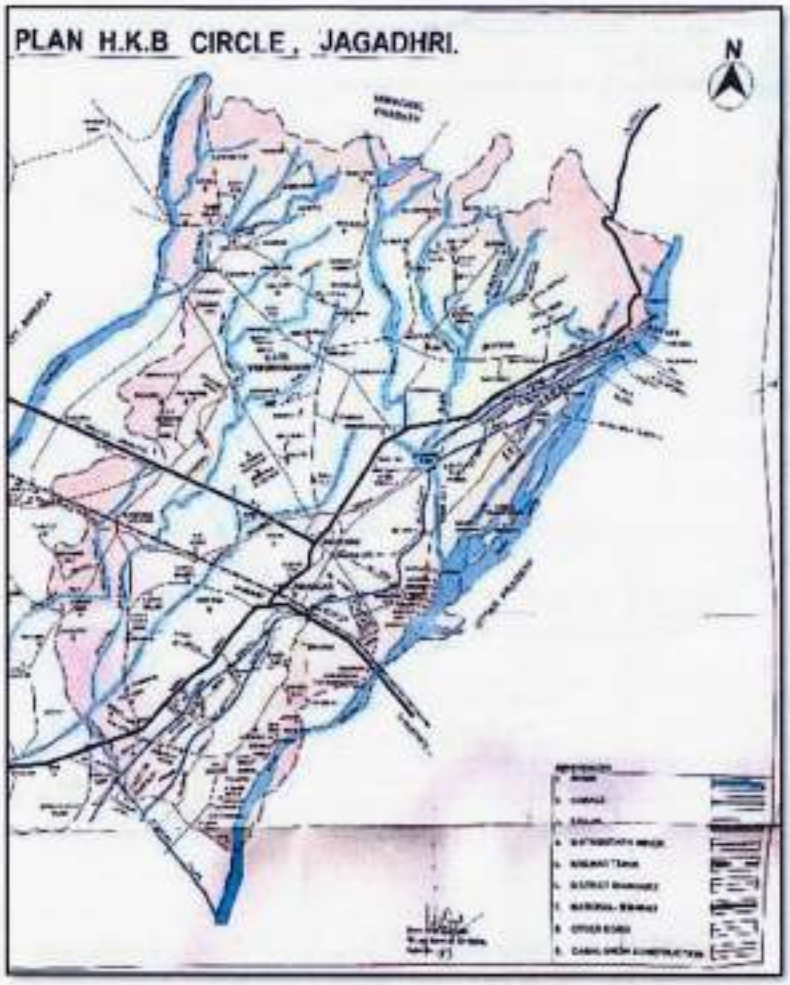


Figure 10: Drainage map of district Yamuna Nagar. (Index Plan, HKB Circle, Jagadhri, District Yamunanagar).

Table 7: Details of drainage system with description of main rivers

Sr. No.	Name of River	Area Drained (in sq. km.)	% Area Drained
1.	Yamuna	21,265	6.5

Table 8: Details of major rivers/streams in the district Yamunanagar

Sr. No.	Name of River (Type)	Type of River	Place of origin	End in the District	Width in the District (in km)	Length in the District (in km)	Altitude at Origin (in m)
1.	Yamuna	Perennial	Yamunotri Glacier	Gumthala	0.6	70	6330
2.	Somb	Seasonal	Aadi Badri	Kanalsi	0.1	35	550
3.	Pathrala	Seasonal	Siwalik Hills	Dadupur	0.08	35.02	550

Table 9: Details of major drains in the district Yamunanagar

Sr. No.	Name of Drain	Length (in ft.)
1.	Alahar Link Drain	21300
2.	Alahar Sub Link Drain	3250
3.	Chautang Nallah U/S Ambala-Jagadhri Road	64700
4.	Chautang Nallah D/S Ambala-Jagadhri Road	136428
5.	Khurdban Drain No. 1	8910
6.	Pinjora Drain U/S & D/S	60000
7.	Potli Drain	9000
8.	Radaur Drain	18500
9.	Sadhaura Drain	2500
10.	Thaska Drain	8060
11.	Jaidhar Harewa Drain	2100
12.	Dholra Drain	2100
13.	Rakshi Nallah	128500

Source: Flood Control Order-2023, District Yamunanagar (yamunanagar.nic.in)

4.7 CLIMATE & RAINFALL

The climate of the study area is classified as sub-tropical monsoon, dry and mild winter, hot summer and sub-humid, which is especially dry with summer and winter except during the monsoon season.

The mean annual rainfall of the district is 1107 mm and normal monsoon rainfall of the district is 898 mm; mean maximum temperature of the district is 48.8° C (May and June) and the mean minimum temperature of the district is 6.8° C in January. The southwest monsoon sets in from the last week of June and withdraws in the last week of September, contributing approximately 81% of annual rainfall. July and August are the wettest months. The remaining 19% rainfall is received during the non-monsoon period within the wake of thunderstorms and western disturbances.

Table 10: Distribution of rainfall (in mm), District Yamunanagar

Distribution of Rainfall (in mm)								
Year	**Month**	**Jagadhri**	**Chhachhrauli**	**Bilaspur**	**Sadhaura**	**Saraswati Nagar**	**Radaur**	**Partapnagar**
2020	July	357	267	160	144	235	281	266
	August	386	304	278	421	288	303	261
	September	37	17	05	00	04	00	47
	Total	**780**	**588**	**443**	**565**	**527**	**584**	**574**
2021	July	322	263	228	283	240	249	308
	August	126	116	129	150	68	115	86
	September	267	166	226	114	187	184	158
	Total	**715**	**545**	**583**	**547**	**495**	**548**	**552**
2022	July	339	287	220	278	324	255	286
	August	128	84	73	44	44	57	222
	September	228	260	151	218	175	217	253
	Total	**695**	**631**	**444**	**540**	**543**	**529**	**761**

Source: Flood Control Order-2023, District Yamunanagar (yamunanagar.nic.in)

4.8 SEISMICITY

As per seismic zoning map of India, as incorporated in Indian standard provision for earthquake resistant design of structures IS: 1893 Part I 2002 general provision and buildings, the Yamunanagar district has been assigned to "Seismic Zone IV".

4.9 FLOOD HAZARD ZONE

Heavy rain falls in the catchment area of river Yamuna, Somb & Pathrala causing flood in the district. It risks the agricultural land and village's abadi area as well as some urban area.

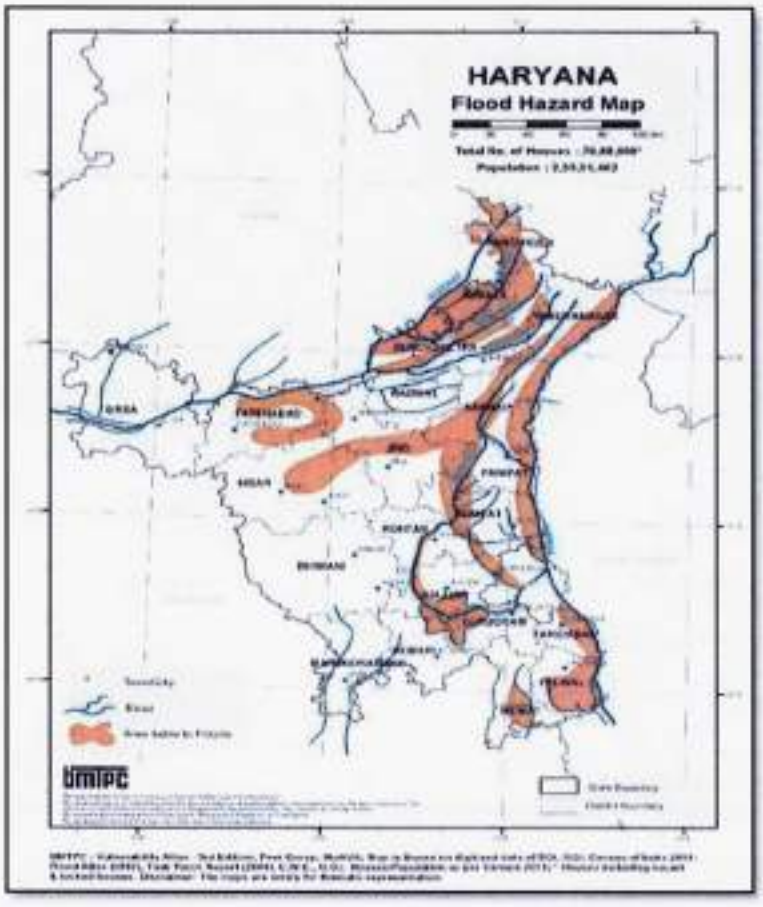


Figure 11: Flood hazard map of Haryana (https://vai.bmtpc.org/hr.html).

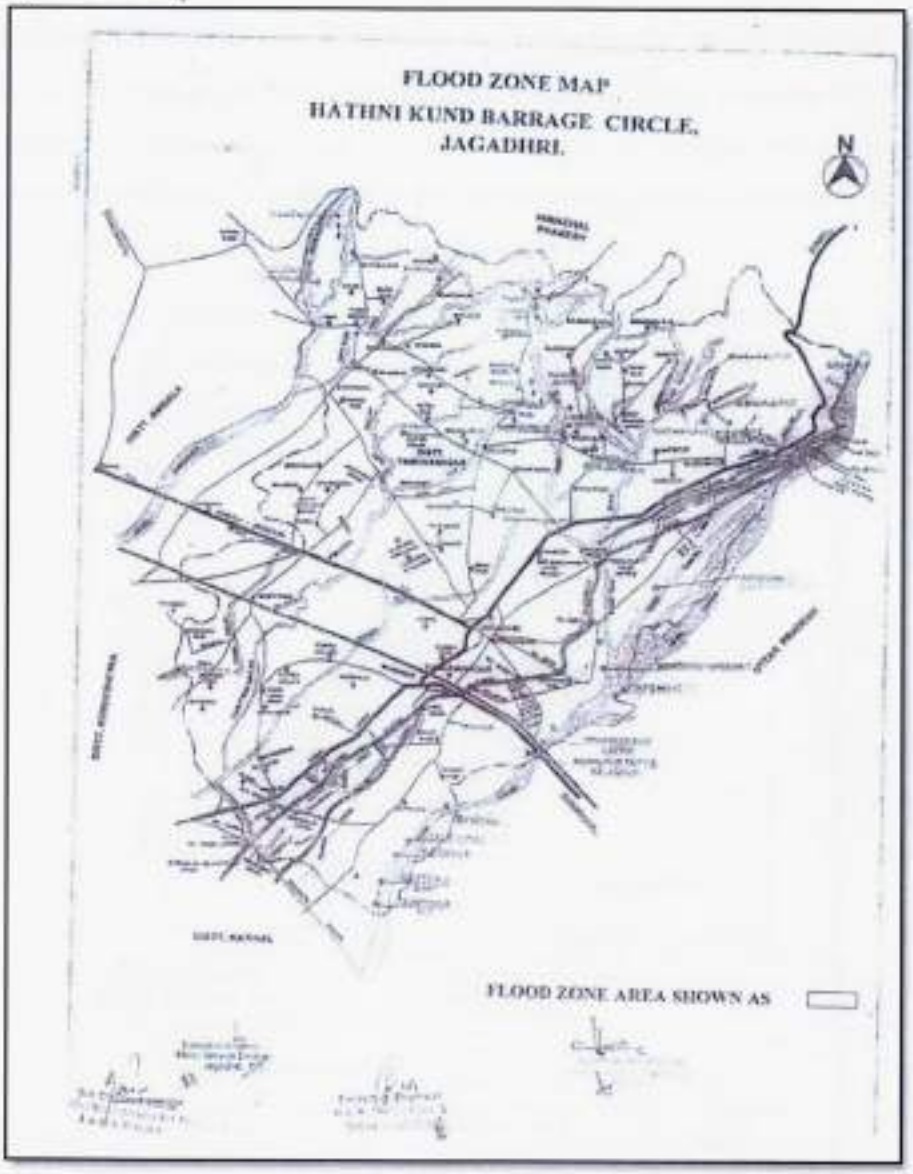


Figure 12: Flood zone map of district Yamuna Nagar (Flood Zone Map, HKB Circle, Jagadhri, District Yamunanagar).

4.10 GEOLOGY AND MINERAL WEALTH

The north-eastern and central part of Haryana is predominantly characterized by sedimentary lithology in the sub-Himalayan zone comprising Subathus, Dagshais, Kasaulis and Siwaliks. The list of existing and proposed mining blocks with name of villages where minor minerals (Boulder-Gravel-Sand/Sand) is available in the district is attached as Annexure-I and Annexure-II. However, potential mineral bearing areas are given in Table 13.

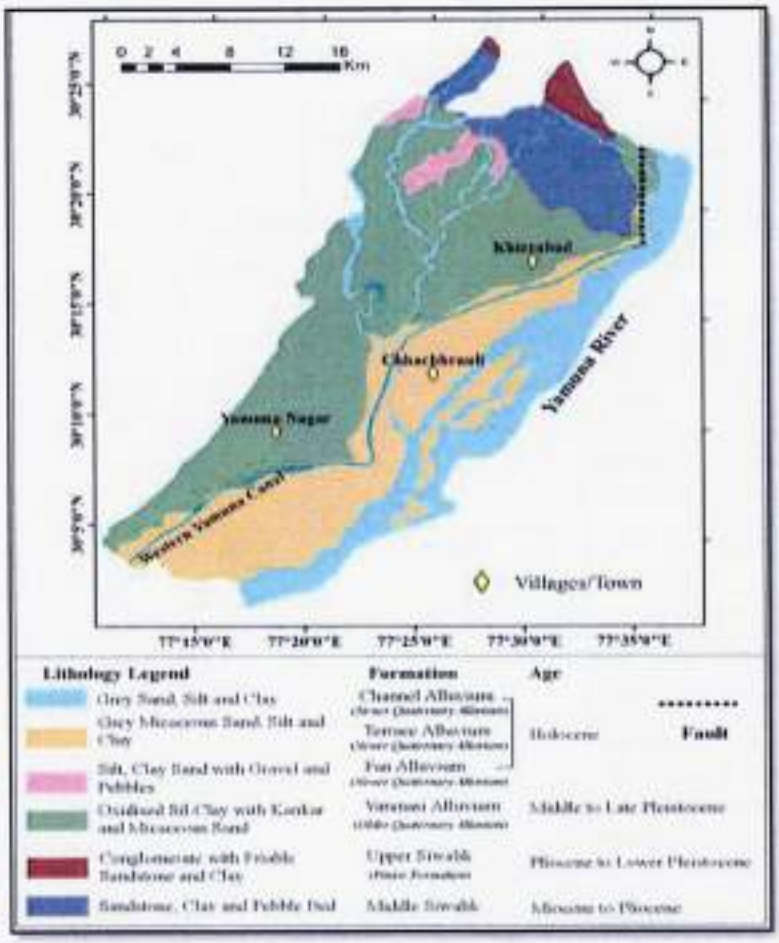


Figure 13: Geological map of district Yamuna Nagar (Assessment of vulnerability zones for ground water pollution using GIS-DRASTIC-EC model: A field-based approach, D Anantha Rao et. al., 2018).

Table 11: Regional stratigraphic (Tertiary) sequence of Haryana

Age	Super Group	Group	Formation	Lithology
Holocene			Newer Alluvium and Newer Aeolian Deposits	Gravel, sand, silt-clay, limestone, gypsum
Lower to Upper Pleistocene			Older Alluvium and Older Aeolian Deposits	Gravel, grey sand, silt, clay, brown sand, calcrete
Lower to Middle Pleistocene	Siwalik	Upper Siwalik	Boulder Conglomerate	Conglomerate, sand stone, silt-clay
Upper Pliocene			Pinjore	Coarse grit, red sandstone and clay, conglomerate
			Tatrot/Saketi	Friable sandstone and variegated clay
		Middle Siwalik	Dhokpathan	Brown sandstone and variegated clay
			Nagri	Hard grey sandstone, mud stone and minor shale
		Lower Siwalik	Nahan	Coarse gritty, clay and red sandstone often calcareous, brownish shale with lignite lenticels, greenish white quartzite
Lower Miocene		Sirmur	Kausauli	Grey sandstone, green shale and grey clay
			Dagshai	Purple and green sandstone, deep red gritty clay, white sand stone with ferruginous concretions
Upper Eocene			Subathu (Nummulitic)	Sandstone with grit clay. Impure fossliferous limestone calcareous slate, greenish shale and dark brown quartzite
Pre-Proterozoic			Tunda pathar	Thickly bedded, stromatolitic limestone with carbonaceous shale and quartzite

Source: Geology and Mineral Resources of Haryana, Misc. Publication No. 30: Part-XVIII, 2012, GSI.

4.11 RECLAMATION AND RESTORATION OF MINING AREA AND PROVISION OF FUND FOR THE SAME

- As explained in foregoing paragraphs mining in river bed areas takes place only up to a maximum depth of 03 meters from existing river bed level, that too in central 3/4th of the river bed. The material brought by the river due to fluvial action fills the void created in the process of excavation. In this way the area operated/used for excavation of mineral from rivers gets reclaimed after every rainy season.
- As it is well known that rising of bed level results in river meandering (change of course) and in the present day the change of course of any river results in floods and damages. Though sometimes areas in and adjoining river banks are affected because of unforeseen circumstances/water stream due to heavy rains.
- Further, the area outside river bed requires leveling reclamation and restoration after mining. The land owners take compensation from the mining contractors in lieu of surface rights. The areas after mining are leveled by the contractors or land owners (depending upon mutual settlement between the contractor and land owners) to make the land reusable for cultivation. In order to ensure that areas after mining in case needs reclamation/restoration are properly dealt/restored.
- The State Mining Rules, 2012 appropriately provide provisions of R&R Fund namely **"Mines and Mineral Development, Restoration and Rehabilitation Fund".** The mineral concession holders are liable to deposit an amount equal to 10% of the dead rent or royalty or contract money paid to the state for Restoration and Rehabilitation works. Further, the state also contributes 5% of the amount received by it on account of the dead rent or royalty or contract money in a financial year to the fund. The fund has been created only for funding of the restoration or reclamation or rehabilitation works in the sites affected by mining operations. The fund can be used for creating common facilities for the benefit of community in and around areas where mining activities are undertaken, development of infrastructure facilities for orderly growth of the mining operations and allied activities and other related works/schemes.

- In compliance with amendment in the Mines and Minerals (Development & Regulation) Act,1957, vide which Section 9B has been inserted making it mandatory to form District Mineral Foundation (DMF) in each district, the State has recently (19.12.2017) notified Haryana District Mineral Foundation Rules, 2017. The foundations shall work for welfare and benefit of persons and areas affected due to mining operations. 1/3rd of the amount collected in **"Mines and Mineral Development, Restoration and Rehabilitation Fund"** shall be transferred in the **DMF Fund.** The projects to be carried out under **Pradhan Mantri Khanij Kshetra Kalyan Yojna** (PMKKKY) shall be implemented by the District Mineral Foundations.
- The areas operated in past in the district Yamuna Nagar were restored (river bed filled up with sediments brought by fluvial action and areas outside river bed leveled by land owners for cultivation). However, some of the areas used for mining in land falling outside river bed were not put in use by private land owners after mining for the reasons known to them. The private land owners could not have been insisted for undertaking cultivation, in case they don't choose for the same. A few of the patches of such un-reclaimed areas exist in and around crusher zone areas in villages Mandewala, Kohliwala, Ballewala, Diowala, Bhood Majra and Bhood Kalan. In this area over a period of time some rain water get collected and remains wet for quite long every year. The same had no ecological impact on the ecology of the area. As a matter of fact, such areas are acting as water recharge zone as well as wet land.

CHAPTER 5

ESTIMATION OF DEPOSITS AND REPLENISHMENT STUDIES

5.0 GENERAL INFORMATION

The word replenishment is the fulcrum of river bed sedimentation under different depositional environmental conditions especially during rainy seasons. The rate of gross or absolute silt production (erosion) in the watershed and the ability of the stream system to transport the eroded material in a river have a direct relation with the quantity of sediment delivered into a river. The rate of gross erosion is dependent upon many physical factors like climatic conditions, nature of soil, slope of the area, topography and land use. Hydro-physical conditions of the watershed govern the capability of transporting the eroded material. It has been observed that the average rate of sediment production decreases as the size of drainage area increases. And also, larger the watershed, the lesser is the variation between the rates. The total amount of eroded material, which reaches a particular hydraulic control point, is termed as sediment yield.

The rotational mining is being adopted to facilitate the replenishment of the excavated pits during rainy season. Thus, the mineable area is to be divided in two blocks i.e., the upstream block and the downstream block. The mining of these blocks is suggested on rotation basis in such a way that pit of previous year mining will act as depository for the monsoon season. Boulder-Gravel-Sand/Sand is extracted from the said lot during one year; more than the extracted quantity of the same are automatically replenished by rainfall in the monsoon by the river itself on account of its flow and velocity.

For sustainability of river bed mining, the rate of excavation should be decided in accordance with the rate of replenishment which is the rate at which sand/gravel is deposited on the river flood plain by the river during monsoon season. However, determination of site- specific rate of replenishment is quite difficult as it is dependent on several factors such as geology, topography of the catchment area of the river, breadth of the flood plain, rainfall in that particular year (which is quite variable and not very much predictable much in advance) etc.

Dandy-Bolton formula is generally used to calculate the sediment yield. But it is to be kept in mind that to prepare the mining plans of the mines, the factor of annual replenishment is to be taken into consideration while calculating the mineral reserves. It has also been observed that during flooding, all the pits replenish with sand/boulder/gravel. Hence, mined out areas in the pre-monsoon season will be completely replenished with sand/boulder/gravel during monsoon. Therefore, it has been assumed that the pits will be replenished after each monsoon.

Usually, replenishment or sediment deposition/depletion quantities can be estimated in the following ways:

- Direct measurement of the sand bar upliftment.
- Monitoring of the new riverine deposits created in the monsoons within the channel.

5.1 COMMON METHODS FOR REPLENISHMENT

5.1.1 CATCHMENT YIELD CALCULATION

The total quantity of surface water that can be expected in a given period from a stream at the outlet of its catchment is known as yield of the catchment in that period. The annual yield from a catchment is the end product of various processes such as precipitation, infiltration and evapotranspiration operating on the catchment. Catchment Yield can be estimated using following formula:

Catchment Yield (m^3) =Catchment area (m^2) * Runoff coefficient (%) *Rainfall (mts./annum)

The runoff generated from a watershed is estimated using Strange's Tables Method to get obtain approximate yield results. Runoff from a catchment is dependent upon annual rainfall as well as catchment area and characteristics such as soil types and the type of groundcover/land usage.

5.1.2 PEAK FLOOD DISCHARGE CALCULATION

The term "peak discharge" stands for the highest concentration of run off from the basin area. The accurate estimation of the flood discharge remains one of the major challenges as it depends

upon physical characteristics of the catchment area and the flood intensity, duration and distribution pattern. As many different models (equations) for peak discharge estimation have been developed and are given as below:

i. As per Dicken's formula: $Q = CA^{3/4}$

Where: Q is maximum flood discharge (m^3/sec)

A is area of catchment in sq. km.

C is constant whose value varies widely between 2.8 to 5.6 for catchments in plains and 14 to 28 for catchments in hills

ii. As per Jarvis formula: $Q = CA^{1/2}$

Where: Q is maximum flood discharge (m^3/sec)

A is area of catchment in sq. km. and C is constant whose value varies between 1.77 as minimum and 177 as maximum. Limiting or 100 percent chance floods are given by the value of C of 177.

iii. As per Rational formula: $Q = CiA$

Where: Q is maximum flood discharge (m^3/sec)

A is area of catchment in sq. km. and C is the runoff coefficient (ratio of runoff to total rainfall) which depends on the characteristics of the catchment area

i is intensity of rainfall (in m/sec)

5.1.3 BED LOAD TRANSPORT CALCULATION

The most difficult problem in river engineering is to accurately predict bed load transport rates in torrential floods flowing from mountainous streams. Three modes of transport namely; rolling, sliding and saltation may occur simultaneously in bed load transport. Most of these equations have some theoretical and empirical bases.

i. Ackers and White Equation: Ackers and White (1973) used dimensional analysis based on flow power concept and their proposed formula is as follows:

$$C_t = C, G, (d_{50}/h) (V/U^*) n' [(F_{gr}/A1) - 1]_m$$

The dimensionless particle d_{gr} is calculated by: $\mathbf{d_{gr} = d_{50} \{g (G_s-1)/v^2\}^{1/3}}$

The particle mobility factor F_{gr} is calculated by: $\mathbf{F_{gr} = \{U^* n '/(G_s-1) g d_{50}\}^{1/2} * \{V/ (5.66 \log (10 h/ d_{50})\}^{1-m'}}$

$A1$ = critical particle mobility factor

C_s = concentration coefficient in the sediment transport function

C_t = total sediment concentration

d_{50}= median grain size

d_{gr}= dimensionless particle diameter; F_{gr}= particle mobility parameter

g= acceleration of gravity; Sg = specific gravity; h= water depth

m= exponent in the sediment transport function; n'= Manning roughness coefficient

U= shear velocity; V= Mean flow velocity; v= kinematic viscosity

ii. Meyer – Peter's equation: Meyer-Peter's equation is based on experimental work carried out at Federal Institute of Technology, Zurich. Mayer-Peter gave a dimensionless equation based, for the first time, on rational laws. Mayer-Peter's equations giving an empirical correlation of bed load transport rates in flumes and natural rivers.

The simplified Meyer-Peter's equation is: $\mathbf{g_b = 0.417[\tau_0 (\eta'/ \eta)^{1.5} - \tau_c]^{1.5}}$ Where,

g_b = rate of bed load transport (by weight) in N per m width of channel per second

η'= Manning's coefficient pertaining to grain size on an unrippled bed and Strickler formula i.e., $\eta' = (1/24) \times d^{1/6}$ where

d is the median size (d_{50}) of the bed sediment in m

η = actual observed value of the rugosity coefficient on rippled channels

τ_c = critical shear stress required to move the grain in N/m^2 and given by equation $\tau_c = 0.687$ da, where dais mean or average size of the sediment in mm. This arithmetic average size is usually found to vary between d_{50} and d_{60}

τ_0= unit tractive force produced by flowing water i.e., $\gamma_w RS$. Truly speaking, its value should be taken as the unit tractive force produced by the flowing water on bed = $0.97\gamma_w RS$. R is the hydraulic mean depth of the channel (depth of flow for wider channel) and S is the bed slope

5.1.4 SEDIMENT YEILD ESTIMATION

Sedimentation occurs as the stream velocity decreases thus reducing its ability to carry sediment. Coarse sediments deposit first, which may then interfere with the channel conveyance and may cause rivers to meander and to form distributaries. As the area of the flowing water increases, the depth decreases, the velocity is reduced and eventually even fine sediments begin to get deposited. As a result, deltas may be formed in the upper portion of reservoirs. The deposited material may later be moved to deeper portions of the reservoir by hydraulic processes within the water body. There are many sediment transport equations which are suitable for use in the prediction of the rate of replenishment of rivers.

Some of the common equations used to estimate sediment yields are:

- Dandy-Bolton Equation
- Modified Universal Soil Loss Equation (MUSLE) developed by Williams and Berndt (1977)

Dandy-Bolton Equation:

Dandy and Bolton equation estimates all types of sediment yield i.e., through sheet and rill erosion, gully erosion, channel bed, bank erosion and mass movement etc. Dandy-Bolton determined the combined influence of the runoff & drainage area to compute the sediment yield. They developed two equations i.e., for run off less than 02 inches and for run off equal & more than 02 inches, which are given below:

For run off less than 2 inches:

$S= 1280* Q^{0.46} *[1.43-0.26 \log (A)]$

For run off equal & more than 2 inches:

$S= 1965*e^{-0.055Q}*[1.43-0.26 \log (A)]$

Where: S = sediment yield (tons/miles^2/yr)

Q = mean Annual runoff (inch)

A = net drainage are in miles^2

Modified Universal Soil Loss Equation (MUSLE)

Modified universal soil loss equation (MUSLE) for estimation of sediment yield is also used widely. MUSLE is a modification of Universal Soil Loss Equation (USLE). MUSLE uses storm-based runoff volumes and runoff peak flows to simulate erosion and sediment yield (Williams, 1995). The use of runoff variables rather than rainfall erosivity as the driving force enables MUSLE to estimate sediment yields for individual storm events. The generalized formula of MUSLE is as below:

$$\mathbf{Y=95\ (Qp_q)^{.56}\ *K*Ls*C*P}$$

Where, Y = sediment yield of stream (t/yr/km^2)

Q = average annual runoff (m^3)

K = soil erodibility factor

p_q = highest discharge recorded (m^3/s)

Ls = gradient/slope length

C = cover management factor

P = erosion control practice

5.2 ILLUSTRATIVE EXAMPLE FOR CARRYING OUT REPLENISHMENT STUDIES

Though the above empirical formulas can be used for rough estimation of sediment yields, the "Volumetric method" based on the actual DGPS field survey is the only reliable methodology to accurately determine the mineral yield potential for individual mining sites and the rate of replenishment of each such site. Hence, this method is preferred over the other methods. In this report, for volume estimation of deposits (Depth x Area) has been adopted. The mineral deposits are interpreted with the help of satellite imageries and Ground truthing followed by actual DGPS survey is done for all the identified deposits.

Table 12: Estimation of few mineral reserves (Based on replenishment study: Pre-monsoon and Post-Monsoon surveys)

Sr. No.	Name of Mining Block	Area (in acres)	Average Thickness (in m)	Approx. Volume (in Million Tonnes/annum)*
1.	Bailgarh North Block (BGS)	64.9	3	1.57
2.	Gumthala South Block (Sand)	122.74	3	2.98
3.	Dhanaura Block (BGS)	45.45	3	1.10
Total Estimated Reserve				**5.65**

**Volume estimation has been done based on previous replenishment studies done in the region. The bulk density of the sand has been calculated to be 2.0/m^3*

The Bailgarh North Block mining site is located at top/upstream (when River Yamuna enters in the district) whereas the Gumthala South Block mining site is at the bottom/downstream (when River Yamuna leaves the district) and majority of the potential/existing/proposed mining sites fall between this area. The previous replenishment studies carried out for the existing mining sites show an average deposition of 03 m. The rate of replenishment is largely dependent on the water released from the Hathnikund Barrage. The amount of water released from the barrage is further dependent on the rainfall in the upstream region i.e. in the hilly regions. Thus, approx. 3.5-04 lakh cusecs of water are discharged annually from the Hathnikund Barrage. However, the

replenishment of seasonal rivers like Somb, Pathrala, etc. totally depends on the rainfall in the region.

5.2.1 IDENTIFICATION OF AREAS OF AGGRADATION/DEPOSITION

For the identification of areas of aggradation/deposition where mining can be allowed and proximity to infrastructural structures and installations where mining shall be prohibited, the following methodology has been adopted:

5.2.1.1 FIELD DATA COLLECTION

i. Physical closed traverse surveys on continuous basis were done for the river stretch sand accordingly relative elevation levels of the deposition zones were captured with the DGPS.

ii. Permanent physical benchmarks were also identified and were established through DGPS. In surveying, a "bench mark" is a post or other permanent mark established at a known elevation that is used as the basis for measuring the elevation of other topographical points.

iii. Sampling of the mining materials was done at regular intervals for the estimation of average bulk density of the minor materials.

5.2.1.2 CRITERIA FOR IDENTIFICATION OF NO MINING ZONES

i. Benchmark (BM) with respect to mean sea level (MSL) should be established in mining channel reaches (MCR) below which no mining shall be allowed.

ii. Mining is to be permitted only in the central 3/4th of the channel where deposition/aggradation of the material has been identified whereas the remaining ¼th width needs to be kept as no mining zone for the protection of banks.

iii. Identifying the mining and no mining zones shall be done after determining the area of sensitivity by ascertaining the distance of the mining area from the protected areas, forest areas, bridges, important structures, habitation etc. and based on the sensitivity the area needs to be defined in sensitive and non-sensitive categories.

iv. As far as possible mining operations should be avoided in the sensitive areas unless local conditions require otherwise. Such deviations may only be of temporary nature and are to be permitted by the DLTF after recording the reasons for the same.

5.2.1.3 DATA COMPILATION

Deposits of minor minerals were mapped from satellite imageries of high resolution such as Cartosat-1 and the latest multispectral satellite imagery obtained from NRC Hyderabad or Open Source available. The satellite image gives the deposits available in the river stretch and their zones of deposition has been marked in the image which was later verified through physical survey (field data collection). Following data were compiled for identification of deposits: -

i. Elevation levels of the different mineral potential areas.

ii. Export DGPS and physical measured data and its geo-referencing using software (ArcGIS/ERDAS etc.).

iii. Aerial extent of each deposit was mapped using satellite imageries of 10 m x 10 m resolution such as sentinel. The satellite image gives the deposits available in the river stretch and their zones of deposition has been verified with DGPS and physical data and is marked in the image with the help of ArcGIS.

iv. Further, the area falling in the vicinity of various geomorphological and physical structures mentioned in the SSMG, 2016 and EMGSM, 2020 guidelines, main water channel, high level bridges etc., have been marked as no mining zones as per the distances prescribed in the aforementioned guidelines.

Development of cross profiles: Cross section lines are chosen based on the drastic variation of the river widths, proximity of the operating sand blocks and the position of the sand bars. Cross-sectional maps of the deposition blocks are given in **Annexure-III.**

Assessment of sediment load in the river: Assessment of sediment load in a river is subjective to study of the whole catchment area, weathering index of the various rock types which acts as a source of the sediments in the specific river bed, rainfall data of the area for a period not less than 20 years, and finally the detail monitoring of the bed upliftment with

time axis. Again, the sediment load estimation is largely depends upon the aerial extents of the catchment areas, which crossed the district and state boundaries.

5.3 METHODOLOGY FOR CALCULATING THE TOTAL POTENTIAL OF MINOR MINERAL IN THE RIVER BED ANNUAL DEPOSITION

For estimating the reserve of river bed material [Sand/Gravel (Minor Mineral)], the following parameters were considered:

a) The volumes of the reserves are calculated on the basis of the established width, thickness and length of the deposit as per actual field data.

b) The tonnage of the reserve quantity is obtained by multiplying the above volume with the bulk density of 2.0 g/m^3.

c) The depth of the reserves has been estimated considering the available deposit thickness of sand the water level/red line.

5.4 NO MINING ZONE

A definition of a protected area was established by IUCN in 1994, which is described as "An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through a legal or other effective means." Mining has a range of environmental consequences for protected areas, whether operations are undertaken within them or nearby.

The types of impact may be listed as follows:

• Direct land take and loss of vegetation cover in the mined area and other parts directly affected by associated activities such as deposition of tailings, or consequences such as subsidence.

• Pollution affects, especially on water supplies, aggravated by accidents (e.g., to tailing dams).

• Impacts due to access associated with mining (roads, railways, pipelines, power lines etc.) which permit illegal hunting, habitat fragmentation and alien invasions.

• Impacts on other protected area values from noise and visual intrusion, arising from both mining and secondary activities, including transportation.

The 2020 guidelines for sand mining stress on protecting rivers and habitats of species including turtles and calls for such sensitive areas to be declared as no-mining zones. The environment ministry has come out with, "Enforcement & Monitoring Guidelines for Sand Mining 2020" to regulate sand mining and check illegal mining.

The latest guidelines suggest the use of technologies like drones with night vision for surveillance of sand mining sites, steps to identify sources of sand, procedures for replenishment of sand, post environmental clearance monitoring of sand mining sites, a procedure for environmental audit of such areas and steps to control the instances of illegal mining.

Protect the rivers from illegal mining:

To protect the rivers from illegal mining, the guidelines said that abandoned stream channels on the floodplains should be preferred rather than active channels and their deltas and floodplains.

1. As per guidelines, mining depth has been restricted to 03 meters depth and distance from the bank is ¼th of river width and not be less than 7.5 meters.

2. Also, mining is prohibited up to a distance of 01 kilometer (01 km) from major bridges and highways on both sides, or five times (5x) of the span (x) of a bridge/public civil structure (including water intake points) on up-stream side and ten times (10x) the span of such bridge on down-stream side, subjected to a minimum of 250 meters on the upstream side and 500 meters on the downstream side.

3. Sand bar/riverine deposits acting as potential sites for river bed mining along with other aspects as mentioned above are illustrated in satellite images in **Annexure-IV**.

5.5 DETAILS OF POTENTIAL SOURCES/SITES OF RIVER BED MATERIAL

Potential sensitive sites for mining near forests, protected areas, habitation, bridges etc., shall be avoided. For this, a sub-divisional committee is formed which after the site visit decides its suitability for mining. Sub divisional level committee shall make recommendations regarding the suitability of all potential mining sites and also record the reason for approving the specific mining leases on the basis of its field inspections.

Table 13: Details of potential mining sites in the district Yamunanagar

Sr. No.	Mineral Deposit Site	Approx. Area (in ha)	Approx. Area (in sq. m.)	Average Thickness (in m)	Approx. Volume (in MT)
1.	Kanyawala (BGS)	15.00	1,50,000	3	9,00,000
2.	Mandoli Ghaggar West (BGS)	21.00	2,10,000	3	12,60,000
3.	Lapra (Sand)	35.00	3,50,000	3	21,00,000
Total Estimated Reserve					**42,60,000**

CHAPTER 6
TRANSPORTATION ROUTE PLAN

6.0 GENERAL CONNECTIVTY

An efficient transportation system is important because it makes possible for people to communicate, trade and engage in other forms of exchange, which in turn helps to develop civilization. Transportation plays a significant role in economic progress and globalization.

To Reach Yamuna Nagar by Road

Yamuna Nagar is connected to towns, cities and other states by the Haryana Roadways (State Transport), as well as some private transportation services. Yamuna Nagar is about 96 km. by road from Chandigarh. For bus enquiry at Yamunanagar bus stand, dial 01732-227717.

To Reach Yamuna Nagar by Air and Train

Yamuna Nagar is not well connected to other major cities of the country via regular flights. The nearest airport is in Chandigarh. The nearest major Railway station in district is Yamunanagar-Jagadhri (Station Code: YJUD). For railway enquiry, dial 139.

6.1 TRANSPORTATION ROUTE PLAN FOR INDIVIDUAL MINING SITES

For connecting the individual mining sites, following criteria is adopted:

- The route to the mining site should not be trespassing the habitation as the movement of the sand laden heavy vehicles would affect the populace there.
- The tippers/dumpers should be covered with tarpaulin so as to minimize dust particles in the air.
- The haul road should be properly maintained and water should be regularly sprinkled as a measure to dust suppression.
- The vehicles should avoid loud honking while moving around the villages as it would lead to noise pollution.

CHAPTER 7

REMEDIAL MEASURES TO MITIGATE THE IMPACT OF MINING

7.0 ENVIRONMENTAL SENSITIVITY

The second most exploited natural resource on earth after water is river bed material. It is preferred for construction due to its quality. But unscientific way of mining from river bed leads to alter river channel morphology, physical habitats and food webs. It also increases the velocity of flow in river which destroy flow-regime eventually erodes the river banks. Removal of vegetation and destruction of soil profile destroys habitat above and below the ground and faunal population decrease. Sand aquifers help in recharging the water table and sand mining causes sinking of water tables in the nearby areas. Mining also leads to Air pollution & Noise Pollution in the nearby areas.

7.1 REMEDIAL MEASURES

In Sustainable Sand Mining Management Guidelines, 2016, Page No. 73 to 78, it is clearly stated that the relevant conditions for the environmental clearance for the specific mining leases, which should be strictly adhered to by all stakeholders, including Project Proponent, Mining Department, Contract labor, other Government Departments and District Administration. Regular monitoring of operational mining sites should be done according to the Hon'ble NGT directions and the inspection report should be sent to SEIAA and other stake holders as also uploaded on their websites. Special attention should be given to ensure compliance with the following important conditions:

7.1.1 SUSTAINABLE MINING PRACTICES

1. Without environmental clearance, no commercial river-bed mining is permissible on the basis of approved DSR/Mining Plan by the concerned authority.

2. The depth of mining in river bed is always less then base flow depth or 03 meters, whichever is less.

3. Mining shall be done in layers to avoid ponding effect in mining site and haphazard extraction is to be strictly avoided.

4. No mining should be carried out in the designated "No-Mining Zone"/"Eco Sensitive Zone"/ "Restricted Zone".

5. Annual replenishment studies, where ever applicable, must be carried out for the river.

6. Stream/any water channel should not be diverted/blocked for the purpose of sand mining.

7. Restricted sand mining operation has to be carried out for mitigation of noise during mining operation.

8. Transportation of mineral shall be carried out through covered trucks only.

9. Mining site has to be maintained in clean and hygienic conditions at all the times.

10. During rainy season mining practices should be stopped.

11. All mines/quarries are to be properly reclaimed before the final closure of the mine.

12. During mining operation green belt development through plantation is most important for environment safe guard, which should be under supervision of mining department.

13. During mining operation, risk factors, viz. accidents during loading and transportation, inundation/flooding and quick sand conditions, should be minimizing. The mining operations are mostly done manually and/or semi-mechanized way.

14. All mining operations will be carried out under the supervision of an experienced and qualified Mines Manager having Certificate of Competency to manage the mines granted by DGMS. The mining site will be supplied with first aid facilities and all the workers will have unrestricted access to these facilities.

7.1.2 MONITORING THE MINING OF MINERALS AND THEIR TRANSPORTATION

1. Proper check and control of extracted minor minerals is a critically important aspect of the DSR. IT tools as prescribed in the SSMG, 2016 and EMGSM, 2020 are to be utilized to ensure that no illegal mining takes place and transportation is done in an environmentally safe manner.

2. For each mining lease site, the access should be controlled in such a way that all vehicles carrying minerals from that area are tracked and accounted for.

3. Mining activities should be monitored regularly in order to ensure effective compliance of stipulated EC conditions and of the provisions under the Minor Mineral Concessions Rules framed by the State Govt.

7.1.3 NOISE MANAGEMENT

1. Noise that produced at the time of mining process should be checked and controlled at source.

2. Noise level should be kept within the permissible limits and restricted mining operation has to be carried out between 6am to 7pm.

7.1.4 AIR POLLUTION AND DUST MANAGEMENT

1. Air pollution due to transportation of mining material should be controlled and water sprinkling should be done regularly.

2. Vehicles carrying minerals shall not be over loaded and have to be covered vehicles with tarpaulin. Wheel-washing facility should be installed and used.

7.1.5 BIO-DIVERSITY PROTECTION AND COMPENSATION

1. No mining lease shall be granted in the forest area without forest clearance in accordance with the provisions of the Forest Conservation Act, 1980 and the rules made thereunder.

2. Protection of turtle and bird habitats shall be ensured.

3. Felling of trees near the quarries is prohibited. For mining lease located in proximity to National Parks/Sanctuaries or in Eco-Sensitive Zones of Protected Areas, latest orders dated 03.06.2022 of the Hon'ble Supreme Court in T. N. Godavarnam case will be meticulously complied with.

4. Spring sources should not be affected due to mining activities. Necessary Protection measures are to be incorporated.

7.1.6 MANAGEMENT OF INSTABILITY AND EROSION

1. The top soil of the mining area should be utilized properly. If the top soil can't be used at that time, it should be stored separately keeping the view that the bacterial organism should not die and should be spread out in the nearby area.

2. The EC should ensure that adequate steps are taken to check soil erosion and control debris flow etc. by constructing engineering structures.

3. Oversized material should be used to control erosion and movement of sediments.

7.1.7 WASTE MANAGEMENT

1. Cleaning and hygienic activity should be maintained in mining areas.

2. Earmarked places approved by mining plan to be used for waste disposal.

3. Rubbish/Debris/Gangue shall not be dumped back in the River/Stream.

7.1.8 BASELINE SURVEYS AND RECLAMATION PLAN ON COMPLETION OF MINING OPERATION

1. All mines/quarries are to be properly reclaimed before the final closure of the mine as per statute.

2. A baseline survey of conditions before commencement of mining operations is to be prepared. This should include the relevant cross-section data between two permanent benchmarks set back

However, there are some identified risks in the mining activity which are as under:

A. Accident during sand loading and transportation

B. Inundation/ Flooding

C. Quick Sand Condition

7.2.2 MITIGATION MEASURES TO PREVENT ACCIDENT DURING LOADING AND TRANSPORTATION

1. Mining activities should be done during daylight hour only.

2. The truck will be covered with tarpaulin and to prevent any spillage.

3. To avoid danger while reversing the trackless vehicles especially at the embankment and tipping points, all areas for reversing of Lorries should be free of workers as far as possible.

4. All transportation within the main working will be carried out directly under the supervision and control of the management.

5. Overloading should not be permitted and the maximum permissible speed limit should be ensured.

6. Trucks must be maintained regularly and the drivers should have a valid driving license.

7.2.3 MEASURES TO PREVENT ACCIDENTS DURING INUNDATION/FLOODING

To minimize the risk of flooding/ inundation following measures will be under taken:

1. Mining activities should be completely stopped during rainy season.

2. Proper weather information particularly on non-monsoon rainy days should be kept.

7.2.4 MEASURES FOR MITIGATION TO QUICK SAND CONDITION

1. Quick sand zone and deep-water zone will be clearly demarcated and all the mine workers will be made aware of the location.

2. Mining will do strictly as per the approved mining plan.

7.2.5 DISASTER MANAGEMENT PLAN

All mining operations will be carried out under the supervision of an experienced and qualified Mines Manager having Certificate of Competency to manage the mines granted by DGMS. All the provisions of Mines Act 1952, MMR 1961 and Mines Rules 1955, and other laws applicable to mines will be strictly complied with. During heavy rainfall and during the monsoon season, mining operations will be closed. Proper coordination with Irrigation Department should be maintained so that at the time of release of water from any dam upstream of the mining site, suitable warning/information is given in advance. Special attention and requisite precautions shall be taken while working in areas of geological weakness like the existence of slip, fault, etc.

CHAPTER 8

PUBLIC CONSULTATION

8.0 PUBLIC CONSULTATIONS

"Public Consultation" is very important in the policy development process. It is a regulatory process by which the public's (Stakeholder's) input on matters affecting them is sought. Accordingly, public consultation should encourage stakeholder ownership and buy-in to the policy development process by seeking assistance with data and information collection, analyses and the identification of other persons, businesses, institutes and other organizations that may have valuable data or information.

8.1 PROCEDURE FOR PUBLIC CONSULTATION

The District Survey Report is placed in public domain for one-month period on district website for seeking comments of the general public and various stakeholders.

DISTRICT SURVEY REPORT (RIVER BED MINING)
DISTRICT YAMUNA NAGAR, HARYANA

1. Abandoned stream channels or terraces and inactive floodplains may be preferred rather than active channels and their deltas and floodplains.

2. Stream should not be diverted to form inactive channel and mining below subterranean water level should be avoided as a safeguard against environmental contamination and over exploitation of resources.

3. Mining area should be demarcated on the ground with pillars having coordinates so as to avoid illegal unscientific mining.

(GURDEEP SINGH) 8/8/23
Mining Officer
Yamunanagar

8/8/2023
Regional Officer
HSPCB, Yamunanagar

Executive Engineer
Water Services Division, Jagadhri

Executive Engineer
HKB Div. 1, Jagadhri

Subject to the condition that permission will be taken under FCA/1980 & EFA 1927 before any work to be started if applicable.
9/10/2023

Executive Engineer
PWD (B&R), Yamunanagar
8/8/23

District Revenue Officer
Yamunanagar

Divisional Forest Officer
Yamunanagar

Mining Officer has informed that the Forest deptt. (vide letter dated 10.8.23) & Irrigation deptt. (vide letter dated 31.8.23) have submitted observations that have been incorporated in the District Survey Report (DSR), as directed by the undersigned. Submitted to DC YNR for approval.
12/10/23

Additional Deputy Commissioner
Yamunanagar

DC YNR. 16/10

ANNEXURE-I

List of existing mining contracts of the district with area, location & period for each minor mineral

River Bed Mining Blocks

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
1.	Jathlana Block YNR B12	101.27	**Jathlana:** **103//11,** 19, 20, 21, 22 **104//7min,** 8min,9min, 10min, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21/1, 21/2, 22, 23 **105//6,** 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25/1, 25/2 **106//13,** 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 11, 12, **123//1 to 15,** 16, 17, 18, 19, 20, 21, 22, 23 **124//1,** 2, 3, 4/1, 4/2, 4/3, 5/1, 5/2, 5/3, 6/1, 6/2, 7, 8, 9/1/1, 9/1/2, 9/2, 9/3, 10, 11, 12/1, 12/2, 12/3, 13, 14,15,19,20, 21 **125//1,** 2, 3, 9/1, 9/2, 10,11,20 **107//14min,** 15min, 16,17, 18, 19min, 20min, 21, 22,23,24, 25 **108//25min 121//5min,** 6, 7min, 14min, 13min, 15, 16 ,17, 18min, 23min, 24, 25 **122//1 to 23,** 24, 25 **126//1,** 2, 3, 4, 8, 9, 10, 11, 12, 21, 20 **127//3 to 8,**2min,9min,12min, 19min, 13, 14, 15, 16, 17, 18, 19, 25 **137//16,** 17, 18, 23, 24 ,25 **138//2,** 3 to 8, 9, 12, 13, 14, 15, 16 **139//1,** 2min, 8min, 9, 10, 11, 12, 20 **136//21min** **Dhakwala:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19/1,19/2, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43 min, 44, 45, 46, 47, 48 min, 49 min, 50, 51, 52, 53, 54 min, 55 min, 56 min, 221, 222 min, 223 min, 224 min, 225 min, 226, 227, 228, 229, 230, 231, 232, 233/1,233/2, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 249 min, 251 min, 252, 253 min, 254 min, 340 min, 341, 342min, 343 min, 344, 345, 346, 347, 348, 349, 350, 351 min, 352 min	10	Sand	36.00

1644

320

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
2.	M T Karhera Block YNR B13	67.79	**3//18,** 19min, 20min, 21min, 22, 23, **4//25min 11//6,** 7, 8min,12, 13, 14, 15,16/1, 16/2, 17, 18, 19min, 20/1min, 21min, 22, 23, 24, 25 **12//1,** 2, 9, 10, 11, 20,21/1, 21/2 **13//1,** 10, 11, 20, 21, 22 **14//1 to 25 15//5/2,** 6, 7, 14/2, 15, 16, 17, 18min, 23, 24, 25 **21//1 to 15,** 16min, 17,18,19,20,21,22, 23 min,24min **22//1,** 2min, 9min, 10, 11 min, 20 min **26//1,** 10, 11, 20/2 **27//1,** 4, 5/1, 5/2, 6, 7, 8, 9/1, 9/2, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20/1, 20/2, 21, 22, 23, 24, 25 **28//5min,** 6min,15min, 16min, 25min**31//5,** 6, 7min, 14min, 15, 16, 17min, 24min, 25 **32//1,** 10, 11, 20, 21 **37//1,** 10, 11, 20, 21 **38//5,** 6, 15 **42//42 32//2,** 3, 4, 5min, 6min, 7, 8, 9, 12, 13, 14, 15min, 17min, 18, 19, 22, 23, 24min **37//2,** 3, 4min, 8min, 9, 12, 13min, 19, 22	07	Sand	28.50

1645

321

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
3.	Nagla Rangraan YNR B14	89.48	**Majri:** 31 min, 34, 35, 36, 32 min, 33, 37, 38, 70 min, 71 min, 42 min, 43, 133, 134, 135, 136 min, 142 min, 143, 144, 145, 152, 156, 157, 158 min, 153, 154, 155 min, 165 min, 166 min, 168, 169, 180, 184, 185 min, 177, 181, 182, 183, 206, 207, 208, 209, 210, 215, 219, 220, 221, 216, 218, 230, 231, 217, 229, 232, 233, 234, 238, 44, 36, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 146, 147, 148, 149, 150 **Nagla Rangran:** **1//17min,** 18, 19, 21, 22/1, 23/1, 23/2, 24min **5//1,** 2, 3, 4min, 8min, 9, 10, 12, 13/1min, 19min, 22/2min, 6/5, 6, 7, 8, 13, 14/1, 14/2, 19, 20, 21, 22, 23, 24 **7//25 8//4/1,** 4/2, 5/1, 5/2, 6, 7, 13, 14/1, 14/2, 15, 16, 17, 18, 22, 23/1, 23/2, 23/3, 24, 25 **9//1,** 2, 3, 4/1, 4/2, 5, 6, 7, 8, 9/1, 9/2, 10, 11/1, 11/2, 12, 13, 14, 15min, 16min, 17, 18, 19/1, 19/2, 20, 21, 22, 23, 24min **17//1,** 2, 3, 4min, 7min, 9, 10,11, 12, 13min,18min,19, 20/1, 20/2, 21, 22min **18//2,** 3, 4, 5, 6, 7, 8, 9, 12/1, 12/2, 13, 14, 15, 16, 17,18, 22, 23, 24, 25/1, 25/2 **19//2,** 3, 4, 5, 6, 7, 8, 9,12, 13, 14, 15/1, 15/2, 16, 19 **20//1,** 2min, 9min, 10, 11, 20, 35 **Sandhala:** **9//12min,** 13, 19, 20min, 21min, 22 **18//5min,** 6, 7min, 14min, 15, 16, 17, 18min, 23min, 24/1, 24/2, 25 **19//1,** 10, 11 **21//2min,** 3, 4, 5/1, 5/2, 6, 7, 8, 9min, 12, 13, 14, 15, 16, 17, 18, 19, 20min, 21min, 22, 23, 24, 25 **20//1,** 10, 11 **34//1,** 2, 3, 4, 5, 6, 7, 8, 9,10, 11, 12, 13, 14, 18, 19, 20, 21, 22, 23 **33//6min,**15min,16min, 25min **37//5min,** 6, 15, 16, 25 **36//1,** 2, 3, 8/1, 8/2, 13, 12/1, 12/2, 11, 20, 19/1, 19/2, 18, 21, 22 **45//5 46//1,** 2	09	Sand	38.60

1646

322

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
4.	Nagli Block YNR B15	77.25	**1//18min,** 19, 21, 22, 23min **5//1,** 2, 3min, 8min, 9, 10, 11, 12, 13min, 18min, 19, 20, 21, 22, 23min **6//5,** 6, 15, 16, 25 **11//5,** 6, 14, 15, 16, 17, 18, 19, 20min, 21, 22, 23, 24, 25 **12//1,** 2, 9, 10,11, 12min, 19min, 20, 21, 22min **21//1,** 2min,9min,10,11,20,21 **22//1 to 25 23//4min,** 5, 6, 7min, 14min, 15, 16, 17min, 24min, 25 **28//4min,** 5, 6, 7min, 14min, 15, 16, 17min, 24min, 25 **29//1 to 25 30//1,** 10, 11, 20 ,21 **37//1,** 10, 11, 20, 21min **38//1 to 24,** 25 **39//4min,** 5, 6, 7,8min, 12min, 13, 14, 15, 16, 17,18,19,20min, 21, 22, 23, 24, 25 **40//16min,** 17min, 24, 25 **41//5 42//1 to 9,** 10, 12, 13 to 17, 18, 24, 25 **43//1,** 2, 3, 4, 8, 9, 10, 11, 12, 20, 19, 21 **44//1 45//5**	10	Sand	33.30
5.	Gurnthala South Block YNR B17	49.67	**124//4 min,** 5, 6, 7 min, 14 min, 15, 16, 17 min, 24 min, 25, **125//1,** 2, 3 min, 8 min, 9, 10, 11, 12, 13 min, 18 min, 19, 20, 21, 22, 23, **136//3 min,** 2, 1, 8 min, 9, 10, 11, 12, 13 min, 18 min, 19, 20, 21, 22, 23 min, **137//5,** 6, 15, 16, 25, **147//5 min,** 6 min, 15 min, 16 min, 25 min, **148//1,** 2, 3, 8, 9, 10, 11, 12, 13 min, 18 min, 19, 20, 21, 22, 23, **157//1** , 2, 3, 8, 9, 10, 11, 12, 13, 14 min, 17 min, 18, 19, 20, 21, 22, 23, 24 min, **158//5 min,** 6 min, 15 min, 16 min, 25 min, **164//5,** 6, 15, 16, 25, **165//1,** 2, 3, 4 min, 7, 8, 9, 10, 11, 12, 13, 14 min, 17, 18, 19, 20, 21, 22, 23, 24, **172//1 min,** 2, 3, 4, 6 min, 7, 8, 9, 10 min, 11 min, 12, 13, 14, 15 min, 16 min, 17, 18, 19, 20 min, 21, 22, 23, 24, 25, **176//2,** 3, 4, 5, **177//1,** 10, **69//6,** 7, **46//8,** 9, 10, 11, 1min, 2min, **47//15min,** 6min	09	Sand	21.88

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
6.	Jairampur Jagir Block YNR B6	33.58	**2//20,** 21, 22 **6//16min,** 25 **7//3,**8/1, 8/2, 3, 4/1, 4/2, 5/1, 5/2, 6/1, 6/2, 6/3, 7/1, 7/2, 7/3, 12/2, 12/3, 13/1, 13/2, 13/3, 14/1, 14/2, 14/3, 15/1, 15/2, 15/3, 16, 17/1, 17/2, 18 to 23, 24 **8//1,2,** 10/1, 10/2, 10/3, **11//1** to 3, 8, 9 to 12, 13, 19 to 22 **12//4,5,** 6,7, 14, 15, 16, 17, 24, 25 **15//3,** 4 to 7, 8, 13, 14, 15, 16, 17, 18, 23, 24/1, 24/2, 24/3, 24/4, 24/5, 24/6, 25/1, 25/2, 25/3, 25/4, 25/5, 25/6 **16//1,** 2, 9, 10, 11, 12, 20, 21/1, 21/2, 21/3, 21/4, 21/5 **19//1,** 10 min, 11min, 19min, 20, 21, 22 **20//3** to 8, 13 to 16, 17, 25 **23//1,** 2, 8, 9, 13 min, 17 min.	10	Sand	15.20
7.	Kanalsi Block YNR B5	44.14	**41//16,** 24, 25 **42//16 to 19,** 20, 21,22 to25 **43//16,** 17 to 24, 25 **44//1,** 10, 11, 12, 19, 20, 21, 22 **45//1,** 2, 3 to 8, 9, 10 to11, 12, 13 to 18, 19, 20 to 21, 22, 23 to 24, 25/1, 25/2 **46//1,** 2, 3, 4, 5, 6, 7, 8, 9 to 17, 18, 19, 20, 21, 24, 25 **47//3,**4,5,6,7/1,7/2,8,9 min,11 min,12 to 25 **48//16 min,** 24 min, 25 **52//4 min,** 5, 6, 7, 15 **53//1,** 2, 3,4/1, 4/2, 5, 7, 8 to 13, 19	09	Boulder-Gravel-Sand	19.50
8.	Mandoli Ghaggar East Block YNR B3	20.18	**GPS Coordinates:** Latitude: N 30°08'10.85" to N 30°08'26.69" Longitude: E 77°25'01.71" to E 77°25'21.23"	10	Boulder-Gravel-Sand	08.58

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
9.	Dhanaura Block YNR B18	18.18	67, 72 min, 75 min, 74, 73, 72, 71, 68/1, 68/2, 68/3 min, 68/4, 68/5, 68/6, 68/7, 68/8, 68/9, 68/10, 69/3 min, 69/4, 69/5, 69/6, 69/7, 69/8, 69/9, 69/10, 69/11 min, 69/12, 69/13, 69/14, 69/15, 69/16, 69/17, 69/18, 89/1, 89/2, 89/3, 89/4, 89/5, 89/6, 89/7, 89/8 min, 89/9, 89/10, 89/11, 89/12, 89/13, 89/14, 89/15, 89/16, 89/17, 89/18 min, 89/19, 89/20, 89/21, 89/22 min, 89/26 min, 89/27, 89/28, 89/29, 89/30 min, 88/1 min, 86/27, 69/19	10	Boulder-Gravel-Sand	09.38

1649

325

Outside River Bed Mining Blocks (in Agricultural land)

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
1.	Malikpur Khadhar Block YNR B28	23.20	**47//5 to 16,** 17, 18, 19, 20, 22, 23, 24, 25, **48//1 to 15,** 17 to 22, **54//3,** 4, 5, **41//13,** 14, 15, 16, 17, 18, 19, 21, 22/1, 22/2, 22/3, 22/4, 22/5, 23, 24/1, 24/2, 25, **40//11,** 20, 21, **49//1,** 10	08	Boulder-Gravel-Sand	04.00
2.	Pipli Majra Block YNR B29, 30 &31	18.20	**Pipli Majra B-29:** **6//21/1, 21/2, 7//25, 12//4,** 5, 6, **7,** 8/1, 8/2, 13, 14, 15, 16/1, 16/2, 17, 18, 19/1, 19/2, 21/1, 21/2, 22, 23, **13//1,** 10, **11** **Pipli Majra B-30:** **16//12,** 13, 19, 20, 21, **17//16,** 17, 23, 24, 25, **20//2,** 3, 4, 5, 9 **Pipli Majra B-31:** **6//15,** 16, 17, 24, 25, **5//20,** 21, 22, **14//1,** 2, 3, 10, **13//4,** 5, 6/1, 6/2, 7	07	Boulder-Gravel-Sand	03.70

1650

326

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
3.	Devdhar YNR B24	31.87	**23//11,** 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22/1, 22/2, 23/1, 23/2, 24, 25, 22/21, **24//12,** 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, **25//16,** 23, 24/1, 24/2, 25, **30//3,** 4/1, 4/2, 5, 6, 7/1, 7/2, 8, 13, 14, 15, 16, 17, 18, **31//1,** 2, 3, **31//4,** 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, **32//1,** 2/1, 2/2, 3, 4, 5, 6, 7, 8, 9/1, 9/2, **32//10/1,** 10/2, 11, 12, 13, 14, 19, 20	08	Boulder-Gravel-Sand	05.10
4.	Jaidhari Block YNR B33	48.60	**31//4,** 5, 6, 7, 14, 15, 16/1, 16/2, 17, 24, 25, **32//1 to 9,11 to 16, 18 to 25, 33//1,** 2, 3, 4/1, 4/2, 5, 6, 7/1, 7/2, 8, 9, 10, 11/1, 11/2, 12, 13, 14/1, 14/2, 15, 16, 17/1, 17/2, 18, 19, 20, 21/1, 21/2, 22, 23, 24/1, 24/2, 25/1, 25/2, 25/3, **34//1,** 2, 9, 10, 11, 12, 19, 20, 21/1, 21/2, 22, **41//4,** 5/1, 5/2, 6, 7, **19//21,** 22, **20//21,** 22, 23, 24, 25, **21//21,** 22, 23/1, 23/2, 24/1, 24/2, 25/1, 25/2, **22//24,** 25, **38//1/1, 1/2,** 2/1, 2/2, 9/1, 9/2, 10, 11/1, 11/2, 12/1, 12/2, 19/1, 19/2, 20, 21, 22, **39//1 to 17,** 24, 25, **50//4,** 5, 6, 7, 14, 15, **51//1,** 2, 9, 10, 11, 12	08	Boulder-Gravel-Sand	09.10

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
5.	Mandewala YNR B38	15.00	**11//13,** 17, 18, 23/1, 23/2, 24, 25/1, 25/2, **15//1,** 35/1, 9, 10, 11/1, 11/2, 12, 19, 20/1, 20/2, 21/8, **14//3/1, 3/2,** 4/1, 4/2, 5/1, 5/2, 6/1, 6/2, 7, 8, 13, 14, 15/1, 15/2, 16/1, 16/2, 17, 18, 19, 20/1, 20/2, 21, 22, 23, 24/1, 24/2, 25/1, 25/2, **20//4/1, 4/2,** 5/1, 5/2, 6, 7, **19//1**	08	Boulder-Gravel-Sand	22.80
6.	Jaidhar Block YNR B34	25.60	**27//12,** 13, 14, 16/1, 16,2, 17, 18/1, 18/2, 19, 20, 21, 22, 23, 24, 25, **26//25/1,25,2, 33//5, 32//1/1, 1/2,** 2, 3, 4/1, 4/2, 4/3, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 17, **31//1,** 2, 3, 6, 7/1, 7/2, 8, 9, 10, 11, 12/1, 12/2, 13/1, 13/2, 14/1, 14/2, 15, 16/1, 16/2, 17, 18, 19, 20, 21, 22, 23, 24, 25/1, 25/2, **43//2,** 3, 4/1, 4/2, 5, 6, **30//11,** 19, 20/1, 20/2, 21, 22, 23, **44//1,** 2, 3	08	Boulder-Gravel-Sand	36.86

1652

328

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
7.	Galauri Block YNR B39	24.00	**4//1,** 2, 9, 10, 11, 12/1, 12/2, 19/1, 19/2, 20, 21/1, 21/2, 22/1, 22/2, **5//3,** 4/1, 4/2, 5, 6/1, 6/2, 7/1, 7/2, 7/3, 8, 13, 14, 15, 16, 17, 18/1, 18/2, 23/1, 23/2, 24, 25, **8//3/1, 3/2,** 4, 5/1, 5/2, 6, 7/1, 7/2, 8, 13/1, 13/2, 14/1, 14/2, 15, 16, 17, 18/1, 18/2, 23/1, 23/2, 24, 25, **9//1/1, 1/2,** 2/1, 2/2, 9, 10, 11, 12/1, 12/2, 12/3, 19, 20/1, 20/2, 21, 22, **12//1,** 2, 9/1, 9/2, 10, **13//3,** 4, 5/1, 5/2, 6, 7, 8/1, 8/2.	08	Boulder-Gravel-Sand	04.40
8.	Bhood Kalan YNR B19	12.62	**40//11,** 12/1, 12/2, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, **41//14,** 15, 16, 17, 25, **43//1,** 2, 3, 4, 5, 6, 7, 8, 14, 15, **44//1,** 2, 3, 7, 8, 9, 10, 11, 12, 13, 18, 19, 20	07	Boulder-Gravel-Sand	02.59
9.	Bhood Majra YNR B20	9.95	**26//1,** 18, 19, 20, 21, 22, 23, **27//5,** 6, 14/2, 15/1, 15/2, 16, 17, 24, 25/1, 25/2, 25/3, **29//4,** 5, 6, 7, 15, **30//1,** 2, 9, 10, 11, 12, 13	07	Boulder-Gravel-Sand	02.00

1653

329

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
10.	Kohliwala YNR B21 & 22	13.59	**Kohliwala B-21:** **4//1**, 2/1, 2/2,10, 11, **5//6**/1/1, 6/1/2, 6/2, 7/1, 7/2, 14/1/1, 14/1/2, 14/2, 15, 16, 17 **Kohliwala B-22:** 10//1, 2, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 23/1, 23/2, 24, 25. 11//21, 14//3, 4, 5, 6, 7, 8	08	Boulder-Gravel-Sand	02.50
11.	Begampur YNR B37	39.50	**63//11,** 12, **64//11,** 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, **65//14,** 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, **66// 16/2,** 17, 18/1, 18/2, 23, 24, 25/1, 25/2, **70//3/1, 32/2,** 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16 to 25, **71//1,** 2, 3/1, 3/2, 4 to 11, 12/1, 12/2, 13, 14, 15/1, 15/2, 16 to 19, 20/1, 20/2, 21/1, 21/2, 22 to 25, **72//1,** 2, 3, 7, 8, 9, 10/1, 10/2, 11 to 14, 15, 16/1, 16/2, 17/1, 17/2, 18 to 21, 22, 23, 24, 25, **73//11,** 20, **75//4,** 5, **76//4,** 5, 6, 7 ,11, 12, 14, 15, 16, 17 to 20, 21 to 24, **77//1 to 4,** 8 to 10, 11, 12, 13/1, 13/2, 14 to 18, 19/1, 19/2, 20, 21/1, 21/2, 22 to 25, **78// 7,** 8, 13, 14, 16 to 25, **80//15, 81//1,** 2, 3, 4, 5/1, 5/2, 6, 7/1, 7/2, 8 to 10, 11, 12, 13/1, 13/2, 14, 15, **82//1**	08	Boulder-Gravel-Sand	56.88

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
12.	Chuharpur Block YNR B26 & 27	50.40	**Chuharpur B-26:** **15//22/1, 22/2,** 23min, **19//10min,** 11, 12, 13min, 16min, 17 , 18, 19, 20, 21, 22, 23, 24, 25, **20//2,** 3 , 4, 5min, 6, 7, 8, 9, 12, 13, 14, 15, 16, 17, 18 , 19, 24, 25/1 to 25/4, **32//4,** 5, 6, 7, 14, 15, 17/1, 17/2, 17/3, 24, 25, **33//1,** 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 19, 20, 21/1, 21/2, 22/1, 22/2, **43//4,** 5/1, 5/2 **Chuharpur B-27:** **50//2,** 3, 4, 5, 6, 7, 8, 9min, 13, 14, 15, 16/1, **51//1,** 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16/1, 16/2, 17, 18, 19, 20min, 22, 23/1, 23/2, 24, 25, **52//1,** 2, 3, 4, 5, 6/1, 6/2, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16min, 17min, 18, 19, 20, 21, 22/1, 23min, **53//1,** 2, 3/1, 3/2, 4, 5min, 7min, 8, 9, 10, 11, 12, 13, 14min, 20min	08	Boulder-Gravel-Sand	74.56
13.	Nandgarh Block YNR B36	29.60	**4//9/1, 9/2,** 12, 18/1, 18/2, 19, 21/1, 21/2, 22, 23/1, 23/2, 24/1, 24/2, 11/5, 6, 7, 12, 13, 14, 15/1, 15/2, 16, 17, 18/1, 18/2, 19, 20/1, 20/1, 21, 22, 23, 24/1, 24/2, 25, **12//1,** 2, 3, 4, 5, 6/1, 6/2, 7, 8, 9, 10/1, 10/2, 11, 12, 13, 14, 15/1, 15/2, 17, 18, 19, 20, 21, 22, 23/1, 23/2, **13//10, 15//1,** 2, 9, 10, 11, **16//1,** 2, 3/1, 3/2, 4, 5, 6, 7, 8, 9, 10, 11, 12/1, 12/2, 13, 14, 15, 16, 17, 18, 19, 20/1, 20/2, 23, 24, **23//3**	08	Boulder-Gravel-Sand	46.22

1655

331

Sr. No.	Name of Mining Block	Area (in Hect.)	Details of Khasra No's.	Period (in Yrs.)	Name of Minor Mineral	Annual Capacity as per EC/Mining Plan (in lakh MT)
14.	Ismailpur Block YNR B32	50.50	**15//14,** 15, 16/1, 16/2, 16/3, 17, 18/1, 18/2, 22, 23, 23/1, 23/2, 24, 25, **16//11,** 12, 13, 14, 15, 16, 17, 18, 19/1, 19,2, 20, 21/1, 21/2, 22 to 25, **17//11,** 12, 14, 17, 18, 19, 20, 21, 22, 23, **22//1,** 2, 10, **23//1 to 15,** 17 to 23, **24//2/1, 2/2,** 3 to 8, 9/1, 9/2, 10/1, 10/2, 11, 12, 13/1, 13/2, 14 to 25, **25//15,** 23/1, 23/2, 24, 25, **28//3/1, 3/2,** 4, 5, 6, 7/1, 7/2, 8, 9, 13, 14, 15, 16, 17, 24, 25, **29//1/1, 1/2,** 2/1, 2/2, 3, 4, 5, 6, 7, 8, 9/1, 9/2, 10, 11, 12, 13, 14, 15/1, 15/2, 17 to 21, 22/1, 22/2, 23/1, 23/2, **35//1,** 2/1, 2/2, 9, 10	08	Boulder-Gravel-Sand	76.96
15.	Haldari Gujjar Block YNR B35	46.80	**18//1/1, 1/2,** 2 to 9, 10/1, 10/2, 11 to 25, **19//11 to 25, 20//2 to 4,** 7 to 9, 11 to 14, 18 to 20, 21,22	08	Boulder-Gravel-Sand	70.43

ANNEXURE-II

List of proposed river bed mining contracts of the district with area, location & period for each minor mineral

Sr. No.	Mining Unit	Name of the Village	Total Mineral Concession Area (in acre)	Details of Khasra No's.	GPS reading of all corner point taken by HARSAC by using DGPS			Area as per GPS reading (in acre.)	Remarks
1.	Ranjitpur - Ranipur	Ranjitpur	100.24	2// 4 min, 5 min, 6, 7 min 14 min, 15, 16, 17 min 24 min, 25 min 6// 5 min, 6 min 21// min (Big Number)	Pillar	Latitude	Longitude	27.38	Boulder, Gravel & Sand
					A1	30°25' 51.966'' N	77°21' 1.074'' E		
					A2	30°25' 44.595'' N	77°21' 1.783'' E		
					A3	30°25' 37.288'' N	77°21' 6.833'' E		
					A4	30°25' 33.084'' N	77°21' 9.669'' E		
					A5	30°25' 30.563'' N	77°21' 13.011'' E		
					B1	30°25' 52.519'' N	77°21' 6.306'' E		
					B2	30°25' 46.764'' N	77°21' 6.655'' E		
					B3	30°25' 43.063'' N	77°21' 11.273'' E		
					B4	30°25' 37.896'' N	77°21' 14.196'' E		
					B5	30°25' 36.042'' N	77°21' 15.267'' E		
		Ranipur Gaunda		36// 15/1 min, 15/2, 16/1, 17 min, 24/1, 24/4 min, 23 37// 1/1 min, 1/2, 2/1 min, 2/2 min, 3 min, 8, 9, 10/1, 10/2 min, 11, 12, 19 min, 20 min, 21 min 39// 2/1 min, 2/2, 3/1, 3/2 min, 4 min, 5 min, 7 min, 8, 9/1, 10/1, 11/1, 12, 13 min, 14 min, 18 min, 19 min, 20 min, 21, 22 min 40// 16/1, 24 min, 25 min 43// 3 min, 5, 6 min, 7, 8/1, 8/2 min, 9/1 min, 9/2, 11 min, 12/1 min, 12/2, 13 min, 14 min, 18 min, 19/1 min, 20 min **Ancillary area** 40// 11, 12, 13, 18, 19, 20, 21, 22, 23	Pillar	Latitude	Longitude	27.48	
					A1	30° 2559.866" N	77° 21'46.777" E		
					A2	30° 2559.163" N	77° 21'44.258" E		
					A3	30° 2556.779" N	77° 21'42.455" E		
					A4	30° 2552.124" N	77° 21'37.226" E		
					A5	30° 2543.479" N	77° 21'27.393" E		
					A6	30° 2539.363" N	77° 21'22.933" E		
					A7	30° 2535.801" N	77° 21'18.544" E		
					B1	30° 2601.112" N	77° 21'49.044" E		
					B2	30° 2556.430" N	77° 21'46.674" E		
					B3	30° 2554.733" N	77° 21'45.449" E		
					B4	30° 2551.482" N	77° 21'41.375" E		
					B5	30° 2544.072" N	77° 21'34.950" E		
					B6	30° 2538.602" N	77° 21'28.535" E		
					B7	30° 2536.318" N	77° 21'24.307" E		
					B8	30° 2534.664" N	77° 21'20.675" E		
		Swabari		1// 7 min, 13 min, 14 min, 15 min, 17 min, 18 min, 22 min, 23 min, 24 min	Pillar	Latitude	Longitude	3.96	
					A7	30°25' 35.801'' N	77°21' 18.544'' E		
					A8	30°25' 32.564'' N	77°21' 13.932'' E		
					A5	30°25' 30.563'' N	77°21' 13.011'' E		
					B8	30°25' 34.664'' N	77°21' 20.675'' E		

					B9	30°25' 30.895'' N	77°21' 17.370'' E		
		Ranipur		32// 16 min, 17 min, 18 min, 19 min, 23 min, 24, 25 min 35// 3 min, 4, 5 min, 6 min, 7, 8, 9/1 min, 12/2 min, 13, 14 min, 15 min, 17 min, 18, 19/1 min, 22 min, 23, 24 min 44// 2 min, 3/1, 3/2 min, 4 min, 8 min, 9 min, 11 min, 12, 13 min, 18 min, 19, 20 min, 21/1 min, 21/2 min, 22, 23 min 47// 1 min, 2/1, 2/2, 3 min, 6 min, 7 min, 8 min, 9/1, 9/2/1, 10 min, 11 min, 12/1, 12/2 min, 13, 14, 15/1 min, 15/2 min, 17 min, 18 min, 19 min	Pillar	Latitude	Longitude	31.56	
					A10	30°24' 37.805'' N	77°20'56.086'' E		
					A11	30°24' 28.988'' N	77°20'54.712'' E		
					A12	30°24' 25.179'' N	77°20'54.051'' E		
					A13	30°24' 16.141'' N	77°20'50.834'' E		
					A14	30°24' 12.497'' N	77°20'51.011'' E		
					A15	30°24' 9.559'' N	77°20'53.752'' E		
					A16	30°24' 8.435'' N	77°21'0.599'' E		
					B10	30°24' 37.345'' N	77°21'2.924'' E		
					B11	30°24' 30.474'' N	77°21'0.527'' E		
					B12	30°24' 26.349'' N	77°20'59.004'' E		
					B13	30°24' 22.494'' N	77°20'57.057'' E		
					B14	30°24' 16.733'' N	77°20'55.327'' E		
					B15	30°24' 13.908'' N	77°20'55.171'' E		
					B16	30°24' 12.766'' N	77°20'56.738'' E		
					B17	30°24' 11.747'' N	77°21'0.227'' E		
					B18	30°24' 9.813'' N	77°21'2.332'' E		
		Gadawali	94.45	4// 12 min, 13, 14, 16 min, 17 min, 18, 19 min, 20 min, 21 min, 22, 23 min, 24 min 5// 17 min, 18 min, 19 min, 20 min, 21 min, 22 min, 23 min, 24 min, 25 min 6// 1 min, 2, 3 min, 8 min, 9 min, 10 min, 11 min, 13 min, 14 min, 17 min, 18 min, 23 min, 24 min, 25 min 7// 6 min, 7 min, 11 min, 12 min, 13 min, 14 min, 15 min, 17 min, 18 min, 19 min, 20 min, 22 min, 23 min, 24 min, 25 min 8// 15 min, 16 min, 17 min 11// 3 min, 4, 5 min, 6 min, 7 min, 8 min, 14 min, 15, 16 min, 17 min, 25 min 12// 4/1 min, 5/1 min, 10 min, 11 min, 20 min, 21, 22 min 13// 1 min, 4 min, 5, 6 min, 7 min 14// 1, 2 min, 3 min, 9 min, 10 min 20// 1, 2 min, 9 min, 10, 11, 12 min, 19 min, 20, 21, 22 min 21// 5 min, 6 min, 15 min, 16 min, 25 min 26// 5 min, 6 min, 15 min 27// 1, 2 min, 9 min, 10 min	Pillar	Latitude	Longitude	52.00	
					A 9	30° 24' 9.279" N	77°21'45.571" E		
					A 10	30° 24' 6.110" N	77°21'42.810" E		
					A 11	30° 24' 4.784" N	77°21'42.456" E		
					A 12	30° 24'5.258" N	77°21'39.019" E		
					A 13	30° 24'7.740" N	77°21'35.486" E		
					A 14	30° 24'8.225" N	77°21'33.617" E		
					A 15	30° 24'7.956" N	77°21'31.808" E		
					A 16	30° 24'6.551" N	77°21'30.036" E		
					A 17	30° 24'5.716" N	77°21'28.435" E		
					A 18	30° 24'5.592" N	77°21'26.373" E		
					A 19	30° 24'7.530" N	77°21'24.468" E		
					A 20	30° 24'12.946" N	77°21'23.192" E		
					A 22	30° 24'13.756" N	77°21'18.669" E		
					A 23	30° 24'12.617" N	77°21'16.819" E		
					A 24	30° 24'11.594" N	77°21'12.985" E		
					A 25	30° 24'8.627" N	77° 21'8.351" E		
					A 26	30° 24'10.112" N	77° 21'2.662" E		
					A 27	30° 24'8.396" N	77° 21'0.618" E		
					A 28	30° 24'7.105" N	77° 21'5.684" E		
					A 29	30° 24'4.675" N	77° 21'9.458" E		
					A 30	30° 23'57.720" N	77°21'13.853" E		
					A 31	30° 23'55.045" N	77°21'14.820" E		
					A 32	30° 23'45.487" N	77°21'14.503" E		
					A 33	30° 23'43.014" N	77°21'14.479" E		
					B 9	30° 24'8.264" N	77°21'52.647" E		

					B 10	30° 24'7.260" N	77°21'51.080" E		
					B 11	30° 24'3.183" N	77°21'45.623" E		
					B 12	30° 24'1.550" N	77°21'42.899" E		
					B 13	30° 24'1.469" N	77°21'39.838" E		
					B 14	30° 24'4.276" N	77°21'37.131" E		
					B 15	30° 24'5.794" N	77°21'35.456" E		
					B 16	30° 24'5.890" N	77 21'31.077" E		
					B 17	30° 24'4.365" N	77°21'29.357" E		
					B 18	30° 24'4.495" N	77°21'25.638" E		
					B 19	30° 24'5.423" N	77°21'23.961" E		
					B 20	30° 24'7.347" N	77°21'22.459" E		
					B 21	30° 24'8.958" N	77°21'22.033" E		
					B 22	30° 24'11.695" N	77°21'21.087" E		
					B 23	30° 24'11.584" N	77°21'18.813" E		
					B 24	30° 24'10.079" N	77°21'13.863" E		
					B 25	30° 24'7.562" N	77°21'10.853" E		
					B 26	30° 24'3.834" N	77°21'15.211" E		
					B 27	30° 23'57.882" N	77°21'18.360" E		
					B 28	30° 23'54.712" N	77°21'18.744" E		
					B 29	30° 23'50.591" N	77°21'18.768" E		
					B 30	30° 23'47.410" N	77°21'19.414" E		
					B 31	30° 23'41.908" N	77°21'19.383" E		
		Shergarh		40/ 21/1 min 5// 16 min, 17 min, 18 min, 19/2 min, 22 min 23 min, 24 min 14// 25 min 15// 1/2 min, 2 min, 9 min, 10 min, 11 min, 12 min, 20 min, 21 min 18// 1 min 19// 5 min, 6 min, 7 min, 12 min, 13 min, 14 min, 15 min, 17 min, 18 min, 20 min, 21, 22 min, 23 20// 16/1 min, 24 min, 25 min 26// 5 min 27// 1 min, 2 min, 3 min, 4 min, 5 min, 7 min, 8 min, 9 28// 1 min 22// 20 min, 21 min 23// 16 min, 17 min **Ancillary area** 20// 7 to 14, 17 to 20	**Pillar**	**Latitude**	**Longitude**	**20.00**	
					A 1	30° 24'34.068" N	77° 22' 24.497" E		
					A 2	30° 24'32.726" N	77° 22' 17.854" E		
					A 3	30° 24'31.671" N	77° 22' 15.955" E		
					A 4	30° 24'19.349" N	77° 22' 11.496" E		
					A 5	30° 24'18.234" N	77° 22' 10.217" E		
					A 6	30° 24'14.609" N	77° 22' 2.755" E		
					A 7	30° 24'11.640" N	77° 21' 57.042" E		
					A 8	30° 24'9.889" N	77° 21' 52.869" E		
					A 9	30° 24'9.279" N	77° 21' 45.571" E		
					B 1	30° 24'32.413" N	77° 22' 27.491" E		
					B 2	30° 24'32.732" N	77° 22' 23.177" E		
					B 3	30° 24'31.866" N	77° 22' 18.112" E		
					B 4	30° 24'19.860" N	77° 22' 13.234" E		
					B 5	30° 24'17.192" N	77° 22' 11.702" E		
					B 6	30° 24'14.089" N	77° 22' 8.802" E		
					B 7	30° 24'11.017" N	77° 22' 2.583" E		
					B 8	30° 24'9.443" N	77° 21' 59.176" E		
					B 9	30° 24'8.264" N	77° 21' 52.647" E		
					A 20	30° 24'12.946" N	77° 21' 23.192" E		
					A 21	30° 24'14.157" N	77° 21' 22.434" E		
					A 22	30° 24'34.068" N	77° 22' 24.497" E		
		Dayalgarh		12/18 min, 19min, 22 min.	**Pillar**	**Latitude**	**Longitude**	**1.50**	
					A9	30°24' 33.050'' N	77°22' 33.00'' E		
					A10	30°24' 33.547'' N	77°22' 28.151'' E		
					A11	30°24' 30.583'' N	77°22' 28.151'' E		

					A12	30°24'29.415'' N	77°22'30.65'' E		
		Sunder Bahadur pur		13/0 25 min 14/0 11 min, 20 min, 21 min 29/0 1 min, 10 min 30/0 5 min, 6 min, 7 min, 14 min, 15 min, 16 min, 17 min, 18 min, 19 min, 20 min, 21min, 22 min, 23 min 31/0 16 min, 25 min	**Pillar**	**Latitude**	**Longitude**	8.47	
					A1	30°24' 45.623'' N	77°22' 50.077'' E		
					A2	30°24' 43.422'' N	77°22' 50.068'' E		
					A3	30°24' 41.893'' N	77°22' 50.640'' E		
					A4	30°24' 38.318'' N	77°22' 48.963'' E		
					A5	30°24' 34.299'' N	77°22' 45.936'' E		
					A6	30°24' 32.879'' N	77°22' 42.214 '' E		
					A7	30°24' 32.568'' N	77°22' 38.112 '' E		
					A8	30°24' 32.635'' N	77°22' 36.126'' E		
					B1	30°24' 46.041'' N	77°22' 50.902'' E		
					B2	30°24' 44.079'' N	77°22' 51.886'' E		
					B3	30°24' 42.059'' N	77°22' 51.958'' E		
					B4	30°24' 37.812'' N	77°22' 51.317'' E		
					B5	30°24' 33.329'' N	77°22' 48.127'' E		
					B6	30°24' 31.522'' N	77°22' 41.993'' E		
					B7	30°24' 31.218'' N	77°22' 37.683'' E		
					B8	30°24' 31.353'' N	77°22' 35.737'' E		
		Bihta	79.18	2/0 23 min 3/0 3 min, 8 min, 12 min, 13, 19 min, 21 min, 22 min 19/0 1 min, 2, 10 min	**Pillar**	**Latitude**	**Longitude**	4.00	
					A 8	30° 22' 16.632" N	77° 20' 52.973" E		
					A 9	30° 22' 10.506" N	77° 20' 50.539" E		
					A 10	30° 22' 4.259" N	77° 20' 47.712" E		
					A 11	30° 22' 1.887" N	77° 20' 47.808" E		
					A 12	30° 22' 1.870" N	77° 20' 47.828" E		
					A 12A	30° 22' 14.871" N	77° 20' 54.450" E		
		Mujaffar		1/0 13, 14, 16 min, 17 min, 18, 22, 23 min, 24 min 5/0 21 min 6/0 2, 3 min, 8 min, 9, 11 min, 12/1 min, 12/2 min, 13 min, 14 min, 16 min, 17 min, 18 min, 19 min, 23 min, 24 min, 25 min 9/0 4 min, 5/1 min, 5/2, 6/1/1 min 10/0 1 min, 2 min, 9 min, 10 min, 11/1 min, 11/2 min, 12/1, 12/2 min, 13/1 min, 13/2 min, 17 min, 18 min, 19 min, 23 min, 24 min, 25 min 16/0 1 min, 9 min, 10 min, 11 min, 12 min, 19 min, 20 min, 21 min, 22 min 17/0 4 min, 5/1 min, 5/2, 6 min, 13 min 27/0 2 min, 9 min, 12 min, 19 min, 22 min, 23 min 30/0 2 min, 3 min, 8 min, 9 min, 12/2 min, 13/2 min, 18 min, 19 min, 21 min, 22 min, 23 min 38/0 1 min, 2/1 min, 2/2 min, 9 min, 10 min, 11 min, 12/1 min, 12/2 min, 19 min, 20 min, 21 min, 22 min 40/0 1 min, 2 min, 9 min, 10/1, 10/2, 11/1, 11/2 min 41/0 5/2 min, 6/1 min, 6/2 min, 15 min 16 min **Ancillary area** 11/0 8 to 13, 18 to 20	**Pillar**	**Latitude**	**Longitude**	45.00	
					A 12A	30° 22' 14.871" N	77° 20' 54.450" E		
					A 12	30° 22' 1.870" N	77° 20' 47.828" E		
					A 13	30° 21' 57.214" N	77° 20' 53.198" E		
					A 14	30° 21' 53.977" N	77° 20' 57.491" E		
					A 15	30° 21' 50.685" N	77° 21' 0.895" E		
					A 16	30° 21' 47.018" N	77° 21' 5.266" E		
					A 17	30° 21' 42.291" N	77° 21' 10.291" E		
					A 18	30° 21' 39.608" N	77° 21' 12.487" E		
					A 19	30° 21' 37.186" N	77° 21' 15.603" E		
					A 20	30° 21' 35.635" N	77° 21' 13.950" E		
					A 21	30° 21' 32.507" N	77° 21' 14.085" E		
					A 22	30° 21' 18.166" N	77° 21' 13.864" E		
					A 23	30° 21' 7.411" N	77° 21' 11.666" E		
					A 24	30° 21' 2.749" N	77° 21' 10.634" E		
					A 25	30° 21' 0.767" N	77° 21' 10.409" E		
					B 7A	30° 22' 11.565" N	77° 20' 54.321" E		
					B 7	30° 22' 10.079" N	77° 20' 57.170" E		
					B 8	30° 22' 6.872" N	77° 20' 52.949" E		

					B 9	30° 23' 1.697" N	77° 20' 51.914" E		
					B 10	30° 21' 58.897" N	77° 20' 55.327" E		
					B 11	30° 21' 56.522" N	77° 20' 58.452" E		
					B 12	30° 21' 52.562" N	77° 21' 2.856" E		
					B 13	30° 21' 44.383" N	77° 21' 11.813" E		
					B 14	30° 21' 41.624" N	77° 21' 14.296" E		
					B 15	30° 21' 34.158" N	77° 21' 15.928" E		
					B 16	30° 21' 18.869" N	77° 21' 16.657" E		
					B 17	30° 21' 8.609" N	77° 21' 15.099" E		
					B 18	30° 21' 3.422" N	77° 21' 13.758" E		
					B 19	30° 21' 1.213" N	77° 21' 13.379" E		
		Bhamouli		5// 13min, 14 min, 17 min, 18 min, 23 min, 24 min 10// 3 min, 4 min, 7 min, 8 min, 14 min, 15 min, 16 min, 17 min, 24 min, 25 min 20// 1 min, 9 min, 10 min 11 min, 12/1 min, 12/2 min, 13/1 min, 13/2 min, 16 min, 17 min, 18 min, 24 min, 25 min 21// 5 min 19// 21 min, 22 min, 23 min, 24 min 26// 5 min 27// 1 min, 2 min, 3 min, 4 min, 5 min 28// 1/1. 1/2 min, 3, 4 min, 5 min, 6/1 min. 6/2 min, 7/1 min, 7/2 min, 8/1 min, 15 min, 16 min, 25 min 29// 11/1 min, 20 min 33// 4 min, 5 min, 6 min, 7 min	**Pillar**	**Latitude**	**Longitude**	**22.00**	
					A 1	30° 21' 0.787" N	77° 21' 10.409" E		
					A 2	30° 20' 59.563" N	77° 21' 10.903" E		
					A 3	30° 20' 54.715" N	77° 21' 11.245" E		
					A 4	30° 20' 48.799" N	77° 21' 13.430" E		
					A 5	30° 20' 43.864" N	77° 21' 16.435" E		
					A 6	30° 20' 37.459" N	77° 21' 25.040" E		
					A 7	30° 20' 36.259" N	77° 21' 27.479" E		
					A 8	30° 20' 35.556" N	77° 21' 28.959" E		
					A 9	30° 20' 34.480" N	77° 21' 34.232" E		
					A 10	30° 20' 34.106" N	77° 21' 44.152" E		
					A 11	30° 20' 33.821" N	77° 21' 49.908" E		
					A 12	30° 20' 33.144" N	77° 21' 53.141" E		
					A 13	30° 20' 29.237" N	77° 21' 53.860" E		
					A 14	30° 20' 22.643" N	77° 21' 51.720" E		
					B 1	30° 21' 1.213" N	77° 21' 13.379" E		
					B 2	30° 20' 59.743" N	77° 21' 12.929" E		
					B 3	30° 20' 55.516" N	77° 21' 12.912" E		
					B 4	30° 20' 53.587" N	77° 21' 13.040" E		
					B 5	30° 20' 51.520" N	77° 21' 13.894" E		
					B 6	30° 20' 48.385" N	77° 21' 15.343" E		
					B 7	30° 20' 45.348" N	77° 21' 17.388" E		
					B 8	30° 20' 42.056" N	77° 21' 20.716" E		
					B 9	30° 20' 40.800" N	77° 21' 22.459" E		
					B 10	30° 20' 38.511" N	77° 21' 26.436" E		
					B 11	30° 20' 36.909" N	77° 21' 30.143" E		
					B 12	30° 20' 35.963" N	77° 21' 35.414" E		
					B 13	30° 20' 35.841" N	77° 21' 44.075" E		
					B 14	30° 20' 35.837" N	77° 21' 49.899" E		
					B 15	30° 20' 34.171" N	77° 21' 54.652" E		
					B 16	30° 20' 29.415" N	77° 21' 55.410" E		
					B 17	30° 20' 22.172" N	77° 21' 53.016" E		
		Rukali	16.47	7// 3 mn, 4 min, 7 min, 8 min, 13 min, 14 min, 15 min, 16 min, 17 min, 18 min, 24/3 min, 25/2 min 13// 5 min, 6 min, 7 min, 14 min, 15 min, 17 min, 18 min, 22 min, 23 min 19// 20 min	**Pillar**	**Latitude**	**Longitude**	**11.00**	
					A 15	30° 18' 18.439" N	77° 21' 39.729" E		
					A 16	30° 18' 16.169" N	77° 21' 38.705" E		
					A 17	30° 18' 13.608" N	77° 21' 38.936" E		
					A 18	30° 18' 11.900" N	77° 21' 40.146" E		
					A 19	30° 18' 10.181" N	77° 21' 42.198" E		
					A 20	30° 18' 7.369" N	77° 21' 42.907" E		
					A 21	30° 18' 3.913" N	77° 21' 40.275" E		

				20// 2 min, 3 min, 8 min, 9 min, 12 min, 13 min, 14 min, 16 min, 17 min **Anciallary area** 7// 21 to 23 13// 1 to 3	A 22	30° 18' 1.791" N	77° 21' 38.141" E		
					A 23	30° 17' 57.674" N	77° 21' 35.001" E		
					A 24	30° 17' 55.432" N	77° 21' 34.296" E		
					A 25	30° 17' 54.640" N	77° 21' 36.509" E		
					A 26	30° 17' 52.331" N	77° 21' 39.811" E		
					A 27	30° 17' 50.743" N	77° 21' 43.886" E		
					B 18	30° 18' 18.352" N	77° 21' 40.989" E		
					B 19	30° 18' 16.108" N	77° 21' 39.718" E		
					B 20	30° 18' 13.246" N	77° 21' 42.035" E		
					B 21	30° 18' 10.745" N	77° 21' 43.987" E		
					B 22	30° 18' 7.138" N	77° 21' 44.268" E		
					B 23	30° 18' 4.683" N	77° 21' 43.261" E		
					B 24	30° 18' 3.184" N	77° 21' 42.127" E		
					B 25	30° 18' 2.733" N	77° 21' 40.943" E		
					B 26	30° 18' 1.052" N	77° 21' 38.814" E		
					B 27	30° 17' 57.950" N	77° 21' 36.288" E		
					B 28	30° 17' 55.571" N	77° 21' 37.017" E		
					B 29	30° 17' 54.260" N	77° 21' 39.703" E		
					B 30	30° 17' 50.921" N	77° 21' 44.878" E		
Total	**1**	**12**	**290.34**					**254.35**	

Sr. No.	Mining Unit	Name of the Village	Total Mineral Concession Area (in acre)	Details of Khasra Nos.	GPS reading of all corner point taken by HARSAC by using DGPS			Area as per GPS reading (in acre.)	Remarks
2.	Nagli-32-Pirthipur	Nagli-32	147.02	141// 19 min, 20 min, 21 min, 22 min 146// 1 min, 2 min, 9 min, 10 min, 11 min, 12 min, 19 min, 22 min 159// 6 min, 15 min, 16 min, 24 min, 25 min 160// 1 min, 10 min, 11 min 164// 4 min, 5 min, 6 min, 7 min, 14 min, 17 min, 24 min, 13 min, 18 min, 22 min, 23, 24 min 169/2 min, 3, 4 min, 8 min, 9, 10 min, 11 min, 12 min, 13 min	Pillar	Latitude	Longitude	17.00	Boulder, Gravel & Sand
					A1	30° 24' 35.830" N	77° 24' 52.620" E		
					A2	30° 24' 32.648" N	77° 24' 52.735" E		
					A3	30° 24' 22.910" N	77° 24' 53.204" E		
					A4	30° 24' 9.341" N	77° 24' 48.330" E		
					A5	30° 23' 54.153" N	77° 24' 45.151" E		
					A6	30° 23' 50.179" N	77° 24' 42.186" E		
					A7	30° 23' 48.584" N	77° 24' 42.127" E		
					A8	30° 23' 46.979" N	77° 24' 41.535" E		
					A9	30° 23' 44.078" N	77° 24' 39.185" E		
					A10	30° 23' 41.099" N	77° 24' 36.559" E		
					A11	30° 23' 37.555" N	77° 24' 34.691" E		
					A12	30° 23' 35.695" N	77° 24' 29.321" E		
					B1	30° 24' 36.118" N	77° 24' 55.837" E		
					B2	30° 24' 33.574" N	77° 24' 54.863" E		
					B3	30° 24' 22.964" N	77° 24' 54.446" E		
					B4	30° 23' 59.980" N	77° 24' 49.403" E		
					B5	30° 23' 54.183" N	77° 24' 46.123" E		
					B6	30° 23' 49.523" N	77° 24' 45.189" E		
					B7	30° 23' 47.869" N	77° 24' 43.702" E		
					B8	30° 23' 45.759" N	77° 24' 42.511" E		
					B9	30° 23' 40.435" N	77° 24' 41.247" E		
					B10	30° 23' 38.934" N	77° 24' 41.064" E		
		Gahrakuri		2// 21 min 3// 21 min, 22 min, 23 min, 24, 25 8//, 6 min, 14 min, 15 min, 16 min, 17/1 min, 17/2 min, 23 min, 24 min 9// 1 min, 2 min, 3 min, 4 min, 5 min, 10 min 12// 2 min, 3 min, 8 min, 9 min, 11 min, 12 min, 19 min, 20 min, 21 min 13// 15 min, 16 min, 24, 25/1 min, 25/2 19// 3 min, 4 min, 5/1 min, 5/2 min, 10 min, 11 min, 19 min, 20 min 24// 1 min, 2 min, 3 min, 4 min, 8 min, 9 min, 10 min, 11 min, 12 min, 20 min 25// 17, 23 min, 24 min 28// 3 min, 4 min, 7 min, 8 min, 13 min, 14 min	Pillar	Latitude	Longitude	28.50	
					A1	30° 23' 35.613" N	77° 24' 32.948" E		
					A2	30° 23' 36.612" N	77° 24' 28.905" E		
					A3	30° 23' 34.435" N	77° 24' 24.146" E		
					A4	30° 23' 27.420" N	77° 24' 17.434" E		
					A5	30° 23' 25.035" N	77° 24' 15.295" E		
					A6	30° 23' 19.599" N	77° 24' 9.714" E		
					A7	30° 23' 17.725" N	77° 24' 7.599" E		
					A8	30° 23' 16.775" N	77° 24' 4.551" E		
					A9	30° 23' 14.224" N	77° 23' 59.55" E		
					A10	30° 23' 12.12" N	77° 23' 57.07" E		
					A11	30° 23'10.10" N	77° 23' 54.65" E		
					A12	30° 23' 3.46" N	77° 23' 49.555" E		
					A12A	30° 23' 2.051" N	77° 23' 44.202" E		
					A13	30° 22' 57.362" N	77° 23' 38.671" E		
					A14	30° 22' 50.729" N	77° 23' 37.586" E		
					B1	30° 23' 33.448" N	77° 24' 35.820" E		
					B2	30° 23' 34.127" N	77° 24' 29.059" E		
					B3	30° 23' 32.991" N	77° 24' 25.075" E		
					B4	30° 23' 30.739" N	77° 24' 22.557" E		
					B5	30° 23' 26.417" N	77° 24' 18.374" E		
					B6	30° 23' 16.491" N	77° 24' 11.210" E		
					B7	30° 23' 12.724" N	77° 24' 6.051" E		
					B8	30° 23' 12.724" N	77° 23' 59..55" E		

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					B9	30° 23' 9.12" N	77° 23' 57.20" E		
					B10	30° 23' 7.37" N	77° 23' 54.73" E		
					B11	30° 23' 5.45" N	77° 23' 52.00" E		
					B11(A)	30° 22' 59.26" N	77° 23' 46.505" E		
					B11(B)	30° 22' 56.28" N	77° 23' 41.583" E		
					B12	30° 22' 49.586" N	77° 23' 39.272" E		
		Rajpur		**40 min** **41 min**	**Pillar**	**Latitude**	**Longitude**	8.0	
					A34	30° 22' 50.729" N	77° 23' 33.586" E		
					A35	30° 22' 47.540" N	77° 23' 33.244" E		
					A36	30° 22' 44.186" N	77° 23' 33.349" E		
					A37	30° 22' 35.111" N	77° 23' 32.299" E		
					B12	30° 22' 49.586" N	77° 23' 39.272" E		
					B13	30° 22' 45.981" N	77° 23' 36.896" E		
					B14	30° 22' 42.889" N	77° 23' 35.270" E		
					B15	30° 22' 33.613" N	77° 23' 34.832" E		
		Rampur Jansan		39 min, 40 min, 41 min	**Pillar**	**Latitude**	**Longitude**	**23.00**	
					A17	30° 22' 35.111" N	77° 23' 32.299" E		
					A18	30° 22' 30.565" N	77° 23' 28.799" E		
					A19	30° 22' 26.955" N	77° 23' 27.457" E		
					A20	30° 22' 11.575" N	77° 23' 21.026" E		
					B15	30° 22' 33.613" N	77° 23' 34.832" E		
					B16	30° 22' 28.790" N	77° 23' 34.526" E		
					B17	30° 22' 21.029" N	77° 23' 28.730" E		
					B18	30° 22' 8.992" N	77° 23' 25.054" E		
		Chaltarao		**16// 11 min, 12, 18 min, 19, 20 min, 21 min, 22, 23 min** **13//** 1 min, 2 min, 3 min, 9 min, 10 min, 11, 12 min, 19 min, 20, 21 min **14//** 6 min, 14 min, 15 min, 16, 17 min, 18 min, 23 min, 24, 25 **21//** 2 min, 3 min, 4, 5, 6 min, 7, 8, 9 min, 12 min, 13, 14, 15 min, 16 min, 17, 18, 19 min, 22 min, 23, 24, 25 min **22//** 1 min, 10 min **26//** 2 min, 3, 4, 5 min, 6 min, 7, 8, 9 min, 12 min, 13, 14, 15 min, 16 min, 17, 18, 19 min, 23, 24, 25 min **27//** 4, 5 min **Ancillary area** 8// 16 to 19, 22 to 25 15// 2 to 5	**Pillar**	**Latitude**	**Longitude**	**45.00**	
					A20	30° 22' 11.575" N	77° 23' 21.026" E		
					A21	30° 22' 4.942" N	77° 23' 20.571" E		
					A22	30° 22' 0.148" N	77° 23' 16.483" E		
					A23	30° 21' 57.836" N	77° 23' 12.986" E		
					A24	30° 21' 55.693" N	77° 23' 12.118" E		
					A25	30° 21' 52.203" N	77° 23' 10.630" E		
					A26	30° 21' 49.821" N	77° 23' 10.833" E		
					A27	30° 21' 42.084" N	77° 23' 10.268" E		
					A28	30° 21' 39.218" N	77° 23' 11.742" E		
					B18	30° 22' 8.992" N	77° 23' 25.054" E		
					B19	30° 22' 5.835" N	77° 23' 25.115" E		
					B20	30° 21' 58.032" N	77° 23' 21.921" E		
					B21	30° 21' 50.468" N	77° 23' 17.795" E		
					B22	30° 21' 45.276" N	77° 23' 18.621" E		
					B23	30° 21' 34.818" N	77° 23' 18.152" E		
		Pothipur		**23//13** min, 14 min, 15 min, 16/1 min, 16/2 min, 17, 18 min, 23 min, 24, 25 min **26//** 2/2 min, 3 min, 4, 5 min, 6 min, 7 min, 8/1, 8/2, 9 min, 12 min, 13, 14 min, 18 min, 19 min, 22 min, 23 **36//** 2 min, 3, 9/1 min	**Pillar**	**Latitude**	**Longitude**	**16.50**	
					A31	30° 21' 22.910" N	77° 23' 14.851" E		
					A32	30° 21' 15.140" N	77° 23' 11.633" E		
					A33	30° 21' 12.221" N	77° 23' 10.221" E		
					A34	30° 21' 10.146" N	77° 23' 9.765" E		
					A35	30° 21' 4.938" N	77° 23' 11.191" E		
					B28	30° 21' 22.910" N	77° 23' 19.865" E		
					B29	30° 21' 21.092" N	77° 23' 18.385" E		
					B30	30° 21' 17.328" N	77° 23' 18.655" E		
					B31	30° 21' 14.223" N	77° 23' 16.989" E		
					B32	30° 21' 12.101" N	77° 23' 14.679" E		
					B33	30° 21' 9.304" N	77° 23' 13.738" E		
					B34	30° 21' 8.742" N	77° 23' 14.827" E		

	Total	6	147.02					138.00	

Sr. No.	Mining Unit	Name of the Village	Total Mineral Concession Area (in acre)	Details of Khasra Nos.	GPS reading of all corner point taken by HARSAC by using DGPS			Area as per GPS reading (in acre.)	Remarks
3.	Leda Khadar-Barali Magra	Leda Khadar	23.61	50/ 9 min, 12 min, 13 min, 14 min, 16 min, 17 min, 18 min, 25 min 60/ 19 min, 20 min, 21 min, 22 min, 23 min, 24 min, 25 min 70/ 15/1 min, 15/2 min, 16 min, 17 min, 18 min, 19 min, 20 min, 21 min, 22 min, 23 min, 25 min 80/ 20 min, 21 min 90/ 1/1 min, 1/2 min, 10 min 180/ 5 min, 6min 180/ 17, 18 min, 24 min **Ancillary area** 170/ 16, 17, 24, 25 180/ 20, 21	Pillar	Latitude	Longitude	9.50	Boulder, Gravel & Sand
					A1	30° 18' 43.416" N	77° 24' 7.491" E		
					A2	30° 18' 46.307" N	77° 24' 8.835" E		
					A3	30° 18' 45.851" N	77° 24' 10.844" E		
					A4	30° 18' 44.156" N	77° 24' 12.984" E		
					A5	30° 18' 43.817" N	77° 24' 17.454" E		
					A6	30° 18' 42.312" N	77° 24' 22.843" E		
					A7	30° 18' 41.775" N	77° 24' 28.402" E		
					A8	30° 18' 42.972" N	77° 24' 31.040" E		
					A9	30° 18' 42.235" N	77° 24' 35.188" E		
					A10	30° 18' 42.825" N	77° 24' 35.832" E		
					A11	30° 18' 43.210" N	77° 24' 37.526" E		
					A12	30° 18' 43.918" N	77° 24' 39.586" E		
					A13	30° 18' 43.451" N	77° 24' 41.116" E		
					A14	30° 18' 42.088" N	77° 24' 41.718" E		
					A15	30° 18' 39.438" N	77° 24' 41.709" E		
					B1	30° 18' 48.316" N	77° 24' 8.894" E		
					B2	30° 18' 46.988" N	77° 24' 9.887" E		
					B3	30° 18' 45.782" N	77° 24' 12.622" E		
					B4	30° 18' 44.443" N	77° 24' 15.751" E		
					B5	30° 18' 43.597" N	77° 24' 19.213" E		
					B6	30° 18' 43.248" N	77° 24' 23.707" E		
					B7	30° 18' 42.677" N	77° 24' 26.135" E		
					B8	30° 18' 42.694" N	77° 24' 29.136" E		
					B9	30° 18' 43.120" N	77° 24' 32.671" E		
					B10	30° 18' 42.744" N	77° 24' 35.572" E		
					B11	30° 18' 44.556" N	77° 24' 39.429" E		
					B12	30° 18' 44.816" N	77° 24' 41.396" E		
					B13	30° 18' 44.456" N	77° 24' 42.038" E		
					B14	30° 18' 42.987" N	77° 24' 42.822" E		
					B15	30° 18' 38.856" N	77° 24' 43.205" E		
					B15-a	30° 18' 38.365" N	77° 24' 42.838" E		
					B15-b	30° 18' 38.329" N	77° 24' 42.848" E		
					B15-c	30° 18' 38.199" N	77° 24' 42.766" E		
					B15-d	30° 18' 38.691" N	77° 24' 42.682" E		
		Kotra Khan Singh		50/ 10/1 min, 10/2 min, 11 min, 20 min, 21 min 60/ 15 min 70/ 1 min, 2 min, 9 min, 10 min, 12 min, 13 min, 17 min, 18 min, 24 min, 25 min 150/ 1 min 160/ 5 min	Pillar	Latitude	Longitude	5.30	
					A16	30° 18' 37.860" N	77° 24' 41.895" E		
					A17	30° 18' 33.810" N	77° 24' 42.645" E		
					A18	30° 18' 30.675" N	77° 24' 43.568" E		
					A19	30° 18' 27.956" N	77° 24' 43.996" E		
					A20	30° 18' 26.189" N	77° 24' 44.816" E		
					A21	30° 18' 24.125" N	77° 24' 43.246" E		
					A22	30° 18' 22.731" N	77° 24' 58.426" E		
					A22-a	30° 18' 22.644" N	77° 24' 58.266" E		
					A22-b	30° 18' 21.780" N	77° 24' 58.581" E		
					A22-C	30° 18' 21.887" N	77° 24' 58.128" E		
					A23	30° 18' 18.892" N	77° 24' 53.892" E		

					B16	30° 18' 37.343" N	77° 24' 45.018" E		
					B17	30° 18' 34.886" N	77° 24' 45.403" E		
					B18	30° 18' 30.784" N	77° 24' 46.251" E		
					B19	30° 18' 25.290" N	77° 24' 46.482" E		
					B20	30° 18' 26.773" N	77° 24' 45.547" E		
					B21	30° 18' 26.131" N	77° 24' 46.132" E		
					B22	30° 18' 24.685" N	77° 24' 48.264" E		
					B23	30° 18' 23.645" N	77° 24' 50.589" E		
					B24	30° 18' 21.538" N	77° 24' 52.672" E		
					B25	30° 18' 19.888" N	77° 24' 55.387" E		
		Beroli Majra		3// 24 min 9// 4 min, 5 min, 7 min, 14 min, 17 min, 18 min, 23 min, 24 min 14// 2 min, 3 min, 9 min, 10 min, 11 min 13// 15 min	Pillar	Latitude	Longitude	2.30	
					A24	30° 17' 51.840" N	77° 25' 10.667" E		
					A25	30° 17' 50.369" N	77° 25' 10.795" E		
					A26	30° 17' 48.421" N	77° 25' 10.727" E		
					A27	30° 17' 47.587" N	77° 25' 10.534" E		
					A28	30° 17' 45.559" N	77° 25' 9.865" E		
					A29	30° 17' 44.038" N	77° 25' 9.011" E		
					A30	30° 17' 42.962" N	77° 25' 8.588" E		
					A31	30° 17' 42.218" N	77° 25' 8.139" E		
					A32	30° 17' 40.714" N	77° 25' 7.033" E		
					A33	30° 17' 39.579" N	77° 25' 5.683" E		
					A34	30° 17' 38.424" N	77° 25' 4.248" E		
					A35	30° 17' 37.486" N	77° 25' 2.711" E		
					A36	30° 17' 36.458" N	77° 25' 1.369" E		
					B26	30° 17' 51.720" N	77° 25' 11.799" E		
					B27	30° 17' 50.161" N	77° 25' 11.695" E		
					B28	30° 17' 48.332" N	77° 25' 11.354" E		
					B29	30° 17' 47.486" N	77° 25' 11.310" E		
					B30	30° 17' 45.516" N	77° 25' 10.249" E		
					B31	30° 17' 44.035" N	77° 25' 9.634" E		
					B32	30° 17' 42.792" N	77° 25' 9.185" E		
					B33	30° 17' 42.095" N	77° 25' 8.572" E		
					B34	30° 17' 40.742" N	77° 25' 7.436" E		
					B35	30° 17' 39.405" N	77° 25' 6.248" E		
					B36	30° 17' 38.318" N	77° 25' 5.095" E		
					B37	30° 17' 37.166" N	77° 25' 3.438" E		
					B38	30° 17' 36.042" N	77° 25' 1.880" E		
	Total	3	23.61					17.10	

Sr. No.	Mining Unit	Name of the Village	Total Mineral Concession Area (in acre)	Details of Khasra Nos.	GPS reading of all corner point taken by HARSAC by using DGPS			Area as per GPS reading (in acre.)	Remarks
4.	Belgarh South	Belgarh South	62.88	53// 6 min, 15/1 min, 15/2 min, 16, 17 min, 23 min, 24 min, 25 54// 1 min, 2, 9/1, 9/2, 10 min, 11, 12, 19, 20, 21 55// 1, 10, 11 56// 3 min, 4, 5, 6, 7, 8 min, 9 min, 12 min, 13/1, 13/2, 14, 15, 16, 17, 18/1, 18/2, 19 min, 21 min, 22 min, 23, 24 72// 1 min, 2, 3, 4/1/1, 4/2, 4/1/2, 5, 7, 8, 9, 10 min, 11/2 min, 12, 13/1, 13/2, 14, 18, 19, 20/1 min, 21, 22, 25 73// 25 min 73// 1, 2, 9, 10, 11, 12/1, 12/2, 20, 21 74// 5 min, 6 min, 15 min, 16/1/1, 16/2, 17 min, 24 min, 25 85// 4/1 min, 4/2, 5, 7 min, 8 min, 13 min, 14, 18 min, 21 min, 22 min 86// 1/1 min, 1/2 min, 2, 10 min **Ancillary area** 84// 6, 7, 14, 15 85// 10, 11	Pillar	Latitude	Longitude	56.50	Boulder, Gravel & Sand
					A1	30° 13' 20.564" N	77° 30' 32.127" E		
					A10	30° 13' 4.122" N	77° 30' 17.432" E		
					A11	30° 12' 59.481" N	77° 30' 16.257" E		
					A12	30° 12' 52.659" N	77° 30' 14.229" E		
					A13	30° 12' 51.844" N	77° 30' 13.982" E		
					A14	30° 12' 50.985" N	77° 30' 13.396" E		
					A15	30° 12' 49.650" N	77° 30' 9.589" E		
					A16	30° 12' 48.397" N	77° 30' 7.286" E		
					A2	30° 13' 34.323" N	77° 30' 28.399" E		
					A3	30° 13' 30.222" N	77° 30' 29.360" E		
					A4	30° 13' 28.518" N	77° 30' 24.428" E		
					A5	30° 13' 25.818" N	77° 30' 22.466" E		
					A6	30° 13' 20.454" N	77° 30' 21.448" E		
					A7	30° 13' 15.908" N	77° 30' 20.373" E		
					A8	30° 13' 11.018" N	77° 30' 19.339" E		
					A9	30° 13' 8.859" N	77° 30' 18.706" E		
					B1	30° 13' 49.127" N	77° 30' 35.526" E		
					B10	30° 13' 4.948" N	77° 30' 22.337" E		
					B11	30° 13' 0.826" N	77° 30' 20.878" E		
					B12	30° 12' 53.801" N	77° 30' 15.551" E		
					B13	30° 12' 51.513" N	77° 30' 15.965" E		
					B14	30° 12' 50.579" N	77° 30' 13.118" E		
					B15	30° 12' 49.708" N	77° 30' 12.614" E		
					B16	30° 12' 47.265" N	77° 30' 10.272" E		
					B2	30° 13' 34.139" N	77° 30' 33.991" E		
					B3	30° 13' 28.181" N	77° 30' 32.456" E		
					B4	30° 13' 24.150" N	77° 30' 31.433" E		
					B5	30° 13' 21.120" N	77° 30' 30.972" E		
					B6	30° 13' 18.181" N	77° 30' 29.151" E		
					B7	30° 13' 16.157" N	77° 30' 28.014" E		
					B8	30° 13' 12.121" N	77° 30' 26.089" E		
					B9	30° 13' 8.085" N	77° 30' 25.982" E		
	Total	1	62.88					56.50	

Sr. No.	Mining Unit	Name of the Village	Total Mineral Concession Area (in acre)	Details of Khasra Nos.	GPS reading of all corner point taken by HARSAC by using DGPS			Area as per GPS reading (in acre.)	Remarks
5.	Pohari	Pohari	164.10	1/ 6 min, 15 min, 16 min, 17 min, 23 min, 24 min, 25 2/ 8, 9, 10, 11, 12, 13, 19 min, 20 min, 21 min, 22 min 3/ 1, 2, 3 4/ 2 min, 3 min, 4, 5, 6, 7, 8, 9 min, 10 min, 11, 12, 13, 14, 15, 16, 17/1, 17/2, 18, 19, 20, 21, 22, 23, 24 5/ 6 min, 7 min, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 6/ 25, 7/, 4, 5, 6, 7, 8, 13, 14, 15, 16, 17, 18, 19/1, 19/2, 21, 22, 23, 24, 25 8/ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 9/ 1, 2, 3, 4, 8, 9, 10, 11/1, 11/2, 12, 13, 18, 19, 20, 21, 22, 23 10/ 1, 2, 3, 8 min, 9/1, 9/2, 10, 11 min, 12 min, 13 min 11/ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 min, 17 min, 18 min, 19, 20, 21 min, 22 min, 23 min 12/ 1, 2, 3/1, 3/2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13/1, 13/2, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 13/ 5, 6, 14, 15/1, 15/2, 16/1, 16/2, 17, 18, 24, 25 14/ 5, 15/ 1, 2, 3, 4/1, 4/2, 5/1, 5/2, 6 min, 7/1, 7/2, 8, 9, 12, 13 min, 14 min, 15 min, 16/ 1 min, 10 min **Ancillary area** 1/ 15, 18, 19, 21, 22 4/ 1 min, 2 min	Pillar	Latitude	Longitude	157.90	Sand
					A1	30° 0' 48.823" N	77° 16' 39.645" E		
					A10	30° 0' 32.905" N	77° 16' 8.882" E		
					A11	30° 0' 31.090" N	77° 16' 5.918" E		
					A12	30° 0' 26.983" N	77° 16' 3.375" E		
					A13	30° 0' 25.203" N	77° 16' 1.631" E		
					A14	30° 0' 21.144" N	77° 15' 58.345" E		
					A15	30° 0' 14.487" N	77° 15' 52.543" E		
					A2	30° 0' 47.363" N	77° 16' 32.216" E		
					A3	30° 0' 42.612" N	77° 16' 30.049" E		
					A4	30° 0' 41.094" N	77° 16' 27.236" E		
					A5	30° 0' 38.493" N	77° 16' 24.770" E		
					A6	30° 0' 37.941" N	77° 16' 21.556" E		
					A7	30° 0' 37.428" N	77° 16' 18.653" E		
					A8	30° 0' 36.640" N	77° 16' 14.574" E		
					A9	30° 0' 34.498" N	77° 16' 11.248" E		
					B1	30° 0' 20.475" N	77° 16' 31.087" E		
					B2	30° 0' 18.648" N	77° 16' 26.393" E		
					B3	30° 0' 17.446" N	77° 16' 21.805" E		
					B4	30° 0' 15.760" N	77° 16' 18.120" E		
					B5	30° 0' 12.907" N	77° 16' 14.176" E		
					B6	30° 0' 9.439" N	77° 16' 11.632" E		
					B7	30° 0' 6.954" N	77° 16' 7.419" E		
	Total	1	164.10					157.90	

Sr. No.	Mining Unit	Name of the Village	Total Mineral Concession Area (in acre)	Details of Khasra Nos.	GPS reading of all corner point taken by HARSAC by using DGPS			Area as per GPS reading (in acre.)	Remarks
6.	Gandhali North	Gandhali	334.98	44/ 3, 4, 5 min, 6 min, 7, 8, 9, 11, 12, 13, 14, 15 min, 16 min, 17, 18, 19, 20, 21, 22, 23, 24, 25 min 45/ 6, 21, 25 46/ 13 min, 14 min, 16, 17, 18 min, 19 min, 20 min, 21, 22, 23, 24, 25 47/ 16 min, 17 min, 18 min, 21 min, 22 min, 23, 24, 25 66/ 25 min 67/ 5 min, 6, 7 min, 12 min, 13/1 min, 13/2 min, 14, 15, 16, 17, 18/1, 18/2, 19 min, 20 min, 21, 22/1, 22/2, 23, 24, 25 68/ 1 min, 2, 3/1, 3/2, 3/3, 4, 5, 6, 7, 8/1, 8/2, 9, 10, 11, 12, 13/1, 13/2, 13/3, 14, 15, 16, 17, 18, 19/1, 19/2, 20, 21, 22, 23, 24, 25 69/ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 70/ 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 71/ 1, 2, 3, 4, 5 min, 6 min, 7, 8, 9, 10, 11, 12, 13, 14, 15 min, 16 min, 17 min, 18, 19, 20, 21, 22, 23, 24 min 79/ 1, 2/1, 2/2, 3/1, 3/2, 4 min, 8/1 min, 8/2, 9, 10, 11, 12, 13 min, 18 min, 19 min, 20, 21 min, 22 min 80/ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 81/ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 82/ 1, 2, 3, 4, 5/1, 5/2, 6/1, 6/2/1, 6/2/2, 7, 8, 9, 10, 11, 12, 13, 14/1, 14/2, 15/1, 15/2, 16/1, 16/2, 17, 18, 19, 20, 21, 22, 23, 24, 25/1, 25/2 83/ 1/1, 1/2, 2/1, 2/2, 2/3, 3/1, 3/2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23/1, 23/2, 24, 25 84/ 4 min, 5 min, 6/1, 6/2, 6/3, 7 min, 14/1 min, 14/2, 14/3, 14/4, 14/5, 15/1, 15/2, 16/1, 16/2, 17 min, 24 min, 25 99/ 4 min, 5/1, 5/2, 5/3, 6, 7/1 min, 7/2 min, 14 min, 15, 16, 17 min, 24 min, 25 100/ 1, 2/1, 2/2, 3, 4, 5 min, 6/2 min, 7 min, 8 min, 9/1, 9/2 min, 10, 11, 12 min, 19 min, 20, 21, 22 min, 23 min 101/ 1/1, 1/2 min, 2 min, 3, 4, 5, 6 min, 7 min, 8 min 102/ 1, 2, 3, 4, 5, 6, 7, 8, 9 min, 10 min, 12 min, 13 min, 14 min, 15 min 103/ 1, 2, 3, 4, 5 min, 6 min, 7 min, 8 min, 9, 10, 11/1 min, 11/2 min, 12/1 min, 12/2 min, 13 min 104/ 1 min 113/ 1/1, 1/2, 2, 3, 4 min, 7 min, 8, 9, 10, 11, 12, 13, 14 min, 17 min, 18, 19, 20, 21 min, 22 min, 23 min, 24 min 114/ 4 min, 5/1, 5/2, 6, 7 min, 14 min, 15, 16, 17 min, 24 min, 25 min 125/ 3 min, 4 min **Ancillary area** 84/ 21, 22	Pillar	Latitude	Longitude	323.36	Sand
					A1	29° 56' 48.685" N	77° 12' 43.630" E		
					A10	29° 57' 21.860" N	77° 12' 51.229" E		
					A11	29° 57' 24.780" N	77° 12' 55.075" E		
					A12	29° 57' 30.010" N	77° 13' 2.108" E		
					A13	29° 57' 30.743" N	77° 13' 11.466" E		
					A14	29° 57' 31.756" N	77° 13' 15.352" E		
					A15	29° 57' 33.179" N	77° 13' 19.606" E		
					A16	29° 57' 25.539" N	77° 13' 29.716" E		
					A17	29° 57' 37.906" N	77° 13' 42.587" E		
					A2	29° 56' 53.430" N	77° 12' 44.252" E		
					A3	29° 56' 56.323" N	77° 12' 44.223" E		
					A4	29° 57' 0.696" N	77° 12' 43.683" E		
					A5	29° 57' 5.504" N	77° 12' 43.516" E		
					A6	29° 57' 9.813" N	77° 12' 44.106" E		
					A7	29° 57' 13.203" N	77° 12' 42.960" E		
					A8	29° 57' 15.758" N	77° 12' 42.960" E		
					A9	29° 57' 19.198" N	77° 12' 45.714" E		
					B1	29° 57' 39.163" N	77° 13' 47.763" E		
					B10	29° 57' 6.811" N	77° 12' 59.956" E		
					B11	29° 57' 5.460" N	77° 12' 53.629" E		
					B12	29° 57' 4.362" N	77° 12' 50.228" E		
					B13	29° 56' 59.989" N	77° 12' 51.157" E		
					B14	29° 56' 58.535" N	77° 12' 51.822" E		
					B15	29° 56' 58.466" N	77° 12' 56.056" E		
					B16	29° 56' 50.665" N	77° 12' 55.800" E		
					B17	29° 56' 48.685" N	77° 12' 55.759" E		
					B2	29° 57' 32.446" N	77° 13' 48.599" E		
					B3	29° 57' 25.000" N	77° 13' 47.582" E		
					B4	29° 57' 11.982" N	77° 13' 41.654" E		
					B5	29° 57' 7.644" N	77° 13' 36.820" E		
					B6	29° 57' 3.660" N	77° 13' 25.897" E		
					B7	29° 57' 6.045" N	77° 13' 9.437" E		
					B8	29° 57' 6.632" N	77° 13' 6.743" E		
					B9	29° 57' 6.679" N	77° 13' 3.423" E		

				85// 25 98// 5, 6, 15 99// 1, 2, 9 to 12					
Total	1	1	334.98					323.36 .	
Sr. No.	Mining Unit	Name of the Village	Total Mineral Concession Area (in acre)	Details of Khasra Nos.	GPS reading of all corner point taken by HARSAC by using DGPS			Area as per GPS reading (in acre.)	Remarks
7.	Tajewala	Tajewala	79.07	147 min, 148 min, 149 min For ancillary work 63//16 to 19, 22, 23, 24, 25. 64//20 65//8,9,12	Pillar No.	Latitudes	Longitudes	65.68	Boulder, Gravel & Sand
					A	30° 17' 51.928" N	77° 33' 53.685" E		
					B	30° 17' 52.528" N	77° 34' 7.58" E		
					C	30° 17' 44.762" N	77° 33' 57.146" E		
					D	30° 17' 37.585" N	77° 33' 47.609" E		
					E	30° 17' 30.825" N	77° 33' 38.161" E		
					F	30° 17' 27.262" N	77° 33' 32.205" E		
					G	30° 17' 11.383" N	77° 33' 16.824" E		
					H	30° 17' 6.545" N	77° 33' 6.94" E		
					I	30° 17' 14.355" N	77° 33' 14.756" E		
					J	30° 17' 19.281" N	77° 33' 21.379" E		
					K	30° 17' 22.74" N	77° 33' 24.452" E		
					L	30° 17' 22.74" N	77° 33' 26.044" E		
					M	30° 17' 30.439" N	77° 33' 30.479" E		
					N	30° 17' 34.078" N	77° 33' 33.302" E		
					O	30° 17' 40.811" N	77° 33' 37.213" E		
					P	30° 17' 43.842" N	77° 33' 42.228" E		

					Q	30° 17 43..09" N	77° 33' 47.406" E		
Total	1	1	79.07					65.68	
Sr. No.	Mining Unit	Name of the Village	Total Mineral Concession Area (in acre)	Details of Khasra Nos.					Remarks
8	Belgarh North	Belgarh North	64.91	**5//6 min**, 16 min, 23 min, 24 min, 25 **6//10 min**, 11, 20, 21 **7//1**, 10, 11 min **8//**3 min, 4, 5, 6,7, 8, 9 min, 12, 13, 14, 15 min, 17 min, 18, 19, 20 min, 21, 22, 23, 24 min **6//10**, 11, 20, 21 **9//16 min**, 24 min, 25 min **17//4 min**, 5, 6, 7 min, 8 min, 14 min, 15, 16 min, 25 min **18//1**, 3, 4 min, 7 min, 8, 9, 10, 12, 13 min, 19 min, 20, 21, 22 min, 23 min **20//1**, 2, 3 min, 4 min, 7 to 13 **34//5 min**, 6 min **35//1**, 10 min					Boulder, Gravel & Sand
Total	1	1	64.91						
Grand Total	6	24	1166.91					1012.89	

Vide 9/10/2017
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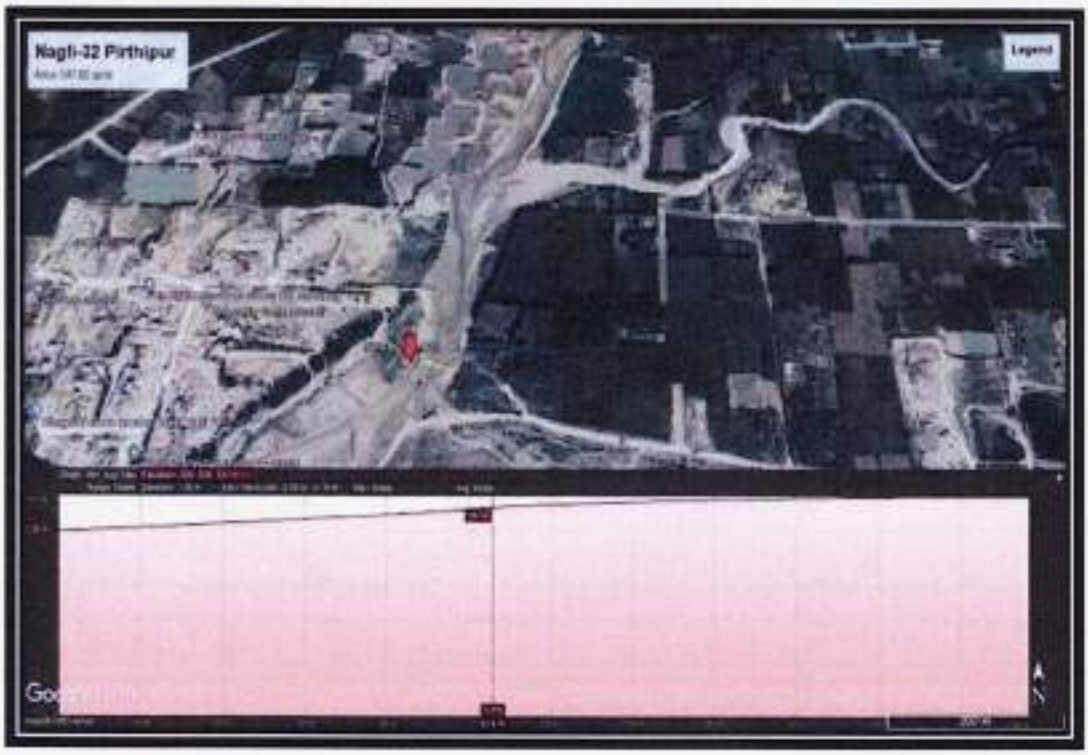
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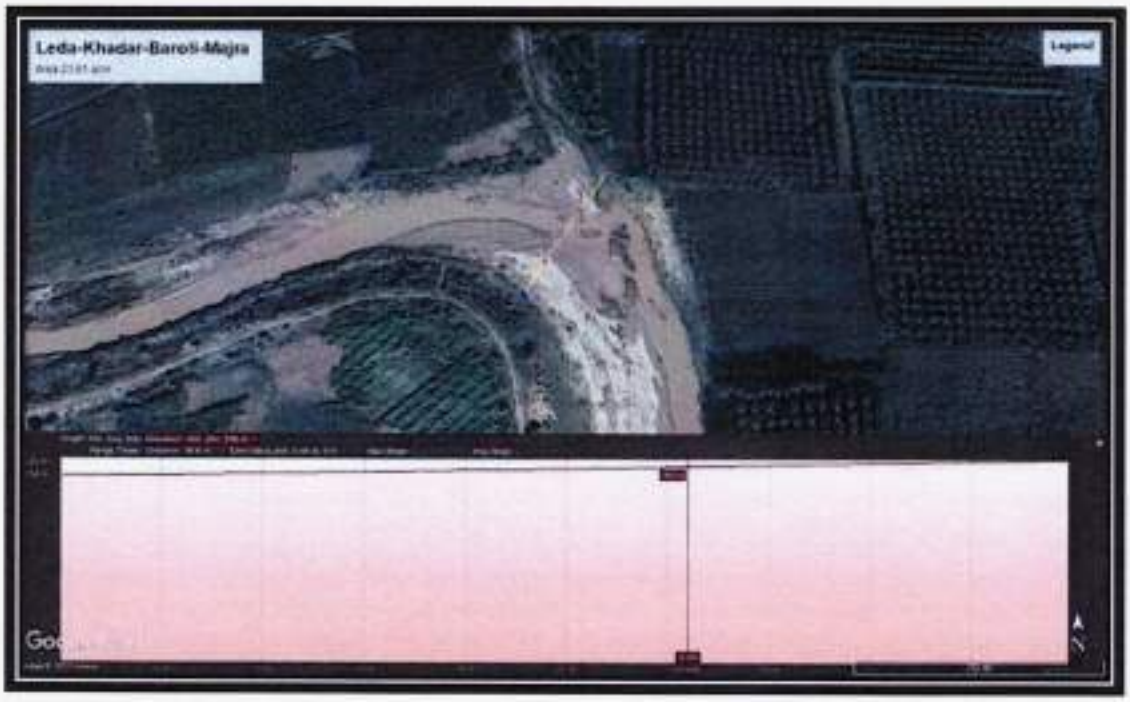
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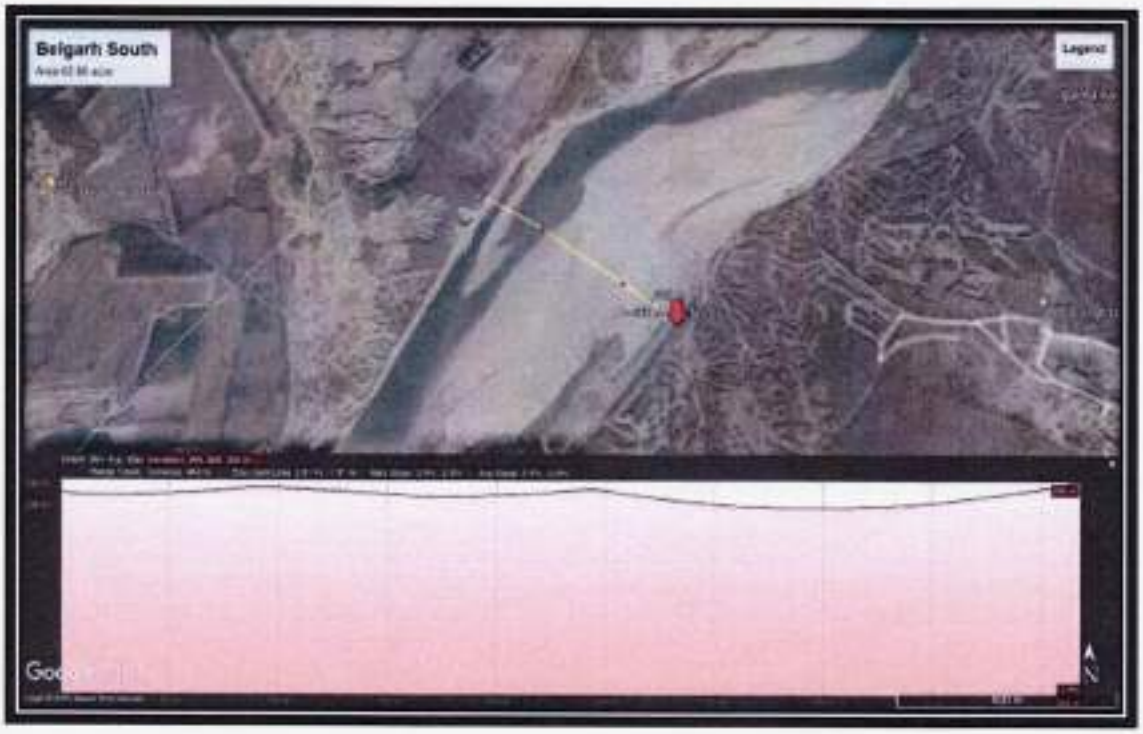
ANNEXURE-III

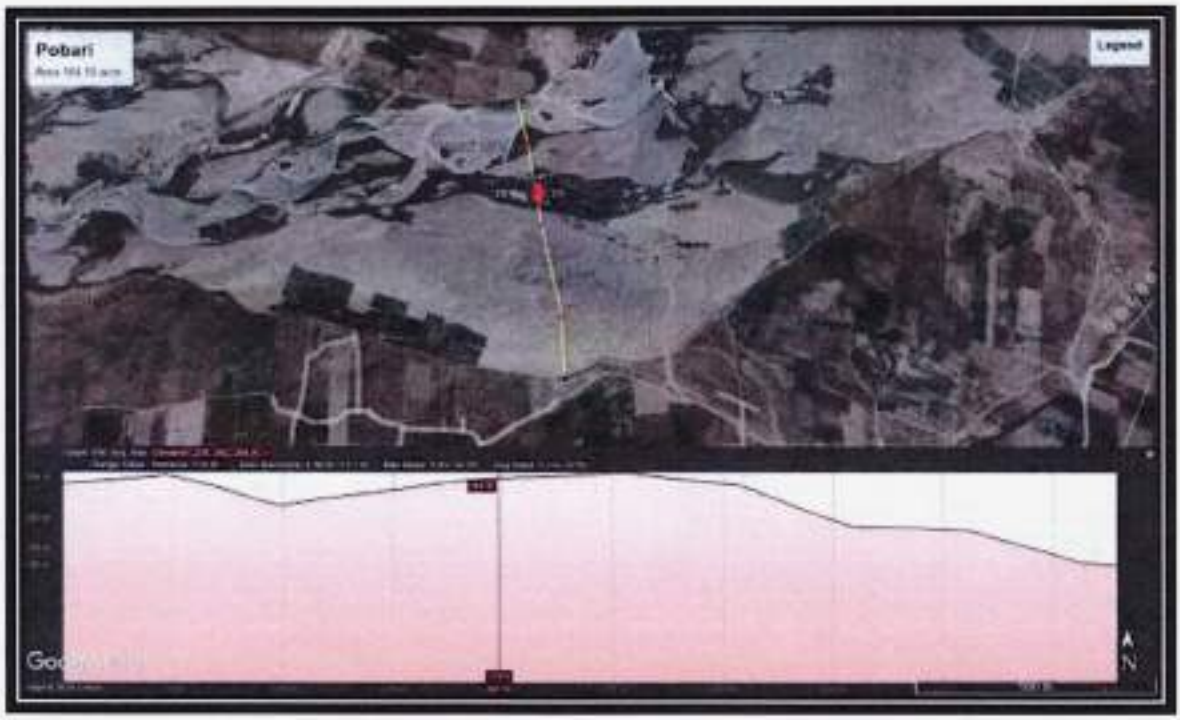
Cross-sectional maps of the deposition blocks/proposed mining sites

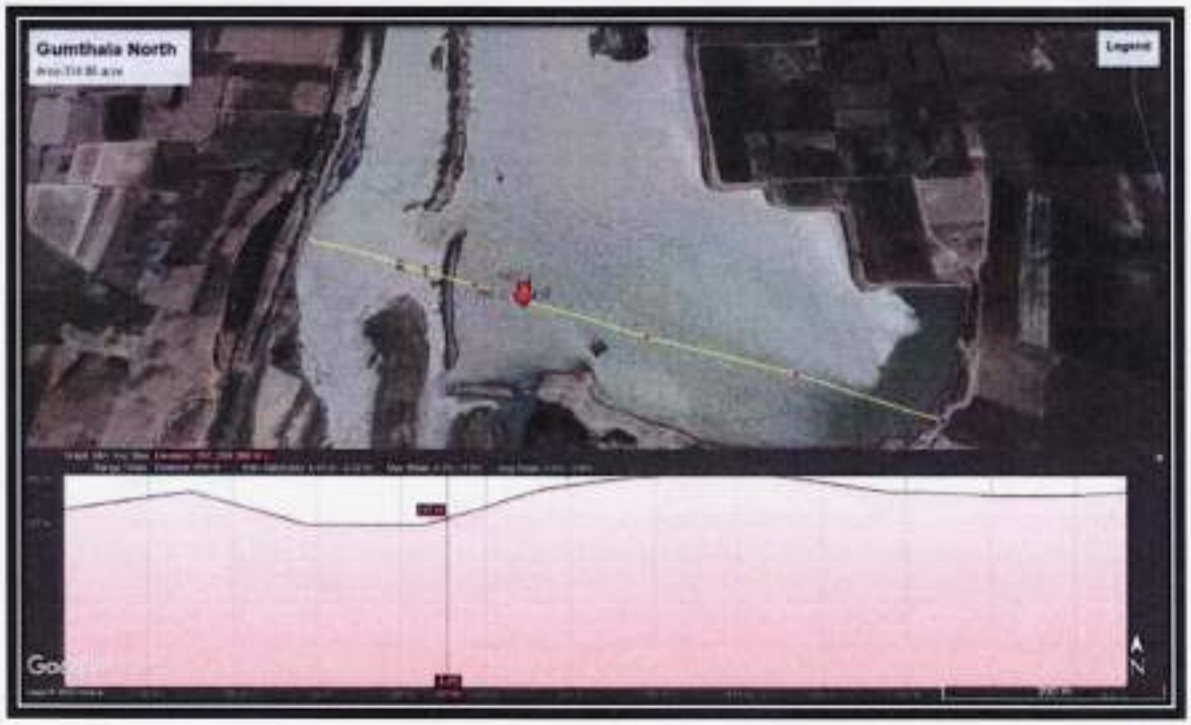





Leda-Khadar-Barosi-Majra
Legend


Belgarth South
Legend

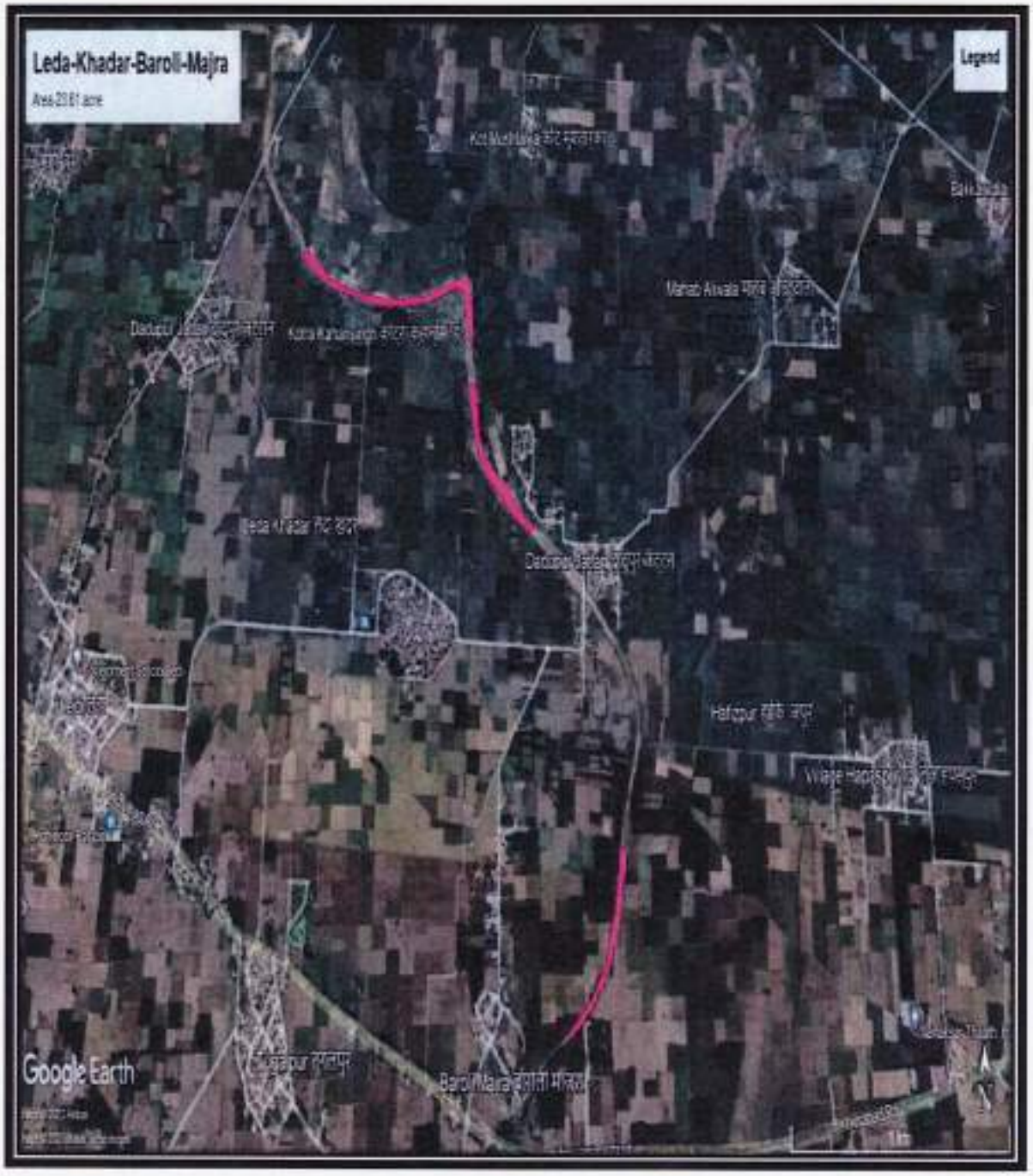

Pobari
Legend
N


Gumthala North
Legend
N

ANNEXURE-IV

Mineral deposits of proposed mining sites are illustrated in satellite images




Leda-Khadar-Baroli-Majra
Area 23.61 acre
Legend
Google Earth


Nagli-32 Pirthipur
Legend
Google Earth
N


Belgarh South
Legend
Google Earth
N


Pobari
Legend
Google Earth


Gumthala North
Legend
Google Earth

Dolphin Engineer
We Provide Accurate & Precise Surveys

REPORT ON REPLENISHMENT STUDY FOR SAND MINOR MINERAL MINES

MANDOLI GHAGGAR EAST BLOCK/YNR B-3, (RIVER BED)
DISTRICT: YAMUNANAGAR

LEASE AREA	PRODUCTION
20.18 HA	8,50,000 T PER ANNUM

Owner

M/s J S M Foods Pvt Ltd

Production Capacity	Area
8.85839 MT	20.18

CONTACT US-

B-3, C-49, Vidya Apartments, Paras Marg, Bapu Nagar, Jaipur, Rajasthan-302020

+91 96800 26609 www.dolphinengineers.com

INDEX

Sr.No.	Description	Page No.
1.	The Project	3
2.	Object of Replenishment Study	4
3.	Need for present annual Replenishment Study	4
4.	Replenishment Study	5
5.	General Introduction	5
6.	Physiographic	7
7.	Drainage	7
8.	Sedimentation, Assessment & Infrastructure	8
9.	Approach & Methodology	10-13
10.	Flow Chart Of Sand Volume Calculation Using Differential Global Positioning System (Dgps):	14
11.	Pre-Monsoon Contour Map	16
12.	Post-Monsoon Contour Map	17
13.	Composite Section of Pre and Post map	18
14.	Calculation of sand Replenished	19-24
15.	Mine Site Photo	25-26

SUBJECT: REPORT ON REPLENISHMENT STUDY FOR SAND MINOR MINERAL MINES OF MANDOLI GHAGGAR EAST BLOCK/YNR B-3, (RIVER BED), DISTRICT: YAMUNANAGAR, LEASE AREA: 20.18 HA, PRODUCTION: 8,50,000 T PER ANNUM

REFERENCES:

a) Environmental Clearance vide letter no. SEIAA/HR/2016/989 Dated 21/12/2016

1) THE PROJECT :

M/s J S M Foods Pvt Ltdwas the highest bidder for the Sand of Mandoli Ghaggar East Block/YNR B-3 for which e-auction was held on 10-06-15 and 11-06-2015. A Letter of Intent has been issued by the Director General Mines & Geology Department, Haryana vide letter no DMG/Hy/Cot/Mandoli Ghaggar East Block/YNR B-3//2015/3915/dated 19-06-2015 for Mining of Sand (Minor Mineral) in revenue village Mandoli Ghaggar East Block/YNR B-3, over an area of 20.18 hectares in District- Yamunanagar, Haryana for a period of 10 years. This is River Bed Block.

Name of Block	Name of Village	Details ofKhasra No/KilaNos	Area of block in ha
MandoliGhaggar East Block/YNR B-3	Mandoli Ghaggar	**52//2,** 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 18, 23, 24, 25 **53//1,** 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24 **58//1,** 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 18, 19, 20 **59//3,** 4, 5, 6, 7, 8, 13, 14, 15, 16, 17,18	20.18

CO-ORDINATES OF THE LEASE AREA AS UNDER-

N30^{0}08' 10.85" to N30^{0}08' 26.69", / E 77^{0}25' 01.71" to E77^{0}25'21.23"

Pillar no.	Latitudes	Longitudes
BP-1	N30° 08' 26.69"	E77° 25' 01.91"
BP-2	N30° 08' 26.69"	E77° 25' 21.23"
BP-3	N30° 08' 22.73"	E77° 25' 21.18"
BP-4	N30° 08' 22.73"	E77° 25' 18.73"
BP-5	N30° 08' 20.75"	E77° 25' 18.71"
BP-6	N30° 08' 20.75"	E77° 25' 20.12"
BP-7	N30° 08' 18.77"	E77° 25' 18.62"
BP-8	N30° 08' 18.77"	E77° 25' 16.23"
BP-9	N30° 08' 16.79"	E77° 25' 16.21"
BP-10	N30° 08' 16.79"	E77° 25' 13.75"
BP-11	N30° 08' 12.83"	E77° 25' 13.70"
BP-12	N30° 08' 12.83"	E77° 25' 11.26"
BP-13	N30° 08' 10.85"	E77° 25' 11.24"
BP-14	N30° 08' 10.85"	E77° 25' 01.71"

The area is approachable from various nearest towns as detailed below

Village Mandoli Ghaggar East is very well connected with Metalled Road. Yamunanagar Railway Terminus is about 15 km from the mining area.

Delhi ISBT is about 230 Km and Yamunanagar is about 15 km NW from the mining area. State Headquarters Chandigarh is about 90 km in the North West of the mining area.

2) OBJECTIVE FOR REPLENISHMENT STUDY

The requirements of the "Replenishment Study" as per the terms of EC letter are as below:

As per specific Conditions of EC (A-19), the Project Proponent should carry out replenishment study annually certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity shall be decreased /stopped accordingly till the replenishment is completed;

3) NEED FOR PRESENT ANNUAL REPLENISHMENT STUDY

- As per specific Conditions of EC (A-19), the Project Proponent should carry out replenishment study annually certified by an authorized agency.
- In case the replenishment is lower than the approved rate of production, then the mining activity shall be decreased /stopped accordingly till the replenishment iscompleted;

Project Proponent, M/s J S M Foods Pvt Ltd Appointed M/s. Dolphin Engineers Jaipur, a Survey Company for undertaking:-

a) Pre-monsoon survey and replenishment study
b) Post-monsoon survey and replenishment study
c) To prepare composite sections of pre and post monsoon survey findings
d) To calculate the volume of sand replenished during study period.
e) Finally, to prepare "Replenishment Study Report" and to submit it to the concerned Office

4. REPLENISHMENT STUDY

4.0 PERIOD OF SURVEY FOR SEDIMENTATION SURVEY AND REPLENISHMENT STUDY

Pre-monsoon: 15th to 20th May, 2023

Post-monsoon: 18th to 21s Oct, 2023

4.1 GENERAL INTRODUCTION:

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are Non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin. But its over-exploitation and indiscriminate mining supersedes replenishment &optimum extraction is overtaken by profits, extraction has exceeded its replenishment rate and it neglects laws of mineral conservation.

Sand mining has become a widely spread activity and does not require a huge set up or technology, the number of ventures has increased extensively and it has become a footloose industry in itself but the backward-forward linkages are becoming stronger as many are getting employed as well as the construction activity / industry requires this mineral at consistent rates. In the state of Punjab, sand has been declared as an essential commodityso as to control its

extraction and sale price. Andhra Pradesh on the other hand is heading towards a lottery system. Riverine environmental systems are unique in them and provide environmental services, natural resources to meet variety of needs of urban and rural communities. The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance. Rivers also act as natural administrative boundariesamong the states and this gives rise to improper and unclear demarcation of boundaries as the river keeps changing its course from time to time thereby unclear administrative controls and mechanisms becomes a point of excuse for administration for any illegal activity taking in this disputed area. River Yamuna near Dakpathar barrage leaves Uttarakhand and enters Himachal Pradesh.

The Yamuna River is the biggest tributary of the river Ganga in North India. Its source in the Yamunotry glacier at an elevation of 6387 mtrs on South western sides of Banderpooch crests in the lower Himalayan ranges. The overall span of the Yamuna River is 1376 Kms (855 miles) with catchment area of 366223 square km (141,399 square km). This encompasses 40.2 % of the whole Ganga valley, prior to joining Ganga at TriveniSangam in Allahabad (UP)

ITINERARY OF YAMUNA RIVER:

The river passes through many states such as Uttarakhand, UP, Haryana, going across to HP and then Delhi. With yearly discharge of around 10,000 cubic billion meters (cbm) and consumption of 4400 cbm (of which irrigation comprises 96%), the river represents above 70% of water provision of Delhi. Yamuna water are fairly good quality for its entire span from Yamunotri in Himalayan ranges to Wazirabad in Delhi, the length of which is around 375 Kms.

ITINERARY OF DRAINAGE AREA OF YAMUNA:

The origin of Yamuna is situated in the Yamunotri glacier at an elevation of 6387 mtrs on SE sides of Banderpooch crests, which are located in the Mussoorie range of lower Himalayan range in Uttarkashi district of Uttarakhand, to the North of Haridwar. From this place Yamuna runs to South around 200 Kms across the Shivalik mountain ranges and lower Himalayan ranges.

A significant portion of its beginning of Drainage basin (with total area of 2320 square km) is situated in HP and a major tributary sapping the upper drainage basin in the Tons, which is also biggest and most extensive tributary of the Yamuna. Other tributaries in the area are the Rishi Ganga, Giri, Hanuman Ganga, Kunta& Bata, which sap the upper drainage basin of the huge Yamuna River. Subsequently, the river moves down the terrains of Doon basin at Dakpathar close to Dehradun, in this place water is redirected into a channel for the purpose of electricity

generation. Once it goes across the sikh religious place of Ponta Sahib, the river arrives at Tajewala in the YAMUNANAGAR district of Haryana where a dam was constructed in 1873. This dam is the origin of the two major channels or water courses – Eastern Yamuna Canal and Western Yamuna Canal and both drain in UP & Haryana.

The Western Yamuna Canal (WYC) traverses Karnal, Yamunanagar and Panipat prior to arriving at the Haiderpur water treatment plant, which provides a portion of municipal water provisions of Delhi. The Yamuna also forms natural boundary between the states of Uttrakhand& HP and also amid the states of UP and Haryana.

Together with the Ganga to which it flows almost parallel once it meets the Indo-Gangetic plateau, the biggest Alluvial productive area in the World, it forms the Ganges-Yamuna Doab are stretched across 69,000 square Km which is 33% of the whole area.

Drainage system is the pattern formed by streams, rivers and lakes in a drainagebasin. In a drainage system, streams or rivers always connect together to formnetworks. Many factors such as topography, soil type, bedrock type, climate &vegetation cover influence input, output and transport of sediment and water in adrainage basin (Charlton, 2008). These factors also influence the nature of thepattern of water bodies (Twidale, 2004). As a consequence, drainage pattern canreflect geographical characteristics of a river network to a certain extent. There areseveral types of drainage pattern. So far, much research has been done on thedescription of drainage patterns in geology and hydrology (e.g. Howard, 1967;Lambert, 1998; Twidale, 2004; Pidwirny, 2006).

In addition, sediment transport knowledge is important in river restoration,ecosystem protection, navigation, watershed studies and reservoir management.Bed load represents the lower portion of sediment load in natural rivers. Fluvialsediment load materials are transported by rivers. Sediment load can be dividedinto bed load and suspended load based on the mode of transport. Bed load istransported close to the bed where particles moved by rolling, sliding, or dissolving (Adegbola, 2012). Xiaoping (2003) explained that bed load transport in naturalrivers is a complicated event. Its movement is quite uneven in both the transverse & longitudinal directions, which vary considerably.

4.2 PHYSIOGRAPHY:

The area forms a part of the Indo-Gangetic plains and exhibit flat terrain withgeneral slope from north to south. The area is devoid of any prominent topographic features. However, a natural depression exists in north & northwest of Gohana (29˚08′22″N & 76˚42′55″E). The maximum

elevation of the plain is 230m above mRL. Topographically the district can be divided into the following units.

Active flood plains along the present-day course of the river Yamuna in eastern part of the district. These are generally bordering the active flood plains and are wider, low lying flat tracts.

4.3 DRAINAGE:

The Yamuna which marks the eastern boundary of the Haryana State as well asSonipat district provides the major drainage in the area. The river Yamuna emerges from Yamunotri off the Bansur-Punch glacier in TehriGarhwal district ofUttarakhand at an elevation of 6330 meters. It emerges into the plains from thefoothills at Kalesar just north of Tajewala.The area constitutes alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The general slope of the area is southwards.The Yamuna Rivers are plays an important role for the nation and provide water

required by Besides, mining activities are also being carried out in the rivers for the developmental process.Di-siltation (remove of excess sand and stone from river bed) of the river helps to maintain the carrying capacity and provides protection from flooding duringmonsoon season. Further, continuous flow of river is essential for ecological andeconomic needs such as irrigation and biodiversity etc. Drainage study of the river helps to understand potential carrying capacity of water during pre-monsoon& post monsoon season which is generated from rainfall in the watershed and quantity of di-siltation of rivers under mining affected areas. Drainage and replenishment study was carried out in Yamuna River, Haryana was found with ephemeral streams. Quantification and estimation of river bed material (RBM) was accomplished by followed three scientific approaches i. e. mapping of watersheds by using Arc GIS software & and ERDAS software using analysis, survey of proposed mining area and grain size distribution of sand and gravelvarious sectors such as irrigation, drinking, recreation and industrial requirements etc.

4.4 SEDIMENTATION. ASSESSMENT AND INFRASTRUCTURE

Dandy&Bolton formula is often used to check whether the sedimentation yield exceedsthe replenishment rate but the whole question is whether there is adequate monitoringof the river basin, the answer is no as hydrological stations are sparsely spread. Theformula uses catchment area and mean annual runoff as key determinants to give ayield value. It does not differentiate in basin wide smaller streams and theircharacteristics. CWC distinguishes river basins as classified and non-classified, as perthe latest hydrological data for unclassified River basins; there are 122

GDSW (Gauge,Discharge, Sediment & Water Quality) sites in 12 such basins, the number was 147 in2005. This brings in context the whole issue of scientific mining, thereby indicating that the monitoring of sediment yield in rivers / streams within the river basins is essential toarrive at extraction rates and express and conduct environmental studies based onthese basin wide characteristics which should become part of the 'Terms of Reference'.

SEDIMENTATION

In the geological sciences, process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs. The term is commonly used as a synonym for sedimentary petrology and sedimentology.The physics of the most common sedimentation process, the settling of solid particles from fluids, has long been known. The settling velocity equation formulated in 1851 by G.G. Stokes is the classic starting point for any discussion of the sedimentation process. Stokes showed that the terminal settling velocity of spheres in a fluid was inversely proportional to the fluid's viscosity and directly proportional to the density difference of fluid and solid, the radius of the spheres involved, and the force of gravity. Stokes' equation is valid, however, only for very small spheres (under 0.04 millimetre [0.0015 inch] in diameter) and hence various modifications of Stokes' law have been proposed for non-spherical particles and particles of larger size.

No settling velocity equation, however valid, provides a sufficient explanation of even the basic physical properties of natural sediments. The grain size of the classic elements and their sorting, shape, roundness, fabric, and packing are the results of complex processes related not only to the density and viscosity of the fluid medium but also to the translational velocity of the depositing fluid, the turbulence resulting from this motion, and the roughness of the beds over which it moves. These processes also are related to various mechanical properties of the solid materials propelled, to the duration of sediment transport, and to other little-understood factors.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits laid down in different geographic and geomorphic environments. Great efforts have been made to differentiate between continental, near-shore, marine, and other deposits in the geologic record. The classification of environments and criteria for their

recognition is still a subject of lively debate. The analysis and interpretation of ancient deposits has been advanced by the study of modern sedimentation. Oceanographic and limnologicexpeditions have shed much light on sedimentation in the Gulf of Mexico, the Black Sea, and the Baltic Sea, and in various estuaries, lakes, and fluvial basins in all parts of the world.

Chemical sedimentation is understood in terms of chemical principles and laws. Although the famous physical chemist J.H. van't Hoff applied the principles of phase equilibrium to the problem of crystallizing brines and the origin of salt deposits as early as 1905, little effort was made to apply physical chemistry to the problems of chemical sedimentation. More recently, however, there has been investigation of the role of the redox (mutual reduction and oxidation) potential and pH (acidity–alkalinity) in the precipitation of many chemical sediments, and a renewed effort has been made to apply known thermodynamic principles to the origin of anhydrite and gypsum deposits, to the chemistry of dolomite formation, and to the problem of the ironstones and related sediments.

THE FACTORS WHICH AFFECTS THE "COMPUTATION OF SEDIMENT" :-

a) Geomorphology & Drainage Pattern: The following geomorphic units plays important role:

- Structural Plain
- Structural Hill
- Structural Ridge
- Denudation Ridge & Valley
- Plain & Plateau of Gangetic plain
- Highly Dissected pediment
- Un dissected pediment

b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)

c) Drainage System/Pattern of the area (Drainage Density = ……. Km/Sq. Km of Yamuna River

d) Rainfall &Climate: Year wise Rainfall data for previous 10 years of Yamuna Basin/River

e) As per Dandy & Bolton study "Sediment Yield" can be related to i) Catchment Area and ii) Mean Annual Run-off

5.0 APPROACH & METHODOLOGY FOLLOWED FOR REPLENISHMENT STUDY:-

The MoEF&CC in compliance of above Hon'ble Supreme Court's and NGT'S order has prepared **"Sustainable sand Mining Guidelines, 2016"** in consultation with State

governments, detailing the provisions on environmental clearance (EC) for cluster, creation of District Environment Impact Assessment Authority, preparation of District survey report and proper monitoring of minor mineral. There by issued Notification dated 15.01.2016 for making certain amendments in the EIA Notification, 2006, and made mandatory to obtain EC for all minor minerals including sand ,boulder and gravel .The main objective of the preparation of Replenishment studies is to input valuable information for enforcement and monitoring of existing sand leases of Haryana. As per provisions of **"Enforcement and Monitoring Guidelines for Sand Mining January 2020"** Guidelines of **MOEF&CC,** it is to ensure the following-

1. Identification of areas of aggradations or deposition where mining can be allowed;
2. Identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area.
3. Identification of mineral wealth in the district.

The DMG/ SEIAA / SEAC will scrutinize and recommend for EC quantity of mining of minor minerals on the basis of Replenishment studies.

5.1 NEED OF REPLENISHMENT STUDIES:-

To ensure identification of areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area. As per notification it is essential to prepare a Replenished Studies document though a NABL/NABET approved consultant for approval by competent authorities in state .

Following Methodology shall be proposed to undertake the replenishment studies of the potential stretches of the river bed of Haryana:

5.2 STEPS INVOLVED :-

- Preparation of KML file with the coordinates of the LOI / existing lease covering 100 meter additional boundary beyond to the lease boundary to capture nearby data;
- Fixing of ground control points with the help of DGPS at fixed points;
- Drone Survey for pre - monsoon and post monsoon season.

6.0 METHODOLOGY &INSTRUMENT AND SOFTWARE PROPOSED:-

- A drone survey or unmanned aerial vehicle (UAV), survey is proposed to capture aerial data with downward-facing sensors, such as RGB or multispectral cameras.
- Photogrammetric combines images that contain the same point on the ground from multiple vantage points to yield detailed 2D and 3D maps.
- From this field data, photogrammetric software can create geo-referenced orthomosaics, elevation models or 3D models of the project area. These maps can also be used to extract information such as highly-accurate distances or volumetric measurements.

The following instruments proposed to be used in the project:

1) Dual-frequency DGPS (Nov Com SF3020 / Geo Max Zanith 10
2) Phantom 4 pro / Mavic pro 2 Drone

6.1 NEED OF DATA CAPTURING

Total stations only measure individual points. One drone flight produces thousands of measurements, which can be represented in different formats (orthomosaics, Point Cloud, DTM, DSM, Contour lines, etc). Each pixel of the produced map or point of the 3D model contains 3D geo-data.

1. FLIGHT PLANNING AND IMAGES COLLECTION

After pushing the take-off button, the drone autonomously takes off, captures images and lands back where it started. In this step, the operator essentially makes sure that nobody approaches the drone during take-off or landing and that the weather conditions stay optimal for the survey mission.

2. GEO-TAGGING OF IMAGES

After one or several flights, import the images into AgiSoft photos can, Global Mapper or Pix4D Mapper to geo-tag them. Geo-tagging assigns geographical position (X, Y, Z) information to the images either in a separate CSV file or in the images' meta-data.

3. IMPORTING INTO PHOTOGRAMMETRIC SOFTWARE

After importing or uploading the geo-tagged images in a photogrammetric software such as Agi Soft photos can, Global Mapper or Pix4D Mapper, Drondeploy, images will be connected together to create 2D or 3D models of the surveyed site.

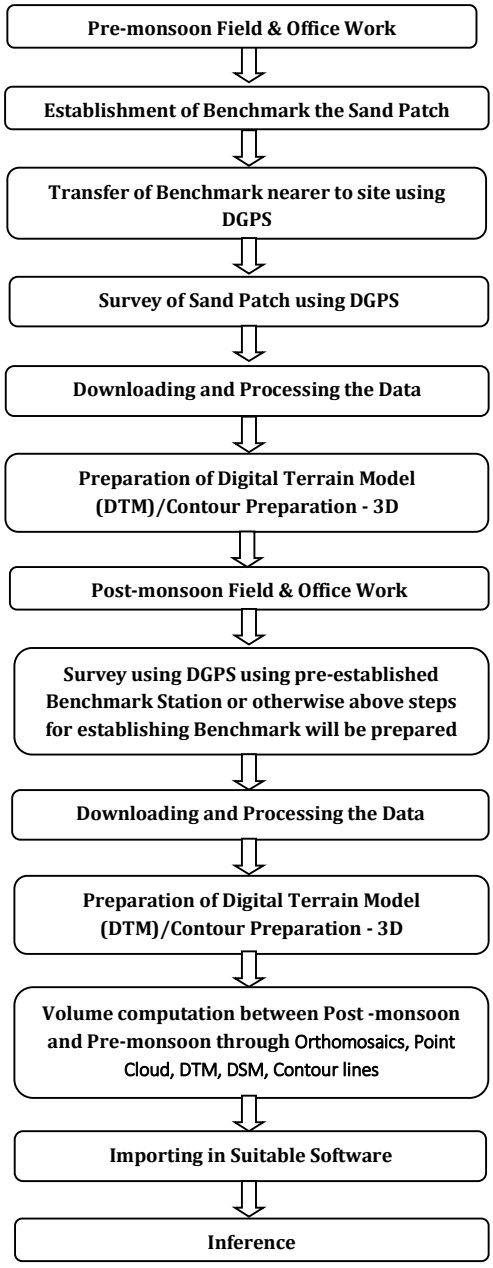
Image processing can be a lengthy and time consuming process depending on the number of images and the performance of computer. Some photogrammetric software is desktop-based, thus requiring robust hardware. Other software is cloud-based, employing powerful servers.

4.0 OUTPUT

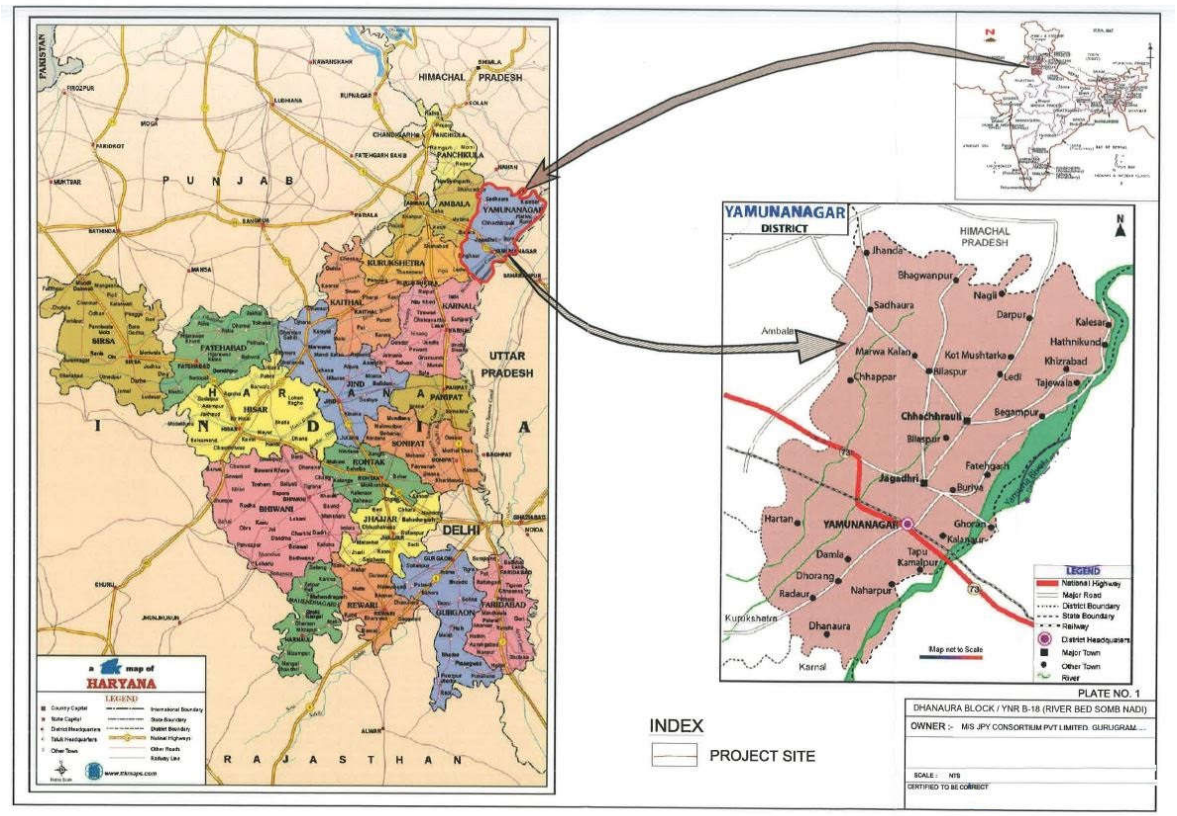
- Photographs of each point and associated coordinates
- Accuracy of co-ordinates absolute and relative within 1.0 cm
- Creation of Pre and Post Monsoon layers
- Generating Transverse and Longitudinal section
- Generating 3D digital terrain model
- Marking of depression in river bed , sand patches ,plantation and water level in main channel
- Computation of sectional area using included area /excluded area method
- Conducting Pre-monsoon survey of area by Drone and DGPS, Marking of Sand patches, Water level in river channel. Water saturation level in sand patch will be measured with the help of automatic WL indicator in holes. Similarly; in Post-monsoon survey to marking of sand patches , water level in main channel prepare individual and composite layers sections of pre and post monsoon survey findings
- Grid pattern 30 m x 20 m (30 m along the length of the river and 20 m along width of the river)or part thereof
- To calculate the volume of sand replenished during study period (Post mining).
- Determination of specific density to ascertain tonnage of mineral available for proposed excavation.
- Calculation of Replenishment to assess Geological reserves
- Finally to prepare “Replenishment Study Report”
- Periodical Monitoring of River bed sand patches, bank condition, plantation on yearly basis and physical and chemical analysis of River water turbidity.

Calculation of tonnage is annexed

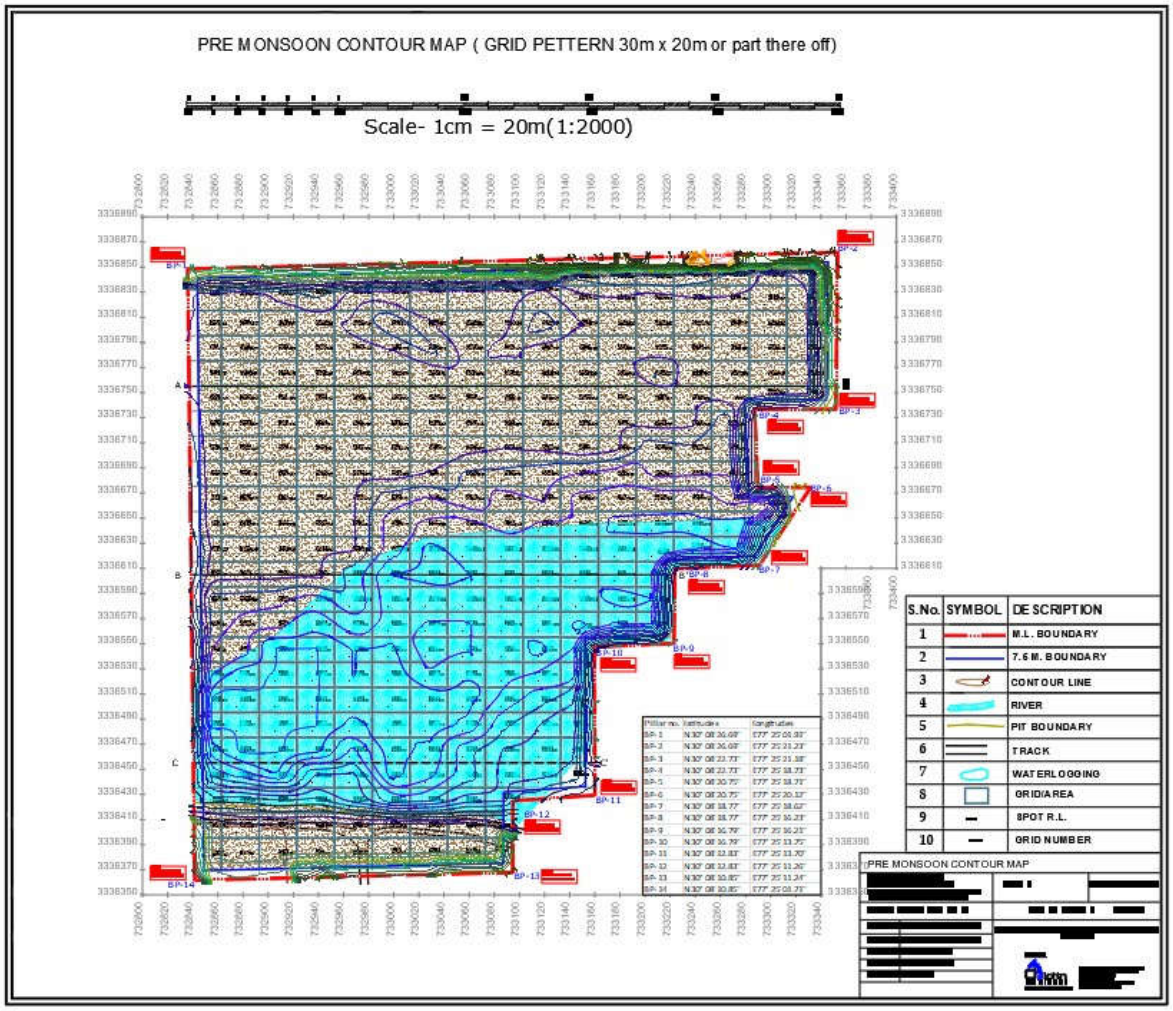
7.0 FLOW CHART OF SAND VOLUME CALCULATION USING DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS):



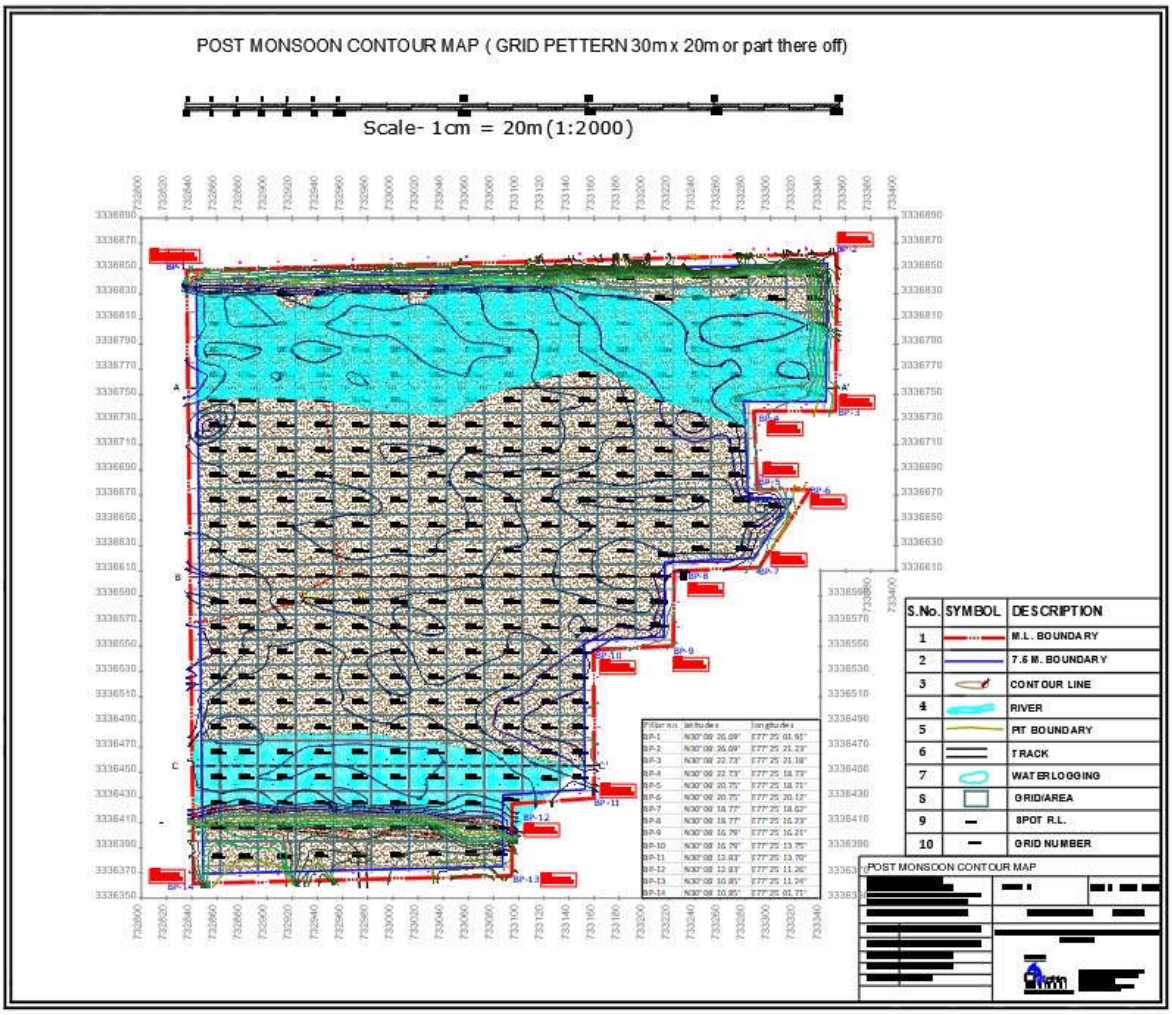
LOCATION PLAN



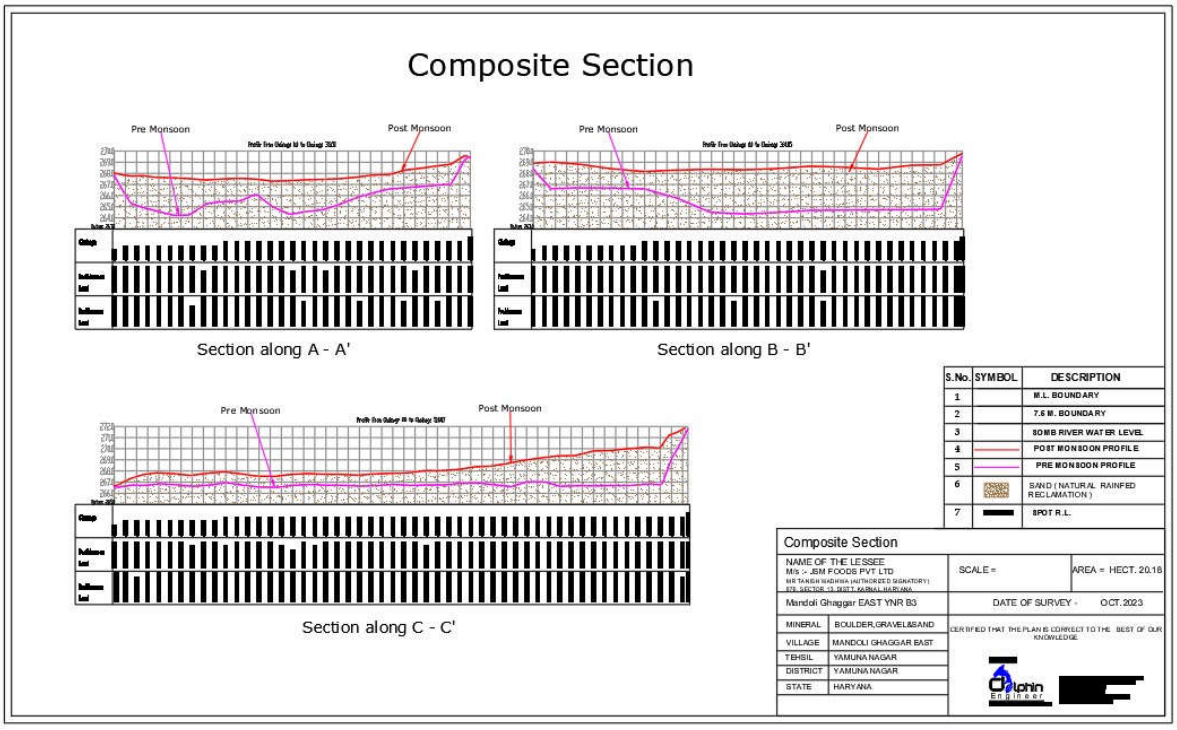
a) PRE-MONSOONCONTOUR MAP (GRID PATTERN 30M X 20M OR PART THEREOF)

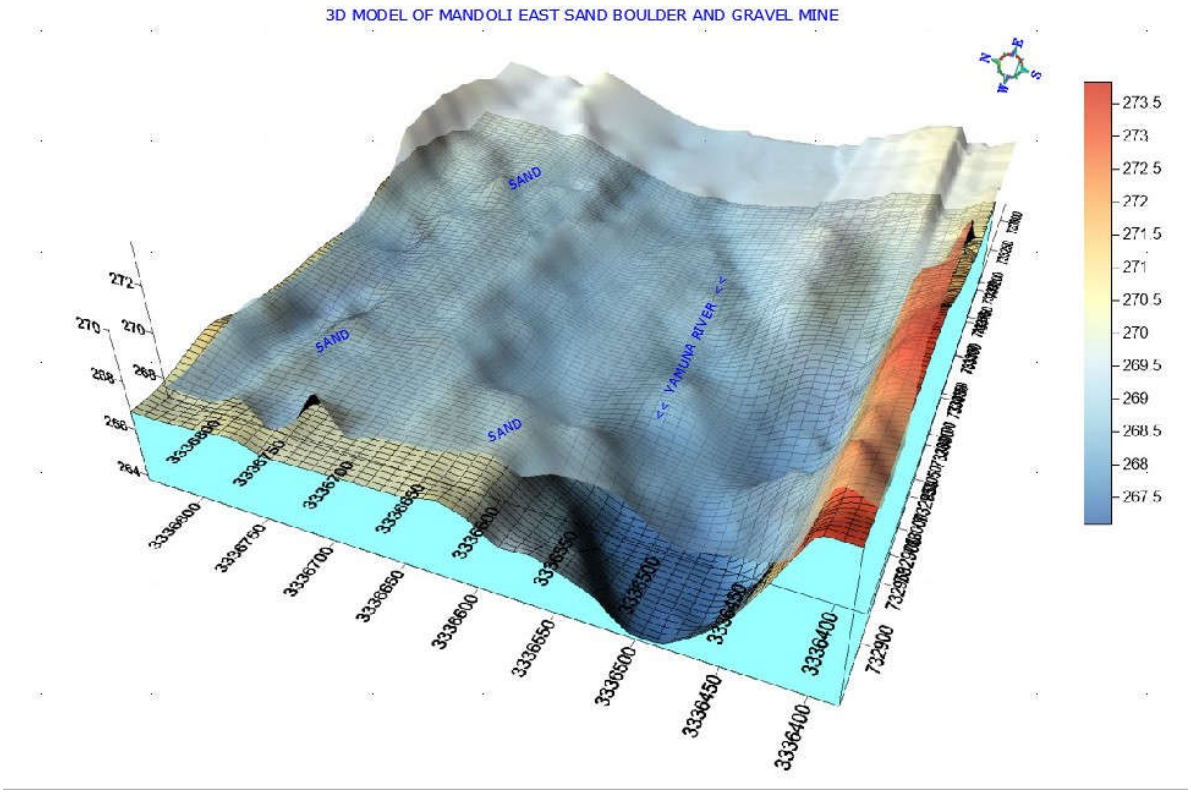


b) POST-MONSOON CONTOUR MAP (GRID PATTERN : 30M X 20M OR PART THEREOF)



c) COMPOSITE SECTION OF PRE & POST MONSOON CONTOUR MAP





a) TONNAGE CALCULATION OF SAND REPLENISHED

Grid no	Easting	Northing	Grid Area	Post Monsoon RL	Pre Monsoon RL	Mineable Reserve for 3 mtr Depth of Sand	Diffrence	Volume	Replenished Reserve Tonnage
1	732855.829	3336382.387	361	271.224	269.887	3	1.337	902.5	1805
2	732877.83	3336382.654	757.39	271.028	269.691	3	1.337	2272.17	4544.34
3	732907.83	3336383.019	735.49	271.119	269.782	3	1.337	2206.47	4412.94
4	732937.83	3336383.384	713.59	273.785	269.92	3	3.865	2140.77	4281.54
5	732967.83	3336383.749	691.69	273.584	269.9	3	3.684	2075.07	4150.14
6	732997.83	3336384.114	669.79	273.462	269.712	3	3.75	2344.265	4688.53
7	733027.83	3336384.479	647.89	273.603	269.843	3	3.76	2267.615	4535.23
8	733057.83	3336384.844	625.99	273.514	269.863	3	3.651	2190.965	4381.93
9	733080.026	3336385.114	292.52	273.676	269.779	3	3.897	1023.82	2047.64
10	732855.699	3336405.277	285.24	271.852	269.942	3	1.91	570.48	1140.96
11	732877.83	3336405.277	600	272.474	269.528	3	2.946	1800	3600
12	732907.83	3336405.277	600	272.236	269.603	3	2.633	1800	3600
13	732937.83	3336405.277	600	272.773	269.779	3	2.994	1800	3600
14	732967.83	3336405.277	600	272.63	269.613	3	3.017	1800	3600
15	732997.83	3336405.277	600	272.987	269.717	3	3.27	2100	4200
16	733027.83	3336405.277	600	273.057	269.811	3	3.246	2100	4200
17	733057.83	3336405.277	600	270.261	269.816	3	0.445	1500	3000
18	733080.055	3336405.277	289	270.401	269.503	3	0.898	578	1156
19	732855.586	3336425.277	289.76	268.249	267.804	3	0.445	869.28	1738.56
20	732877.83	3336425.277	600	268.733	267.835	3	0.898	1800	3600
21	732907.83	3336425.277	600	267.949	267.504	3	0.445	1800	3600
22	732937.83	3336425.277	600	268.569	267.671	3	0.898	2100	4200
23	732967.83	3336425.277	600	267.21	266.765	3	0.445	1800	3600
24	732997.83	3336425.277	600	267.682	265.657	3	2.025	1500	3000
25	733027.83	3336425.277	600	267.502	265.885	3	1.617	1500	3000
26	733057.83	3336425.277	600	268.41	266.793	3	1.617	1200	2400
27	733087.665	3336427.634	335.47	267.882	266.614	3	1.268	1006.41	2012.82
28	732855.473	3336445.277	294.28	267.794	265.869	3	1.925	735.7	1471.4
29	732877.83	3336445.277	600	267.525	265.327	3	2.198	1500	3000
30	732907.83	3336445.277	600	267.432	264.546	3	2.886	1200	2400
31	732937.83	3336445.277	600	267.615	266.536	3	1.079	1200	2400
32	732967.83	3336445.277	600	267.708	266.629	3	1.079	1500	3000
33	732997.83	3336445.277	600	267.343	264.326	3	3.017	1500	3000
34	733027.83	3336445.277	600	267.505	264.826	3	2.679	1500	3000
35	733057.83	3336445.277	600	267.615	265.794	3	1.821	1500	3000
36	733087.83	3336445.277	600	267.737	266.658	3	1.079	1500	3000
37	733117.83	3336444.606	640.3	268.076	266.902	3	1.174	1920.9	3841.8
38	733142.692	3336445.473	386.77	268.467	267.11	3	1.357	1353.695	2707.39
39	732855.36	3336465.277	298.8	267.697	264.667	3	3.03	597.6	1195.2
40	732877.83	3336465.277	600	267.768	263.906	3	3.862	1500	3000
41	732907.83	3336465.277	600	267.617	263.932	3	3.685	1500	3000
42	732937.83	3336465.277	600	267.37	264.31	3	3.06	1500	3000
43	732967.83	3336465.277	600	267.224	265.614	3	1.61	1200	2400
44	732997.83	3336465.277	600	267.341	264.305	3	3.036	1500	3000
45	733027.83	3336465.277	600	267.409	264.615	3	2.794	1200	2400
46	733057.83	3336465.277	600	267.699	265.835	3	1.864	1200	2400
47	733087.83	3336465.277	600	268.081	266.548	3	1.533	1200	2400
48	733117.83	3336465.277	600	268.9	266.756	3	2.144	1500	3000
49	733142.656	3336465.277	393.02	269.204	266.893	3	2.311	1179.06	2358.12
50	732855.247	3336485.277	303.32	267.312	263.882	3	3.43	758.3	1516.6

51	732877.83	3336485.277	600	267.103	263.914	3	3.189	1500	3000
52	732907.83	3336485.277	600	267.919	263.933	3	3.986	1500	3000
53	732937.83	3336485.277	600	267.768	263.977	3	3.791	1500	3000
54	732967.83	3336485.277	600	267.898	264.632	3	3.266	1500	3000
55	732997.83	3336485.277	600	267.978	264.298	3	3.68	1500	3000
56	733027.83	3336485.277	600	267.831	264.151	3	3.68	1500	3000
57	733057.83	3336485.277	600	268.275	264.595	3	3.68	1500	3000
58	733087.83	3336485.277	600	269.254	265.902	3	3.352	1200	2400
59	733117.83	3336485.277	600	269.794	266.55	3	3.244	1200	2400
60	733142.619	3336485.277	391.53	270.072	266.673	3	3.399	978.825	1957.65
61	732855.134	3336505.277	307.83	267.861	263.897	3	3.964	769.575	1539.15
62	732877.83	3336505.277	600	267.807	263.916	3	3.891	1500	3000
63	732907.83	3336505.277	600	267.885	263.934	3	3.951	1500	3000
64	732937.83	3336505.277	600	267.819	263.972	3	3.847	1500	3000
65	732967.83	3336505.277	600	268.114	264.299	3	3.815	1500	3000
66	732997.83	3336505.277	600	268.109	264.125	3	3.984	1500	3000
67	733027.83	3336505.277	600	268.151	264.216	3	3.935	1500	3000
68	733057.83	3336505.277	600	268.189	264.249	3	3.94	1500	3000
69	733087.83	3336505.277	600	269.166	265.207	3	3.959	1200	2400
70	733117.83	3336505.277	600	269.446	265.83	3	3.616	1200	2400
71	733142.581	3336505.277	390.04	269.707	266.454	3	3.253	780.08	1560.16
72	732855.021	3336525.277	312.35	268.936	265.008	3	3.928	624.7	1249.4
73	732877.83	3336525.277	600	268	264.13	3	3.87	1500	3000
74	732907.83	3336525.277	600	267.764	263.935	3	3.829	1500	3000
75	732937.83	3336525.277	600	267.5	263.968	3	3.532	1500	3000
76	732967.83	3336525.277	600	268.466	264.518	3	3.948	1200	2400
77	732997.83	3336525.277	600	267.643	264.244	3	3.399	1500	3000
78	733027.83	3336525.277	600	268.652	264.998	3	3.654	1200	2400
79	733057.83	3336525.277	600	268.447	264.511	3	3.936	1500	3000
80	733087.83	3336525.277	600	268.06	264.803	3	3.257	1200	2400
81	733117.83	3336525.277	600	269.105	265.11	3	3.995	1200	2400
82	733142.544	3336525.277	388.55	269.158	265.234	3	3.924	971.375	1942.75
83	732854.908	3336545.277	316.87	269.022	265.502	3	3.52	633.74	1267.48
84	732877.83	3336545.277	600	268.607	265.29	3	3.317	1200	2400
85	732907.83	3336545.277	600	267.827	263.944	3	3.883	1500	3000
86	732937.83	3336545.277	600	267.555	263.964	3	3.591	1500	3000
87	732967.83	3336545.277	600	268.105	264.514	3	3.591	1200	2400
88	732997.83	3336545.277	600	267.975	264.384	3	3.591	1500	3000
89	733027.83	3336545.277	600	268.871	265.28	3	3.591	1200	2400
90	733057.83	3336545.277	600	268.859	265.027	3	3.832	1200	2400
91	733087.83	3336545.277	600	268.565	264.743	3	3.822	1200	2400
92	733117.83	3336545.277	600	268.144	264.377	3	3.767	1500	3000
93	733142.508	3336545.078	379.37	269.001	265.014	3	3.987	758.74	1517.48
94	732854.795	3336565.277	321.39	268.948	265.924	3	3.024	642.78	1285.56
95	732877.83	3336565.277	600	268.508	265.299	3	3.209	1500	3000
96	732907.83	3336565.277	600	268.623	265.148	3	3.475	1200	2400
97	732937.83	3336565.277	600	268.255	264.568	3	3.687	1200	2400
98	732967.83	3336565.277	600	268.461	265.374	3	3.087	1200	2400
99	732997.83	3336565.277	600	268.507	264.725	3	3.782	1200	2400
100	733027.83	3336565.277	600	268.32	265.042	3	3.278	1500	3000
101	733057.83	3336565.277	600	268.652	265.044	3	3.608	1200	2400
102	733087.83	3336565.277	600	268.507	264.661	3	3.846	1200	2400
103	733117.83	3336565.277	600	268.754	264.77	3	3.984	1200	2400
104	733148.694	3336563.057	613.57	268.321	264.379	3	3.942	1533.925	3067.85
105	733177.83	3336565.473	588.26	269.017	265.043	3	3.974	1176.52	2353.04

106	733204.235	3336566.082	419.41	268.776	264.802	3	3.974	1048.525	2097.05
107	732854.682	3336585.277	325.91	268.399	265.787	3	2.612	814.775	1629.55
108	732877.83	3336585.277	600	268.739	265.772	3	2.967	1500	3000
109	732907.83	3336585.277	600	268.443	265.664	3	2.779	1500	3000
110	732937.83	3336585.277	600	268.53	265.212	3	3.318	1500	3000
111	732967.83	3336585.277	600	268.524	265.916	3	2.608	1200	2400
112	732997.83	3336585.277	600	268.505	264.64	3	3.865	1200	2400
113	733027.83	3336585.277	600	268.591	264.746	3	3.845	1500	3000
114	733057.83	3336585.277	600	268.633	264.654	3	3.979	1500	3000
115	733087.83	3336585.277	600	268.561	264.657	3	3.904	1200	2400
116	733117.83	3336585.277	600	268.572	264.69	3	3.882	1200	2400
117	733147.83	3336585.277	600	268.562	264.723	3	3.839	1200	2400
118	733177.83	3336585.277	600	268.313	264.316	3	3.997	1500	3000
119	733204.363	3336585.277	461.32	268.229	264.481	3	3.748	1153.3	2306.6
120	732854.569	3336605.277	330.43	269.019	266.631	3	2.388	660.86	1321.72
121	732877.83	3336605.277	600	268.852	266.708	3	2.144	1200	2400
122	732907.83	3336605.277	600	268.418	266.696	3	1.722	1200	2400
123	732937.83	3336605.277	600	268.159	266.625	3	1.534	1500	3000
124	732967.83	3336605.277	600	268.289	265.767	3	2.522	1500	3000
125	732997.83	3336605.277	600	268.359	264.49	3	3.869	1500	3000
126	733027.83	3336605.277	600	268.311	264.348	3	3.963	1500	3000
127	733057.83	3336605.277	600	268.426	264.478	3	3.948	1500	3000
128	733087.83	3336605.277	600	268.646	264.674	3	3.972	1200	2400
129	733117.83	3336605.277	600	268.546	264.691	3	3.855	1200	2400
130	733147.83	3336605.277	600	268.381	264.721	3	3.66	1200	2400
131	733177.83	3336605.277	600	268.733	264.74	3	3.993	1200	2400
132	733204.499	3336605.277	466.73	268.767	264.779	3	3.988	933.46	1866.92
133	732854.456	3336625.277	334.95	268.66	266.982	3	1.678	669.9	1339.8
134	732877.83	3336625.277	600	268.155	266.64	3	1.515	1500	3000
135	732907.83	3336625.277	600	268.374	266.731	3	1.643	1500	3000
136	732937.83	3336625.277	600	268.052	266.628	3	1.424	1500	3000
137	732967.83	3336625.277	600	267.839	266.581	3	1.258	1200	2400
138	732997.83	3336625.277	600	267.956	265.221	3	2.735	1200	2400
139	733027.83	3336625.277	600	267.925	264.322	3	3.603	1500	3000
140	733057.83	3336625.277	600	268.288	264.701	3	3.587	1200	2400
141	733087.83	3336625.277	600	268.55	264.711	3	3.839	1200	2400
142	733117.83	3336625.277	600	268.584	264.684	3	3.9	1200	2400
143	733147.83	3336625.277	600	268.383	264.704	3	3.679	1200	2400
144	733177.83	3336625.277	600	268.664	264.724	3	3.94	1200	2400
145	733210.658	3336622.506	589.01	268.549	264.752	3	3.797	1178.02	2356.04
146	733237.83	3336626.529	524.89	268.334	264.793	3	3.541	1049.78	2099.56
147	733272.4	3336627.246	624.84	268.216	264.335	3	3.881	1562.1	3124.2
148	732854.343	3336645.277	339.47	268.371	266.66	3	1.711	848.675	1697.35
149	732877.83	3336645.277	600	268.254	266.762	3	1.492	1500	3000
150	732907.83	3336645.277	600	268.028	266.817	3	1.211	1500	3000
151	732937.83	3336645.277	600	267.925	266.683	3	1.242	1500	3000
152	732967.83	3336645.277	600	267.751	266.569	3	1.182	1200	2400
153	732997.83	3336645.277	600	267.877	265.227	3	2.65	1500	3000
154	733027.83	3336645.277	600	267.897	264.88	3	3.017	1500	3000
155	733057.83	3336645.277	600	267.965	264.809	3	3.156	1500	3000
156	733087.83	3336645.277	600	268.214	265.188	3	3.026	1200	2400
157	733117.83	3336645.277	600	268.722	264.968	3	3.754	1200	2400
158	733147.83	3336645.277	600	268.602	264.914	3	3.688	1200	2400
159	733177.83	3336645.277	600	268.354	264.389	3	3.965	1500	3000
160	733207.83	3336645.277	600	268.321	264.364	3	3.957	1500	3000

161	733237.83	3336645.277	600	268.306	264.349	3	3.957	1500	3000
162	733278.204	3336645.277	1015	268.204	264.341	3	3.863	2537.4	5074.8
163	732854.23	3336665.277	343.99	268.355	266.652	3	1.703	859.975	1719.95
164	732877.83	3336665.277	600	268.437	266.734	3	1.703	1500	3000
165	732907.83	3336665.277	600	268.442	266.739	3	1.703	1500	3000
166	732937.83	3336665.277	600	268.385	266.682	3	1.703	1500	3000
167	732967.83	3336665.277	600	268.245	266.542	3	1.703	1500	3000
168	732997.83	3336665.277	600	267.98	265.733	3	2.247	1500	3000
169	733027.83	3336665.277	600	267.818	265.425	3	2.393	1500	3000
170	733057.83	3336665.277	600	268.014	265.888	3	2.126	1200	2400
171	733087.83	3336665.277	600	268.405	265.283	3	3.122	1500	3000
172	733117.83	3336665.277	600	268.672	265.555	3	3.117	1200	2400
173	733147.83	3336665.277	600	267.94	264.828	3	3.112	1500	3000
174	733177.83	3336665.277	600	267.857	264.75	3	3.107	1500	3000
175	733207.83	3336665.277	600	267.827	264.725	3	3.102	1500	3000
176	733237.83	3336665.277	600	267.798	264.701	3	3.097	1500	3000
177	733270.668	3336665.595	595.3	268.271	265.179	3	3.092	1190.6	2381.2
178	733298.356	3336661.092	363.57	267.811	264.724	3	3.087	908.925	1817.85
179	732854.117	3336685.277	348.51	268.215	266.642	3	1.573	871.275	1742.55
180	732877.83	3336685.277	600	267.867	266.662	3	1.205	1500	3000
181	732907.83	3336685.277	600	267.883	266.678	3	1.205	1500	3000
182	732937.83	3336685.277	600	267.938	266.733	3	1.205	1500	3000
183	732967.83	3336685.277	600	267.857	266.652	3	1.205	1500	3000
184	732997.83	3336685.277	600	267.943	266.738	3	1.205	1200	2400
185	733027.83	3336685.277	600	267.675	266.47	3	1.205	1200	2400
186	733057.83	3336685.277	600	268.539	265.887	3	2.652	1500	3000
187	733087.83	3336685.277	600	268.611	265.865	3	2.746	1500	3000
188	733117.83	3336685.277	600	268.755	265.735	3	3.02	1500	3000
189	733147.83	3336685.277	600	268.645	265.473	3	3.172	1500	3000
190	733177.83	3336685.277	600	268.904	265.211	3	3.693	1500	3000
191	733207.83	3336685.277	600	268.634	265.584	3	3.05	1200	2400
192	733237.83	3336685.277	600	268.608	265.558	3	3.05	1200	2400
193	733267.321	3336685.277	579.61	268.581	265.531	3	3.05	1159.22	2318.44
194	732854.004	3336705.277	353.03	267.752	266.613	3	1.139	882.575	1765.15
195	732877.83	3336705.277	600	267.685	266.644	3	1.041	1500	3000
196	732907.83	3336705.277	600	267.713	266.672	3	1.041	1500	3000
197	732937.83	3336705.277	600	267.819	266.778	3	1.041	1500	3000
198	732967.83	3336705.277	600	267.707	266.666	3	1.041	1500	3000
199	732997.83	3336705.277	600	268.123	266.885	3	1.238	1200	2400
200	733027.83	3336705.277	600	268.106	266.778	3	1.328	1200	2400
201	733057.83	3336705.277	600	267.956	266.634	3	1.322	1200	2400
202	733087.83	3336705.277	600	267.799	266.497	3	1.302	1200	2400
203	733117.83	3336705.277	600	267.881	266.586	3	1.295	1500	3000
204	733147.83	3336705.277	600	268.143	266.875	3	1.268	1200	2400
205	733177.83	3336705.277	600	268.743	266.613	3	2.13	1200	2400
206	733207.83	3336705.277	600	268.627	265.707	3	2.92	1500	3000
207	733237.83	3336705.277	600	268.814	265.894	3	2.92	1200	2400
208	733266.888	3336705.277	562.31	268.788	265.868	3	2.92	1124.62	2249.24
209	732853.891	3336725.277	357.55	269.502	266.582	3	2.92	893.875	1787.75
210	732877.83	3336725.277	600	267.663	266.613	3	1.05	1500	3000
211	732907.83	3336725.277	600	267.685	266.635	3	1.05	1500	3000
212	732937.83	3336725.277	600	267.853	266.803	3	1.05	1500	3000
213	732967.83	3336725.277	600	267.72	266.67	3	1.05	1500	3000
214	732997.83	3336725.277	600	267.647	266.597	3	1.05	1500	3000
215	733027.83	3336725.277	600	267.574	266.524	3	1.05	1500	3000

216	733057.83	3336725.277	600	267.768	266.718	3	1.05	1200	2400
217	733087.83	3336725.277	600	267.679	266.629	3	1.05	1200	2400
218	733117.83	3336725.277	600	267.768	266.718	3	1.05	1500	3000
219	733147.83	3336725.277	600	268.12	266.778	3	1.342	1800	3600
220	733177.83	3336725.277	600	268.347	266.516	3	1.831	1800	3600
221	733207.83	3336725.277	600	268.731	266.646	3	2.085	1500	3000
222	733237.83	3336725.277	600	270.003	266.609	3	3.394	1200	2400
223	733266.455	3336725.277	545.01	269.099	265.705	3	3.394	1362.525	2725.05
224	732853.778	3336745.277	362.07	267.626	266.54	3	1.086	905.175	1810.35
225	732877.83	3336745.277	600	267.933	266.847	3	1.086	1200	2400
226	732907.83	3336745.277	600	267.756	266.67	3	1.086	1200	2400
227	732937.83	3336745.277	600	267.999	266.913	3	1.086	1200	2400
228	732967.83	3336745.277	600	267.635	266.549	3	1.086	1500	3000
229	732997.83	3336745.277	600	267.614	266.528	3	1.086	1500	3000
230	733027.83	3336745.277	600	267.769	266.683	3	1.086	1500	3000
231	733057.83	3336745.277	600	267.75	266.664	3	1.086	1200	2400
232	733087.83	3336745.277	600	267.848	266.762	3	1.086	1200	2400
233	733117.83	3336745.277	600	267.936	266.85	3	1.086	1500	3000
234	733147.83	3336745.277	600	267.948	266.862	3	1.086	1800	3600
235	733177.83	3336745.277	600	268.394	266.918	3	1.476	2100	4200
236	733207.83	3336745.277	600	268.884	266.584	3	2.3	2100	4200
237	733237.83	3336745.277	600	269.286	266.548	3	2.738	1800	3600
238	733271.704	3336744.982	569.2	270.129	266.511	3	3.618	1423	2846
239	733297.83	3336749.807	328.24	270.195	266.577	3	3.618	656.48	1312.96
240	733328.629	3336749.757	348.87	270.441	266.823	3	3.618	697.74	1395.48
241	732853.665	3336765.277	366.59	267.009	266.936	3	0.073	733.18	1466.36
242	732877.83	3336765.277	600	267.743	266.869	3	0.874	1200	2400
243	732907.83	3336765.277	600	267.425	266.551	3	0.874	1200	2400
244	732937.83	3336765.277	600	267.843	266.969	3	0.874	1200	2400
245	732967.83	3336765.277	600	267.414	266.54	3	0.874	1500	3000
246	732997.83	3336765.277	600	267.774	266.9	3	0.874	1200	2400
247	733027.83	3336765.277	600	267.635	266.761	3	0.874	1200	2400
248	733057.83	3336765.277	600	267.484	266.61	3	0.874	1200	2400
249	733087.83	3336765.277	600	267.72	266.846	3	0.874	1200	2400
250	733117.83	3336765.277	600	268.132	266.628	3	1.504	1500	3000
251	733147.83	3336765.277	600	268.351	266.909	3	1.442	1500	3000
252	733177.83	3336765.277	600	268.488	266.606	3	1.882	2100	4200
253	733207.83	3336765.277	600	269.08	267.523	3	1.557	2100	4200
254	733237.83	3336765.277	600	269.43	266.696	3	2.734	2100	4200
255	733267.83	3336765.277	600	269.474	266.82	3	2.654	1500	3000
256	733297.83	3336765.277	600	269.531	266.877	3	2.654	1200	2400
257	733328.72	3336765.277	635.61	269.249	266.595	3	2.654	1589.025	3178.05
258	732853.552	3336785.277	371.11	268.225	266.86	3	1.365	742.22	1484.44
259	732877.83	3336785.277	600	268.225	266.86	3	1.365	1200	2400
260	732907.83	3336785.277	600	267.936	266.571	3	1.365	1200	2400
261	732937.83	3336785.277	600	268.28	266.915	3	1.365	1200	2400
262	732967.83	3336785.277	600	267.98	266.615	3	1.365	1200	2400
263	732997.83	3336785.277	600	267.841	266.476	3	1.365	1200	2400
264	733027.83	3336785.277	600	267.202	265.837	3	1.365	1500	3000
265	733057.83	3336785.277	600	267.446	266.658	3	0.788	1200	2400
266	733087.83	3336785.277	600	267.403	266.393	3	1.01	1200	2400
267	733117.83	3336785.277	600	268.025	266.674	3	1.351	1200	2400
268	733147.83	3336785.277	600	268.502	266.956	3	1.546	1200	2400
269	733177.83	3336785.277	600	269.356	266.594	3	2.762	1800	3600
270	733207.83	3336785.277	600	269.169	266.743	3	2.426	2100	4200

271	733237.83	3336785.277	600	269.587	266.639	3	2.948	1800	3600
272	733267.83	3336785.277	600	269.504	266.556	3	2.948	1500	3000
273	733297.83	3336785.277	600	269.635	266.687	3	2.948	1500	3000
274	733328.838	3336785.277	640.31	269.815	266.867	3	2.948	1600.775	3201.55
275	732853.439	3336805.277	375.63	267.575	266.784	3	0.791	751.26	1502.52
276	732877.83	3336805.277	600	267.451	266.66	3	0.791	1200	2400
277	732907.83	3336805.277	600	267.5	266.709	3	0.791	1200	2400
278	732937.83	3336805.277	600	267.526	266.735	3	0.791	1500	3000
279	732967.83	3336805.277	600	267.159	266.368	3	0.791	1200	2400
280	732997.83	3336805.277	600	267.329	265.551	3	1.778	1500	3000
281	733027.83	3336805.277	600	267.204	266.445	3	0.759	1200	2400
282	733057.83	3336805.277	600	267.706	266.82	3	0.886	1500	3000
283	733087.83	3336805.277	600	268.217	266.669	3	1.548	1200	2400
284	733117.83	3336805.277	600	268.078	265.721	3	2.357	1500	3000
285	733147.83	3336805.277	600	268.49	266.481	3	2.009	1200	2400
286	733177.83	3336805.277	600	269.373	266.928	3	2.445	1200	2400
287	733207.83	3336805.277	600	269.125	266.747	3	2.378	1500	3000
288	733237.83	3336805.277	600	269.531	266.973	3	2.558	1200	2400
289	733267.83	3336805.277	600	269.265	266.707	3	2.558	1500	3000
290	733297.83	3336805.277	600	269.252	266.694	3	2.558	1500	3000
291	733328.956	3336805.277	645.01	269.497	266.939	3	2.558	1612.525	3225.05
292	732853.31	3336828.326	496.95	267.579	266.732	3	0.847	993.9	1987.8
293	732877.83	3336828.644	801.98	267.391	266.544	3	0.847	2004.95	4009.9
294	732907.83	3336829.031	825.21	267.988	267.141	3	0.847	2888.235	5776.47
295	732937.83	3336829.418	848.44	268.539	267.692	3	0.847	2969.54	5939.08
296	732967.83	3336829.805	871.67	267.647	266.8	3	0.847	3050.845	6101.69
297	732997.83	3336830.192	894.9	267.721	266.874	3	0.847	2237.25	4474.5
298	733027.83	3336830.58	918.13	267.592	266.745	3	0.847	1836.26	3672.52
299	733057.83	3336830.967	941.36	267.829	266.982	3	0.847	2824.08	5648.16
300	733087.83	3336831.354	964.6	268.255	266.851	3	1.404	2411.5	4823
301	733117.83	3336831.741	987.83	268.209	266.435	3	1.774	1975.66	3951.32
302	733147.83	3336825.277	600	269.156	266.881	3	2.275	1800	3600
303	733177.83	3336825.277	600	269.259	266.992	3	2.267	1500	3000
304	733207.83	3336825.277	600	269.559	266.702	3	2.857	1200	2400
305	733237.83	3336825.277	600	269.91	266.972	3	2.938	1500	3000
306	733267.83	3336825.277	600	269.903	266.965	3	2.938	1500	3000
307	733297.83	3336825.277	600	269.677	266.739	3	2.938	1500	3000
308	733329.073	3336825.277	649.71	269.892	266.954	3	2.938	1949.13	3898.26
309	733147.83	3336842.128	411.06	270.568	267.63	3	2.938	1438.71	2877.42
310	733177.83	3336842.515	434.29	270.826	267.888	3	2.938	1520.015	3040.03
311	733207.83	3336842.903	457.52	270.965	268.027	3	2.938	1601.32	3202.64
312	733237.83	3336843.29	480.75	270.715	267.777	3	2.938	1682.625	3365.25
313	733267.83	3336843.677	503.98	270.388	267.45	3	2.938	1763.93	3527.86
314	733297.83	3336844.064	527.21	269.776	266.838	3	2.938	1581.63	3163.26
315	733329.187	3336844.47	601.38	270.018	267.08	3	2.938	2104.83	4209.66
							2.456	**442919.51**	**885839.01**

CONCLUSION

Replenishment Study for the year 2023 reveals that there is replenishment (Natural Reclamation Rainfed Water Containing Sand) of approximately, **885839.01** T of Sand.

DOLPHIN ENGINEERS
VIDHYA APARTMENT
BAPUNAGAR
JAIPUR

G) Site Photographs









End of report

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REPLENISHMENT REPORT FOR SAND MINES

Submitted under rule 70 (1) & 77 (2) of Haryana Minor Mineral Concession , Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules, 2012

FOR BOULDER, GRAVEL & SAND MINE (MINOR MINERAL)

OF

MANDOLI GHAGGAR WEST BLOCK (YNR B-4) VILLAGE-MANDOLI, TEHSIL-YAMUNA NAGAR
DISTRICT-YAMUNANAGAR, STATE-HARYANA
TOTAL LEASE AREA-25.56 Hect. (NON-FOREST) | PRODUCTION CAPACITY-119100 T/ANNUM
LEASE PERIOD-7 YEARS | PERIOD OF MINING SCHEME-2 YEARS

APPLICANT
M/S JSM FOODS PRIVATE LIMITED
Mr. Tanish Wadhwa (Authorized Signatory)
676, Sector-13, Karnal
e-mail: jsmfoodsmandoll@gmail.com
Phone: 9996015005



B-3, C-49, Vidya Apartments, Paras Marg,
Bapu Nagar Jaipur, Rajasthan-302020

INDEX

Sr.No.	Description	Page No.
1.	The Project	1
2.	Object of Replenishment Study	2
3.	Need for present annual Replenishment Study	2
4.	Replenishment Study	2
5.	General Introduction	3
6.	Physiographic	5
7.	Drainage	5
8.	Sedimentation, Assessment & Infrastructure	6
9.	Approach & Methodology	8
10.	Pre-Monsoon Contour Map	10
11.	Post-Monsoon Contour Map	11
12.	Composite Section of Pre and Post map	12
13.	Calculation of sand Replenished	13-24
14.	Mine Site Photo	25-26

About the Project

Environmental Clearance vide letter no. SEIAA/HR/2022/589 dated 7.10.2022 EC for Boulder, Gravel and Sand Minor Mineral Project located at Mandoli Ghaggar West Block / YNR B-4 at Village Mandoli Ghaggar west Tehsil Chhachhrauli District YamunaNagar, Haryana over an area of 25.56 Ha With production capacity of 11,91,000 TPA - - Regarding addition of Boulder & Gravel in the earlier EC and Extension of validity of Environment Clearance (EC)

M/s JSM Foods Pvt., Ltd., WZ/932-Basie Darapur,1st floor near Senior Secondary school New Delhi-110015were the highest bidder for the sand of Mandoli Ghaggar West Block/YNR B-4 for which e-auction was held on 10-06-15 and 11-06-2015. A Letter of Intent has been issued by the Director General Mines & Geology Department, Haryana vide letter no DMG/HY/Cont/Mandoli Ghaggar West Block/YNRB-4/2015/3918/dated 19-06-2015 for Mining of Sand (Minor Mineral) in revenue village Mandoli Ghaggar West Block/YNR B-4, over an area of 25.56 hectares in District- Yamunanagar, Haryana for a period of 7 years .The project was granted EC for EC for Boulder, Gravel and Sand Minor Mineral Project located at Mandoli Ghaggar West Block / YNR B-4 at Village Mandoli Ghaggar west Tehsil Chhachhrauli District YamunaNagar, Haryana over an area of 25.56 Ha With production Capacity of 11,91,000 TPA,

Vide extension letter of the SEIAA deem it appropriate to again to clarify that the project proponent shall not undertake mining of Boulder & Gravel in the allotted mining areas, despite the facts that extension of validity in the earlier EC dated 21.12.2016 & addition of these items have been allowed by SEIAA to the Project Proponent.

Detail of Khasara /Kila No no.

Name of Block	Nme of Village	Details ofKhasra No/KilaNos	Area of block in ha
MandoliGhaggarWest Block/YNR B-4	MandoliGhaggar	**53//5,** 6, 15, 16/1, 16/2, 25 **54//1 to 25** **55//1,** 2, 9, 10, 11,20 **57//1 to 4**, 7 to 13 **58//5,** 6, 15	25.56

Mining Area forms a part of G. T. Sheet No's –53F/ 8

Co-ordinates of the lease area as under

N30^{0}08’ 8.21” to N30^{0}08’ 26.69”
E 77^{0}24’ 42.02” to E77^{0}25’1.64”

Pillar no.	Latitudes	Longitudes
BP-1	N30° 08' 20.69"	E30° 24' 42.04"
BP-2	N30° 08' 20.69"	E30° 25' 01.64"
BP-3	N30° 08' 10.85"	E30° 25' 01.47"
BP-4	N30° 08' 10.85"	E30° 24' 59.02"
BP-5	N30° 08' 9.25"	E30° 24' 59.00"
BP-6	N30° 08' 8.32"	E30° 24' 51.62"
BP-7	N30° 08' 8.21"	E30° 24' 44.27"
BP-8	N30° 08' 22.73"	E30° 24' 44.44"
BP-9	N30° 08' 22.73"	E30° 24' 42.97"
BP-10	N30° 08' 23.33"	E30° 24' 42.97"
BP-11	N30° 08' 24.27"	E30° 24' 42.02"

The area is approachable from various nearest towns as detailed below

Village Mandoli Ghaggar is very well connected with Metalled Road. Yamunanagar Railway Terminus is about 15 km from the miningarea.

Delhi ISBT is about 230 Km and Yamunanagar is about 15 km NW from the miningarea. State Headquarters Chandigarh is about 90 km in the North West of the miningarea.

Objective for Replenishment Study

The requirements of the “Replenishment Study” as per the terms of EC letter are as below:

As per specific Conditions of EC (D-19), the Project Proponent should carry out replenishment study annually certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity shall be decreased /stopped accordingly till the replenishment is completed.

As per specific Conditions of EC (D-19), the Project Proponent should carry out replenishment study annually certified by an authorized agency.

In case the replenishment is lower than the approved rate of production, then the mining activity shall be decreased /stopped accordingly till the replenishment is completed.

Project Proponent, M/s JSM Foods Pvt., Ltd., WZ/932-Basie Darapur,1st floor near Senior Secondary school New Delhi-110015 appointed M/s Vardan EnviroNet, Gurgaon, an Environmental Consulting Company for undertaking:

a) Pre-monsoon survey and replenishment study
b) Post-monsoon survey and replenishment study
c) To prepare composite sections of pre and post monsoon survey findings
d) To calculate the volume of sand replenished during study period.
e) Finally, to prepare "Replenishment Study Report" and to submit it to the concerned Office.

4. Replenishment Study

4.0 Period of Survey for sedimentation survey and replenishment study

Pre-monsoon: 15th to 20th June, 2022

Post-monsoon: 18th to 21stSeptember, 2022

4.1 General Introduction:

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are Non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin. But its over-exploitation and indiscriminate mining supersedes replenishment &optimum extraction is overtaken by profits, extraction has exceeded its replenishment rate and it neglects laws of mineral conservation.

Sand mining has become a widely spread activity and does not require a huge set up or technology, the number of ventures has increased extensively and it has become a footloose industry in itself but the backward-forward linkages are becoming stronger as many are getting employed as well as the construction activity / industry requires this mineral at consistent rates. In the state of Punjab, sand has been declared as an essential commodity so as to control its extraction and sale price. Andhra Pradesh on the other hand is heading towards a lottery system. Riverine environmental systems are unique in them and provide environmental services, natural resources to meet variety of needs of urban and rural communities. The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance. Rivers also act as natural administrative boundariesamong the states and this gives rise to improper and unclear demarcation of boundaries as the river keeps changing its course from time to time thereby unclear administrative controls and mechanisms becomes a point of excuse for administration for any

illegal activity taking in this disputed area. River Yamuna near Dakpathar barrage leaves Uttarakhand and enters Himachal Pradesh.

The Yamuna River is the biggest tributary of the river Ganga in North India. Its source in the Yamunotry glacier at an elevation of 6387 mtrs on South western sides of Banderpooch crests in the lower Himalayan ranges. The overall span of the Yamuna River is 1376 Kms (855 miles) with catchment area of 366223 square km (141,399 square km). This encompasses 40.2 % of the whole Ganga valley, prior to joining Ganga at TriveniSangam in Allahabad (UP)

Itinerary of Yamuna River:

The river passes through many states such as Uttrakhand, UP, Haryana, going across to HP and then Delhi. With yearly discharge of around 10,000 cubic billion meters (cbm) and consumption of 4400 cbm (of which irrigation comprises 96%), the river represents above 70% of water provision of Delhi. Yamuna water are fairly good quality for its entire span from Yamunotri in Himalayan ranges to Wazirabad in Delhi, the length of which is around 375 Kms.

Itinerary of Drainage area of Yamuna:

The origin of Yamuna is situated in the Yamunotri glacier at an elevation of 6387 mtrs on SE sides of Banderpooch crests, which are located in the Mussoorie range of lower Himalayan range in Uttrakashi district of Uttrakhand, to the North of Haridwar. From this place Yamuna runs to South around 200 Kms across the Shivalik mountain ranges and lower Himalayan ranges.

A significant portion of its beginning of Drainage basin (with total area of 2320 square km) is situated in HP and a major tributary sapping the upper drainage basin in the Tons, which is also biggest and most extensive tributary of the Yamuna. Other tributaries in the area are the Rishi Ganga, Giri, Hanuman Ganga, Kunta& Bata, which sap the upper drainage basin of the huge Yamuna River. Subsequently, the river moves down the terrains of Doon basin at Dakpathar close to Dehradun, in this place water is redirected into a channel for the purpose of electricity generation. Once it goes across the sikh religious place of Ponta Sahib, the river arrives at Tajewala in the YAMUNANAGAR district of Haryana where a dam was constructed in 1873. This dam is the origin of the two major channels or water courses – Eastern Yamuna Canal and Western Yamuna Canal and both drain in UP & Haryana.

The Western Yamuna Canal (WYC) traverses Karnal, Yamunanagar and Panipat prior to arriving at the Haiderpur water treatment plant, which provides a portion of municipal water provisions of Delhi. The Yamuna also forms natural boundary between the states of Uttrakhand& HP and also amid the states of UP and Haryana.

Together with the Ganga to which it flows almost parallel once it meets the Indo-Gangetic plateau, the biggest Alluvial productive area in the World, it forms the Ganges-Yamuna Doab are stretched across 69,000 square Km which is 33% of the whole area.

Drainage system is the pattern formed by streams, rivers and lakes in a drainagebasin. In a drainage system, streams or rivers always connect together to formnetworks. Many factors such as topography, soil type, bedrock type, climate &vegetation cover influence input, output and transport of sediment and water in adrainage basin (Charlton, 2008). These factors also influence the nature of thepattern of water bodies (Twidale, 2004). As a consequence, drainage pattern canreflect geographical characteristics of a river network to a certain extent. There areseveral types of drainage pattern. So far, much research has been done on the description of drainage patterns in geology and hydrology (e.g., Howard, 1967; Lambert, 1998; Twidale, 2004; Pidwirny, 2006).

In addition, sediment transport knowledge is important in river restoration, ecosystem protection, navigation, watershed studies and reservoir management. Bed load represents the lower portion of sediment load in natural rivers. Fluvialsediment load materials are transported by rivers. Sediment load can be divided in to bed load and suspended load based on the mode of transport. Bed load is transported close to the bed where particles moved by rolling, sliding, or dissolving(Adegbola, 2012). Xlaoqing (2003) explained that bed load transport in natural rivers is a complicated event. Its movement is quite uneven in both the transverse & longitudinal directions, which vary considerably.

4.2 Physiography:

The area forms a part of the Indo-Gangetic plains and exhibit flat terrain withgeneral slope from north to south. The area is devoid of any prominent topographic features. However, a natural depression exists in north & northwest of Gohana(29˚08’22”N & 76˚42’55”E). The maximum elevation of the plain is 230m above mRL. Topographically the district can be divided into the following units.

Active flood plains along the present-day course of the river Yamuna in eastern part of the district. These are generally bordering the active flood plains and are wider, low lying flat tracts.

4.3 Drainage:

The Yamuna which marks the eastern boundary of the Haryana State as well asSonipat district provides the major drainage in the area. The river Yamuna emerges from Yamunotri off the Bansur-Punch glacier in TehriGarhwal district of Uttarakhand at an elevation of 6330 meters. It emerges into the plains from thefoothills at Kalesar just north of Tajewala. The area constitutes alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The general slope of the area is southwards.The Yamuna Rivers are plays an important role for the nation and provide water

required by Besides, mining activities are also being carried out in the rivers for the developmental process.Di-siltation (remove of excess sand and stone from river bed) of the river helps tomaintain the

carrying capacity and provides protection from flooding duringmonsoon season. Further, continuous flow of river is essential for ecological andeconomic needs such as irrigation and biodiversity etc. Drainage study of the river helps to understand potential carrying capacity of water during pre-monsoon& post monsoon season which is generated from rainfall in the watershed and quantity of di-siltation of rivers under mining affected areas. Drainage and replenishment study was carried out in Yamuna River, Haryana was found with ephemeral streams. Quantification and estimation of river bed material (RBM) was accomplished by followed three scientific approaches i. e. mapping of watersheds by using Arc GIS software & and ERDAS software using analysis, survey of proposed mining area and grain size distribution of sand and gravelvarious sectors such as irrigation, drinking, recreation and industrial requirements etc.

4.4 Sedimentation. Assessment and Infrastructure

Dandy & Bolton formula is often used to check whether the sedimentation yield exceedsthe replenishment rate but the whole question is whether there is adequate monitoringof the river basin, the answer is no as hydrological stations are sparsely spread. Theformula uses catchment area and mean annual runoff as key determinants to give ayield value. It does not differentiate in basin wide smaller streams and theircharacteristics. CWC distinguishes river basins as classified and non-classified, as perthe latest hydrological data for unclassified River basins; there are 122 GDSW (Gauge,Discharge, Sediment & Water Quality) sites in 12 such basins, the number was 147 in2005. This brings in context the whole issue of scientific mining, thereby indicating that

the monitoring of sediment yield in rivers / streams within the river basins is essential toarrive at extraction rates and express and conduct environmental studies based onthese basin wide characteristics which should become part of the ‘Terms of Reference’.

Sedimentation, in the geological sciences, process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs. The term is commonly used as a synonym for sedimentary petrology and sedimentology.The physics of the most common sedimentation process, the settling of solid particles from fluids, has long been known. The settling velocity equation formulated in 1851 by G.G. Stokes is the classic starting point for any discussion of the sedimentation process. Stokes showed that the terminal settling velocity of spheres in a fluid was inversely proportional to the fluid’s viscosity and directly proportional to the density difference of fluid and solid, the radius of the spheres involved, and the force of gravity. Stokes’ equation is valid, however, only for very small spheres (under

0.04 millimeter [0.0015 inch] in diameter) and hence various modifications of Stokes' law have been proposed for no spherical particles and particles of larger size.

No settling velocity equation, however valid, provides a sufficient explanation of even the basic physical properties of natural sediments. The grain size of the classic elements and their sorting, shape, roundness, fabric, and packing are the results of complex processes related not only to the density and viscosity of the fluid medium but also to the translational velocity of the depositing fluid, the turbulence resulting from this motion, and the roughness of the beds over which it moves. These processes also are related to various mechanical properties of the solid materials propelled, to the duration of sediment transport, and to other little-understood factors.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits laid down in different geographic and geomorphic environments. Great efforts have been made to differentiate between continental, near-shore, marine, and other deposits in the geologic record. The classification of environments and criteria for their recognition is still a subject of lively debate. The analysis and interpretation of ancient deposits has been advanced by the study of modern sedimentation. Oceanographic and limnologicexpeditions have shed much light on sedimentation in the Gulf of Mexico, the Black Sea, and the Baltic Sea, and in various estuaries, lakes, and fluvial basins in all parts of the world.

Chemical sedimentation is understood in terms of chemical principles and laws. Although the famous physical chemist J.H. van't Hoff applied the principles of phase equilibrium to the problem of crystallizing brines and the origin of salt deposits as early as 1905, little effort was made to apply physical chemistry to the problems of chemical sedimentation. More recently, however, there has been investigation of the role of the redox (mutual reduction and oxidation) potential and pH (acidity–alkalinity) in the precipitation of many chemical sediments, and a renewed effort has been made to apply known thermodynamic principles to the origin of anhydrite and gypsum deposits, to the chemistry of dolomite formation, and to the problem of the ironstones and related sediments.

The factors which affect the "Computation of Sediment": -

a) Geomorphology & Drainage Pattern: The following geomorphic units plays important role:
    - Structural Plain
    - Structural Hill
    - Structural Ridge
    - Denudation Ridge & Valley

- Plain & Plateau of Gangetic plain
- Highly Dissected pediment
- Un dissected pediment

b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)

c) Drainage System/Pattern of the area (Drainage Density = …….Km/Sq. Km of Yamuna River

d) Rainfall &Climate: Year wise Rainfall data for previous 10 years of Yamuna Basin/River

5. Approach & Methodology Followed for Replenishment Study: -

The MoEF&CC in compliance of above Hon'ble Supreme Court's and NGT'S order has prepared **"Sustainable sand Mining Guidelines, 2016"** in consultation with State governments, detailing the provisions on environmental clearance (EC) for cluster, creation of District Environment Impact Assessment Authority, preparation of District survey report and proper monitoring of minor mineral. There by issued Notification dated 15.01.2016 for making certain amendments in the EIA Notification, 2006, and made mandatory to obtain EC for all minor minerals including sand , boulder and gravel .The main objective of the preparation of Replenishment studies is to input valuable information for enforcement and monitoring of existing sand leases of Haryana. As per provisions of **"Enforcement and Monitoring Guidelines for Sand Mining January 2020"** Guidelines of MOEF&CC, it is to ensure the following-

1. Identification of areas of aggradations or deposition where mining can be allowed;
2. Identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area.
3. Identification of mineral wealth in the district.

The DMG/ SEIAA / SEAC will scrutinize and recommend for EC quantity of mining of minor minerals on the basis of Replenishment studies.

5.1 NEED OF REPLENISHMENT STUDIES:-

Replenishment studies are required to comply the conditions imposed by SEIAA while granting EC of the project to ensure identification of areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area. While validating EC application also requested for addition of addition of Boulder & Gravel in the earlier EC and Extension of validity of EC)

Following Methodology shall be proposed to undertake the replenishment studies of the potential stretches of the river bed of Haryana:

5.2 STEPS:-

- Preparation of KML file with the coordinates of the LOI / existing lease covering 100 meter additional boundary beyond to the lease boundary to capture nearby data;
- Fixing of ground control points with the help of DGPS at fixed points;
- Drone Survey for pre - monsoon and post monsoon season.

6.0 METHODOLOGY & INSTRUMENT AND SOFTWARE PROPOSED:-

- A drone survey or unmanned aerial vehicle (UAV), survey is proposed to capture
- aerial data with downward-facing sensors, such as RGB or multispectral cameras.
- Photogrammetric combines images that contain the same point on the ground from
- multiple vantage points to yield detailed 2D and 3D maps.
- From this field data, photogrammetric software can create geo-referenced
- orthomosaics, elevation models or 3D models of the project area. These maps can
- also be used to extract information such as highly- accurate distances or volumetric easurements.

The following instruments proposed to be used in the project:

1) Dual-frequency DGPS (Nov Com SF3020 / Geo Max Zanith 10

2) Phantom 4 pro / Mavic pro 2 Drone

6.1 NEED OF DATA CAPTURING

Total stations only measure individual points. One drone flight produces thousands of measurements, which can be represented in different formats (orthomosaics, Point Cloud, DTM, DSM, Contour lines, etc). Each pixel of the produced map or point of the 3D model contains 3D geo-data.

1. FLIGHT PLANNING AND IMAGES COLLECTION

After pushing the take-off button, the drone autonomously takes off, captures images and lands back where it started. In this step, the operator essentially makes sure that nobody approaches the drone during take-off or landing and that the weather conditions stay optimal for the survey mission.

2. GEO-TAGGING OF IMAGES

After one or several flights, import the images into AgiSoft photos can, Global Mapper or Pix4D Mapper to geo-tag them. Geo-tagging assigns geographical position (X, Y, Z) information to the images either in a separate CSV file or in the images' meta-data.

3. IMPORTING INTO PHOTOGRAMMETRIC SOFTWARE

After importing or uploading the geo-tagged images in a photogrammetric software such as AgiSoft photos can, Global Mapper or Pix4D Mapper, Drondeploy, images will be connected to gether to create 2D or 3D models of the surveyed site.

Image processing can be a lengthy and time consuming process depending on the number of images and the performance of computer. Some photogrammetric software is desktop-based, thus requiring robust hardware. Other software is cloud-based, employing powerful servers.

4.0 OUTPUT

 Photographs of each point and associated coordinates

 Accuracy of co-ordinates absolute and relative within 1.0 cm

 Creation of Pre and Post Monsoon layers

 Generating Transverse and Longitudinal section

 Generating 3D digital terrain model

 Marking of depression in river bed , sand patches ,plantation and water level in main channel

 Computation of sectional area using included area /excluded area method

 Conducting Pre-monsoon survey of area by Drone and DGPS, Marking of Sand patches, Water level in river channel. Water saturation level in sand patch will be measured with the help of automatic WL indicator in holes. Similarly; in Post-monsoon survey to marking of sand patches , water level in main channel prepare individual and composite layers sections of pre and post monsoon survey findings

 Grid pattern 30 m x 20 m (30 m along the length of the river and 20 m along width of the river) or part thereof

 To calculate the volume of sand replenished during study period (Post mining).

 Determination of specific density to ascertain tonnage of mineral available for proposed excavation.

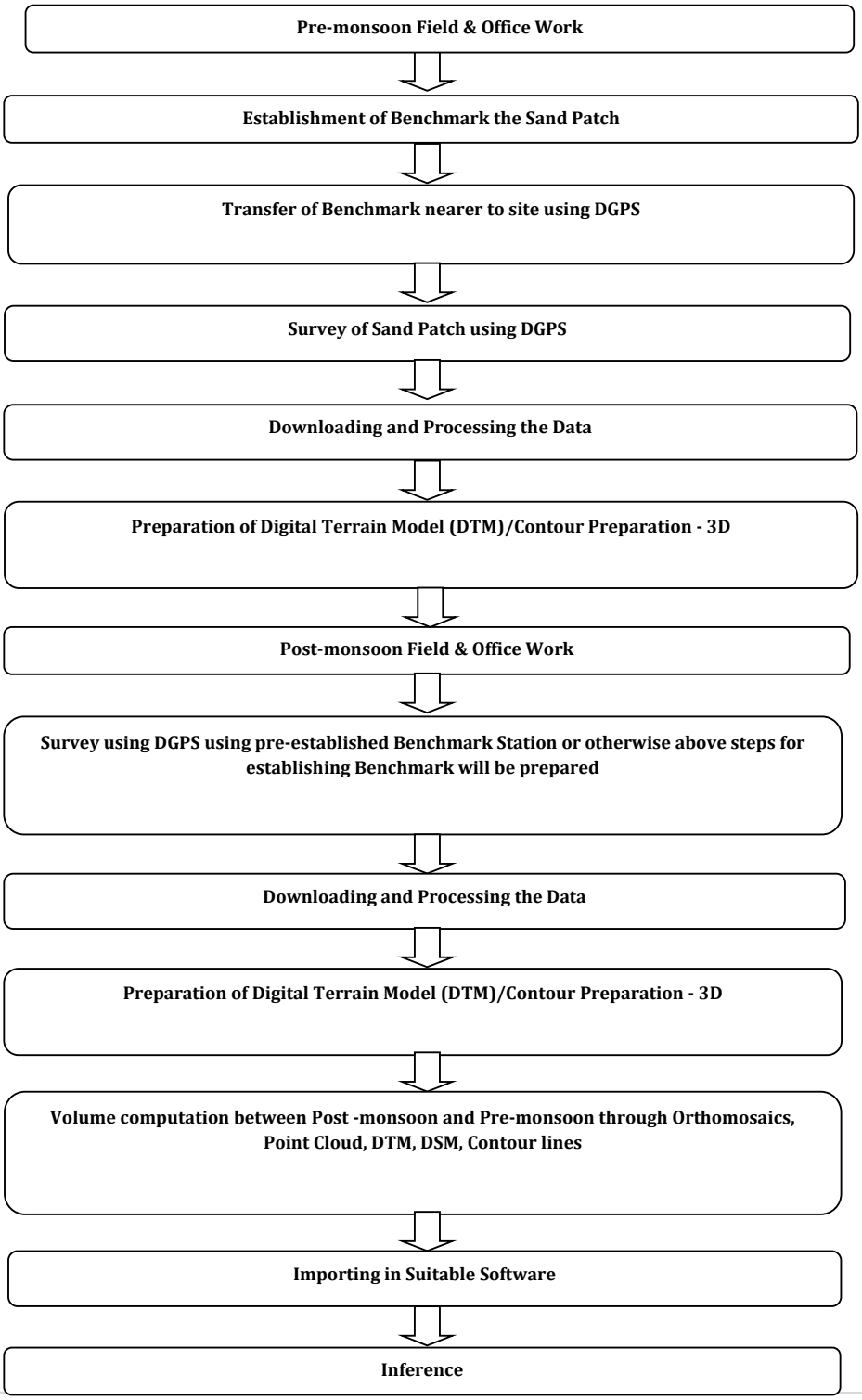
 Calculation of Replenishment to assess Geological reserves

 Finally to prepare “Replenishment Study Report”

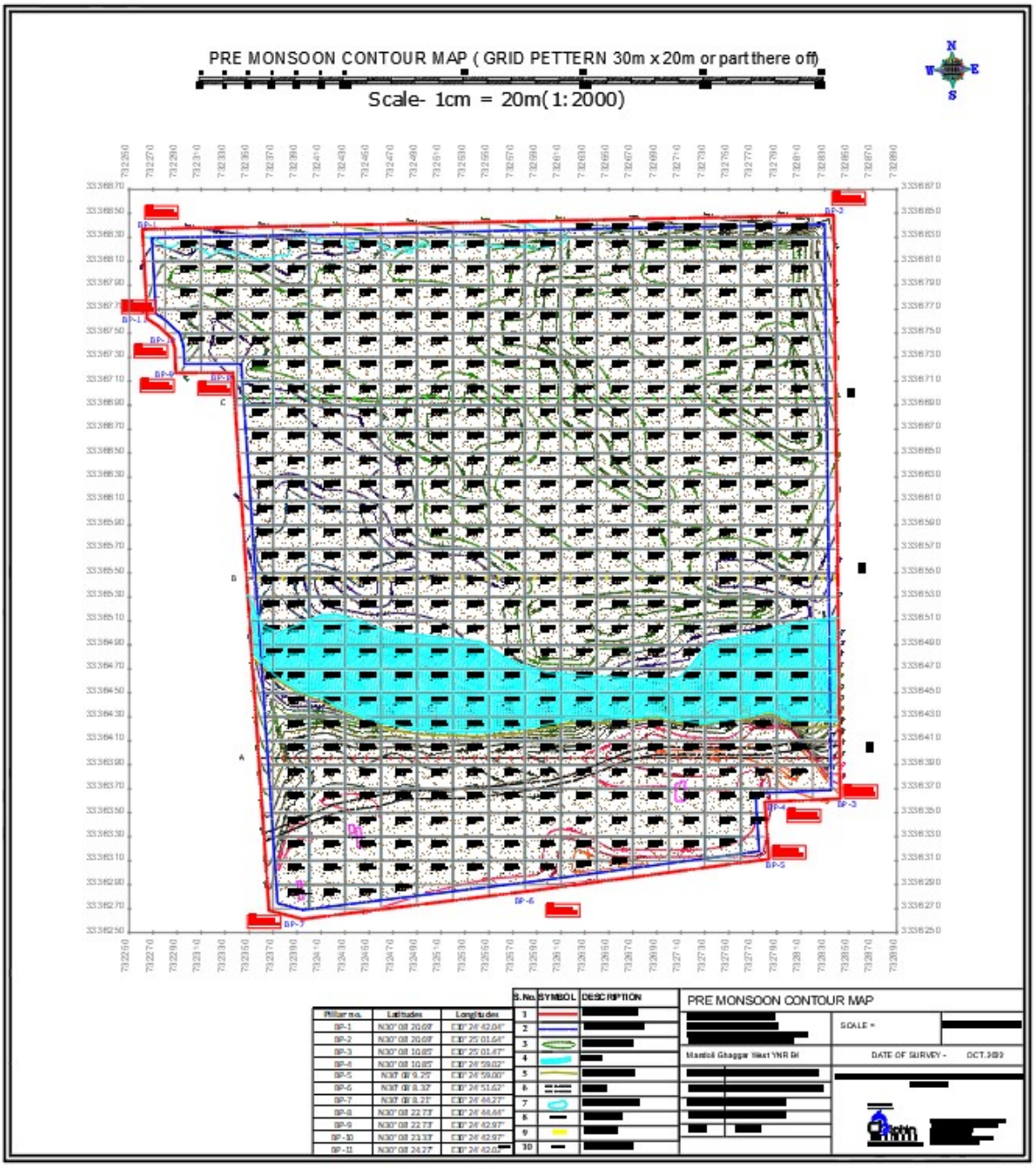
 Periodical Monitoring of River bed sand patches, bank condition, plantation on yearly basis and physical and chemical analysis of River water turbidity.

Calculation of tonnage is annexed

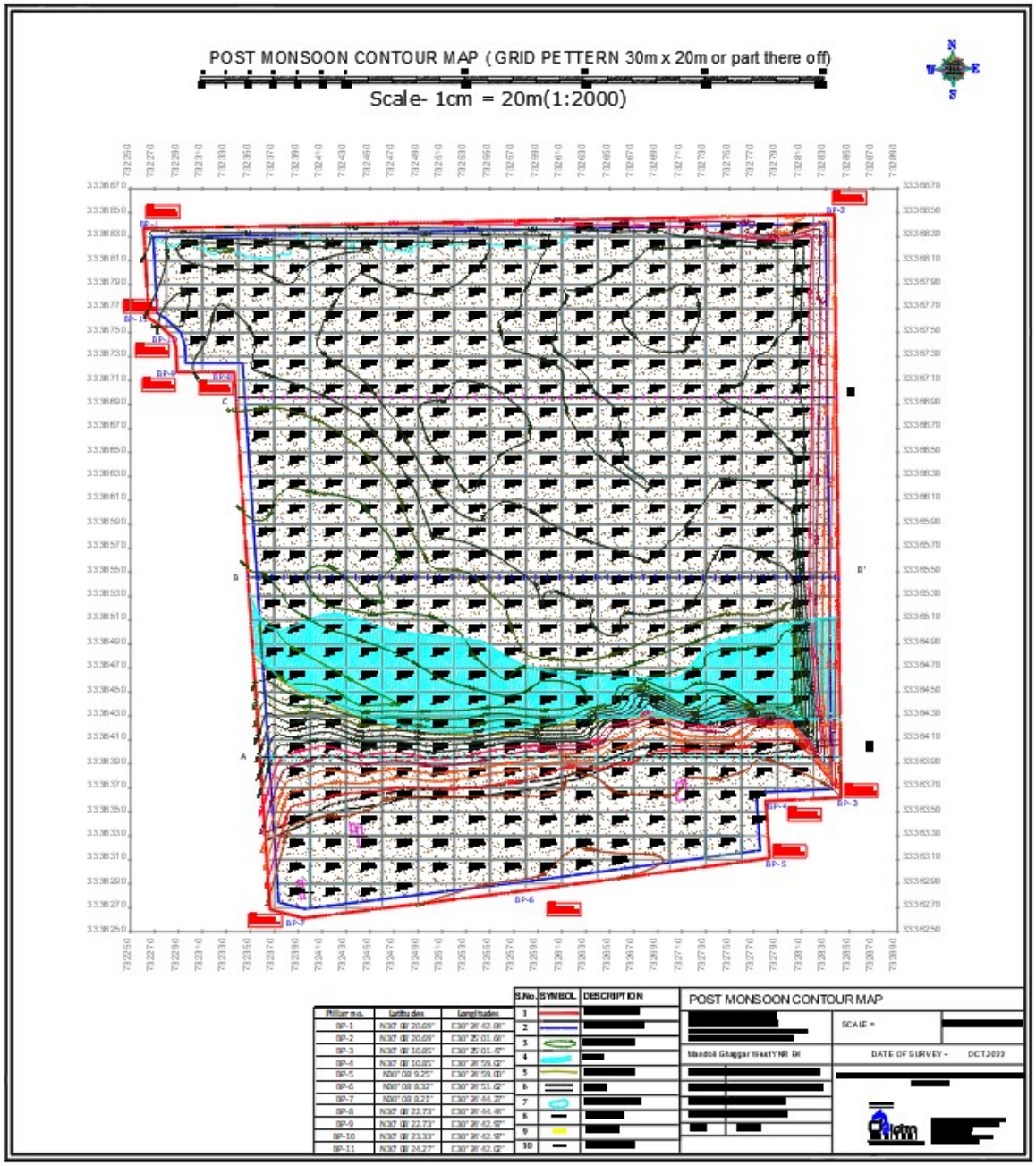
7.0 Flow Chart of Sand Volume Calculation using Differential Global Positioning System (DGPS):



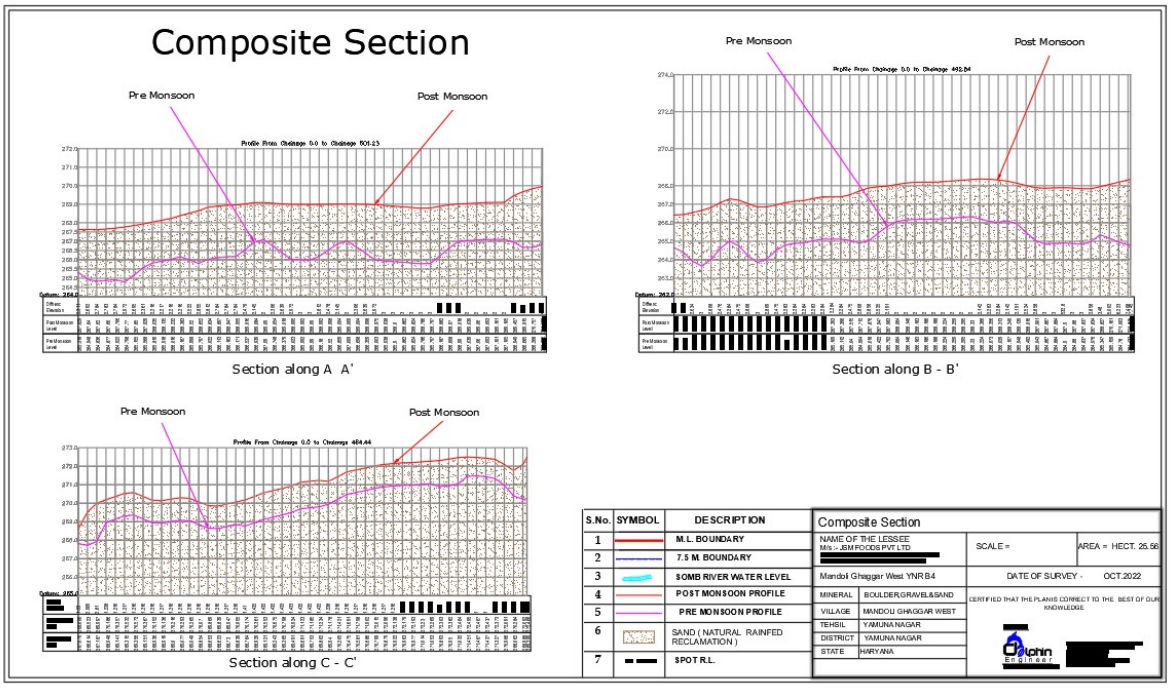
a) Pre-Monsoon Contour Map (Grid Pattern 30m x 20m or part thereof)

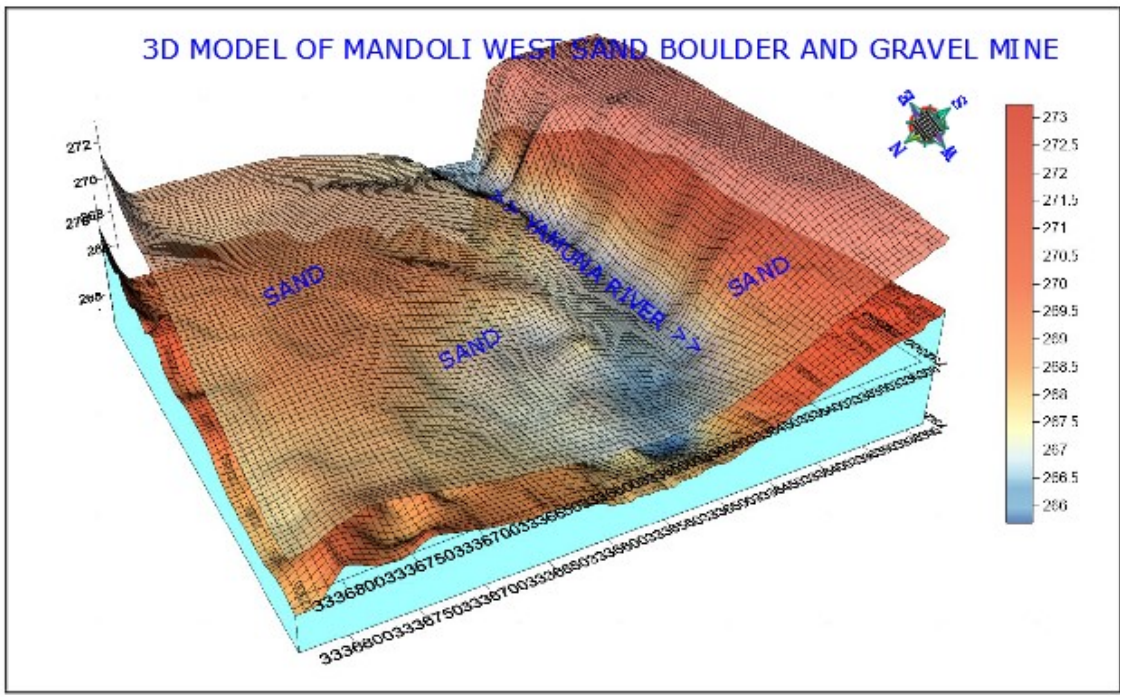


a) Post-monsoon Contour map (Grid Pattern : 30m x 20m or part thereof)



b) Composite section of Pre & Post Monsoon Contour Map





c)Tonnage Calculation of Sand Replenished

Grid no	Easting	Northing	Grid Area	Post Monsoon RL	Pre Monsoon RL	Mineable Reserve for 3 mtr Depth of Sand	Diffrence	Volume	Replenished Reserve Tonnage
1	732382.255	3336280	502.22	272.857	269.857	3	3	1506.66	3013.32
2	732412.255	3336280	556.78	272.882	269.882	3	3	1670.34	3340.68
3	732442.255	3336280	446.2	272.887	269.887	3	3	1338.6	2677.2
4	732472.255	3336283.959	335.09	272.892	269.892	3	3	1005.27	2010.54
5	732382.255	3336300	559.33	272.816	269.816	3	3	1677.99	3355.98
6	732412.255	3336300	600	272.866	269.866	3	3	1800	3600
7	732442.255	3336300	600	272.87	269.87	3	3	1800	3600
8	732472.255	3336300	600	272.875	269.875	3	3	1800	3600
9	732502.255	3336300	823.98	272.874	269.874	3	3	2471.94	4943.88
10	732532.255	3336300	712.87	272.858	269.858	3	3	2138.61	4277.22
11	732562.255	3336300	601.75	272.879	269.879	3	3	1805.25	3610.5
12	732592.255	3336300	487.04	272.95	269.95	3	3	1461.12	2922.24
13	732622.255	3336302.585	367.77	273.127	271.127	3	2	735.54	1471.08
14	732652.255	3336305.52	247.52	273.129	271.129	3	2	495.04	990.08
15	732382.255	3336320	586.39	272.776	269.776	3	3	1759.17	3518.34
16	732412.255	3336320	600	272.697	269.697	3	3	1800	3600
17	732442.255	3336320	600	272.777	269.777	3	3	1800	3600
18	732472.255	3336320	600	272.762	269.762	3	3	1800	3600
19	732502.255	3336320	600	272.817	269.817	3	3	1800	3600
20	732532.255	3336320	600	272.809	269.809	3	3	1800	3600
21	732562.255	3336320	600	272.779	269.779	3	3	1800	3600
22	732592.255	3336320	600	272.868	269.868	3	3	1800	3600
23	732622.255	3336320	600	273.007	271.007	3	2	1200	2400
24	732652.255	3336320	600	272.934	269.934	3	3	1800	3600
25	732682.255	3336320	727.28	272.935	269.935	3	3	2181.84	4363.68
26	732712.255	3336320	607.04	272.917	269.917	3	3	1821.12	3642.24
27	732742.255	3336321.887	486.79	272.899	269.899	3	3	1460.37	2920.74
28	732382.255	3336340	613.29	272.482	270.482	3	2	1226.58	2453.16
29	732412.255	3336340	600	272.716	269.716	3	3	1800	3600
30	732442.255	3336340	600	272.654	269.654	3	3	1800	3600
31	732472.255	3336340	600	272.678	269.678	3	3	1800	3600
32	732502.255	3336340	600	272.766	269.766	3	3	1800	3600
33	732532.255	3336340	600	272.76	269.76	3	3	1800	3600
34	732562.255	3336340	600	272.687	269.687	3	3	1800	3600
35	732592.255	3336340	600	272.795	269.795	3	3	1800	3600
36	732622.255	3336340	600	272.825	269.825	3	3	1800	3600
37	732652.255	3336340	600	272.738	269.738	3	3	1800	3600
38	732682.255	3336340	600	272.741	269.741	3	3	1800	3600
39	732712.255	3336340	600	272.741	269.741	3	3	1800	3600
40	732742.255	3336340	600	272.747	269.747	3	3	1800	3600
41	732768.701	3336340	476.91	272.801	269.801	3	3	1430.73	2861.46
42	732382.255	3336360	640.04	271.795	268.795	3	3	1920.12	3840.24
43	732412.255	3336360	600	272.069	270.069	3	2	1200	2400
44	732442.255	3336360	600	272.379	270.379	3	2	1200	2400
45	732472.255	3336360	600	272.603	269.603	3	3	1800	3600
46	732502.255	3336360	600	272.715	269.715	3	3	1800	3600
47	732532.255	3336360	600	272.707	269.707	3	3	1800	3600
48	732562.255	3336360	600	272.653	269.653	3	3	1800	3600
49	732592.255	3336360	600	272.615	269.615	3	3	1800	3600
50	732622.255	3336360	600	272.767	269.767	3	3	1800	3600
51	732652.255	3336360	600	272.543	269.543	3	3	1800	3600
52	732682.255	3336360	600	272.546	269.546	3	3	1800	3600
53	732712.255	3336360	600	272.526	269.526	3	3	1800	3600

54	732742.255	3336360	600	272.622	269.622	3	3	1800	3600
55	732766.66	3336360	314.67	272.686	269.686	3	3	944.01	1888.02
56	732382.255	3336380	666.94	270.814	267.814	3	3	2000.82	4001.64
57	732412.255	3336380	600	271.215	269.215	3	2	1200	2400
58	732442.255	3336380	600	271.048	269.048	3	2	1200	2400
59	732472.255	3336380	600	271.427	269.427	3	2	1200	2400
60	732502.255	3336380	600	271.118	269.118	3	2	1200	2400
61	732532.255	3336380	600	271.395	269.395	3	2	1200	2400
62	732562.255	3336380	600	271.775	268.775	3	3	1800	3600
63	732592.255	3336380	600	271.992	268.992	3	3	1800	3600
64	732622.255	3336380	600	272.749	269.749	3	3	1800	3600
65	732652.255	3336380	600	272.355	270.355	3	2	1200	2400
66	732682.255	3336380	600	272.322	270.322	3	2	1200	2400
67	732712.255	3336380	600	272.496	270.496	3	2	1200	2400
68	732742.255	3336380	600	272.48	270.48	3	2	1200	2400
69	732772.255	3336380	600	272.57	269.57	3	3	1800	3600
70	732802.255	3336380	998.47	272.552	271.552	3	1	998.47	1996.94
71	732382.255	3336400	693.84	269.913	268.913	3	1	693.84	1387.68
72	732412.255	3336400	600	270.436	269.436	3	1	600	1200
73	732442.255	3336400	600	269.79	268.79	3	1	600	1200
74	732472.255	3336400	600	270.021	269.021	3	1	600	1200
75	732502.255	3336400	600	269.418	268.418	3	1	600	1200
76	732532.255	3336400	600	269.743	268.743	3	1	600	1200
77	732562.255	3336400	600	270.318	269.318	3	1	600	1200
78	732592.255	3336400	600	270.696	269.696	3	1	600	1200
79	732622.255	3336400	600	270.842	269.842	3	1	600	1200
80	732652.255	3336400	600	271.652	270.652	3	1	600	1200
81	732682.255	3336400	600	271.99	270.99	3	1	600	1200
82	732712.255	3336400	600	272.114	271.114	3	1	600	1200
83	732742.255	3336400	600	272.232	271.232	3	1	600	1200
84	732772.255	3336400	600	272.479	271.479	3	1	600	1200
85	732802.255	3336400	899.53	272.389	271.389	3	1	899.53	1799.06
86	732382.255	3336420	720.74	268.233	267.233	3	1	720.74	1441.48
87	732412.255	3336420	600	268.788	267.788	3	1	600	1200
88	732442.255	3336420	600	267.66	266.66	3	1	600	1200
89	732472.255	3336420	600	267.858	266.858	3	1	600	1200
90	732502.255	3336420	600	267.525	266.525	3	1	600	1200
91	732532.255	3336420	600	267.544	266.544	3	1	600	1200
92	732562.255	3336420	600	268.155	267.155	3	1	600	1200
93	732592.255	3336420	600	267.651	266.651	3	1	600	1200
94	732622.255	3336420	600	267.718	266.718	3	1	600	1200
95	732652.255	3336420	600	270.437	269.437	3	1	600	1200
96	732682.255	3336420	600	271.371	270.371	3	1	600	1200
97	732712.255	3336420	600	270.378	269.378	3	1	600	1200
98	732742.255	3336420	600	270.107	269.107	3	1	600	1200
99	732772.255	3336420	600	271.575	270.575	3	1	600	1200
100	732802.255	3336420	895.01	271.704	270.704	3	1	895.01	1790.02
101	732382.255	3336440	747.65	266.837	264.837	3	2	1495.3	2990.6
102	732412.255	3336440	600	266.748	264.748	3	2	1200	2400
103	732442.255	3336440	600	265.847	262.847	3	3	1800	3600
104	732472.255	3336440	600	265.986	262.986	3	3	1800	3600
105	732502.255	3336440	600	266.073	263.073	3	3	1800	3600
106	732532.255	3336440	600	266.12	263.12	3	3	1800	3600
107	732562.255	3336440	600	266.323	263.323	3	3	1800	3600
108	732592.255	3336440	600	266.078	263.078	3	3	1800	3600
109	732622.255	3336440	600	266.229	263.229	3	3	1800	3600
110	732652.255	3336440	600	266.84	264.84	3	2	1200	2400
111	732682.255	3336440	600	269.553	267.553	3	2	1200	2400

112	732712.255	3336440	600	266.693	264.693	3	2	1200	2400
113	732742.255	3336440	600	268.07	267.07	3	1	600	1200
114	732772.255	3336440	600	266.275	263.275	3	3	1800	3600
115	732802.255	3336440	890.49	266.321	263.321	3	3	2671.47	5342.94
116	732363.647	3336460	174.55	266.524	264.524	3	2	349.1	698.2
117	732382.255	3336460	600	265.86	262.86	3	3	1800	3600
118	732412.255	3336460	600	265.874	262.874	3	3	1800	3600
119	732442.255	3336460	600	266.043	263.043	3	3	1800	3600
120	732472.255	3336460	600	266.263	263.263	3	3	1800	3600
121	732502.255	3336460	600	266.434	263.434	3	3	1800	3600
122	732532.255	3336460	600	266.668	264.668	3	2	1200	2400
123	732562.255	3336460	600	267.007	265.007	3	2	1200	2400
124	732592.255	3336460	600	266.511	264.511	3	2	1200	2400
125	732622.255	3336460	600	266.502	264.502	3	2	1200	2400
126	732652.255	3336460	600	266.791	264.791	3	2	1200	2400
127	732682.255	3336460	600	266.384	263.384	3	3	1800	3600
128	732712.255	3336460	600	266.247	263.247	3	3	1800	3600
129	732742.255	3336460	600	266.376	263.376	3	3	1800	3600
130	732772.255	3336460	600	266.294	263.294	3	3	1800	3600
131	732802.255	3336460	885.97	266.339	263.339	3	3	2657.91	5315.82
132	732363.647	3336480	201.45	265.682	262.682	3	3	604.35	1208.7
133	732382.255	3336480	600	265.909	262.909	3	3	1800	3600
134	732412.255	3336480	600	266.075	263.075	3	3	1800	3600
135	732442.255	3336480	600	266.24	263.24	3	3	1800	3600
136	732472.255	3336480	600	266.457	263.457	3	3	1800	3600
137	732502.255	3336480	600	266.712	264.712	3	2	1200	2400
138	732532.255	3336480	600	266.966	264.966	3	2	1200	2400
139	732562.255	3336480	600	267.349	265.349	3	2	1200	2400
140	732592.255	3336480	600	267.622	266.622	3	1	600	1200
141	732622.255	3336480	600	267.701	266.701	3	1	600	1200
142	732652.255	3336480	600	267.481	265.481	3	2	1200	2400
143	732682.255	3336480	600	267.086	265.086	3	2	1200	2400
144	732712.255	3336480	600	266.703	264.703	3	2	1200	2400
145	732742.255	3336480	600	266.299	263.299	3	3	1800	3600
146	732772.255	3336480	600	266.313	263.313	3	3	1800	3600
147	732802.255	3336480	881.45	266.357	263.357	3	3	2644.35	5288.7
148	732361.453	3336500	228.35	265.844	262.844	3	3	685.05	1370.1
149	732382.255	3336500	600	266.129	263.129	3	3	1800	3600
150	732412.255	3336500	600	266.429	263.429	3	3	1800	3600
151	732442.255	3336500	600	266.621	264.621	3	2	1200	2400
152	732472.255	3336500	600	266.84	264.84	3	2	1200	2400
153	732502.255	3336500	600	266.881	264.881	3	2	1200	2400
154	732532.255	3336500	600	267.031	265.031	3	2	1200	2400
155	732562.255	3336500	600	267.42	265.42	3	2	1200	2400
156	732592.255	3336500	600	267.807	266.807	3	1	600	1200
157	732622.255	3336500	600	267.823	266.823	3	1	600	1200
158	732652.255	3336500	600	268.136	267.136	3	1	600	1200
159	732682.255	3336500	600	267.695	266.695	3	1	600	1200
160	732712.255	3336500	600	267.394	265.394	3	2	1200	2400
161	732742.255	3336500	600	266.978	264.978	3	2	1200	2400
162	732772.255	3336500	600	266.748	264.748	3	2	1200	2400
163	732802.255	3336500	876.93	266.394	263.394	3	3	2630.79	5261.58
164	732361.453	3336520	255.26	266.108	263.108	3	3	765.78	1531.56
165	732382.255	3336520	600	266.487	263.487	3	3	1800	3600
166	732412.255	3336520	600	266.954	264.954	3	2	1200	2400
167	732442.255	3336520	600	267.066	265.066	3	2	1200	2400
168	732472.255	3336520	600	267.028	265.028	3	2	1200	2400
169	732502.255	3336520	600	267.05	265.05	3	2	1200	2400

170	732532.255	3336520	600	267.096	265.096	3	2	1200	2400
171	732562.255	3336520	600	267.491	265.491	3	2	1200	2400
172	732592.255	3336520	600	268.004	267.004	3	1	600	1200
173	732622.255	3336520	600	267.948	266.948	3	1	600	1200
174	732652.255	3336520	600	268.032	267.032	3	1	600	1200
175	732682.255	3336520	600	268.142	267.142	3	1	600	1200
176	732712.255	3336520	600	268.034	267.034	3	1	600	1200
177	732742.255	3336520	600	267.709	266.709	3	1	600	1200
178	732772.255	3336520	600	267.821	266.821	3	1	600	1200
179	732802.255	3336520	872.41	267.404	265.404	3	2	1744.82	3489.64
180	732360.304	3336540	282.16	266.371	264.371	3	2	564.32	1128.64
181	732382.255	3336540	600	266.673	263.673	3	3	1800	3600
182	732412.255	3336540	600	267.472	265.472	3	2	1200	2400
183	732442.255	3336540	600	266.888	263.888	3	3	1800	3600
184	732472.255	3336540	600	267.211	265.211	3	2	1200	2400
185	732502.255	3336540	600	267.316	265.316	3	2	1200	2400
186	732532.255	3336540	600	267.3	265.3	3	2	1200	2400
187	732562.255	3336540	600	267.892	264.892	3	3	1800	3600
188	732592.255	3336540	600	268.002	266.002	3	2	1200	2400
189	732622.255	3336540	600	268.114	266.114	3	2	1200	2400
190	732652.255	3336540	600	268.221	266.221	3	2	1200	2400
191	732682.255	3336540	600	268.328	266.328	3	2	1200	2400
192	732712.255	3336540	600	268.198	266.198	3	2	1200	2400
193	732742.255	3336540	600	267.829	264.829	3	3	1800	3600
194	732772.255	3336540	600	267.881	264.881	3	3	1800	3600
195	732802.255	3336540	867.89	267.751	264.751	3	3	2603.67	5207.34
196	732360.304	3336560	309.06	266.633	263.633	3	3	927.18	1854.36
197	732382.255	3336560	600	266.668	263.668	3	3	1800	3600
198	732412.255	3336560	600	266.981	263.981	3	3	1800	3600
199	732442.255	3336560	600	266.556	263.556	3	3	1800	3600
200	732472.255	3336560	600	266.968	263.968	3	3	1800	3600
201	732502.255	3336560	600	267.618	264.618	3	3	1800	3600
202	732532.255	3336560	600	267.659	264.659	3	3	1800	3600
203	732562.255	3336560	600	268.011	266.011	3	2	1200	2400
204	732592.255	3336560	600	268.433	266.433	3	2	1200	2400
205	732622.255	3336560	600	268.304	266.304	3	2	1200	2400
206	732652.255	3336560	600	268.409	266.409	3	2	1200	2400
207	732682.255	3336560	600	268.516	265.516	3	3	1800	3600
208	732712.255	3336560	600	268.24	266.24	3	2	1200	2400
209	732742.255	3336560	600	267.928	264.928	3	3	1800	3600
210	732772.255	3336560	600	267.965	264.965	3	3	1800	3600
211	732802.255	3336560	863.37	268.123	266.123	3	2	1726.74	3453.48
212	732356.566	3336580	335.96	266.896	263.896	3	3	1007.88	2015.76
213	732382.255	3336580	600	266.854	263.854	3	3	1800	3600
214	732412.255	3336580	600	266.765	263.765	3	3	1800	3600
215	732442.255	3336580	600	266.667	263.667	3	3	1800	3600
216	732472.255	3336580	600	267.074	265.074	3	2	1200	2400
217	732502.255	3336580	600	268.016	266.016	3	2	1200	2400
218	732532.255	3336580	600	268.083	266.083	3	2	1200	2400
219	732562.255	3336580	600	268.278	266.278	3	2	1200	2400
220	732592.255	3336580	600	268.387	266.387	3	2	1200	2400
221	732622.255	3336580	600	268.508	265.508	3	3	1800	3600
222	732652.255	3336580	600	268.601	265.601	3	3	1800	3600
223	732682.255	3336580	600	268.705	265.705	3	3	1800	3600
224	732712.255	3336580	600	268.438	266.438	3	2	1200	2400
225	732742.255	3336580	600	268.031	266.031	3	2	1200	2400
226	732772.255	3336580	600	268.049	266.049	3	2	1200	2400
227	732802.255	3336580	858.85	268.239	266.239	3	2	1717.7	3435.4

228	732356.566	3336600	362.87	267.057	265.057	3	2	725.74	1451.48
229	732382.255	3336600	600	266.927	263.927	3	3	1800	3600
230	732412.255	3336600	600	266.946	263.946	3	3	1800	3600
231	732442.255	3336600	600	266.929	263.929	3	3	1800	3600
232	732472.255	3336600	600	267.289	265.289	3	2	1200	2400
233	732502.255	3336600	600	268.255	266.255	3	2	1200	2400
234	732532.255	3336600	600	268.647	265.647	3	3	1800	3600
235	732562.255	3336600	600	268.305	266.305	3	2	1200	2400
236	732592.255	3336600	600	268.543	265.543	3	3	1800	3600
237	732622.255	3336600	600	268.663	265.663	3	3	1800	3600
238	732652.255	3336600	600	268.783	265.783	3	3	1800	3600
239	732682.255	3336600	600	268.893	265.893	3	3	1800	3600
240	732712.255	3336600	600	268.637	265.637	3	3	1800	3600
241	732742.255	3336600	600	268.23	266.23	3	2	1200	2400
242	732772.255	3336600	600	268.242	266.242	3	2	1200	2400
243	732802.255	3336600	854.33	268.48	266.48	3	2	1708.66	3417.32
244	732356.566	3336620	389.77	267.059	265.059	3	2	779.54	1559.08
245	732382.255	3336620	600	266.997	263.997	3	3	1800	3600
246	732412.255	3336620	600	267.02	265.02	3	2	1200	2400
247	732442.255	3336620	600	267.071	265.071	3	2	1200	2400
248	732472.255	3336620	600	267.525	264.525	3	3	1800	3600
249	732502.255	3336620	600	268.481	266.481	3	2	1200	2400
250	732532.255	3336620	600	269.099	267.099	3	2	1200	2400
251	732562.255	3336620	600	268.632	265.632	3	3	1800	3600
252	732592.255	3336620	600	268.699	265.699	3	3	1800	3600
253	732622.255	3336620	600	268.819	265.819	3	3	1800	3600
254	732652.255	3336620	600	268.94	265.94	3	3	1800	3600
255	732682.255	3336620	600	269.008	267.008	3	2	1200	2400
256	732712.255	3336620	600	268.826	265.826	3	3	1800	3600
257	732742.255	3336620	600	268.428	266.428	3	2	1200	2400
258	732772.255	3336620	600	268.446	266.446	3	2	1200	2400
259	732802.255	3336620	849.81	268.718	265.718	3	3	2549.43	5098.86
260	732356.566	3336640	416.67	267.069	265.069	3	2	833.34	1666.68
261	732382.255	3336640	600	267.036	265.036	3	2	1200	2400
262	732412.255	3336640	600	267.008	265.008	3	2	1200	2400
263	732442.255	3336640	600	267.233	265.233	3	2	1200	2400
264	732472.255	3336640	600	267.941	264.941	3	3	1800	3600
265	732502.255	3336640	600	268.795	265.795	3	3	1800	3600
266	732532.255	3336640	600	269.199	267.199	3	2	1200	2400
267	732562.255	3336640	600	268.944	265.944	3	3	1800	3600
268	732592.255	3336640	600	268.855	265.855	3	3	1800	3600
269	732622.255	3336640	600	268.976	265.976	3	3	1800	3600
270	732652.255	3336640	600	269.003	267.003	3	2	1200	2400
271	732682.255	3336640	600	268.985	265.985	3	3	1800	3600
272	732712.255	3336640	600	268.999	265.999	3	3	1800	3600
273	732742.255	3336640	600	268.6	265.6	3	3	1800	3600
274	732772.255	3336640	600	268.631	265.631	3	3	1800	3600
275	732802.255	3336640	845.29	268.922	265.922	3	3	2535.87	5071.74
276	732352.255	3336660	443.57	267.07	265.07	3	2	887.14	1774.28
277	732382.255	3336660	600	267.114	265.114	3	2	1200	2400
278	732412.255	3336660	600	267.176	265.176	3	2	1200	2400
279	732442.255	3336660	600	267.642	264.642	3	3	1800	3600
280	732472.255	3336660	600	268.307	266.307	3	2	1200	2400
281	732502.255	3336660	600	269.106	267.106	3	2	1200	2400
282	732532.255	3336660	600	269.176	267.176	3	2	1200	2400
283	732562.255	3336660	600	269.051	267.051	3	2	1200	2400
284	732592.255	3336660	600	268.986	265.986	3	3	1800	3600
285	732622.255	3336660	600	268.997	265.997	3	3	1800	3600

286	732652.255	3336660	600	269.009	267.009	3	2	1200	2400
287	732682.255	3336660	600	268.948	265.948	3	3	1800	3600
288	732712.255	3336660	600	268.92	265.92	3	3	1800	3600
289	732742.255	3336660	600	268.773	265.773	3	3	1800	3600
290	732772.255	3336660	600	268.799	265.799	3	3	1800	3600
291	732802.255	3336660	840.77	269.09	267.09	3	2	1681.54	3363.08
292	732352.255	3336680	470.48	267.422	265.422	3	2	940.96	1881.92
293	732382.255	3336680	600	267.379	265.379	3	2	1200	2400
294	732412.255	3336680	600	267.618	264.618	3	3	1800	3600
295	732442.255	3336680	600	267.996	264.996	3	3	1800	3600
296	732472.255	3336680	600	268.572	265.572	3	3	1800	3600
297	732502.255	3336680	600	269.229	267.229	3	2	1200	2400
298	732532.255	3336680	600	269.159	267.159	3	2	1200	2400
299	732562.255	3336680	600	269.03	267.03	3	2	1200	2400
300	732592.255	3336680	600	268.989	265.989	3	3	1800	3600
301	732622.255	3336680	600	269.004	267.004	3	2	1200	2400
302	732652.255	3336680	600	269.016	267.016	3	2	1200	2400
303	732682.255	3336680	600	268.912	265.912	3	3	1800	3600
304	732712.255	3336680	600	268.798	265.798	3	3	1800	3600
305	732742.255	3336680	600	268.946	265.946	3	3	1800	3600
306	732772.255	3336680	600	269	267	3	2	1200	2400
307	732802.255	3336680	836.25	269.125	267.125	3	2	1672.5	3345
308	732352.255	3336700	497.38	267.685	264.685	3	3	1492.14	2984.28
309	732382.255	3336700	600	267.821	264.821	3	3	1800	3600
310	732412.255	3336700	600	268.059	266.059	3	2	1200	2400
311	732442.255	3336700	600	268.351	266.351	3	2	1200	2400
312	732472.255	3336700	600	268.748	265.748	3	3	1800	3600
313	732502.255	3336700	600	268.896	265.896	3	3	1800	3600
314	732532.255	3336700	600	269.102	267.102	3	2	1200	2400
315	732562.255	3336700	600	268.995	265.995	3	3	1800	3600
316	732592.255	3336700	600	268.989	265.989	3	3	1800	3600
317	732622.255	3336700	600	269.008	267.008	3	2	1200	2400
318	732652.255	3336700	600	268.989	265.989	3	3	1800	3600
319	732682.255	3336700	600	268.875	265.875	3	3	1800	3600
320	732712.255	3336700	600	268.761	265.761	3	3	1800	3600
321	732742.255	3336700	600	269.025	267.025	3	2	1200	2400
322	732772.255	3336700	600	269.089	267.089	3	2	1200	2400
323	732802.255	3336700	831.73	269.102	267.102	3	2	1663.46	3326.92
324	732352.255	3336720	542.64	268.024	266.024	3	2	1085.28	2170.56
325	732382.255	3336720	600	268.216	266.216	3	2	1200	2400
326	732412.255	3336720	600	268.402	266.402	3	2	1200	2400
327	732442.255	3336720	600	268.588	265.588	3	3	1800	3600
328	732472.255	3336720	600	268.915	265.915	3	3	1800	3600
329	732502.255	3336720	600	268.874	265.874	3	3	1800	3600
330	732532.255	3336720	600	268.922	265.922	3	3	1800	3600
331	732562.255	3336720	600	268.976	265.976	3	3	1800	3600
332	732592.255	3336720	600	268.987	265.987	3	3	1800	3600
333	732622.255	3336720	600	269.006	267.006	3	2	1200	2400
334	732652.255	3336720	600	268.817	265.817	3	3	1800	3600
335	732682.255	3336720	600	268.689	265.689	3	3	1800	3600
336	732712.255	3336720	600	268.564	265.564	3	3	1800	3600
337	732742.255	3336720	600	268.821	265.821	3	3	1800	3600
338	732772.255	3336720	600	269.057	267.057	3	2	1200	2400
339	732802.255	3336720	827.21	269.069	267.069	3	2	1654.42	3308.84
340	732299.073	3336740	381.7	268.309	266.309	3	2	763.4	1526.8
341	732322.255	3336740	766.84	267.814	264.814	3	3	2300.52	4601.04
342	732352.255	3336740	600	267.979	264.979	3	3	1800	3600
343	732382.255	3336740	600	268.309	266.309	3	2	1200	2400

344	732412.255	3336740	600	268.581	265.581	3	3	1800	3600
345	732442.255	3336740	600	268.789	265.789	3	3	1800	3600
346	732472.255	3336740	600	268.879	265.879	3	3	1800	3600
347	732502.255	3336740	600	268.919	265.919	3	3	1800	3600
348	732532.255	3336740	600	268.927	265.927	3	3	1800	3600
349	732562.255	3336740	600	269.004	267.004	3	2	1200	2400
350	732592.255	3336740	600	269.016	267.016	3	2	1200	2400
351	732622.255	3336740	600	268.908	265.908	3	3	1800	3600
352	732652.255	3336740	600	268.66	265.66	3	3	1800	3600
353	732682.255	3336740	600	268.464	266.464	3	2	1200	2400
354	732712.255	3336740	600	268.474	266.474	3	2	1200	2400
355	732742.255	3336740	600	268.751	265.751	3	3	1800	3600
356	732772.255	3336740	600	268.965	265.965	3	3	1800	3600
357	732802.255	3336740	822.69	269.036	267.036	3	2	1645.38	3290.76
358	732292.255	3336760	586.24	268.57	265.57	3	3	1758.72	3517.44
359	732322.255	3336760	600	267.908	264.908	3	3	1800	3600
360	732352.255	3336760	600	268.025	266.025	3	2	1200	2400
361	732382.255	3336760	600	268.181	266.181	3	2	1200	2400
362	732412.255	3336760	600	268.507	265.507	3	3	1800	3600
363	732442.255	3336760	600	268.833	265.833	3	3	1800	3600
364	732472.255	3336760	600	268.934	265.934	3	3	1800	3600
365	732502.255	3336760	600	268.919	265.919	3	3	1800	3600
366	732532.255	3336760	600	268.863	265.863	3	3	1800	3600
367	732562.255	3336760	600	269.031	267.031	3	2	1200	2400
368	732592.255	3336760	600	269.092	267.092	3	2	1200	2400
369	732622.255	3336760	600	268.852	265.852	3	3	1800	3600
370	732652.255	3336760	600	268.546	265.546	3	3	1800	3600
371	732682.255	3336760	600	268.254	266.254	3	2	1200	2400
372	732712.255	3336760	600	268.387	266.387	3	2	1200	2400
373	732742.255	3336760	600	268.664	265.664	3	3	1800	3600
374	732772.255	3336760	600	268.94	265.94	3	3	1800	3600
375	732802.255	3336760	818.17	268.987	265.987	3	3	2454.51	4909.02
376	732292.255	3336780	768	268.664	265.664	3	3	2304	4608
377	732322.255	3336780	600	268.002	266.002	3	2	1200	2400
378	732352.255	3336780	600	268.035	266.035	3	2	1200	2400
379	732382.255	3336780	600	268.054	266.054	3	2	1200	2400
380	732412.255	3336780	600	268.38	266.38	3	2	1200	2400
381	732442.255	3336780	600	268.694	265.694	3	3	1800	3600
382	732472.255	3336780	600	268.617	265.617	3	3	1800	3600
383	732502.255	3336780	600	268.516	265.516	3	3	1800	3600
384	732532.255	3336780	600	268.664	265.664	3	3	1800	3600
385	732562.255	3336780	600	268.901	265.901	3	3	1800	3600
386	732592.255	3336780	600	269.157	267.157	3	2	1200	2400
387	732622.255	3336780	600	268.957	265.957	3	3	1800	3600
388	732652.255	3336780	600	268.713	265.713	3	3	1800	3600
389	732682.255	3336780	600	268.469	266.469	3	2	1200	2400
390	732712.255	3336780	600	268.394	266.394	3	2	1200	2400
391	732742.255	3336780	600	268.661	265.661	3	3	1800	3600
392	732772.255	3336780	600	268.939	265.939	3	3	1800	3600
393	732802.255	3336780	813.65	268.912	265.912	3	3	2440.95	4881.9
394	732292.255	3336800	789.28	268.272	266.272	3	2	1578.56	3157.12
395	732322.255	3336800	600	268.096	266.096	3	2	1200	2400
396	732352.255	3336800	600	268.059	266.059	3	2	1200	2400
397	732382.255	3336800	600	267.893	264.893	3	3	1800	3600
398	732412.255	3336800	600	268.255	266.255	3	2	1200	2400
399	732442.255	3336800	600	268.502	265.502	3	3	1800	3600
400	732472.255	3336800	600	268.169	266.169	3	2	1200	2400
401	732502.255	3336800	600	268.24	266.24	3	2	1200	2400

402	732532.255	3336800	600	268.486	266.486	3	2	1200	2400
403	732562.255	3336800	600	268.733	265.733	3	3	1800	3600
404	732592.255	3336800	600	269.058	267.058	3	2	1200	2400
405	732622.255	3336800	600	269.277	267.277	3	2	1200	2400
406	732652.255	3336800	600	269.033	267.033	3	2	1200	2400
407	732682.255	3336800	600	268.752	265.752	3	3	1800	3600
408	732712.255	3336800	600	268.537	265.537	3	3	1800	3600
409	732742.255	3336800	600	268.703	265.703	3	3	1800	3600
410	732772.255	3336800	600	268.923	265.923	3	3	1800	3600
411	732802.255	3336800	809.13	268.838	265.838	3	3	2427.39	4854.78
412	732292.255	3336820	805.34	267.652	264.652	3	3	2416.02	4832.04
413	732322.255	3336820	617.92	267.399	265.399	3	2	1235.84	2471.68
414	732352.255	3336820	636.28	267.537	264.537	3	3	1908.84	3817.68
415	732382.255	3336820	654.63	267.677	264.677	3	3	1963.89	3927.78
416	732412.255	3336820	672.99	267.818	264.818	3	3	2018.97	4037.94
417	732442.255	3336820	691.34	267.959	264.959	3	3	2074.02	4148.04
418	732472.255	3336820	709.7	268.068	266.068	3	2	1419.4	2838.8
419	732502.255	3336820	728.05	268.064	266.064	3	2	1456.1	2912.2
420	732532.255	3336820	746.41	268.31	266.31	3	2	1492.82	2985.64
421	732562.255	3336820	764.76	268.634	265.634	3	3	2294.28	4588.56
422	732592.255	3336820	783.12	268.959	265.959	3	3	2349.36	4698.72
423	732622.255	3336820	600	269.283	267.283	3	2	1200	2400
424	732652.255	3336820	600	269.352	267.352	3	2	1200	2400
425	732682.255	3336820	600	268.984	265.984	3	3	1800	3600
426	732712.255	3336820	600	268.99	265.99	3	3	1800	3600
427	732742.255	3336820	600	268.769	265.769	3	3	1800	3600
428	732772.255	3336820	600	268.823	265.823	3	3	1800	3600
429	732802.255	3336820	804.61	268.804	265.804	3	3	2413.83	4827.66
430	732622.255	3336834.128	201.48	269.229	267.229	3	2	402.96	805.92
431	732652.255	3336834.128	219.83	269.509	266.509	3	3	659.49	1318.98
432	732682.255	3336834.128	238.19	269.349	267.349	3	2	476.38	952.76
433	732712.255	3336834.128	256.54	269.806	266.806	3	3	769.62	1539.24
434	732742.255	3336834.128	274.9	270.123	268.123	3	2	549.8	1099.6
435	732772.255	3336834.128	293.25	270.853	267.853	3	3	879.75	1759.5
436	732802.255	3336834.128	420.17	271.314	269.314	3	2	840.34	1680.68
								633160.3	1266320.56

Conclusion

It is observed from the data generated from the drone and DGPS survey for 2 successive seasons computing 436 grids considering max 3 meter depth and 1.0 meter above the Saturation level of sand the replenished quantity is higher than the depleted quantity of River bed in 2022 year . as per Replenishment Study for the year 2022 it reveals that there is replenishment of Rainfed RBM of approximately **1266320** MT of Sand.

Site Photographs









ANNEXURE R 16/12A

From

The Director General,
Mines and Geology Haryana,
Plot No. 9, I.T. Park, Sector-22,
Panchkula.

To

M/s JSM Foods Pvt Ltd.
Mr. Tanish Wadhwa (Authorized Signatory)
676, Sector-13, Distt. Karnal, Haryana.

Memo No. DMG/HY/Mandoli Ghaggar East Block/YNR-B-3/2021/3991
Dated Panchkula the 12-10-2021.

Subject: **Submission of Mining Scheme including Progressive Mine Closure Plan for Boulder, Gravel and Sand Minor Minerals for Mandoli Ghaggar East Block/YNR-B-3, District Yamunanagar (Haryana), comprising an area of 20.18 Hectares of M/s JSM Foods Pvt Ltd., Yamunanagar (Haryana).**

****

Reference to your letter dated 20.09.2021 on the subject noted above.

2. Vide letter under reference, the Mining scheme along with Progressive Mine Closure Plan in respect of 20.18 hectares of land in village Mandoli Ghaggar, district Yamuna Nagar was submitted for approval.

3. In exercise of the powers conferred by Rule 69 of the Haryana Minor Mineral Concession, Stoking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012, I hereby approve the above said Mining Scheme along with Progressive Mine Closure Plan in respect of Stone mine of Village – Mandoli Ghaggar over an area of 20.18 hectares of land situated in village Mandoli Ghaggar Yamuna Nagar. This approval is subject to the following conditions:-

(i) That this Mining Scheme and Progressive Mine Closure Plan is approved without prejudice to any other laws applicable to the mine/area from time to time whether made by the Central Government or State Government or any other authority.

(ii) That this approval of the "Mining Scheme along with Progressive Mine Closure Plan" of Mining does not in any way imply the approval of the State Government in terms of any other provisions of the Mines and Minerals (Development & Regulation) Act, 1957 or Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 or any other law including Forest (Conservation) Act, 1980 and Environment Protection Act, 1986 and rules framed there under.

(iii) That this "Mining Scheme along with Progressive Mine Closure Plan" is being approved on the basis of data provided by you. In case, at any point of time any ambiguity in the same is found, the approval will be revoked with suspension of the mining operations and will be allowed to resume operation only after modification/rectification of the same, if so required.

(iv) That this "Mining Scheme along with Progressive Mine Closure Plan" is approved without prejudice to any other order or direction from any court of any competent jurisdiction and is for a period of five years only and shall not be make you entitled for any extension of the lease period.

(v) That all the norms and provisions as envisaged in the Mining Scheme would be adhered to, during the working of mine.

Encl: Mining Scheme & Progressive
Mine Closure Plan (2 copies)

Mining Engineer,
for Director General, Mines and Geology,
Haryana

Registered Post

Endst. No. DMG/HY/Mandoli Ghaggar East Block/YNRB-3/2021/ Dated:

A copy along with a copy of the dully approved Modified Mining Scheme and Progressive Mine Closure Plan is forwarded to the Director Mines Safety, Room No. 201-203, 2nd Floor, B-Block, CGO Complex-II, Hapur Road, Ghaziabad for information and necessary action.

Encl: Mining Scheme & Progressive
Mine Closure Plan

-Sd-
Mining Engineer,
for Director General, Mines and Geology,
Haryana

Endst. No. DMG/HY/Mandoli Ghaggar East Block/YNRB-3/2021/ Dated:

A copy along with a copy of the dully approved Modified Mining Scheme and Progressive Mine Closure Plan is forwarded to the Mining Officer, Mines and Geology Department, Yamuna Nagar for information and necessary action.

Encl: Mining Scheme & Progressive
Mine Closure Plan

-Sd-
Mining Engineer,
for Director General, Mines and Geology,
Haryana

Endst. No. DMG/HY/Mandoli Ghaggar East Block/YNRB-3/2021/ Dated:

A copy is forwarded to Sh. Kireet Acharya, 70/30, Patel Marg, Manas Sarovar, Jaipur-202020 (Rajasthan) for information and necessary action.

-Sd-
Mining Engineer,
for Director General, Mines and Geology,
Haryana

ANNEXURE R 16/12B

From

The Director General,
Mines and Geology Haryana,
Plot No. 9, I.T. Park, Sector-22,
Panchkula.

To

M/s JSM Foods Pvt Ltd.
Mr. Tanish Wadhwa (Authorized Signatory)
676, Sector-13, Distt. Karnal, Haryana.

Memo No. DMG/HY/Mandoli Ghaggar West Block/YNRB-4/2021/ 4008
Dated Panchkula the 12-10-2021.

Subject: **Submission of Mining Scheme including Progressive Mine Closure Plan for Boulder, Gravel and Sand Minor Minerals for Mandoli Ghaggar West Block/YNR-B-4, District Yamunanagar (Haryana), comprising an area of 25.56 Hectares of M/s JSM Foods Pvt Ltd., Yamunanagar (Haryana).**

****

Reference to your letter dated 10.09.2021 on the subject noted above.

2. Vide letter under reference, the Mining scheme along with Progressive Mine Closure Plan in respect of 25.56 hectares of land in village Mandoli Ghaggar, district Yamuna Nagar was submitted for approval.

3. In exercise of the powers conferred by Rule 69 of the Haryana Minor Mineral Concession, Stoking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012, I hereby approve the above said Mining Scheme along with Progressive Mine Closure Plan in respect of Stone mine of Village – Mandoli Ghaggar over an area of 25.56 hectares of land situated in village Mandoli Ghaggar Yamuna Nagar. This approval is subject to the following conditions:-

(i) That this Mining Scheme and Progressive Mine Closure Plan is approved without prejudice to any other laws applicable to the mine/area from time to time whether made by the Central Government or State Government or any other authority.

(ii) That this approval of the "Mining Scheme along with Progressive Mine Closure Plan" of Mining does not in any way imply the approval of the State Government in terms of any other provisions of the Mines and Minerals (Development & Regulation) Act, 1957 or Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 or any other law including Forest (Conservation) Act, 1980 and Environment Protection Act, 1986 and rules framed there under.

(iii) That this "Mining Scheme along with Progressive Mine Closure Plan" is being approved on the basis of data provided by you. In case, at any point of time any ambiguity in the same is found, the approval will be revoked with suspension of the mining operations and will be allowed to resume operation only after modification/rectification of the same, if so required.

(iv) That this "Mining Scheme along with Progressive Mine Closure Plan" is approved without prejudice to any other order or direction from any court of any competent jurisdiction and is for a period of five years only and shall not be make you entitled for any extension of the lease period.

(v) That all the norms and provisions as envisaged in the Mining Scheme would be adhered to, during the working of mine.

Encl: Mining Scheme & Progressive
Mine Closure Plan (2 copies)

Mining Engineer,
for Director General, Mines and Geology,
Haryana

Registered Post

Endst. No. DMG/HY/Mandoli Ghaggar West Block/YNRB-4/2021/ Dated:

A copy along with a copy of the dully approved Modified Mining Scheme and Progressive Mine Closure Plan is forwarded to the Director Mines Safety, Room No. 201-203, 2nd Floor, B-Block, CGO Complex-II, Hapur Road, Ghaziabad for information and necessary action.

Encl: Mining Scheme & Progressive
Mine Closure Plan

-Sd-
Mining Engineer,
for Director General, Mines and Geology,
Haryana

Endst. No. DMG/HY/Mandoli Ghaggar West Block/YNRB-4/2021/ Dated:

A copy along with a copy of the dully approved Modified Mining Scheme and Progressive Mine Closure Plan is forwarded to the Mining Officer, Mines and Geology Department, Yamuna Nagar for information and necessary action.

Encl: Mining Scheme & Progressive
Mine Closure Plan

-Sd-
Mining Engineer,
for Director General, Mines and Geology,
Haryana

Endst. No. DMG/HY/Mandoli Ghaggar West Block/YNRB-4/2021/ Dated:

A copy is forwarded to Sh. Kireet Acharya, 70/30, Patel Marg, Manas Sarovar, Jaipur-202020 (Rajasthan) for information and necessary action.

-Sd-
Mining Engineer,
for Director General, Mines and Geology,
Haryana

ANNEXURE R 16/13

Cat. A Mech. O/C

MODIFIED MINING SCHEME

INCLUDING

PROGRESSIVE MINE CLOSURE PLAN

(Submitted Under Rule 70 (1) & 77(2) of Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012)

खान एवं भूविज्ञान विभाग, हरियाणा, पंचकूला
Department of Mines and Geology
Haryana, Panchkula
APPROVED
With Conditions
शर्तों के साथ अनुमोदित
Vide Letter No. DMG/HY/Mandoli Ghaggar East/
निर्देशक/Dated 3991 to 3996 dt 12/10/2021
खनन अधिकारी
Mining Engineer

FOR

BOULDER, GRAVEL & SAND MINE (MINOR MINERAL)

OF

MANDOLI GHAGGAR EAST BLOCK (YNR B-3)
VILLAGE- MANDOLI, TEHSIL-YAMUNA NAGAR
DISTRICT-YAMUNANAGAR, STATE-HARYANA

TOTAL LEASE AREA-20.18 Hect. (NON-FOREST)

PRODUCTION CAPACITY – 850000 T/ANNUM

LEASE PERIOD – 10 YEARS

PERIOD OF MINING SCHEME – 5 YEARS

APPLICANT

M/S JSM FOODS PRIVATE LIMITED

Mr. Tanish Wadhwa (Authorized Signatory)
676, Sector-13, Karnal
e-mail: jsmfoodsmandoli@gmail.com
Phone : 9996015005

Prepared By

KIREET ACHARYA (RQP/AJM/230A/2003)
Phone 0141-2786183, 9414163053, acharyak12@gmail.com

JSM FOODS PVT. LTD.

WZ/932, BASIE DARAPUR, 1ST FLOOR,
NEAR SENIOR SECONDARY SCHOOL, NEW DELHI-110015

A. CONSENT LETTER/ UNDERTAKING/ CERTIFICATE

FROM THE APPLICANT

01 The Modified Mining Scheme in respect of "MandoliGhaggar East Block/YNR B-3"sand mine over an area of20.18Hect., near village MandoliGhaggar East, Tehsil Jagadhri,DistrictYamunanagar, State Haryana, under Rule 70(1) Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 & 23 of MCDR 2017 has been prepared by Qualified Person Kireet Acharya. This is to request the Director, Department of Mines and Geology Haryana, to make any further correspondence regarding any correction of the Mining Plan/Scheme of Mining with the said Qualified person at his address below :

Sh. Kireet Acharya
70/30 Patel Marg,Mansarovar,
Jaipur 202020 (Rajasthan),
Mobile No. 9414163053
Email – acharyak12@gmail.com

We hereby undertake that all modifications / updating as made in the said Mining Plan/Scheme of Mining by the said recognized person be deemed to have been made with our knowledge and consent and shall be acceptable on us and binding in all respects.

02 It is certified that the CCOM Circular No-2/2010 will be implemented and complied with when an authorized agency is approved by the State Government.

03 It is certified that the Progressive Mine Closure plan of "MandoliGhaggar East" Block/YNR B-3" Boulder, Gravel and Sand mine near villageMandoliGhaggar Eastover an area of 20.18 Ha. complies with all statutory rules, Regulations, Orders made by the Central or State Government, Statutory organization, Court etc which have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities. The information furnished in the Progressive Mine Closure plan is true and correct to the best of our knowledge and records.

04 "The provisions of Mines Act, Rules and Regulations made there under have been observed in the Mining Scheme over an area of 20.18 hectare , District Yamunanagar, State Haryana belonging to M/s. JSM Foods Pvt. Ltd.and where specific permissions are required, the applicant will approach the D.G.M.S. Further, standards prescribed by D.G.M.S. in respect of miners' Health will be strictly implemented".

Place: ----------

Date----------

For M/s. JSM Foods Pvt. Ltd.

APPROVED

JSM FOODS PVT. LTD.

WZ/932, BASIE DARAPUR, 1ST FLOOR,
NEAR SENIOR SECONDARY SCHOOL, NEW DELHI-110015

AUTHORISATION

I, TANISH WADHWA Director of M/s. JSM Foods Pvt. Ltd., Mining site at Village MandoliGhaggarEast, Block YNR/B-3, Tehsil Jagadhri, Distt Yamuna Nagar, hereby authorizeShriKireetAcharya, (RQP/AJM/230/2003/A) to prepare the Modified Mining Scheme including Progressive Mine Closure Plan (Review & Mining scheme) under Haryana Minor Mineral Concession, Stocking,Transportation of Minerals and Prevention of Illegal Mining Rules, 2012, in respect of minor mineral mines of "Boulder, Gravel and Sand" of "M/s. JSM Foods Pvt. Ltd" over an area of 20.18 hectare in Tehsil Jagadhri, District Yamunanagar, State Haryana.

I request the Director General, Department of Mines & Geology, Govt. of Haryana, Chandigarh, to make further correspondence regarding re-submission/ modification / withdrawal and to collect the approved copies of the aforesaid Mining Plan Including Progressive Mine Closure Plan with the said recognized person on his following address: -

Kireet Acharya
(RQP/AJM/230/2003/(A)
70/30 Patel Marg, Mansarovar
Jaipur 302020
E-mail-acharyak12@gmail.com
Mobile: 9414163053

M/sJSM Foods Pvt. Ltd.
For JSM FOODS PVT. LTD.
Auth. Sign.

Place: YAMUNANAGAR
Date: 10.09.2021

APPROVED
R. S. Sharma
IAS

CERTIFICATE FROM QP

The provisions of the mineral Conservation and Development Rules 2017 made under section 18 of the Mines & Minerals (Development & Regulation) Act 1957, have been observed in the preparation of the Modified mining scheme and PMCP for Mandoli Ghaggar East Block (YNR B3) Boulder, Gravel & Sand Mine over and area of 20.18 ha., of M/s JSM Foods Private Limited R/o 676, Sector -13, Karnal in village Mandoli, Tehsil & District- Yamuna Nagar, Haryana state and whenever specific permissions are required, the applicant will approach the concerned authorities of State Mines and Geology Department. The information furnished in the Mining Scheme/ Review of Mining Plan and PMCP are true and correct to the best of our knowledge.

Place:Jaipur
Date

(Kireet Acharya)
(RQP/AJM/230/2003/(A)

KIREET ACHARYA
RQP/AJM/230A/2003

APPROVED

S.No.	TABLE OF CONTENTS
	Introductory notes
1.0	General Information
2.0	Location and accessibility
	Details of approved mining plan/scheme
	Review of earlier approved proposal
PART -A	Geology and Exploration
2.0	Mining
	Underground Mining
3.0	Mine Drainage
4.0	Stacking Of Mineral Reject /Sub Grade Material and Disposal Of Waste
5.0	Use of Mineral And Mineral Reject
6.0	Processing of Mineral Rejects
7.0	Site services
8.0	Progressive Mine Closure Plan

LIST OF PLATES	Scale	Plate no.
Key Plan	1:50000	1
Khasara Plan	1:4000	2
Surface Plan	1:2000	3
Geological Plan and Sections	1;2000	4
Year wise Development Plans and Sections (2021-2022)	1:2000	5A
Year wise Development Plans and Sections (2022-2023)	1:2000	5B
Year wise Development Plans and Sections (2023-2024)	1:2000	5C
Year wise Development Plans and Sections (2024-2025)	1:2000	5D
Year wise Development Plans and Sections (2025-2026)	1:2000	5E
Conceptual Plan and Section	1:2000	6
Environment Plan	1:5000	7

APPROVED
R. S. Thakran
Asst.

Kireet Acharya
Qualified Person
MGE CONNECT.COM

LIST OF ANNEXURES

Annexure No.	Particulars
1.	Consent & undertaking by the owner
2.	Letter of Authorization by owner for preparation of mining plan to Qualified person
3.	Copy of Pan card of owner /authorized signatory
4.	Copy of LOI, MOA
5	Copy of approval letter of first Mining plan
6.	Copy of Air & Water Consent Given By State Govt.
7.	Copy of Environment Clearance
8	Air Quality Monitoring Report
9	Water Quality Monitoring Report
10	Noise Monitoring Report
11	Soil Monitoring Report
12	Mine Water Balance Chart
13	Copy of Qualification and experience of qualified person
14	Copy of Replenishment studies
15	GPS Coordinates

APPROVED

Kireet Acharya
Qualified Person
MGE CONNECT.COM

INTRODUCTORY NOTES

M/S JSM Foods Private Limited was established in 2005 with vision to be the most reputed group in India's as leading property developers and restaurants business. The company having office at WZ/932 Basie Darapur First Floor, Near Secondary School New Delhi registered with state department and since than been engaged in contract mining mainly for Boulder, sand, gravel and various other minerals involving operations like removal of overburden, mining ,logistics etc. JSM is one of Haryana state's leading sand mining company in private sector with annual turnover of apprx. INR 50 Cr. the year ended 2019. The promoters of JSM are engaged in Chain of Restaurants, Real estate and Mining, trading of sand, aggregates in Haryana, Uttar Pradesh and Delhi.

Govt. of Haryana, Department of Mines and Geology conducted auction of Boulder, Gravel and Sand minor mineral mine of "Mandolai Ghaggar East Block /YNR B-3. M/S JSM Foods Private Limited company was considered as highest bidder by paying Rs.03,30,50,000 crores /- for the Mandolai Ghaggar East Block YNR B-03, accordingly LOI was issued for tentative area 20.18 Hectares granted for 10 years. M/S JSM Foods Private Limited company is one of the leading company in sand mining in the state of Haryana having vast experience in operating sand mines, Road-Building Construction and Marketing of building material in Yamunnagar and other parts of the state. The company is experienced having technical staffs and resources to work in mining since 10 years.

Subsequent to auction process by Department of Mines & Geology, Govt. of Haryana, issued the letter of intent for LOI grant **(Annexure-4)** vide letter no. DMG/HY/Cont./Mandolai Ghaggar East Block B-3 /YNR B-3/2015/3915 dated 19.06.2015 in favor of M/S JSM Foods Private Limited company was issued .

The period of lease shall be 10 years & the same shall commence with effect from the date of grant of Environment Clearance by Competent Authority or on expiry of a period of 12 months from the date of communication of acceptance of highest bid /issuance of "**Letter of Intent** "whichever is earlier.

Kireet Acharya
Qualified Person
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The first Mining Plan including Progressive Mine Closure Plan was got approved by the competent authority from DMG, Haryana vide letter no. DMG/HY/MP/Mandolai Ghaggar East Block YNR B-3 /2015 /454 dated 8.1.2016 **Annexure-5.**

After obtaining requisite Environmental Clearance (EC) from the SEIAA, Haryana vide their letter no SEIAA/HR/2016/989 dated 21.12.2016, for production target of 850000 MTPA **(Annexure-7)** the lessee has started the sand, gravel mining operations with effect from 18.6.2017. After obtaining EC, Consent for Air, water and Hazardous substances from the state Pollution Control Board **(Annexure-6)** and finally the applicant started the mining work from July 2017 after executing Mining lease agreement and registration.

Initially the lessee started working in fresh and replenished area for which no history /record is available on account of yearly replenishment. The lease started working from a block measuring size 14.18 ha area. The present Lease holder commenced mining of boulder, gravel and sand to produce 850,000 MTPA from this area w.e.f. June 2017 by deploying heavy earth moving machineries. The mineral produced was sent to the construction sites operating nearby lease area.

Director General of mining and Geology, Haryana vide order no. DMG /Hy/ Cont./MG east block /YNR B-3/2015/516 dated 5.2.2021 under Rule 56(17) permitted the inclusion of additional mineral Boulder and Gravel with the sand mining contract .The total quantity of the Sand ,Boulder and gravel will not exceed to 8,50,000 Tons and shall obtain separate EC for the new product with signing a supplementary lease agreement and the period of associated mineral will be coterminous to the original lease agreement. The quantity of boulder and gravel will not be more than 27.45 % of permitted quantity in Environmental clearance % i.e. 2,33,325 tons will be Boulder and gravel.

"The present document is submitted for Modified mining scheme for next five year (2021-2026) in view of inclusion of Boulder and Gravel in concession and requirement

Kireet Acharya
Qualified Person
MGE CONNECT.COM

of document for obtaining modification in environment Clearance. It also covers review of past Mining plan and PMCP under Rule 17(2) of MCR, 2016" for existing capacity of 850000 TPA under compliance of Haryana Minor Mineral Concession, Stocking and Transporting of Minerals and Prevention of Illegal Mining Rules- 2012 without changing in mining technology .At present there is no change in capacity and methodology .

APPROVED

Kireet Acharya
Qualified Person
MGE CONNECT.COM

1.0 GENERAL INFORMATION

a.)	**Name of the Lessee** **i) Nominated Owner**	M/S JSM Foods Private Limited company Mr. Tanish Wadhwa (Authorized Signatory) 676, Sector-13, Karnal e-mail: jsmfoodsmandoli@gmail.com Phone : 9996015005
	iii) Head Office	M/S JSM Foods Private Limited 676, Sector-13, Karnal e-mail: jsmfoodsmandoli@gmail.com Phone : 9996015005
	iv) Site address	M/S JSM Foods Private Limited company Village –Mandolai Ghaggar East Block YNR B-3 Tehsil -Chhachroli Distt. Yamuna agar Haryana
	Rule 45 IBM Registration Number	-NA-
	Mining Lease code	---
b.)	**Status of the Applicant**	It is a private Company having experience in sand Mining, transportation and marketing of minerals and products.
	Name of the Directors /partners	Name, address and Photo indentify of owners /partners are placed as 1. Smarth Sain gupta S/o Vipin Gupta 2. Radhey shyam Wadhwa s/o Tau Ram Wadhwa 3. Tanish wadhwa,S/O Manoj Kumar 676 Sector 13 Karnal ,Haryana
c.)	**Minerals which are included in the PL**	It is an auctioned block from Department of Mines and Geology Department, Govt. of Haryana

Kireet Acharya
Qualified Person
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d).	**Mineral (s) which is/are included in the Lease Deed**	Sand as minor minerals and Boulder and Gravel associated mineral
e.).	**Minerals which are the lessee indents to mine**	Sand as minor minerals and Boulder and Gravel associated mineral
f.)	**Name of Qualified person , who prepare the Mining Plan with PMCP-** Lessee appointed following qualified person for preparation the Mining plan with PMCP. whose Name, address, Qualification and Experience are as under - Sh. Kireet Acharya MGE CONNECT.COM 70/30 Patel Marg. Mansarovar Jaipur 202020 (Raj.) Mobile No. 9414163053 Email – acharyak12@gmail.com Master of Science in Geology fromKurukshetra University having 42 years experience in Mining Industry ,Copy of Degree , experience and RQP certificate are placed as **(Annexure.-13)**	
g)	**Name of a Person employed under clause I of Sub rule (1) of rule 42 of MCDR, 1988 (Applicable for Scheme of Mining only)**	Statutory mining persons are employed as per Rules of MCDR, 2017 and Regulations of MMR-2016. 1.Shri Sohan Singh Mines Manager (Mines) C/O JSM Foods Private Limited company Village –Mandolai Ghaggar East Block B-3 Block YNR/B-3 Tehsil -Chhachroli Distt. Yamuna agar Haryana Phone : - 7018661867

APPROVED
R. S. Thakran
Mines

2.0 LOCATION AND ACCESSIBILITY

	Lease details	The sand mine 20.18 hect. is a open cast fully mechanized sand mine for which LOI was issued in favour to M/s. JSM Foods Private Limited vide letter no.DMG/HY/Cont./Mandolai Ghaggar east /YNR B-3/2015/3915 dated 19.06.2015 by following bidding process and the first Mining Plan including Progressive Mine Closure Plan was got approved by the competent authority Department of Mines and Geology, Haryana vide letter no. DMG/HY/Cont./Mandolai Ghaggar east /YNR B-3/2015/454 dated 8.1.2016 **(Annexure-5)** and The Environment Clearance was obtained, lease deed was executed and registered by applicant. **Annexure -7)**
a)	**Name of mine**	Mandolai Ghaggar East Block YNR B-3 sand mine
b)	**Mine code**	M.L. No. YNR/B03
c)	**Location of mine/ area** **Village,** **Tehsil,** **Police station –** **Post office** **District,** **PIN**	Mandolai Ghaggar East Block B-3 Block, YNR – B07 Chhachroli Yamunanagar Yamunanagar Yamunanagar
d)	**Details of applied/ lease area with location plan-**	Granted Lease area is 20.18 hectare (Location plan is enclosed as (**Plate-1.)**
	Forest (Specify)- **Protected-** **Notified-**	There is no forest land, The lease area falls in gram Panchyat land, A Govt. Land.
	Non Forest **a) Govt. waste land** **b) Grazing Land** **c) Agriculture land** **d)Others (specify)**	20.18 hect.(Govt. land) NIL NIL NIL

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	Total area	20.18 hect.
e)	**Area**	20.18 hect. Mandolai Ghaggar East Block YNR B-3
	Khasra no	53//5, 6, 15, 16/1, 16/2, 25 54//1 to 25 55/1, 2, 9, 10, 11, 20 57//1 to 4, 7, to 13 58//5, 6, 15
		20.18 Hectares
f)	**Whether the area falls under Coastal Regulation Zone (CRZ)? If yes, details Thereof**	NA
	Existence of public road/railway line, if any nearby and approximate distance-	Lease area is well connected with a metallic road, Yamunanagar railway station is 25 kms from the mining lease area. Delhi ISBT is about 240 Kms and Yamuna nagar is 25 kms district head quarter, UT head quarter is Chandigarh is located 100kms north west of lease area. All nearby villages like Chhachroli, Jagadhari, Yamunanagar and kurukshetra have police statin, Electricity and education facilities.

c) **Attach a general location map showing area and access routes. It is preferred that the area be marked on a Survey of India topographical map or a cadastral map or forest map as the case may be. However, if none of these are available, the area may be shown on an administrative map.**

The detail of the land covered in the lease area notified by Haryana Govt.on 27.4.2015 and subsequent corrigendum dated 19.5.2015 are described in above para .Coordinates of the lease area and important boundary pillars are as under-

YNR B-03:

Pillar number	Latitudes	Longitudes
BP-1	N30° 08' 26.69''	E77° 25' 01.91''
BP-2	N30° 08' 26.69''	E77° 25' 21.23''
BP-3	N30° 08' 22.73''	E77° 25' 21.18''
BP-4	N30° 08' 22.73''	E77° 25' 18.73''
BP-5	N30° 08' 20.75''	E77° 25' 18.71''
BP-6	N30° 08' 20.75''	E77° 25' 20.12''
BP-7	N30° 08' 18.77''	E77° 25' 18.62''
BP-8	N30° 08' 18.77''	E77° 25' 16.23''
BP-9	N30° 08' 16.79''	E77° 25' 16.21''
BP-10	N30° 08' 16.79''	E77° 25' 13.75''
BP-11	N30° 08' 12.83''	E77° 25' 13.70''
BP-12	N30° 08' 12.83''	E77° 25' 11.26''
BP-13	N30° 08' 10.85''	E77° 25' 11.24''
BP-14	N30° 08' 10.85''	E77° 25' 01.71''

The location area is marked on Topo sheet No.53F/8 as approved by Department of Mines and Geology, Govt. of Haryana as under- (**Plate No 1**) and each corner wise coordinates are placed as **Annexure-15**

DETAILS OF APPROVED MINING PLAN / SCHEME OF MINING (if any)

S. N	Date and reference of earlier approved MP/SOM				
	Type of document & rule under which prepared	Approval letter no & date	Lease area for which approval given (ha)	Date of Approval	Proposal from – to
a)	Mining Plan under Rule Haryana Miner Mineral Concession, Storage, Transportation and prevention of illegal	Vide letter no. DMG/HY/Cont./Mandoli Ghaggar east /YNR B-3/2015/454 dated 8.1.2016	20.18 ha.	08.1.2016	5 years

	Mining rules -2012) For fresh grant of lease area.	**(Annexure -5)**			
b)	**Modified Mining Scheme**	-	applied for	-	-
c)	**Details of last modifications if any (for approved MP/SOM, indicating date of approval, reason for modification the previous approved period) of**				
	First mining plan was approved by Department of mines and geology vide letter No. DMG/HY/Cont./Mandolai Ghaggar east /YNR B-3/2015/454 dated 8.1.2016 **(Annexure-5)** for 0.615 MTPA of ROM.				
	REVIEW OF EARLIER APPROVED PROPOSAL -				

	Items	Proposals	Achievement	Remarks
a)	Exploration by Bore holes / Trail pits / Trenches on Geological axis	Replenishment study of river sediment /sand, gravel was proposed at the time of grant of lease and subsequently at the commencement of next scheme. as area falls along **river bed**	As per detailed study of lease area conducted in 2016 it was established that 12,10,800 Ton reserves per year were available and total 8508000 Tons mineable reserves and a mine of **8,50,000** TPA sand mine can be planned	No deviation observed
b)	Number of sand pits proposed for production	Mining was proposed to be carried out from the identified and earmarked block year wise	Sand Mining was carried out as per year wise proposals	No deviation observed

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c)	Location of Development	Esat to west direction		The mining was continuing from North to South direction as proposed in the approved Plan. (Surface Plan -3	No deviation observed

d.	Top Soil			
	Year	**Proposed**	**Achievement**	**Remarks**
	2016-17	0	0	No top soil was observed and recovered from the river bed .
	2017-18	0	0	
	2018-19	0	0	
	2019-20	0	0	
	2020-21	0	0	
	Total	**0**	**0**	

e)	Quantity of overburden (T)			
	Year	**Proposal**	**Achievement**	**Remarks**
	2016-17	0	0	No overburden was estimated in past plan period and no over burden was recovered as such no deviation is found
	2017-18	0	0	
	2018-19	0	0	
	2019-20	0	0	
	2020-21	0	0	
	Total	0	0	

f)	Quantity of Reject			
	Year	Proposal	Achievement	Remarks
	2016-17	0	0	All sand recovered was homogenous and found useful ,thus no reject was there
	2017-18	0	0	
	2018-19	0	0	

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	2019-20	0	0	Hence no deviation was found
	2020-21	0	0	
	Total	0	0	

g)	**Quantity of ROM production in Tonnes** *Sept 2020			
	Year	**Proposal Tons**	**Achievement**	**Remark**
	2016-17	850000	-	Due to fluctuation in demand in construction industry the quantity of ROM varied. No deviation is considered
	2017-18	850000	831926	
	2018-19	850000	830862	
	2019-20	850000	859051	
	2020-21	850000	-	
	Total	**4250000**	2521839	

h)	**Production of Saleable Sand and Gravel in tonnes**			
	Year	**Proposal**	**Achievement ***	**Remark**
	2016-17	850000	-	Due to fluctuation in demand in construction industry the quantity of ROM varied. No deviation is considered
	2017-18	850000	831926	
	2018-19	850000	830862	
	2019-20	850000	859051	
	2020-21	850000	-	
	Total	**4250000**	2521839	

i)	**Layout parameters**			
	Item	**Proposal**	**Achievement ***	**Remark**
j)	Location of topsoil dumps	Top soil generation was not ancipated thus a location for storage of top soil was not planned	No location was planned for top soil storage	No deviation found

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k)	Stacking of mineral	Sand and Gravel was not proposed to be directly loaded in to trucks and location for storage of mineral was not planned	No location was planned for mineral stacking	No deviation found
l)	Location of OB & mineral reject dumps	No reject was anticipated	Total mineral as sand and gravel was found usefull	No deviation found
m)	Height of benches width of benches Bench Slope		Maintained to mark level	No deviation found
n)	Area under backfilling of mined out area	The mined out area was proposed to be back filled by replenishment every year.	It was ensured mined out area is back filled by leaving a barrier after every 50 meter and it was achieved every year a regular backfilling	No deviation found
o)	Plantation /Afforestation	500 plants per year were proposed along the river bank and other feasible sites during five years plan period	Total 500 no. of saplings were planted in plan period for development of green belt of 7.5 meter wide and office area.	No Deviation found
p)	Green belt	A margin of 7.5 meter was proposed to be left as safety barrier	Green belt margin7.5 meter is left for plantation except the main course of river.	No deviation found

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q)	Number of settling ponds	Not proposed	None	No deviation found
r)	Processing of mineral	Sand ,Boulder ,Gravel ROM was not proposed to be screened and sized as found directly saleable	No screening / sizing facility was installed	No deviation is found
s)	UPL limit	It was proposed to work 3 meter above the water level	Complied to work up to UPL limit	No deviation is found

r) REVIEW OF FINANCIAL ASSURANCE

In present document past five year proposals of Mining scheme with PMCP for Top soil, ROM production ,Overburden, mineral reject, land use, Plantation, environmental management have been discussed considering capacity of 0.650 Million ton per annum for past five years proposals (2016-2021) under as per Rule 70(1) and 77 (2) of Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules -2012. Item wise details are as under-

S.No.	Item Details	Proposed for use	Actual area as on date Sept . 2020	Remarks
i.	Area under Mining	14.18	4.50	4.50 hect per year area has been broken area for mining and rest area is as unused
ii.	Storage of top soil	0	0	No Soil generated during the last 5 years, plantation was done over the road, village and green belt area.
iii.	Waste dump site	0	0	No waste generated during last 5 years no stacking was required
v.	Mineral Storage	0	0	On account of direct loading no mineral stock was proposed at the mine

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vi.	Infrastructure, Work shop, Admin building, weigh bridge etc	0	0	Office and other infrastructure facilities are already made outside lease
vii.	Roads	0	0	-
viii.	Railways	0	0	-
ix.	Tailing Pond	0	0	-
x.	Effluent Treatment Plant-	0	0	-
xi.	Mineral Separation Plant	0	0	-
xii.	Township area	0	0	-
xii	Green belt	2.018	2.018	-
Xiii	Others (Undisturbed)			-

	Give status of compliance of violations pointed out			
Sr .no	**Date of inspection**	**Violation date**	**Rule violated**	**Compliance status**
1.	Mining was done as per Haryana Minor Mineral Concession stocking and transporting of minerals and prevention of illegal mining rules -2012 and MMDR Act. No violation was pointed out by State and Central Authorities			
s	**Indicate and give details of any Suspension /Closure/ Prohibitory order issued by any Government agency under any rule or Court of law** In compliance to the Hon'ble NGT order dated 01.6.2016 passed in original application no.176 of 2016 (earlier OA no.184/2013 and original application no.272 of 2016 in the matter of Gurpreet Singh Bagga v/s MoEFCC and Ors. and Ganga Jamuna Mining Company V/S state of Haryana, It was decided tht mining contractors even if are having all clearances in District Yamuna nagar shall comply with the directions of the NGT. Accordingly Mining work was suspended till the Hon'ble NGT modifying its order dated 1.06.2016. Accordingly the working was suspended wef 20.9.2016 in view of Hon'ble NGT order and subsequent order from Department of Mines and Geology ,Haryana.DMG letter no.DMG/HY/OA/no.481 of 2016/YNR/4962 dated 20.9.2016			

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t	**In case the MP/SOM is submitted under rules 9 and 10 of the MCDR'88 or under rule 17(2) of the MCR'2016 for approval of modification, specify reason and justification for modification under these rules.** No Modification was sought by applicant during the past plan period



PART – A

Briefly describe the Topography, drainage pattern, vegetation, climate, rainfall data of the lease area

PHYSIOGRAPHY, DRAINAGE AND CLIMATE

Yamuna Nagar district of Haryana located in north-eastern part of Haryana State and lies between 29° 55': 30° 31' north latitudes and 77° 00': 77° 35' east longitudes. The district is bounded, in north by Himachal Pradesh, in the east by Uttar Pradesh, in west by Ambala district, in south by Karnal and Kurukshetra districts. Total geographical area of the district is 1768 sq.km and comprises 4% of total area of State. Yamuna Nagar district is divided into one sub-division and six-development blocks viz. Bilaspur, Chachrauli, Jagadhri, Mustafabad, Radaur and Sadhaura. Yamuna Nagar is thickly populated district and density of population is 589 persons per Km2, which is higher than State average of 478 persons per Km2. The population of the district is 12, 14,162 as per 2011 census 801337 persons

PHYGIOGRAPHY

The district is divided into five Physiographic units

- Siwaliks
- Dissected Rolling Plains
- Interfluvial Plains
- Active And Recent Flood Plains
- Relict Plains



a) Siwaliks hills –

Siwalik hill ranges occupy the northern fringe of Yamuna Nagar district and attain the height up to 950m AMSL. The hills are about 500m high with respect to the adjacent alluvial plains. These are characterized by the broad tableland topography that has been carved into quite sharp slopes by numerous ephemeral streams come down to the outer slopes of the Siwaliks and spread much of gravels boulders, pebbles in the beds of these streams.

b) Dissected rolling plains (kandi belt) - A dissected rolling plain in the northern parts of district is a transitional tract between Siwaliks hills and alluvial plains. It is about 25 km wide and elevation varies between 250 and 375m AMSL.

c) Interfluvial plains - This tract is part of higher ground between Ghaggar and Chautang and includes high mounds and valleys. In general, the slope is from northeast to southwest.

d) Active and recent flood plains - This plain is narrow tract along river Yamuna in the district.

e) Relict wedge plain - This is almost in alignment to the surface water divide between the westward flowing Ghaggar and eastward flowing Yamuna River.

DRAINAGE

The district is mainly drained by the rivers Yamuna, Markanda and its tributaries. Markanda is tributary of river Ghaggar and drains major part of the district. The high land between Markanda River and small rivulets of River Yamuna acts as basin boundary between west flowing rivers of Indus system and east flowing rivers of Ganga basin. River Yamuna drains eastern part of the district and acts as boundary between Haryana and Uttar Pradesh State.

Yamuna Nagar district is bestowed with rich water resources, both surface as well as ground water resources. The ground water is major sources of irrigation in the district. Nearly 40% of area is irrigated by canal water. Distributaries in the district are 21.45 Km long. Two major canals passing through the district are Western Yamuna Canal and augmentation canal. Length of unlined WJC is 63.64km whereas augmentation canal is 22.54 km long. Net irrigated area is 1130Km2 whereas, gross irrigated area 1860Km2. Percentage of gross area irrigated to total cropped area is 91.6%. Systematic hydro geological surveys in the district was carried out by Geological Survey of India during 1956-61.Re-Appraisal Hydro Geological Surveys in the district were carried out by Central Ground Water Board, during 1975-77, 1981-82 and 1988-89. detailed hydro geological and water balance studies were carried out under Ghaggar and Upper Yamuna Projects. Ground water exploration has been carried out in various phases and

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so far 5 exploratory wells, 15 slim holes and 15 piezometers have been constructed in the district.

CLIMATE

The climate of Yamunanagar district can be classified as subtropical monsoon, mild dry winter, hot summer and sub-humid which is mainly dry with very hot summer and cold winter except during monsoon season when moist air of oceanic origin penetrate into the district. The hot weather season starts from mid March to last week of the June followed by the south west monsoon which lasts up to September. The transition period from September to November forms the post monsoon season. The winter season starts late in November and remains up to first week of March.

Rainfall: The normal annual rainfall of the district is 1076 mm, and is unevenly distributed over the area. The average rainy days are 44. The south west monsoon sets in from last week of June and withdraws in the end of September, contributing about 81% of normal annual rainfall. July and August are the wettest months. Rest19% rainfall is received during non-monsoon period in the wake of western disturbances and thunderstorms. Generally rainfall in the district increases from southwest to northeast .The mean maximum temperature is 40.8° C (May & June) and mean minimum is 6.8° C (January) of the district.

Normal Annual Rainfall: 1076 mm

Normal monsoon Rainfall: 879 mm

Temperature

Mean Maximum: 40.8°C(May & June)

Mean Minimum : 6.8 °C(January)

Normal Rainy days : 44

HYDROGEOLOGY

The ground water exploration in the district reveals that clay group of formations dominates over the sand group in the district area. Ground water in the district occurs in the alluvium under water table and semi-confined to confined conditions. These aquifers consist of sand, silt, gravels and kankar associated with clay and form highly

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potential aquifers. In alluvium, the permeable granular zones comprise fine to medium grained sand and occasionally coarse sand and gravel. Their lateral and as well as vertical extent is extensive. In Kandi belt, which has not been explored fully boulders cobbles and pebbles, constitutes the major aquifer horizon. Siwalik Hills occupy marginal areas in the northeastern parts of the district constitute a low potential zone.

In Kandi areas, the shallow aquifers are isolated lenses embedded in clay beds whereas aquifers in alluvial areas occur on regional scale and have pinching and swelling disposition and are quite extensive in nature. These aquifers generally consists sands (fine to coarse grained) and gravels and are often intercepted by clay and kankar. These aquifers are under unconfined.

Under ground water exploration programme nine exploratory wells were drilled in the district. On average 3-12 of granular zones were deciphered in the depth range down to 450 m bgl. Exploratory wells drilled in depth range of 130 and 180 m bgl yield discharge in the range of 2700 to 4900 lpm for drawdown of 6.0 m to 12.0 m and Transmissivity of aquifers range between 1500 to 4900 m2/day. The yield potentials of aquifer below 200.0m bgl are yet to be evaluated.

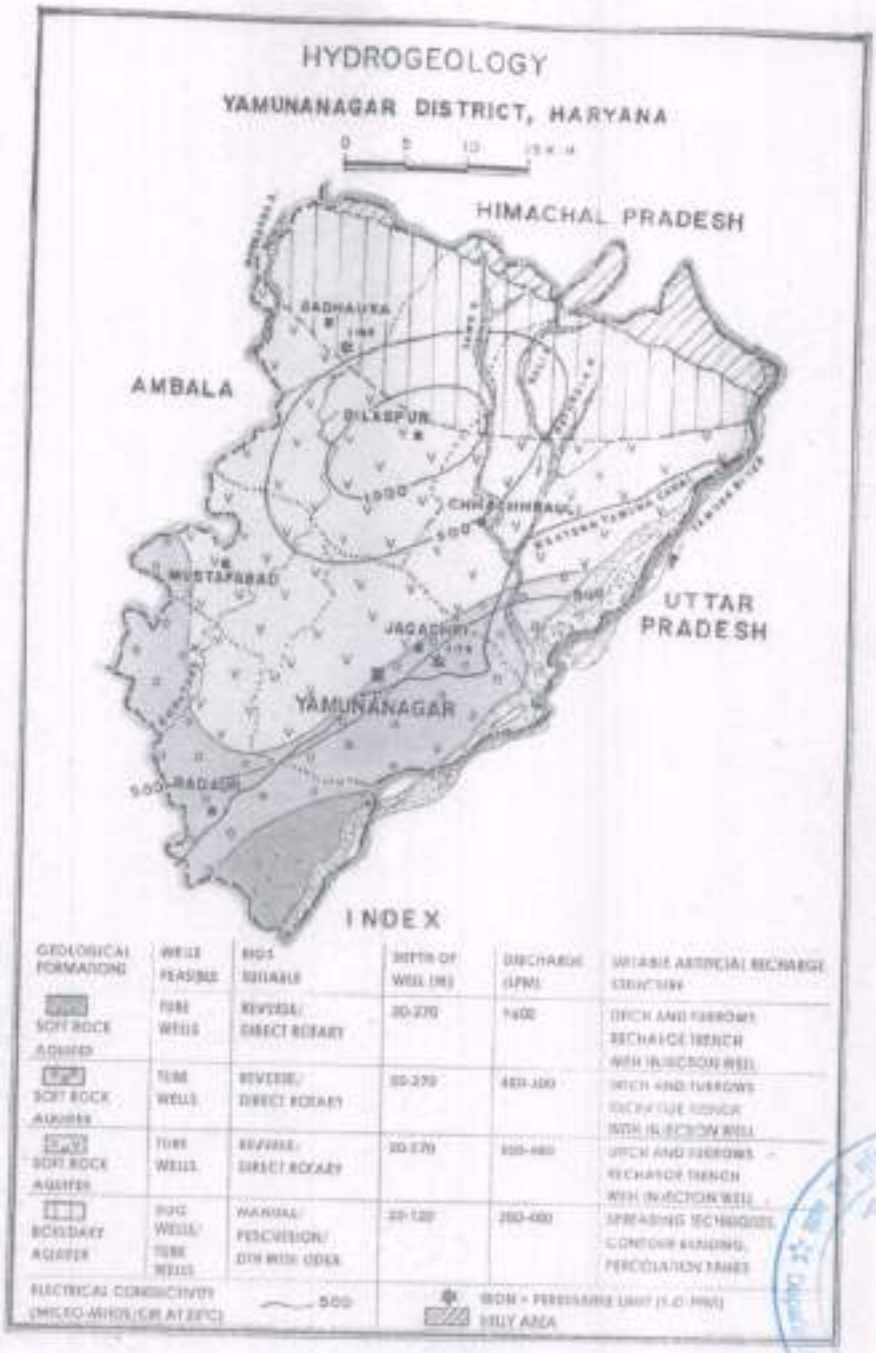
DEPTH TO WATER LEVEL

The depth to water level during pre-monsoon period in the district ranges between 2.07m bgl at Choli and 15.32m bgl at Khizrabad. However, in major part of district water level ranges between 5.0m bgl and 10.0m bgl. The Depth to water level during pre-monsoon period in the district ranges between 1.57m bgl at Choli and 18.41m bgl at Bahadurpur. However, in major part of district water level ranges between 5.0m bgl and 15.0m bgl. Appraisal of water level data of May and November reveals that some parts of the district have experienced water level decline whereas in other parts rise in water level has been recorded. Maximum decline of –0.43m has been observed in area around Khizrabad and maximum rise of 0.39m was recorded at Sabri village. During last ten years, majority of observation points in the district have shown declining trends ranging from 0.00013 m/yr to 0.389m/yr, however, area as not recorded any significant rise during last ten years. The discharge of the shallow tubewells tapping unconfined

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aquifers is tube wells ranges from 100 lpm to 500 lpm with moderate Drawdown values. Near Manakpur, a phreatic aquifer extending down to 88.0m bgl has Transmissivity value of 2500m2/day, lateral hydraulic conductivity of 31m /day.

(Source: District Groundwater Brochure CGWB).



PART –A GEOLOGY AND EXPLORATION:

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3.0 Brief descriptions of Regional Geology with reference to location of lease/applied area.

3.1 GEOLOGY OF THE AREA

i) Regional Geology

The north-eastern and central part of Haryana is predominantly characterized by sedimentary litho logy in the Sub-Himalayan zone comprising Subathus, Dagshais, Kasaulis and Siwaliks. A general Regional stratigraphic sequence in the area is given in Table.

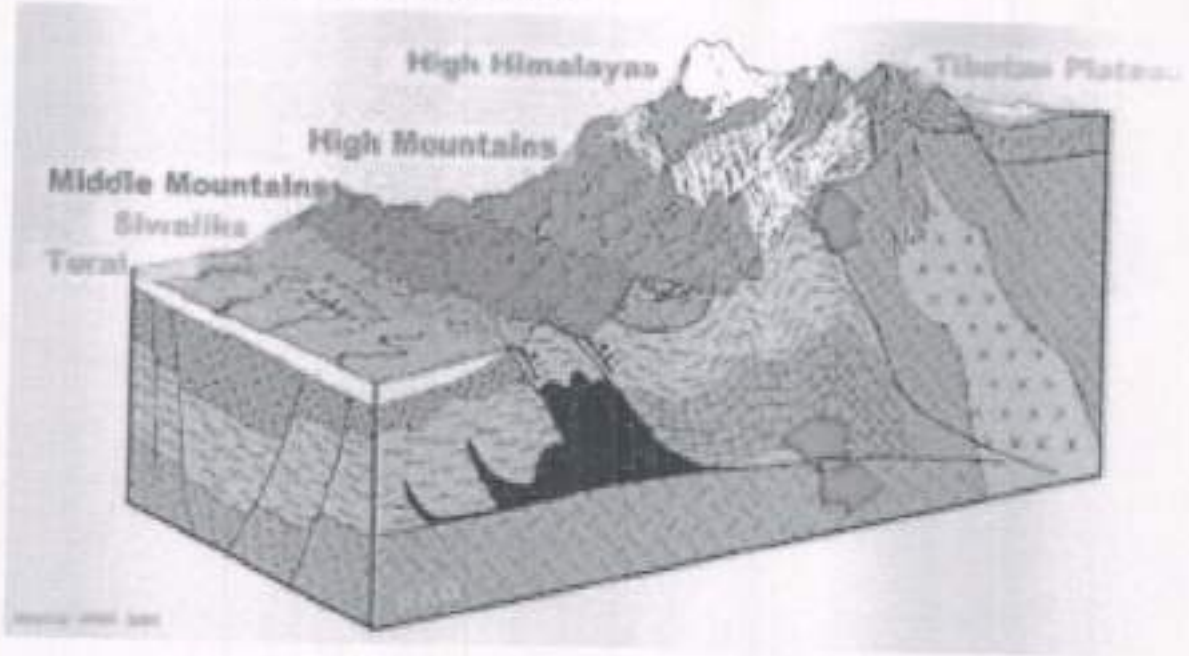
Table: Regional stratigraphic sequence

Age	Super group	group	Formation	litho logy
Holocene			Newer alluvium and Newer Aeolian Deposits	Gravel, Sand, silt, clay, limesand, gypsum
Lower to upper Pleistocene			older alluvium and Older Aeolian Deposits	Gravel, grey sand, silt, clay, brown sand, calcrete
Lower to Middle Pleistocene	SIWALIK	Upper Siwalik	Boulder Conglomerates formation	Conglomerate, sandsand, silt, clay
Upper Pliocene			Pinjore Formation	Coarse grit,red sand sand and clay, conglomerate
			Tatrot Formation	Friable Sandsand and variegated clay
		Middle Siwalik	Dhokpathan Formation	Brown sandsand and orange clay
Middle Miocene			Nagri Formation	Hard grey sand , muds and and minor shale
		Lower Siwalik	Nahan Formation	Coarse grity ,clay and red sand sand often calcareous, brownish shale with lignite lenticles, greenish white Quartzite
Lower Miocene		Sirmur	Kausauli Formation	Grey and green sand,green shale and grey clay
			Dagsai Formation	Purple and green sand sand, deep red gritty,clay,white andsand with ferruginous concretions
Upper Eocene			Subathu formation	Sandsand with gritu clay. Impure fossiliferous limesand

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				calcareous slate,greenish shale and dark brown quartzite
Pre-proterozoic			Tunda pathar	Thickly bedded ,sstromatolite limesand with carboniferous shale and quartzite

A schematic diagramme of Himalayas showing higher, middle and lower Himalayas including Shiwaliks is shown here below-



3.2 LOCAL GEOLOGY

The litho units encountered in the river bed and surrounding areas belongs to the Shivalik super groups. The sediments are river borne and has deposited in the riverbed and the flood plains. The different formations of the area belong to Shivalik Super group and are a mixture of boulders, pebbles, sand, silt and clay. The following sequences have been observed in the area.

1. Soil/Alluvium
2. Sand
3. Gravel
4. Boulder

There is no clear demarcation between the litho units. They have been deposit in a mixed form. The Litho- units exposed in the flood plains belong to Shivalik Super-Group. The mineral Boulders, Gravel and sand have formed by weathering of rocks and then deposition on the flood plains of the rivers originated from the Shivaliks. These

have been washed by rainwater during rainy season and deposited in flood plains and river beds in the form of boulders, gravels and sand of different sizes and shapes. These minerals are sorted by screening. The max depth of the minerals is not known.

Soil/alluvium varying in thickness from 0.5 -1.50m (Av.1.0mts) constitute the top horizons in the area suitable for agriculture. Yamuna River meanders through the area exposing the alluvium and soil at the banks. Sand is found in the river bed. Sand is deposited up to great depths. This bed is presently dry and water flows only during the rainy season The Sand exposed in the River bed of Yamuna and surrounding areas is the product of the deposition of the sediments brought and deposited in the flood plains of River Yamuna. These sediments are of recent geological formation. The litho-units exposed within the river and surrounding areas have formed as water borne sediments brought by flood water during rainy season every year and deposited in riverbed and flood plains. Geological map and section are enclosed as Plate – 03)

3.2.1.3 DESCRIPTION OF FORMATION

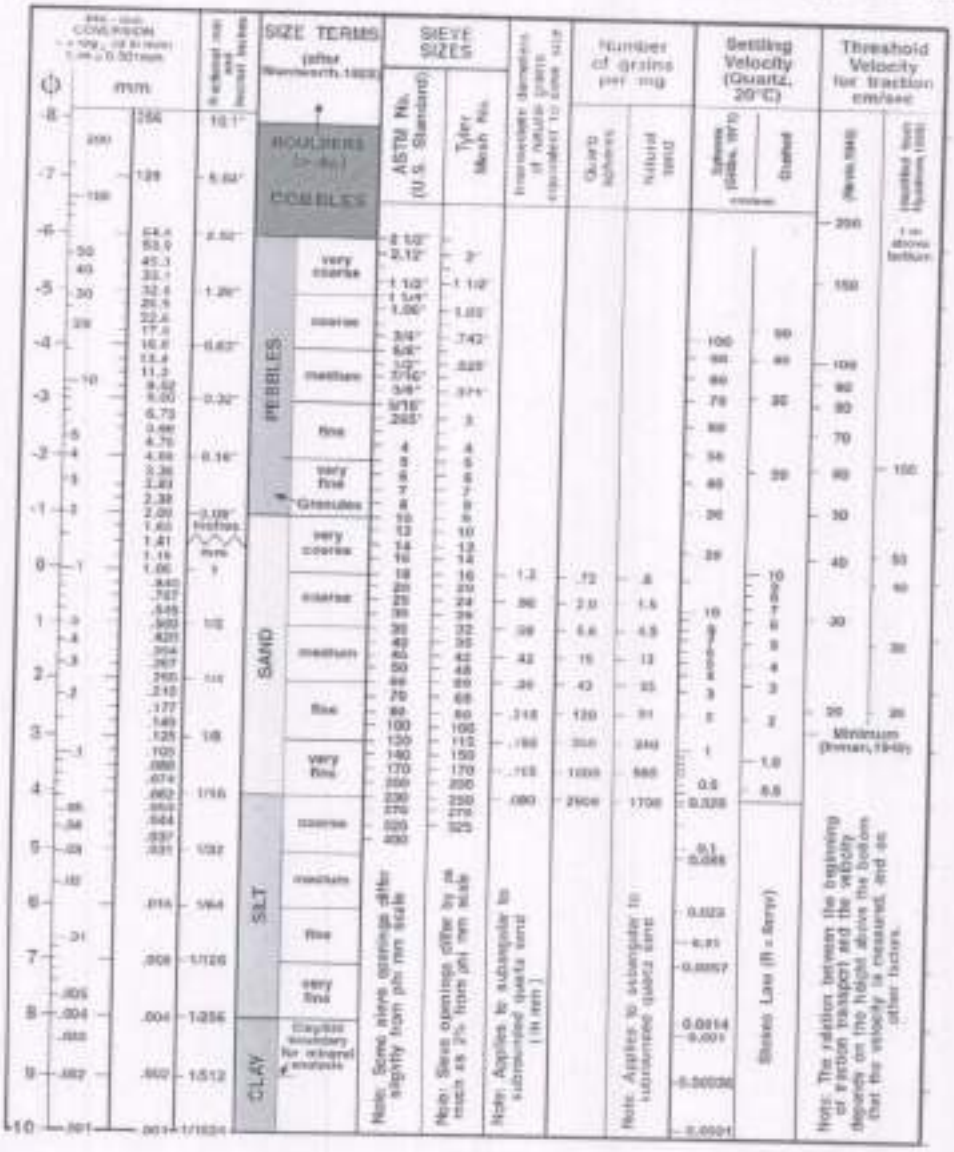
The description of Sand found in the lease area as minor mineral has been as under:

3.2.2 (Sand)

Sediments of various sizes and in mixed form are predominantly deposited in the flood plains of River Yamuna and its tributaries. There is no perfect classification between boulders, cobbles, pebbles and sand. They are deposited in a mixed state. The classification is done by grab mining and the sediments are passed through different sieves in the screening plants.

Sediments of various sizes and in mixed form are predominantly deposited in the flood plains/river bed and there is no perfect classification between sediments. These may be called as coarse sand, medium sand and fine sand. The term sand is used to denote an aggregate of rock grains greater than 1/16mm and less than 2 mm in diameter mineral.

Classification of Sediments (Wentworth-Grain Size-chart)



3.2.5 PHYSICAL & CHEMICAL CHARACTERISTICS OF MINERAL

Technically, the size of boulders varies from 2.52 inches to up to 10.1 inches & pebbles range from 0.08 inches to 2.52 inches. Sand is merely a size category. Sand is particulate matter that's larger than silt and smaller than gravel. Different specialists set different limits for sand: Engineers call sand anything between 0.074 and 2 millimeter, or between a U.S. standard #200 sieve and a #10 sieve.

Soil scientists classify grains between 0.05 and 2 mm as sand, or between sieves #270 and #10.Sedimentologists categorize sand between 0.062 mm (1/16 mm) and 2 mm on the Wentworth scale, or 4 to −1 unit on the phi scale, or between sieves #230 and #10.

In some other nations a metric definition is used instead, between 0.1 and 1 mm. From a geological viewpoint, sand is anything small enough to be carried by the wind but big enough that it doesn't stay in the air, roughly 0.06 to 1.5 millimeters. It indicates a vigorous environment.

COMPOSITION AND SHAPE OF MINERALS

Most boulders, gravels and sand is made of quartz or its microcrystalline cousin chalcedony, because that common mineral is resistant to weathering. The farther from its source rock sand is, the closer it is to impure quartz. But Yamuna sands contain quartz grains, tiny bits of rock (lithics), or dark minerals like lime sand and ferruginous concretions.

The size of the sediments is variable. The grains whether small or large are rounded in shape. Sand is grey, brown in color, coarse to fine grained. The present deposits are of good quality and can be used for building industries. There is no other use of this material.

ORIGIN & CONTROL OF MINERALISATION (ANNUAL REPLENISHMENT OF MINERAL IN RIVER BED/FLOOD PLAINS AREA VIS-Â-VIS SEDIMENTATION)

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs. The term is commonly used as a synonym for sedimentary petrology and sediment logy.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits lay down in different geographic and geomorphic environments.

The factors which affects the "Computation of Sediment":

a) Geomorphology & Drainage Pattern : The following geomorphic units plays important role :

- Structural Plain
- Structural Hill
- Structural Ridge
- Denudation Ridge & Valley
- Plain & Plateau of Gangetic plain
- Highly Dissected pediment
- Un dissected pediment

b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)

c) Drainage System/Pattern of the area (Drainage Density = ...Km/Sq. Km of Yamuna River

d) Rainfall & Climate : Year wise Rainfall data for previous 07 years of Yamuna Basin/River

e) As per Dandy & Bolton study "Sediment Yield" can be related to

i) Catchment Area and

ii) Mean Annual Run-off

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin.

The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found

in abundance. River Yamuna near Dakpathar barrage leaves Uttarakhand and enters Himachal Pradesh.

The Yamuna river is the biggest tributary of the river Ganga in North India. Its source in the Yamunotry glacier at an elevation of 6387 mtrs on South western sides of Banderpooch crests in the lower Himalayan ranges. The overall span of the Yamuna river is 1376 Kms (855 miles) with catchment area of 366223 square km (141,399 square mile). This encompasses 40.2 % of the whole Ganga valley, prior to joining Ganga at Triveni Sangam in Allahabad (UP)

Itinerary of Yamuna River:and its tributries

The river passes through many states such as Uttrakhand, UP, Haryana, going across to HP and then Delhi. With yearly discharge of around 10,000 cubic billion meters (cbm) and consumption of 4400 cbm (of which irrigation comprises 96%), the river represents above 70% of water provision of Delhi. Yamuna water are fairly good quality for its entire span from Yamunotri in Himalayan ranges to Wazirabad in Delhi, the length of which is around 375 Kms.

The origin of Yamuna is situated in the Yamunotri glacier at an elevation of 6387 mtrs on SE sides of Banderpooch crests, which are located in the Mussoorie range of lower Himalayan range in Uttrakashi district of Uttrakhand, to the North of Haridwar. From this place Yamuna runs to South around 200 Kms across the Shivalik mountain ranges and lower Himalayan ranges. A significant portion of its beginning of Drainage basin (with total area of 217.00 square km) is situated in HP and a major tributary sapping the upper drainage basin in the Tons, which is also biggest and most extensive tributary of the Yamuna. Other tributaries in the area are the Rishi Ganga, Giri, Hanuman Ganga, Kunta & Bata, which sap the upper drainage basin of the huge Yamuna river. Subsequently, the river moves down the terrains of Doon basin at Dak Pathar close to Dehradun, in this place water is redirected into a channel for the purpose of electricity generation. Once it goes across the sikh religious place of Ponta Sahib, the river arrives at Tajewala in the Yamunanagar district of Haryana where a dam was constructed in 1873. This dam is the origin of the two major channels or water courses – Eastern

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Yamuna Canal and Western Yamuna Canal and both drain in UP & Haryana. The Western Yamuna Canal (WYC) traverses Karnal, Yamunanagar and Panipat prior to arriving at the Haiderpur water treatment plant, which provides a portion of municipal water provisions of Delhi. The Yamuna also forms natural boundary between the states of Uttrakhand & HP and also amid the states of UP and Haryana. Together with the Ganga to which it flows almost parallel once it meets the Indo-Gangetic plateau, the biggest Alluvial productive area in the World, it forms the Ganges-Yamuna Doab are stretched across 69,000 square Km which is 33% of the whole area.

Table of Drainage Basin area of River Yamuna (square KM/square mile) with % of Drainage Basin

1. HP : 5799/2240 (1.6)
2. UP & Uttrakhand :74208/142 (21.50)
3. Rajasthan :102883/39739 (29.80%)
4. Haryana : 21265/8214(6.5%)
5. Delhi ; 1485/574(0.4%)
6. MP : 14023/5416 (40.6%)

d.) Name of prospecting /exploration agency-

Department of Mines and Geology Haryana has identified potential segments in yamuna river near yamunanagar district found depositional sites for sand. Accordingly department carved sand blocks for auction. Finding it low cost mineral and useful for common man No detailed exploration was proposed in the area .

As per environmental clearance condition no.19 the project proponent will submit annual replenishment studies by an authorized agency and in case the increment is lower than the approved rate of production than the mining activity shall be decreased /stopped accordingly till the replenishment is completed. Accordingly the project proponent appointed t M/S Vardan Environet (A NABET QCI accreditiated organization) Consultant to conduct Replenishment studies following MoEF CC guide lines of January ,2020 .

The study period was during the Pre-monsoon 15th to 20th June, 2020 and Post-monsoon 18th to 21stSeptember, 2020 using following Methodology and approach for studies

Approach & Methodology Followed for Replenishment Study:-

a) Pre-monsoon survey of River bed with the help of GPS and Unmaned Artificial Vehicles (UAV's)/Drone fitted with advance camera

b) Grid pattern 30 m x 20 m (30 m along the length of the river and 20 m along width of the river) or part thereof.

c) To draw pre-monsoon contour map (Base map considered as per approved mining plan)

d) Post-monsoon survey of River bed with the help of GPS and unmanned Drone

e) Same Grid pattern (30 m x 20 m) or part thereof was considered for survey.

f) To draw post-monsoon contour map (Base map considered as per approved mining plan)

g) To draw composite sections of Pre and post monsoon maps. This will determine the depth and volume of sand replenished.

h) Finally to calculate the volume of sand with grid pattern of 30 m x 20 m multiplied by depth of replenishment.

i) The tonnage of replenishment will be volume of sand multiplied by density of sand (which is 2 T per Cubic m)

e.) Details of prospecting/exploration already carried out:

1) Number of pits and trenches indicating dimensions, spacing etc along and across the strike/foliation with reference to geological plan.

Detail of Replenishment studies are places **Annexure -14.**

2.) No. of bore hole indicating type(Core/RC/DTH) diameter, spacing inclination, color level, depth etc. with standard borehole logs duly marked on geological plan and sections

No Bore hole/ DTH /RC/Augur holes are required in view of low priced mineral in shallow deposits.

3) Details of samples analysis.

The Sand deposits are mainly consisting of quartz- feldspar and other flaky minerals constituting mainly silicates thus regular sample of the area are not required in view of low cost mineral as per MEMC Rules 2015.

4.) Expenditure incurred in various prospecting operations.

No expenditure incurred on exploration as mineralization is exposed very well and also further exposed on account of mining pit.

f.) The surface plan of the lease area may be prepared on a scale of 1: 1000 or 1: 2000 with contour interval of maximum of 10 m depending upon the topography and size of the area duly marked by grid lines showing all features indicated under Rule 32(1) of MCDR 2017.

Updated Surface plan dated 14.06.2020 is enclosed as **Plate 3.**

g.) For preparation of geological plan, surface plan prepared on a scale of 1: 1000 or 1: 2000 scale specified under para 1.0 (f) of Part A of the format may be taken as the base plan. The details of exploration already carried out along with supporting data for existence of mineral, locations proposed exploration, various litho-units along with structural features, mineralized/ore zone with grade variation if any may be marked on the geological plan along with other features indicated under Rule 32(2) of MCDR 2017.

Surface Geological plan is enclosed as **Plate-4.**

h.) Geological sections may be prepared on natural scale of geological plan at suitable interval across the lease area from boundary to boundary.

Surface Geological sections are enclosed as **Plate-4.**

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i.) Broadly indicate the future programme of exploration with due justification(duly marking on Geological plan year wise location in different colours) taking into consideration the future tentative excavation programme planned in next five years as in table below: -

The area is fully exposed along the river bed section with the sand resources and also exposed contemporary to mining in past years. Sufficient data are available there to prepare the mining scheme for next five year thus, No additional exploration is proposed in the area

j.) Total Geological, Mineable/ Recoverable Reserves & Resources as per UNFC classification

Proved Reserves

Replenishment Survey by Unmaned Artificial Vehicles (UAV's)/Drone survey technology reveled incremental in reserves estimated 413700 Tons per annum are shown in study report as **Annexure-14.**

- Following special conditions those are applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas are considered while calculating the reserves of this area:

(i) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge on up-stream side and ten times the span of such bridge on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

(ii) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorized by him;

(iii) The maximum depth of mining in the river bed shall not exceed three meter from the un-mined bed level at any point in time with proper bench formation;

(iv) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

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(v) In case of areas permitted for excavation outside river/rivulets i.e. areas adjoining to rivers/rivulets, no mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 metres in case of Tangri, and Ghaggar river and 100 meters on either side of all other rivers/ rivulets;

(vi) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology, a safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf.

vii) The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws.

ix) A barrier of 7.5 m width will be left from the mining area boundary, .

Basis of Mineral Reserves Calculation – outside River channel Area

- Mineral Reserves falling iout side the river bed area has been calculated taking the maximum permissible depth of 3 m from the river bed surface RL.
- The bulk density of Sand is considered 2.0
- Volumetric method is adopted for calculating reserves of Sand.
- The mineable reserves are calculated by deducting "Blocked Geological Reserves on account of river banks, lease boundary, railway line, highways, bridges, anicuts (where ever applicable) from total proved Geological Reserves".
- It is considered that river bed Sand shall be replenished every year as evident from preceding paragraph (3.2.6) on " Annual Replenishment of Mineral in River Bed Area vis-à-vis Sedimentation"

UNFC classification – Codes of UNFC are followed for reserve calculation

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UNFC is a three digit code based system, the economic viability axis representing the first digit, the feasibility axis the second digit and the geological axis the third digit. Each digit provided.

- Codes 1, 2 and 3 in decreasing order. The highest category of resources under UNFC system has code (111) and for lowest category the code is (334).
- Code (111): This code is provided for the economically mineable part of the measured mineral resources (proved category reserves).
- Code (121): This code is provided for the economically mineable part of the indicated mineral resources (probable category reserves).
- Code (211): The part of the measured mineral resources (proved category), which as per feasibility study has not found economically mineable. The reserves blocked in 7.5 meters buffer zone and 50 meters from permanent structure.
- Code (222): The part of the indicated mineral resources (probable category), which as per feasibility study has not found economically mineable. The reserves blocked in 7.5 meters buffer zone and 50 meters from permanent structure.
- Code (333): Tonnage, Grade and mineral contents can be estimated with low level of confidence and resources are also inferred from geological
- The reserves of Sand calculated by volumetric method and are summarized here below:

Table: Geological Reserves

S.No.	Nature of Land	Lease area in Hectares	Total Proved Geological Reserves MT=Grid area x Depth x BD (A)	Block area due to safety barrier and bench slopes	Blocked Geological reserves (B)	Total Mineable Reserves A-B+C for 10 years	Planned Production
1	River Bed	20.18	1210800 T X 10 years =12108000	6.0 ha.	360000x10 = 3600000	8508000	8,50,000 Ton peryear

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k.) Furnish detailed calculation of reserves /resource section wise of reserves

Details of Reserves calculation and blocked reserves under pit slopes and benches and safety barrier are calculated and Reserves as on Sept.2020.

Resources and reserves within the lease have been arrived after applying results /Feasibility /prefeasibility study and economic valuation of deposit based on various factors such as :

a) Mining method, recovery factor, mining losses, processing factor

Open cast mechanized using heavy machineries mining method is proposed and recovery factor for saleable sand is considered s 100% , only no waste is likely to be generated .All sand fractions are saleable

b) Cut off grade, ultimate pit depth proposed

No cut off grade is there as all mineral is saleable

c) Mineral /ore blocked due to benches , barriers, pillars, road, railways, river ,nala, reservoir, Electric line and other statuary barriers, under forest, sanctuaries ,etc. where necessary permissions are not available

Mineral shall be blocked only in safety barrier of 7.5 meter wide green belt and under benche slopes as a part of statutory provisions .Other features like road, nala, reservoir and HT lines are not found in the area.

Depletion of Mineral in last five years period from 01.05.2016 to Sept 2020 are as under

	Past Proposal of ROM	Achieved ROM in T
2016-2017	850000	*Work suspended on account of Hon'ble NGT order
2017-2018	850000	831926
2018-2019	850000	830862
2019-2020	850000	859051
2020-2021	850000	-
Total	42,50,000	2521839

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Anticipated life of mine

It is estimated that the entire mineral mined every year will be replenished. Therefore at the proposed rate of production the life of the mine is >5.0 years

	1)	Estimated mineable ROM being replenished	=	915130 Tons
	2)	Mineable Replenished Tonnage		876510 Tons
	3)	Proposed Production every year	=	850000 Tons
	4)	Depleted reserves in past plan period	=	25,21,839 Tons
	5)	Balance Reserves after replenishment per year	=	915130 Tons
		Anticipated life	=	>5.0 years approx. and more



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PART -B MINING

OPEN CAST MINING:

a.) Briefly describe existing and proposed method of excavation with all design parameters indicating plans and sections

As per previous mining plan some area was broken due to mining activities but the same area is back filled by fresh sand .During the past plan period only 2521839 Tons production was done and the working was suspended due to Hon'ble NGT order for some time . The year wise excavation was replenished in every monsoon season. In view of the same mining activities was continued to next block as per past proposal. On account of regular replenishment the no excavation left open for measurement. Fully mechanized opencast mining method was adopted in this mine to ensure the continuous supply of desired quantity and quality of sand to the nearby consumers in two shift working.

Fresh area doesn't have top soil and overburden so directly sand in loose form loaded to tippers by loaders or by combination of dozer, excavator and dumpers without use of drilling and blasting . The sand is excavated in bench of 3.0 meters or less .The working bench width is kept more than 10 m having pit slope 30°.The sand is loaded by excavator into dumpers.

As per directives of Director General of mining and Geology, Haryana vide order no. DMG /Hy/ Cont./MG east block /YNR B-3/2015/516 dated 5.2.2021 permitted inclusion of associated mineral as Boulder and Gravel with the sand mining contract .The quantity of the ROM comprising of Boulder , sand and gravel will not exceed to 850000.The period of associated mineral will be Coterminous to the original lease agreement . Quantity of boulder and sand will be @27.45 % of ROM i.e.% 2,33,325 tons per annum .

Proposed method of Mining

Mining activity will be carried out by open cast semi-mechanized method. Mining Contract has been allotted for a period of 10 years only. Mining area consist of 20.18 ha area in Mandolai Ghaggar East Block B-3 Block/YNR B-3 out of which about 6.0

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hectares area is under restricted zone. About 14.18 hectare area is free from restriction and therefore there is sufficient area for proposed mining after replenishment. With the addition of Boulder and Gravel in the sand mining contract the methodology and capacity will not be changed.

- No overburden/ waste material will be produced in river bed. No drilling/ blasting are required as the material is loose in nature.
- Light weight excavators will be used for loading of mineral in tippers.
- Proper benching of 1.5- 3.0 m height will be maintained and width of the bench will be around 20 m. The benches shall be maintained in the form of slices/strips parallel to the banks of river.
- Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season.
- Roads will be properly made and sprayed by water for suppression of dust.
- Roads in the mining area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20.
- Extraction activities will start in the blocks from the upstream side to downstream side. This will not obstruct the movement of water, if any, during monsoon period in the river course.
- In case during any period, the replenishment was found less than 1.5-3.0 m or depth of exaction, the mining during said period would restrict to depth which would not be more than 3 m of the original level of the river bed.

Total production envisaged is 2833 MT per day i.e. 113 trips@25Mt/trip). Activities will be carried out as per the production schedule given earlier. The mining quarry will be working as self sustained units with all facilities like site office, rest shelter, first aid and drinking water etc. All these mines will be connected suitably with communication system.

Roads will be properly made and sprayed by water for suppression of dust.
Roads in the mining area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20.

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Year	Production proposed				Area (ha) required per year
	Trips/ day	Total ROM MTPA	Sand Qty. Ton	Boul.+ Gravel Qty. Ton (@27.45)	
2021-22	113	850000	616675	233325	14.18
2022-23	113	850000	616675	233325	14.18
2023-24	113	850000	616675	233325	14.18
2024-25	113	850000	616675	233325	14.18
2025-26	113	850000	616675	233325	14.18

b.) Indicate year-wise tentative Excavation indicating development, ROM, pit wise as in table below•*Bulk Density of mineral is assumed to be = 2.0 T/ m³.*

Annual production proposed= 850000 Tons /Annum (boulder and gravel @27.45 % of Total ROM quantity

Daily production proposed = 2833Tons /day

Production programme is = 113trips/ day @ 25 ton per trip .

Working days have been taken as 300 days per annum.

Projected Production per Year = 300 x2833=850000 Tons (0.85 Million MT)

Table: five Years Proposed Production Details (MT/A)

II) Dump rehandeling (for the purpose of recovery of mineral:

No permanent dump will be re-handled and no dump shall be created during the plan period

c.)Enclose Individual year wise development plans and sections showing pit layouts, dumps, stacks of mineral reject, if any, etc. In case of A category mine .Composite development plan showing pit layout ,dumps stacks , mineral rejects if any and year wise sections in case of B category.

Year wise development plan and section have been prepared as 5A to 5E and sections are also drawn showing all layout, slope ,gradient ,benches and proposed plan



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d. Describe briefly the layout of mine workings, pit road layout, the layout of faces and sites for disposal of overburden/waste along with ground preparation prior to disposal of waste, reject etc.

Lay out of mine working is given in year wise development plan and sections, **(Plate 5A, 5B, 5C, 5D & 5E).**

Details of year wise progression of sand pit, opening RL and closing RL, Haul road from 2021-22 to 2025-26 at the end of each year are as under-

YEAR – 2021-22

During this year, the mining is proposed in same area after replanishment, from top RL 29.5 mRL, and bottom will reach to 291.5 mRL. Benches height will be of 1.5-3.0 meter height and width will be more than 20 meters .Total 850000 T ROM will be produced. Proposed working will be advanced from north to south side in all directions. During the year 14.18 ha. area will be broken. During the period no top soil, No OB is likely be generated. Plantation will be carried out in green belt area and connecting roads to main road in consultation with state govt. departments. Similarly no mineral stock will be maintained as all mineral is directly saleable. Approach roads will be extended up to face with proper gradient of 1:20,

Mining will be carried out without disturbing the River Chanel Geometry, Bed Geomertry, Sub-stratum composition and tubidites. All due care will be undertaken for in-stream biota, loss of riparian in stream biota. No working shall be carried out erosion site of river (Concave Sites) during the plan period. The details of mine layout for the year has been shown on **plate no.5A**

YEAR – 2022-23

During this year, the mining is proposed in same area after replenishment, from top RL 29.5 mRL, and bottom will reach to 291.5 mRL. Benches height will be of 1.5-3.0 meter height and width will be more than 20 meters. Total 850000 T ROM will be produced. Proposed working will be advanced from north to south side in all directions. During the year same 14.18 ha. area will be broken. During the period no top soil, No OB is likely be generated . Plantation will be carried out in green belt area and connecting

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roads to main road in consultation with state govt. departments.. Similarly no mineral stock will be maintained as all mineral is directly saleable. Approach roads will be extended up to face with proper gradient of 1:20 ,

Mining will be carried out without disturbing the River Chanel Geometry, Bed Geomertry ,Sub-stratum composition and tubidites . All due care will be undertaken for in-stream biota , loss of riparian in stream biota .No working shall be carried out erosion site of river (Concave Sites) during the plan period . The details of mine layout for the year has been shown on **(Plate No.5B)**

YEAR – 2023-24

During this year, the mining is proposed in same area after replanishment, from top RL 29.5 mRL , and bottom will reach to 291.5 mRL . Benches height will be of 1.5-3.0 meter height and width will be more than 20 meters .Total 850000 T ROM will be produced. Proposed working will be advanced from north to south side in all directions. During the year same 14.18 ha. area will be broken. During the period no top soil , No OB is likely be generated . Plantation will be carried out in green belt area and connecting roads to main road in consultation with state govt. departments.. Similarly no mineral stock will be maintained as all mineral is directly saleable. Approach roads will be extended up to face with proper gradient of 1:20 ,

Mining will be carried out without disturbing the River Chanel Geometry, Bed Geomertry ,Sub-stratum composition and tubidites . All due care will be undertaken for in-stream biota , loss of riparian in stream biota .No working shall be carried out erosion site of river (Concave Sites) during the plan period . The details of mine layout for the year has been shown on **plate no.5C**

YEAR – 2024-25

During this year, the mining is proposed in same area after replanishment, from top RL 29.5 mRL , and bottom will reach to 291.5 mRL . Benches height will be of 1.5-3.0 meter height and width will be more than 20 meters .Total 850000 T ROM will be produced. Proposed working will be advanced from north to south side in all directions. During the year same 14.18 ha. area will be broken. During the period no top soil , No

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OB is likely be generated . Plantation will be carried out in green belt area and connecting roads to main road in consultation with state govt. departments.. Similarly no mineral stock will be maintained as all mineral is directly saleable. Approach roads will be extended up to face with proper gradient of 1:20 ,

Mining will be carried out without disturbing the River Chanel Geometry, Bed Geomertry ,Sub-stratum composition and tubidites . All due care will be undertaken for in-stream biota , loss of riparian in stream biota .No working shall be carried out erosion site of river (Concave Sites) during the plan period . The details of mine layout for the year has been shown on **plate no.5D**

YEAR – 2025-26

During this year, the mining is proposed in same area after replenishment, from top RL 29.5 mRL, and bottom will reach to 291.5 mRL. Benches height will be of 1.5-3.0 meter height and width will be more than 20 meters .Total 850000 T ROM will be produced. Proposed working will be advanced from north to south side in all directions. During the year same 14.18 ha. area will be broken. During the period no top soil, No OB is likely be generated. Plantation will be carried out in green belt area and connecting roads to main road in consultation with state govt. departments. Similarly no mineral stock will be maintained as all mineral is directly saleable. Approach roads will be extended up to face with proper gradient of 1:20,

Mining will be carried out without disturbing the River Chanel Geometry, Bed Geomertry, Sub-stratum composition and tubidites. All due care will be undertaken for in-stream biota, loss of riparian in stream biota .No working shall be carried out erosion site of river (Concave Sites) during the plan period. The details of mine layout for the year has been shown on **plate no.5E**

f) CONCEPTUAL MINE PLANNING

Exploration proposed.

Mineral is being replenished by river Yamuna sediments and lying adjacent to river bed in post monsoon period , so exploration is not required as low cost commodity minor mineral. Exploration will not be required up to the conceptual period of mining scheme.

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(i) Mine area will be worked in blocks for ease of operation. However, as the digging depth will be restricted to 1.5-3.0 m only in river bed and material will still be available below. This will be further replenished during rainy season. Blocks will be worked systematically as the width is limited while length is much more.

(ii) Sequence of working has been shown on Plate no –4. As the mining contract period is only 09 years, some of the area will be left un-worked at the end of contract period.

(iii) Final Slope Angle To Be Adopted

Height of the bench is limited to 1.5-3.0 m only and width will be more than the height of the bench. Bank side natural slope will not be disturbed. This will prevent collapse of bank and erosion. During plan period workings will be carried out in the designated khasras only & workings will ensure safety, remove congestion of vehicles and will have better control and management. The final slope angle of the benches at conceptual stage will be 30 ° and haul road gradient will be maintained to 1:20. At plan and section at xxxx mRL is shown on the **Plate no.6**

(iv) Ultimate Capacity Of Dumps

There will be no burden removal / generation during the plan period. Therefore no site is designated for dumps.

a) Land use Pattern of Mining Area at Various Stages

Land use pattern will be as follows:

S.No.	Particulars	Present Land Use (ha)
1	Restricted Safety Zone/7.5m mining area boundary	6.0
2	Infrastructure (Office, temp. Shelters etc.)	0.0
3	Area available for mining	14.18
4	Unworked	0.00
	Total	20.18

LAND USE PLANING AT THE END OF LEASE PERIOD

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Sr.No.	Particulars	At the end of 5th year (ha)
1	Safety Zone 7.5m mining area boundary, /restricted area	6.0
2	Infrastructure (Office,temp. Shelters etc.	0.0
3	Reclaimed area	14.18
4	Unworked	0.00
5	Plantation*(Out side)	0.0
	Total	20.18

*Plantation in 1.0 ha land will be done under social forestry on restricted area/outside lease boundary and land available from Panchayat by the end of mine life

* Plantation & infrastructure in restricted area only

Generation of Top soil & its preservation

No top Soil will be available up to the conceptual period, if any negligible quantity will be used as and when required for plantation .

Post mining land use & reclamation:-

The reject and waste generation from year 2021-26 will be almost Nil/ negligible thus back filling will not be possible. However the plantation at green belt will be done at village area / roads and govt. premises .This will be undertaken under specific permission from the Govt. Department. About 2.5 hect. area will be covered under green belt plantation by local species. In all 33% lease will be covered by afforestation as per EIA guide lines

Year wise plantation proposals for next five years.

Year	No of plants	Area	Survival rate	Species of plants
2021-22	1250	0.50	About 90%	Arjun, Karanj, Mango, Jamun, Imli, Peltafar, Acacia, Kathal, Cenmia, Neem, Gulmohar and other local species
2022-23	1250	0.50	About 90%	--Do--
2023-24	1250	0.50	About 90%	
2024-25	1250	0.50	About 90%	

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2025-26	1250	0.50	About 90%	
Total	6250	2.50		--Do--

PROTECTIVE WORK FOR ENVIRONMENT:-

1. Water will be sprayed on haul road to arrest the dust particles.
2. Regular Air, water and noise monitoring will be done.
3. Plantation will be done to dampen the dust and noise.
4. Proper maintenance of all machinery will be carried to minimize the noise levels
5. Only trained operators will be allowed to operate,
6. All machines will be used at optimum capacity
7. Heavy earth moving machineries will be used under the strict supervision of certified personals
8. Workers and operators working near machine sites will be provided with PPE's.
9. Mining will be restricted to 3 meter above the water in river channel
10. No aquatic floura and fauna will be disturbed
11. Pit slope will be maintained to 30° in view of loose mineral, it will be strictly ensured to maintain slope low for better safety to avoid failure of slope by mining.
12. Proper gradient will be kept along slopes and ingress of any unauthorized person shall be restricted.
13. Ear muff fitted Helmets & safety shoes will be provided to workers.

iii.) EXTENT OF MECHANIZATION

In view to produce 0.850 million ton from the mining area the project proponent has already obtained the permission from DGMS to use heavy machineries .Following assumptions are considered for computation of mechanization:

S.no.	Assumptions	Unit
1	No. of shift per day	2
2	No. of working day	300
3	Bulk density of sand/boulder/gravel	2.0

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4	Availability of equipments	75%
5	Fill factor of excavator bucket	0.80
6	Hours of working per shift	6.00

Loading /excavating equipments

The number of loading/excavating equipment as envisaged to be provided is given below in view of enhanced rock volume , the calculation in terms of adequacy of equipments are given below-

Requirement of Excavators:

Annual proposed Sand in tones = 850000 Tons

S.No.	Particular	Capacity	No.
1	Total no of working days	300	
2	Excavators	2.0 M^3	3
3	Hydraulic excavator capacity	2.0 M^3	
4	Dumper Capacity 25.0Tons	25.0Tons	18
5	Water Tanker	4000 liters	2
6	Light vehicles	1	1
7	Maintenance van	1	1

Thus 3 shovels +1 standby will be required to meet the current production

Requirement of Dumpers

The produced ROM shall be sold from the ex pit thus the trucks will be deployed as per the demand. As per targeted quantity 113 nos. of trucks of 25 Ton capacity per day will be required to transport the production

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C. List of Machineries owned by company

The Project proponent has deployed a fleet of heavy machineries, its capacity, make and no. are tabulated as under :

Sr. No	Make	Description	Units
1	Local	Water tankers	1
2	Ashok Leyland	Dumpers	113
3	local	Compressor	1
4	Kirloskar	Pumps	1
5	Maruti	Service van	1

The company has sufficient fleet of machineries to meet the production and development requirements. Additional machinery and trucks will be on hired basis as and when required.

DRILLING & BLASTING

Not applicable

A. UNDER GROUND MINING

Not applicable, it is an open cast mine

3.0 MINE DRAINAGE

The River Yamuna flows from N to S which originates from the Himalayas provides the major drainage in the mining area. The general slope of the land surface is From E-W and elevation of the mining area varies from 261.40 mRL in the north end side of the mining area to 260.15 mRL in south end side of the mining area. There is flow of water in the river bed in a narrow area in post monsoon period. Area is having 1067 mm rainfall in a year. During rainy season, catchment water flows in the river. During dry period the Sand is excavated which gets replenished during rainy period. No mining activities will be carried out during rainy season when there is water flowing in the working area. There will be no intersection of water table as working will be carried out upto 3.0 m depth only from surface of river bed while the water level is 5 -10 m below the surface of river bed.

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3.1 Drainage around and within mine:

The mining area will become a depression, which warrants accumulation of water during rainy season. The pit will become a depression and will help in faster recharge of water in the aquifer

3.2 DEWATERING:

Since the depth of mining proposed is only 1.5-3.0 meters near the river bed, the same being above the water table of the area, there will be no chance of encountering the ground water table during the mining operations. No dewatering of the ground water is proposed.

3.3 Water Requirement

The requirement of water for the project will be as under and it will be sourced through hired tankers and locally tube wells

Sr.no	Activity	Requirement in KLD	Source
1	Dust suppression	10.0	Hired Tankers
2	Drinking	2	Hired Tankers
3	Green belt	3	Hired Tankers
	Total	**15.0**	

a) Minimum and maximum depth of water table based on observations from nearby wells and water bodies

The River Yamuna flows from N to S which originates from the Himalayas provides the major drainage in the mining area. The general slope of the land surface is From E-W and elevation of the mining area varies from 261.40 mRL in the north end side of the mining area to 260.15 mRL in south end side of the mining area.The proposed

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production for the five years is @ 850000 TPA. The ultimate pit limit is 3 m bgl or 2 meter above water table whichever comes first

There is flow of water in the river channel in a narrow area in post monsoon period. Area is having 1067 mm rainfall in a year. During rainy season, catchment water flows in the river. During dry period the Sand is excavated which gets replenished during rainy period. No mining activities will be carried out during rainy season when there is water flowing in the working area. There will be no intersection of water table as working will be carried out upto 1.5-3.0 m depth only from surface of river bed while the water level is 5 -10 m below the surface of river bed.

b) Indicate maximum and minimum depth of Workings.

During the plan period the depth of mining at the end of year 2021-26 working will be up to 291.50 mRL, i.e 3 mtr above from ground water level So water level will not be intersected .

c) Quantity and quality of water likely to be encountered, the pumping arrangements and places where the mine water is finally proposed to be discharged

The quality of water analyzed is observed with in permissible limit. No toxic elements have been observed in the water. The water is drinkable and potable. Water quality report is enclosed herewith as **Annexure -9 .**

d) Describe regional and local drainage pattern. Also indicate annual rain fall, catchments area, and likely quantity of rain water to flow through the lease area, arrangement for arresting solid wash off etc.

The area does not have any other source of water except river or manmade (Public water supply system), so the Rain water is the only source of water to meet the domestic and industrial need of company establishments.

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4.0 STACKING OF MINERAL REJECT /SUB GRADE MATERIAL AND DISPOSAL OF WASTE

a) Indicate briefly the nature and quantity of top soil, overburden / waste and Mineral Reject to be disposed off.

Type of waste generated during the year.

1. No top Soil found in area.
2. Mineral sand consisting of rounded to sub subrounded fine rock of sub Himalayan region .
3. No mineral subgrade / Reject found in the river bed

b) The proposed dumping ground within the lease area be proved for presence or absence of mineral and be outside the UPL unless simultaneous backfilling is proposed or purely temporary dumping for a short period is proposed in mineralized area with technical constraints & justification.

No external sand/gravel is dump is proposed. All the waste & OB will be dumped at periphery for temporary period in the lease area. After complete exhaustion of mineral in the area backfilling will be done with the available waste and plantation will done by spreading top soil over it.

Maximum Height & Spread of the Dump :

During plan period no waste dump shall be made, the waste generated during period of mining scheme shall be used in selling as associated mineral as per permission granted by Mines department .

c) Attach a note indicating the manner of disposal of waste, configuration and sequence of year wise build up of dumps along with the proposals for protective measures.

It will not be required no OB /waste will be generated. all mineral is saleable .

5.0 USE OF MINERAL AND MINERAL REJECT

a) Describe briefly the requirement of Mineral :

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The main mineral is sand , Boulder and Gravel hence the entire mineral sand of this mine is used for construction purpose only and source material for production of sand aggregates of different sizes .

b) Give brief requirement of intermediate industries involved in upgradation of mineral before its end-use.

Not applicable

c) Give detail requirements for other industries, captive consumption, export, associated industrial use etc.

The sand produced from the mine is being used in the manufacturing of aggregates by crushers , which are located near by the lease area.

e) Give details of processes adopted to upgrade the ROM to suit the user requirements.

Not applicable

6.0 PROCESSING OF ROM AND MINERAL REJECT

a) If processing / beneficiation of the ROM or Mineral Reject is planned to be conducted, briefly describe nature of processing / beneficiation. This may indicate size and grade of feed material and concentrate (finished marketable product), recovery etc.

The overall quality of ROM boulder, sand and gravel is suitable for manufacturing of sand aggregate construction purpose and filler purpose. no mineral will be sub grade , all sized sand will suitable for supply to the customers ,hence no beneficiation / processing will be not required at the mine site .As masonry sand is low cost mineral Thus no beneficiation investigation has been proposed.

6.10 EXISTING METHOD OF BENEFICIATION:

Crushing: There is no mineral crushing , screening and beneficiation facility set up with the mine lease area M/S JSM Foods Private Limited has planned direct sell of ROM to nearby construction sites .

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b) Give a material balance chart with a flow sheet or schematic diagram of the processing procedure indicating feed, product, recovery, and its grade at each stage of processing.

All sizes of crushing will be saleable including fine dust .thus 100 % ROM and processed material will be balanced, no loss is anticipated .

c) Explain the disposal method for tailings or reject from the processing plant.

Not anticipated tailing or rejects

d) Quantity and quality of tailings /reject proposed to be disposed, size and capacity of tailing pond, toxic effect of such tailings, if any, with process adopted to neutralize any such effect before their disposal and dealing of excess water from the tailings dam.

Not applicable

e) Specify quantity and type of chemicals if any to be used in the processing plant.

Not applicable

f) Specify quantity and type of chemicals to be stored on site / plant.

Not applicable

g) Indicate quantity (cum per day) of water required for mining and processing and sources of supply of water, disposal of water and extent of recycling. Water balance chart may be given.

Total water requirement for the proposed working will be 15.0KLD per day for dust suppression and drinking purpose, as such there is no tailing /waste water discharge . Water balance chart is attached as **Annexure-12.** The Permission Consent to establish and consent to operate has been obtained from HSPCB ,Govt. of Haryana.

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7.0 OTHER

a) SITE SERVICES

(A) A well constructed mine manager office, stores, First aid center, rest shelters, toilets, drinkable water facilities, canteen facilities and workshop have already been provided for this lease area and within the adjoining lease area of 300 meters. Proper space is available to keep the registers and records during working hours.

(B) visiting doctor facility is provide located in the plant area, So only first aid kits & first aid box are proposed at mine site for giving first aid to the injured persons if, any. Record of pre and during medical examination is kept, and no health hazard is found during the mining working

(C) A well equipped workshop and repair facilities are available for carrying out preventive maintenance, minor and major repairs, rebuilding and complete overhauling of mining equipment.

(D) Permanent facility for workmen, guest houses are within 5 km from Pichopa mine site .Further additional all facilities, Gramin bank, post office, hospitals etc are available at Mandolai and Yamunnagar .

b) EMPLOYMENT POTENTIAL

Following statutory and workmen employed are employed at the mine in site two shift working

S. No.	Category	Numbers
1	Mines manger	1
2	Foreman/mates	2
3	Skilled personnel	10
4	Semi-skilled personnel	20
5	Unskilled	8
Total		40

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The existing man power will remain continue and additional man power will be deployed as per requirement.

8.0 PROGRESSIVE MINE CLOSURE PLAN UNDER RULE 27 OF MCDR' 2017

This is an existing area being worked by mechanized way, in lease area of 20.18 hect. falls in Topographic sheet no. H43W2 falling near village Mandolai , District Yamunanagar .A key plan of lease area and surrounding area with 5.0 kms radius is marked .The total leases area is barren land as per revenue records of the mine. There is no protected forest, reserve forest and archeological monument in the granted area..The same has been recovered and being used under due permission from the state govt.

REVIEW OF IMPLEMENTATION OF MINING PLAN INCLUDING FIVE YEAR PROGRESSIVE CLOSURE PLAN UP TO FINAL CLOSURE OF MINE

8.1 Reason of closure: It is a granted area and minerisation is replenished every year so during plan period closure action is not proposed. Unrestricted area is back filled with minerals and closure is not proposed considering mineral conservation and extraction.

8.1.1 Statuary obligation:

1. The project proponent is working while taking all safety measures and compiling all statuary obligations of MMR 1961, MMD&R ACT.1957,IE Act. 1884 and Air(prevention and control of pollution) Act.1981 and water (prevention and control of pollution) Act.1981 etc.
2. The mining contractor is bound to submit the Progressive mine closure plan either with Mining plan or Scheme of Mining.
3. Mining contractor is bound to follow the terms and conditions as will be stipulated in the mining contract.
4. In addition to it the rules pertaining to the Protection of Environment i.e Environment Act. Environment Rules and other associated rules for the protection of environment will have to be followed.

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5. During the course of mining the rules stipulated in Mines Act, Mines rules Metalliferous Mines Regulation 1961 and Haryana Minor mineral concession storage transport and prevention of illegal mining Rules -2012 will be followed.

6. All other rules pertaining to the mining existing at that time will be followed during the course of mining activities.

8.1.2 Closure plan preparations

Name, address and registration number of the recognized persons who prepared the progressive closure plan and name and address of the executing agency who is involved in the preparation of progressive mine closure plan.

Kireet Acharya

Regd. No RQP/AJM/230/2003/A (Annexure-13)

8.1.3 Regional Geology, local geology ,Reserves and Method of mining already described

8.1.3 Environment Base line information: Details of status of baseline Information with regard to Existing land use pattern indicating the area degraded due to mining, roads, processing plant, workshop, township etc are shown in tabular form.

8.1.4 EXISTING LAND USE PATTERN

The lease area is falling in govt. land (20.18 hect.), others type of land is not found in the area . total lease area the mineralized area and part of area is broken for mining purpose .The present land use pattern of the lease area is tabulated as follows: -

Sr.No.	Particulars	Present Land Use (ha)
1	Restricted Safety Zone/7.5m mining area boundry	6.0
2	Infrastructure (Office, temp. Shelters etc.	0.00
3	Area available for mining	14.18
4	Unworked	0.0
	Total	20.18

LAND USE PLANING AT THE END OF LEASE PERIOD

Sr.No.	Particulars	At the end of 5th year (ha)
1	Safety Zone/7.5m mining area boundry,	6.0
2	Infrastructure (Office,temp. Shelters etc.	0.00
3	Reclaimed area	14.18
4	Unworked	0.0
5	Plantation*	0.0
	Total	20.18

Plantation 1.0 Ha. out side along road, village*

*Plantation in 1.0 ha land will be done under social forestry on land available from Panchayat by the end of mine life

* Plantation & infrastructure In restricted area only

8.1.2 Water regime

The area constitutes almost alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The elevation of the area above mean sea level is about 260.6 mRL. The general slope of the area is southwards. Area is having 1076 mm rainfall in a year. During rainy season, catchment water flows in the river.

There will be no intersection of water table as working will be carried out upto 3.0 m depth only from surface.

8.1.3 Water Quality

The area constitutes almost alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The elevation of the area above mean sea level is about 260.6 mRL. The general slope of the area is southwards. Area is having 1076 mm rainfall in a year. During rainy season, catchment water flows

in the river. There will be no intersection of water table as working will be carried out upto 1.5- 3.0 m depth only from surface.

8.1.4 Quality of air, ambient noise level.

The air noise level is much below the permissible level. Quality of air, water & Noise is monitored regularly at defined stations. The results of the study show that the observed values of base line information are within limits with reference to standard parameters. Air, water & Noise monitoring reports are enclosed as **Annexure-8-11.**

8.1.5 Air Quality Management:

The proposed mining method is not likely to produce much of dust and fugitive emissions to cause damage to ambient air quality of the area. Workers will be provided with personnel protective equipment like face mask, ear plug/ muffs.

For air pollution management at the progressive mine closure of mine, green belt will be developed to prevent and control air pollution.

8.1.5. Waste Management:

As stated in mining method, there will be no waste of any kind. Therefore no waste management s required.

8.1.6 Top Soil Management

There will be no top soil in the river bed. Therefore no top soil handling is needed.

8.1.7 Tailing dam management

There is no proposal of beneficiation of mineral. No tailing dam is envisaged.

8.1.8 Infrastructure:

The infrastructure facilities like site office, first –aid station, rest shelter/ store, drinking water etc. will be established temporarily. At the time of closure there will be no problem to remove the same from the lease area..

8.1.9 Disposal of mining machinery:

Machinery is proposed on hire basis. Hence no decommissioning of mining machinery is proposed.



8.1.10 Safety & Security:

1. Safety measures will be implemented to prevent access to excavation area by un-authorized persons as per Mine Act 1952, MMR 1961.
2. Safety measures will be implemented as per Mine Act 1952, MMR 1961, Mines Rules 1955.
3. Provisions of MMR 1961 shall be followed strictly and all roads shall be 10 m wide and have a gradient of not more than 1 in 20.
4. Excavation will be not more than 3 m in river bed.
5. Width of bench will be kept around 20.0 m for ease of operations and provide sufficient room for the movement of equipments.
6. Protective equipment like dust masks, ear plugs/ muffs and other equipments shall be provided for use by the work persons.
7. Notices giving warning to prevent inadvertent entry of persons shall be displayed at all conspicuous places and in particular near mine entries.
8. Danger signs shall be displayed near the excavations.
9. Security guards will be posted.
10. In the event of temporary closer, approaches will be fenced off and notice displayed.

4.10 Disaster Management and Risk Assessment:

This should deal with action plan for high risk accidents like landslides, subsidence, flood, inundation in underground mines, fire, seismic activities, tailing dam failures etc. and emergency plan proposed for quick evacuation, ameliorative measures to be taken etc. The capability of lessee to meet such eventualities and the assistance to be required from the local authorities should be described.

- The shallow depth of activities outside the river bed mining will not involve any high risk accident due to side falls/collapse.
- There will be no mining whenever there is flow of water.
- The complete mining operation will be carried out under the Management and control of experienced and qualified Mines Manager having Certificate of Competency to manage the mines granted by DGMS.

- All the provisions of Haryana Minor Mineral Concession rules , Mines Act 1952, MMR 1961 and Mines Rules 1955, and other laws applicable to mine will strictly be complied with.
- During heavy rainfall the mining activities will be closed.
- All persons in supervisory capacity will be provided with proper communication facilities.

Competent persons will be provided First Aid Kits which they will always carry.

8.11 Care and Maintenance during Temporary Discontinuance:

In case of any temporary discontinuance due to court order or due to statutory requirement or any other unforeseen circumstance following measures shall be taken for care, maintenance and monitoring of conditions.

- Notice of temporary discontinuance of work in mine shall be given to the DGMS as per the MMR 1961.
- All the mining machinery shall be shifted to a safe place.
- Entrance to the mine or part of the mine, to be discontinued shall be fenced off. Fencing shall be as per the circular 11/1959 from DGMS.
- Security Guards shall be posted for the safety and to prevent any unauthorized entry to the area.
- Carry out regular maintenance of the facilities/area detailed below in such a way as would have been done as if the mines were operation:
  1. Mine roads and approach roads,
  2. Fencing on approach roads,
  3. Checking and maintenance of machines and equipment,
  4. Drinking water arrangements,
  5. Mine office, first aid stations etc.
- Competent persons shall inspect the area regularly.
- Air, water and other environmental monitoring shall be carried out as per CPCB and IBM Guideline.
- Care and upkeep of plantation shall be carried out on regular basis.

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- Status of the working and status monitoring for re-opening of the mines shall be discussed daily.

In case of discontinuance due to any natural calamities/abnormal conditions, mining operation will be restarted as early as possible after completing rescue work, restoring safety and security, repairs of roads etc.

8.2 IMPACT ASSESSMENT:

8.2.1 Land area indicating the area likely to be degraded due to quarrying, dumping, roads, workshop, processing plant, tailing pond/dam, township etc.

Due to mining activities, the present land use pattern will be definitely change, the land will be degraded as pit size will increased & waste removed during mining operation will be systematically backfilled with the balance waste .The disturbed area due to mining , transportation , and temporary infrastructure will be levelled and put use for regressing as per MoEFCC notification 2020

Land use pattern after end of the five year scheme period will be as follows.

S no.	Particulars	Area put on use at end of mining scheme
1	Area under mining	14.18
2	Storage for top soil	0.00
3	Waste dump	0.00
4	Mineral storage	0.00
5	Infrastructure -workshop, Administrative, building etc.	0.00
6	Roads	0.00
7	Railways	0.00
8	Tailing pond	0.00
9	Mineral Separation Plant	0.00
10	Afforestation	0.00
11	Others (Green belt)	6.0
12	Undisturbed area	0.0
	Grand Total	**20.18 hect.**

The likely depth of the pit at the end of mining scheme period will be up to 291.5 mRL.



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8.2.2 Impact on Air Environment

The mining activity does have some impacts on air quality. The major contribution to the air pollution by sand mining is the rise in Suspended Particulate Matter (SPM) due to generation of dust by movement of fleet of dumpers, trucks, jeep etc. Transportation will also give rise to generation of NO_x and SO_2. Heavy vehicles cause emission of NO_2, SO_2 and CO. To prevent air born particles at the time of loading water spraying over haul road will be done . Within sand mining pit area where water sprinklers are not installed, water spraying by water tankers are done to prevent dust generation. Periodical Air sampling and analysis is done by NABL labs and the results are within the range. **(Annexure -8)**

8.2.3 Impact on Water Environment

The mining operations will not interfere with natural drainage pattern and river channel will not be obstructed in any case .

The water will pass freely during rainy season through broken block area and backfilled by sand and gravel .No waste dumps are there thus the quality of water and mineral will be deteriorated. In absence of toxic minerals, the quality of water will not get any adverse impact.

In order to avoid soil erosion & carry-over of the material with rain water,bank slope is kept to 30° , which is on quite safer side . Rain water from pits , river channel , pit sumps, shall be not pumped out and no water reservoir shall be made .Water in small quatity shall be brought through the open aqua duct. The water will seep to river channel owing to high porosity and permeability of sand and gravel . Thus there will be no loss of water periodical water sampling and analysis is done by NABL labs and the results are within the range.**(Annexure -9)**

8.2.4 Impact on Noise levels

In Mine area noise level will be is increased by movement of dumpers , loading of minerals by excavators , and Movement of LMVs etc. The noise level in the working environment are compared with the standards prescribed by Occupational Safety and

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Health Administration (OSHA-USA) which has been adopted and enforced by the Govt. of India through model rules framed under Factories Act. These standards have been established with emphasis on reducing the hearing loss and consequential effects. The summary of the permissible exposures in cases of continuous noise as per above rules is give below:-

Noise at lower levels (sound pressure) is quite acceptable and does not have any bad effect on human being but when it is abnormally high, it incurs some maleficent effects on human beings. Sufficiently loud noise may cause the following adverse effects:-

(i) Damage hearing and health,
(ii) Interfere with work task,
(iii) Interfere with speech communication,
(iv) Cause irritation,
(v) Affect inter-room privacy,
(vi) Interfere with sleep,
(vii) Cause annoyance,

Noise survey is done regularly. Report of Noise survey is attached All the HEMM operators have been provided with ear muff mounted Helmet, also they have been trained & motivate to use them. Periodical Noise monitoring is being done by NABL labs and the results are within the range .**(Annexure -10).**

8.2.5 Vibration levels (due to blasting)

No blasting will be there and movement of heavy machinery will cause vibration effect negligible. It is not proposed to periodically measure / monitoring of ground vibrations,

..

8.2.7 Impact on Acid mine drainage

No acid mine drainage is expected.

8.2.8 Impact on Surface subsidence

No surface subsidence is expected.



8.2.9 Impact on Socio-economics

The mining of and Boulder ,sand and Gravel will promote the construction activities in the region and will create direct and indirect employment opportunities to 500 peoples. It has not only helped in improving and developing the infrastructure of the area but also changed the economic pattern of the area. M/S JSM foods Private Limited has made provided rental accommodation to employees with all basic amenities. Plantations, light and drinking water and coolers are provided under, Schools, post office, bank, hospitals, shopping center, facilities are available at nearby village .

Due to mining activities no evacuation of human settlement is involved. The mining operations will not cause any adverse impact on socio economic environment of the area. The Social & Demographic Profile of the area improves by having an economic activity near the villages by direct and in direct jobs.

8.2.10 Historical monuments etc.

There is no historical monument, place of worship falls in the buffer and core zone .

ENVIRONMENT MANAGEMENT PLAN

9.0 MEASURES TAKEN AND TO BE TAKEN FOR LAND RESTORATION, RECLAMATION AND PLANTATION IN/ OR NEARBY MINING AREA

- Envisaged mining operation will be carried out in the River bed area only. There will be no mining activities when there is flow of water in the working zones. During rainy season, the mining activities will be stopped, if there is flow in the mine.
- Besides resource extraction, following activities will be kept in view:

a) Protection and restoration of ecological system

b) Prevent damages to the soil erosion in the nearby bank areas by making soil banding on the lease boundary

c) Protect riverine configuration such as bank erosion, change of water course gradient, flow regime etc.

d) Prevent contamination of ground water

Safeguard Measures

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While carrying out mining activity following measures will be taken:

- Mining activities will be carried out only in dry bed. No in stream mining will be practiced.
- Identification of river stretches for mining will be completed.
- There will be no mining near the banks and same would be restricted with central 3/4th of the river bed. This is to protect the bank erosion and river migration.
- Mineral Sand ,Boulder and gravel from river will be restricted to a maximum depth of 3.0 m from the existing bed level. This is for safety and sustainability.
- As the mining area is quite large and long in length, systematic extraction will be carried out to prevent seasonal scouring and enhanced erosion.
- Extraction will be carried out in a manner that there is no obstruction to flow of water, if any, during rainy season.
- A gap area will be left at every 50 meter to increase erosion , sand flow ,caving as per sand mining guide lines 2020

Mining on the concave side of the river channel would be avoided to prevent bank erosion. Similarly meandering segment of river will be selected to prevent natural eroding banks and to promote mining on natural building (aggrading) meanders component

Reclamation of Mined out Area

There is no generation of OB/ waste material in case of river bed mining. No backfilling has been proposed in the excavated zone in river bed. River bed will be replenished by sediments during rainy season in due course , no additional input is required .

9.1 GREENBELT DEVELOPENT

In order to restore the environment and ecological balance in the area affected by mining, a forestation is considered to be an effective measure. Afforestation is a major thrust area in pollution control of mining. Afforestation is suitable for detecting, recognizing and reducing air pollution effects. Tree functions as sinks of air pollutants, besides their bio-aesthetical values, owing to its large surface area. The green belt supplements Oxygen to the atmosphere and combat air pollution effectively and

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aesthetic beauty and landscape of the area improves. It also checks soil erosion and make eco-system and climate more conducive.

Following factors will be considered while selecting species for plantation:-

i) Fast growing plant species shall be preferred.
ii) The plant will be of deep rooting system.
iii) The plant will be perennially green to improve aesthetic beauty of the area.
iv) The plant species will be adoptable to the local climatic conditions.
v) Native plant species will be planted.

Afforestation programme shall be carried out basically, along the mine boundaries and roads as permitted by land owners. The mining area is devoid of any vegetation, will not cause any harm to riparian vegetation cover. It is proposed to have plantation on both sides of the roads as greenbelt to provide cover against dust dissemination. As per EIA guide lines 33% area of lease will be taken for Plantation, social forestry programme in villages, school and the areas allocated by the Panchayat/State authorities.

Native plants like Neem, shisham, Mango and other local species will be planted. A suitable combination of trees that can grow fast and also have good leaf cover shall be adopted to develop the greenbelt. It is proposed to plant 6250 no's of native species along with some fruit bearing and medicinal trees during the plan period.

YEAR WISE GREENBELT PROGRAMME

Year	Saplings to be planted	Survival 80 %	Species	Place of Plantation
2021-22	1250	1000	Neem, Mango, Shisham, Sirish, Babool, Gulmohar	Along the roads, in schools and public building and other social forestry programme.
2022-23	1250	1000		
2023-24	1250	1000		
2024-25	1250	1000		
2025-26	1250	1000		
Total	6250	5000		

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11.0 MEASURES TAKEN AND TO BE TAKEN FOR PROTECTION OF ENVIRONMENT IN AND AROUND MINING AREA

- Mining activities will be confined to 3.0 m depth .
- All link roads from the mining area to the tar road will be properly sprayed with water for dust suppression.
- Greenbelt and plantation on road side will help in dust suppression and will also reduce noise level.
- Plantation will improve ecology and aesthetic beauty of the area
- Measures will be taken to prevent the workings from extending in safety zones, cutting the banks and exceeding 3.0 m depth limit from the river bed surface.

12.0 MEASURES TAKEN AND TO BE TAKEN FOR DUMPING OVERBURDEN, STACKING OF TOP SOIL AND UTILIZATION OF TOP SOIL

There is no top soil in the river bed mining. If any soil is required to be removed the same will be used to strengthen the river banks.

13.0 MEASURES TAKEN AND TO BE TAKEN FOR THE CONTROL OF WATER, NOISE AND AIR POLLUTION

Air Pollution:

Emission of gases and dust takes place due to movement of vehicles. Spraying of water and plantation along the road side prevents the spread of dust. Plantation also acts as barrier for restricting pollution. Impact on air environment has been assessed taking in to consideration the proposed production and increase emissions. The sources of air pollution are given below:

- Operation of mining machinery/ loading operations
- Transportation of mineral
- Wind erosion from barren area and river bed
- Emission of gases and dust due to movement of vehicles

MEASURES FOR DUST SUPPRESSION & CONTROL OF AIR POLLUTION:

Control of Air Pollution Due To Dust, Exhaust Emissions or Fumes During Mining or Processing Operations For Minor Mineral & Related Activities and Containing the Same Within Permissible Limits Specified Under : -

1. Anti Smog gun will be used for dust suppression
2. Plantation road side as it will prevent the spreading of dust.
3. Water spraying will be done twice in a day over the haul road & roads leading to adjoining state roads.
4. Dust respirators will be provided to the operators of the heavy earth moving machineries.
5. Preventive maintenance shall be carried out of equipment.
6. At every work place where, the air borne dust generated, to be sampled and the concentration of the respirable dust will be determined regularly. If any measurement at any workplace and at source, the concentration in excess of 50% or 75% of the available concentration of permissible limit then measurements shall be carried on, at intervals not exceeding 3 months or 1 month respectively.
7. Silencers will be fitted to the dumpers.
8. All plying vehicles will be certified for PUC

The following table indicates the concentration of Ambient Air as per the CPCB guidelines:

Air pollutants released during production can be checked by:

- Dust suppression system/ water spraying would be adopted at mine working and loading points
- Excavation operations to be suspended during very strong wind conditions
- Afforestation will be carried out for control of dust
- Plantation with wide canopy trees along approach road will help in dust suppression

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- Persons to be provided with dust mask and other personal protective equipments, particularly during summer months and dust storm periods

Transportation

- Regular water spraying on haulage roads during mineral transportation by water sprinklers,
- Avoid over loading of tippers & consequent spillage on the roads,
- Mineral carrying trucks will be effectively covered by tarpaulin to avoid escape of fines to atmosphere.
- Air quality shall be regularly monitored both in the core zone and the buffer zone.

Controlling of NOx level.

The source of NOx is due to vehicular emission. This can be controlled by proper maintenance and servicing of vehicles. Only P.U.C. certificated vehicles will be permitted

Noise Pollution

There is no drilling and blasting for mineral extraction. Noise pollution due to transportation will not cause any problem to the inhabitants of this area because there is no human settlement in close proximity to the link roads in mining area. Effective steps will be taken to keep the noise level well below the DGMS prescribed limit of 85 dBA.

Noise control is achieved by the following:

- Proper care and maintenance of the equipments will be carried out.
- Personal protective equipments will be provided to the workers.

15.0 DETAILS OF HEALTH CHECKUP AND INSURANCE OF ALL THE EMPLOYED PERSONS (FOR EXISTING MINING AREA)

The lease will comply with the recent provisions of medical examination as per Mines Rule 1955 both at times of appointment and at least once in five year. Medical camps will be organized for this activity. Necessary record and return will be sent to respective authorities Insurance of all employees as per the rules will be carried out.

15.1 Corporate Social Responsibility

As a corporate responsibility following measures along with budget provision is proposed for improving the conditions of persons in and around the project area:

The Yamunanagar district of Haryana State is relatively less developed in respect of employment and facilities. Thus, it can be seen that the proposed project offers good potential for the local people for employment directly and indirectly. The Project Affected Persons, if any, of the lease area will be provided with compensation or job or indirect employment such as business, contract works etc. With the starting of mining operation, employment/business opportunity will increase and welfare amenities such as free medical facilities, conveyance, school, free education, drinking water supply etc will be available for the area.

The details of benefits to the people in the adjoining villages are discussed here under:

a) Employment

From the study of socio economic environment at the study area it is quite evident that the area is not quite developed as far as job opportunities and living standard of the population is concerned. Apart from cultivation, agriculture etc. mining, industries and ancillary activities play an important source of livelihood in this as well as adjoining districts.

With the start of mining operations, various employment opportunities will be generated. Several persons will be benefited with mining works, employment through contractor, running of jeep and buses, canteens, different kind of shops and transport related business avenues.

(b) Educational facilities

Industrial on-job training will be provided to the interested local people and the trained people will be absorbed in jobs as per the requirement of the project. Proponent will also provide full cooperation and monitory assistance for adult education programme. Other activities proposed are :

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1. Targeted programmes for primary education for specially girl child
2. Augmentation of infrastructure and equipments, furniture, blackboard, toilets etc in schools
3. Scholarships to meritorious students
4. Adult education & awareness about saving & investment plans.
5. Partnerships in state sponsored education programmes
6. School wall boundary maintenance
7. Existing govt. school strengthening by boundary wall construction, construction of toilets, roof repair, drinking water taps, etc.

Capacity building activities such as following will be undertaken:

1. Scholarship for ITI training outside for 10 persons
2. Sponsorship of land losers / wards for full term courses
3. Short term courses for skill up gradation
4. Vocational training (dairy, poultry, bee keeping, sericulture)
5. Specific Programmes for Ladies (stitching, embroidery, tailoring etc)

(c) Medical facilities

Project shall provide aid to improve the existing medical facilities in the villages and also improve awareness and provide sufficient training in hygiene, sanitation and proper diet. Some of the activities that can be carried out are as follows:

1. Mobile Clinic with testing and diagnostic facilities
2. Health Camps for Family Planning, HIV/AIDS and other communicable diseases.
3. Addressing local health related issues through audio visuals and group meetings
4. Subsidized treatment in hospital with which tie-up will be there

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5. Specific Programmes for hygiene and sanitation
6. Helping aids to each category of physically challenged as per requirement
7. Eye camps to address the issue of cataracts specially

(d) Infrastructure facilities

Infrastructure facilities like road, Post & Telegraph, Telephone, Banks etc are basics for each and every area. These facilities are already well developed in the surrounding areas. The lessee will take various steps for upliftment of the basic amenities of the area by providing drinking water, communication facilities, etc. Construction of roads, drainage, community halls, school buildings, health centers, street lighting, equipments to educational institutions, public utilities, sanitation facilities, etc in nearby area will be undertaken.

15.2 Fund Provision for Environmental Management

It is proposed to create an Environment Management Fund. The contractor shall deposit/pay an amount equal to 10% of the due contract money along with installments towards the 'Mines and Minerals Development, Restoration and Rehabilitation fund.

8.3 PROGRESSIVE RECLAMATION PLAN:

As the mineral potential will be a continuous process every year in the area and none of the part is will be left as void/ depression available for reclamation . , under the circumstances the back filling and progressive reclamation plan is not feasible.

8.3.1. Mined-Out Land:

Backfilling by fresh mineral sand will be resume with natural flow of river water during the plan period so manual / mechanized process will not be involved

8.3.2 Topsoil Management:

There is no topsoil available in the area. Hence, no stock will be maintained. if soil observed in any part shall be scrapped and shall be collected and stacked separately to be used in plantation.

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8.3.3 Tailings Dam Management:

Tailing dam is not required and not proposed in the mining plan hence this para does not apply.

8.3.4 Acid mine drainage, if any and its mitigative measures.

No acid mine drainage is expected, hence no management required.

8.3.5 Surface subsidence mitigation measures through backfilling of mine voids or by any other means and its monitoring mechanism.

Not Applicable

8.3.6 Information on protective measures for reclamation and Rehabilitations work -

Plantation programme is proposed a long haul road, office, nearby roads and nearby villages outside the lease area for year 2021-2023. Green belt plantation covering an area 5.0 hectares will be carried out on along the 7.5 meter periphery of lease area and afforestation of 5.0 hectares is proposed along the haul road, office, workshop area

Year	No of plants	Area	Survival rate	Local Species of plants
2021-22	1250	0.50	80%	Neem, kikar, Kikar kabli, siras, pipal ficus, cicus, hareda, badberi, Sisam, or any other local species in consultation of forest office
2022-23	1250	0.50	80%	
2023-24	1250	0.50	80%	
2024-25	1250	0.50	80%	
2025-26	1250	0.50	80%	
Total	6750	2.50		

9.3.7 Re-grassing proposal

The area after mining activity will again be backfilled by fresh sand and gravel every year, thus the regressing will be done over it. The back filled area and undisturbed area will be taken up for plantation and regressing as MoEF&CC notification dated 16.1.2020 for the growth of grass, fodder in the mining area

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The project proponent shall after ceasing the mining operations undertake regressing in the mining area and any other area which may have been disturbed due to their mining activities and restore the land to the condition which is fit for the growth of re-grassing, fodder for flora and fauna etc. Necessary undertaking shall be given by project proponent to Mines and Geology Department, Haryana.

8.4 Disaster Management and Risk Assessment:

The topography of the area is such that, there are no chances of landslide, subsidence, inundation, fire, and seismic activities. No tailing dam exists in the area, so there is no chance of failure of this. The management of M/S JSM Foods Private Limited is fully capable to handle risk assessment and disaster management. The mining activities in the lease area are proposed as per regulations of the MMR-1961.

First aid facilities are available at the mines site office. Competent persons (first aid trained) appointed as mining mate, Manager will provide first aid to injured person, if any. Trained persons kept first-aid kits with them. Transportation facilities for the injured persons are available at site for this purpose. Hospital facility is located in the colony at about 5.0 from lease area; Communication facility is available at mine.

In an emergency following person may contact.

1. Shri Tanish Wadhwa (Authorized person)

M/S JSM Foods Private Limited

R/o 676, Sector-13, Karnal

Mobile No. 99960-15005

jsmfoodsmandoli@gmail.com

2. Shri Sohan singh

Mines Manager

M/S JSM Foods Private Limited

Village –Mandolai Ghaggar East Block YNR B-3 ,

Distt. Yamuna agar

Haryana

Phone : 70186-61867

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8.5 CARE AND MAINTENANCE DURING TEMPORARY DISCONTINUANCE:

In case of any temporary discontinuance of the mining activities, the guards will watch & ward to prevent any in advert entry of the unauthorized person also All entries to the mine shall be properly closed. The duty & responsibility of mines manager is to visit all sites & to check, the fencing, waste dump etc. during the working & in the period of the temporary discontinuance of the mining activities. the infrastructure facilities will continue to be used to maintain in safe working.

8.6 OCCUPATIONAL HEALTH AND SAFETY

The lease will comply with the recent provisions of OHS code 2020 for contract workers also to medical examination in addition to as per Mines Rule 1955 both at times of appointment and at least once in year. Medical camps will be organized for this activity. Necessary record and return will be sent to respective authorities Insurance of all employees as per the rules will be carried out.

To prevent the occupational disease / health hazards, suitable measures are proposed in drilling & excavation operations. This will prevent the inhalation of the dust by the workers. The workers will be periodically medically examined under Rule 29(b) of Mines Rule. If any worker found to have contracted with any occupational disease, he will be immediately removed from the affected area and will be provided with proper medical care as per provision of Mines Rule.

In case of any injury to the worker during work, the following measures will be taken:

(i) The workers will be immediately provided the first aid by a trained worker.

(ii) For safety practices during mining, the workers will be provided proper safety wearing and equipments such as hand gloves, safety boots, helmets, earplugs and life jackets etc.

(iii) A First Aid Box will always be provided to the mining mate/ mines foreman, to attend minor injuries.

All the workers will be given vocational training every year on safety aspects in mining by the trained Vocational Training Officers.Apart from this all safety precaution will be taken as per Act, Rules, Regulation and Byelaws made there under.

8.7 ECONOMIC REPERCUSSION OF CLOSURE OF MINE AND MANPOWER RETRENCHMENTS

Mining contract area is granted for a period of 10 years only. As per the production programme envisaged, at the end of contract period, still sufficient Replenished un-worked area would be left available for continuing production activities , Hence, closure is not planned. There will be no affect on the man power as the persons belong to nearby villages and will have an option either to be available for employment for the next contract or do the agriculture in their fields.

8.8 TIME SCHEDULING FOR ABANDONMENT

The mining area has enormous potential for continuance of operations even after the expiry of the awarded period. The details of time schedule of all abandonment will be given at the time of final closer plan. Mining activities are confined 3.0m. depth, relatively shallow depth of workings which will be reclaimed every year during rainy season.

8.9 ANDONMENT COST

As at present mining is not going to be closed so abandonment cost could not be assessed. However based on the progressive mine closure activities during the plan period, cost is assessed as given below:

ACTIVITY	YEAR					Rate	Amount (in Lakhs)
	2021-22	2022-23	2023-24	2024-25	2025-26		
Plantation (in no.)	1250	1250	1250	1250	1250	@ 100 Rs per sapling and maintenance cost	6.25
Wire fencing (meter)	500	500	500	500	500	@ of 100 Rs per meter	2.50
Wire fencing cost	50000	50000	50000	50000	50000		
						Total	8.75

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8.10 FINANCIAL ASSURANCE:

The Indian Bureau of mines has given guidelines for calculation of FA, The amount calculated for the purpose of Financial Assurance is based on the CCOM's Circular no. 4 dated 2006 , and Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules -2012." the computation of FA is based on the area put to use and area considered fully reclaimed . The particulars of area are as below-.

Table indicating the break-up of areas in the Mining Lease for calculation of Financial Assurance

S no.	Particulars	Area put on use at start of plan in hect.	Additional requirement of area during plan period in hect.	Total Area in hect.	Area considered as fully reclaimed & rehabilitated in hect.	Net area considered for calculation in hect.
1	Area under mining	0.00	14.18 per year	14.18	NIL	14.18
2	Storage for top soil	0.0	0.0	0.0	Nil	0.0
3	Waste dump site	0.0	0.0	0.00	Nil	0.00
4	Mineral storage	0.0	0.0	0.0	Nil	0.0
5	Infrastructure (work shop, administrative building etc.), electric lines.	0.0	0.0	0.0	0.00	0.0
6	Road (Kacha way)	0.00	0.00	0.00	Nil	0.00
7	Railways	Nil	Nil	Nil	Nil	Nil
8	Mineral separation plant	Nil	Nil	Nil	Nil	Nil
9	Township area	Nil	Nil	Nil	Nil	Nil
10	Undisturbed	0.0	0.0	0.0	0-00	0.0
11	Afforestation	0.00	0.00	0.00	0.00	0.0
12	Others (green belt)	6.0	0.0	6.0	0.0	0.0

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	Grand Total	6.0	14.18	20.18	0.0	14.18

CALCULATION OF FINANCIAL ASSURANCE

The financial assurance is applicable for the area put to use by project proponent and area reclaimed and habilitated under the provisions .The total broken area at the end of the scheme will be 14.18 hectares .The calculation of financial assurance will be based on the provisions made by state govt. as per Financial security under Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012. The FA is calculated @15000/- per hectare or maximum to Rs.100000/- in case of minor minerals. The same is required to be deposited at the grant of mining lease .

In case of any deficit amount the Project proponent will comply and deposit in account of Department of Mines and Geology department ,Government of Haryana

9.0 CERTIFICATE

It is enclosed with the report.

10.0 PLAN AND SECTION

Plan and section are prepared and enclosed with the mining plan.

Dated-
Place- Jaipur

(Kireet Acharya)
Qualified Person

KIREET ACHARYA
RQP/AJM/230A/2003

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APPROVED
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JSM FOODS PVT. LTD.

WZ/932, BASIE DARAPUR, 1ST FLOOR,
NEAR SENIOR SECONDARY SCHOOL, NEW DELHI-110015

A. CONSENT LETTER/ UNDERTAKING/ CERTIFICATE

FROM THE APPLICANT

01 The Modified Mining Scheme in respect of "MandoliGhaggar East Block/YNR B-3"sand mine over an area of20.18Hect., near village MandoliGhaggar East, Tehsil Jagadhri,DistrictYamunanagar, State Haryana, under Rule 70(1) Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 & 23 of MCDR 2017 has been prepared by Qualified Person Kireet Acharya. This is to request the Director, Department of Mines and Geology Haryana, to make any further correspondence regarding any correction of the Mining Plan/Scheme of Mining with the said Qualified person at his address below :-Sh. Kireet Acharya
70/30 Patel Marg,Mansarovar,
Jaipur 202020 (Rajasthan),
Mobile No. 9414163053
Email – acharyak12@gmail.com

We hereby undertake that all modifications / updating as made in the said Mining Plan/Scheme of Mining by the said recognized person be deemed to have been made with our knowledge and consent and shall be acceptable on us and binding in all respects.

02 It is certified that the CCOM Circular No-2/2010 will be implemented and complied with when an authorized agency is approved by the State Government.

03 It is certified that the Progressive Mine Closure plan of "MandoliGhaggar East" Block/YNR B-3" Boulder, Gravel and Sand mine near villageMandoliGhaggar Eastover an area of 20.18 Ha. complies with all statutory rules, Regulations, Orders made by the Central or State Government, Statutory organization, Court etc which have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities. The information furnished in the Progressive Mine Closure plan is true and correct to the best of our knowledge and records.

04 "The provisions of Mines Act, Rules and Regulations made there under have been observed in the Mining Scheme over an area of 20.18 hectare , District Yamunanagar, State Haryana belonging to M/s. JSM Foods Pvt. Ltd.and where specific permissions are required, the applicant will approach the D.G.M.S. Further, standards prescribed by D.G.M.S. in respect of miners' Health will be strictly implemented".

Place: ----------

Date----------

For M/s. JSM Foods Pvt. Ltd.

JSM FOODS PVT. LTD.

WZ/932, BASIE DARAPUR, 1ST FLOOR,
NEAR SENIOR SECONDARY SCHOOL, NEW DELHI-110015

AUTHORISATION

I, TANISH WADHWA Director of M/s. JSM Foods Pvt. Ltd., Mining site at Village MandoliGhaggarEast, Block YNR/B-3, Tehsil Jagadhri, Distt Yamuna Nagar, hereby authorizeShriKireetAcharya, (RQP/AJM/230/2003/A) to prepare the Modified Mining Scheme including Progressive Mine Closure Plan (Review & Mining scheme) under Haryana Minor Mineral Concession, Stocking,Transportation of Minerals and Prevention of Illegal Mining Rules, 2012, in respect of minor mineral mines of "Boulder, Gravel and Sand" of "M/s. JSM Foods Pvt. Ltd" over an area of 20.18 hectare in Tehsil Jagadhri, District Yamunanagar, State Haryana.

I request the Director General, Department of Mines & Geology, Govt. of Haryana, Chandigarh, to make further correspondence regarding re-submission/ modification / withdrawal and to collect the approved copies of the aforesaid Mining Plan including Progressive Mine Closure Plan with the said recognized person on his following address: -

Kireet Acharya
(RQP/AJM/230/2003/(A)
70/30 Patel Marg, Mansarovar
Jaipur 302020
E-mail-acharyak12@gmail.com
Mobile: 9414163053

M/sJSM Foods Pvt. Ltd.
For JSM FOODS PVT. LTD.
Auth. Sign.

Place: YAMUNANAGAR
Date: 10.09.2021

APPROVED

आयकर विभाग
INCOME TAX DEPARTMENT

भार गर
GOVT. OF INDIA

स्थायी लेखा संख्या कार्ड
Permanent Account Number Card

[redacted]

नाम/
T[redacted]

पि[redacted]'s Name
MA[redacted]

जन[redacted]te of Birth
0[redacted]

हस्ताक्षर/ Signature



18082017

APPROVED

Scanned with CamScanner

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

Registered

From

The Director General,
Mines & Geology Department, Haryana
30 Bays building, Sector-17,
Chandigarh.

To

ISM Foods Private Limited,
W 2/ 932, Basie Daraipur, 1st Floor
Near Senior Secondary School
New Delhi-110015.

Memo No. DMG/HY/Cont/M. G. East Block/YNR B 3/2015/3915
Dated Chandigarh, the **19.06.2015**

Subject: **Acceptance of the highest bid/ in respect of the Sand minor mineral mines of "Mandoli Ghaggar East Block/YNR B 3" having Tentative Area of 20.18 hectares in the district Yamuna Nagar, offered in e-auction held on 10.06.2015 and 11.06.2015 and Issue of Letter of Intent (LoI) – regarding.**

You participated in the in the **e- auction** held on **10.06.2015 and 11.06.2015** on the State Government web portal **https://haryanaeprocurement.gov.in** after accepting the **terms and conditions of the auction notice DMG/HY/e Auction/YNR/2015/2150 dated 27.04.2015 and Corrigendum DMG/HY/e-Auction/YNR/Corr./2015/3350 dated 19.05.2015in order to obtain mining contracts of minor mineral mines of the district Yamuna Nagar.** You offered the highest bid of **Rs. 03,30,50,000/-** [Rs. Three crore thirty lakh fifty thousand only] per annum, against the Reserve Price of **Rs. 03,30,00,000/-** per annum, for obtaining the Mining Contract of Minor Mineral Mines namely **'Mandoli Ghaggar East Block/YNR B 3'** for extraction of Sand having tentative area of **20.18** hectares. The details of the khasra numbers of the tentative area under above said Mining Block is attached as **Annexure 'A'.**

2. You are hereby informed that the State Government has accepted the highest bid of **Rs. 03,30,50,000/-** [Rs. Three-crore thirty lakh fifty thousand only] offered by you in respect of the above said minor mineral mines of **'Mandoli Ghaggar East Block/YNR B 3'** under the provisions of the Haryana Minor Mineral Concession, Stocking, Transportation of Minerals & Preventing of Illegal Mining Rules-2012 (State Rules). Accordingly, you have become the successful bidder in respect of **Mandoli Ghaggar East Block/YNR B 3** of the district Yamuna Nagar.

3. The State Government having accepted the aforementioned highest bid offered by you, the Department is pleased to issue this Letter of Intent (LoI) in your favour in respect of the Mining Block/area namely **'Mandoli Ghaggar East Block/YNR B 3'** subject to the following terms and conditions:

APPROVED

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

(i) The period of contract shall be **10 years** and the same shall commence with effect from the date of grant of environmental clearance by competent authority or on expiry of a period of 12 months from the date of this communication of acceptance of highest bid/ issuance of "**Letter of Intent**", whichever is earlier.

(ii) You may note that the detail of the area of the mining blocks is tentative and was notified "on as is where is basis" **(refer condition no. 4 of the notice)**. In case of any inadvertent mistake, if any, the same would be rectified/ corrected before execution of the agreement **(refer condition no. 3 of the notice)**.

(iii) No request regarding reduction in bid amount on account of reduction in land/area of the Mining block, including due to change in description of khasra numbers/location etc. at any stage will be entertained on any ground including loss/reduction of area for mining on account of compliance of applicable laws/restrictions. Needless to state that this also includes the changes, if any, as per condition no. 3 of auction notice.

(iv) The amount of the highest successful bid i.e. **Rs. 03,30,50,000/-** (Rs. Three crore thirty lakh fifty thousand only) per annum shall be the "Annual Contract Money" payable by you as the contractor in the manner prescribed in the contract agreement to be executed on form MC-1 appended to State Rules;

(v) The above said annual contract money shall be increased at the rate of 25% on completion of each block of three years. Accordingly, the year-wise amount of the annual contract money shall be as per details given below:

Sr. No.	Year of the Contract Period	Annual contract Money
1	First Year	Rs. 03,30,50,000 /-
2	Second Year	Rs. 03,30,50,000 /-
3	Third Year	Rs. 03,30,50,000 /-
4	Fourth Year	Rs. 04,13,12,500/-
5	Fifth Year	Rs. 04,13,12,500/-
6	Sixth Year	Rs. 04,13,12,500/-
7	Seventh Year	Rs. 05,16,40,625/-
8	Eighth Year	Rs. 05,16,40,625/-
9	Ninth Year	Rs. 05,16,40,625/-
10	Tenth Year	Rs. 06,45,50,781/-

(vi) As per the terms and conditions of the grant, you are liable to deposit Rs. 82,62,500/- i.e. equal to 25% of the annual bid amount as "security deposit" out of which you have already deposited an amount of **Rs. 33,05,000/-** (Rs. Thirty three lakh five thousand only) i.e. equal to 10% of the annual bid amount as 'initial bid security' after the conclusion of e-auction. The balance amount of Rs. 49,57,500/- of the bid security i.e.15% of the annual bid amount alongwith one month's advance

contract money shall be deposited before commencement of the mining operations or before expiry of the period of 12 months, whichever is earlier;

(vii) You shall execute an Agreement Deed in Form MC-I appended to the Haryana Minor Mineral Concession, Stocking, Transportation of Mineral & Prevention of Illegal Mining Rules-2012 (the State Rules 2012) within a period of 90 days from the date of issuance of this communication/ grant of LoI;

(viii) It may be pointed out that as per existing applicable rates the contract agreement had to be executed on **Non Judicial Stamp papers worth Rs. 13,27,700/- (Rs. Thirteen lakh twenty seven thousand seven hundred only)**. However, you are aware that M/s Om Minerals, one of the LoI holders (who participated in the auctions held in December 2013) has filed a **CWP No.7991 of 2014** before the Hon'ble Punjab & Haryana High Court. Further a few other similarly situated LoI holders have also filed separate CWP's before the Hon'ble Punjab and Haryana High Court challenging demand/ levy of Stamp Duty on execution of 'Contract Agreement'. The said matter is still pending for adjudication. Accordingly, the present auction was conducted subject to outcome of said cases. Therefore, **the charging of stamp duty for the execution of contract agreement** shall be as per **final outcome of the said CWP's.**

(ix) The Contract Agreement would also be required to be got Registered on payment of the applicable Registration fee;

(x) In case you fail to execute the Agreement Deed within the prescribed period of 90 days, this LoI shall be deemed to have been revoked and the amount of initial bid security deposited at the time of auction shall be forfeited. Further, the balance amount of 15% towards the bid security, amounting to **Rs. 49,57,500/-** being the 15% of the annual bid amount, shall be recovered as arrears of land revenue and, you, as the LoI holder/ defaulter, shall be debarred from participation in any future auctions for a period of 5 years;

(xi) You shall also furnish a solvent surety for a sum equal to the amount of the annual bid for execution of the Agreement. In case the surety offered by the contractor(s) during the subsistence of the contract is not found solvent, the contractor(s) shall offer another solvent surety and a supplementary deed shall be executed to this effect;

(xii) After execution of Agreement, either before commencement of the mining operation or before expiry of the period of 12 months from the date of issuance of this LoI, whichever is earlier, in case of failure to deposit the balance 15% amount towards

security [as required under clause (v) above] the acceptance of bid/issuance of LoI/execution of agreement shall be deemed to have been revoked and 10% amount deposited towards as initial bid security at the time of auction shall stand forfeited. Further, un-paid 15% amount towards security shall be recovered as arrears of land revenue and you shall debarred from participation in any subsequent bids for a period of 5 years;

(xiii) You shall be liable to deposit the contract money in advance at monthly intervals as per provisions of Contract Agreement i.e. from the date of commencement of the contract Agreement;

(xiv) You shall also deposit/ pay an additional amount equal to 10% of the due contract money along with the monthly instalments towards the **'Mines and Minerals Development, Restoration and Rehabilitation Fund'**.

(xv) You shall also be liable to pay advance income tax as per provisions of Section 206(c) of income tax act in addition to contract money, payable as per terms and conditions of contract agreement.

(xvi) On enhancement of the contract money with the expiry of every three years period, you shall deposit the balance amount of security so as to upscale the security amount equal to 25% of the revised annual contract money as applicable for one year with respect to the next block of three years. No interest, whatsoever, shall be payable on the security amount deposited under the prescribed security head of the government;

(xvii) You shall prepare a Mining Plan along with the Mine Closure Plan (Progressive & Final) as per chapter 10 of the State Rules for the "Mining Block" and shall not commence mining operations in any area except in accordance with such Mining Plan duly approved by an officer authorised by the Director, mines & Geology, in this behalf.

(xviii) Further, the actual mining will be allowed to be commenced only after prior Environmental Clearance is obtained by you as the LoI holder/mining contractor for the Mining Block from the Competent Authority as permitted by the competent Authority required under EIA notification dated 14/9/2006, as amended from time to time by the MoE&F, GoI and guidelines/ circulars issued in this behalf;

(xix) The Mining contractor to whom mining rights have been granted through this contract would also be liable to pay the following to the landowners to undertake mining operations:

(a) Annual rent in respect of the land area blocked under the concession but not being operated, and

(b) Rent plus compensation in respect of the area used for actual mining operations.

(xx) The amount of annual rent and the compensation shall be settled mutually between the landowner and the mining contractor. In case of non-settlement of the rent and compensation, the same shall be decided by the District Collector concerned in accordance with the provisions contained in Chapter 9 of the "Haryana Minor Mineral Concession, Stocking and Transportation of Minerals and Prevention of Illegal Mining Rules, 2012";

(xxi) The total mineral excavated and stacked by the concession holder within the area granted on mining contract shall not exceed two times of the average monthly production as per approved Mining Plan at any point of time;

(xxii) The Mining Contractor shall not stock any mineral outside the concession area granted on mining contract, without obtaining a valid license as per provisions contained in Chapter 14 of the State Rules;

(xxiii) The contractor shall not carry out any mining operations in any reserved/ protected forest or any area prohibited by any law in force in India, or prohibited by any authority without obtaining prior permission in writing from such authority or officer authorized in this behalf. In case of refusal of permission by such authority or officer authorized in this behalf, contractor(s) shall not be entitled to claim any relief in payment of contract money on this account;

(xxiv) Following are the general/ special conditions applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas:

(a) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge structure on up-stream side and ten times the span of such bridge structure on down-stream side, subject to a minimum of 150 meters on the up-stream side and 500 meters on the down-stream side;

(b) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorised by him;

(c) The maximum depth of mining in the river-bed shall not exceed three meters from the un-mined bed level at any point in time with proper bench formation;

(d) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

(e) No mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 meters in case of Tangri, Markanda and Ghaggar and 100 meters on either side of all other rivers/ rivulets. (This clause is applicable for mining outside river bed area);

(f) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology Department, may be made applicable to the mining operations in river-beds.

(xxv) A safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf. Further, the depth of excavation of mineral shall not exceed nine meters (9m) at any point of time.(This clause is applicable for mining outside river bed area);

(xxvi) The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws;

(xxvii) The contractor shall be under obligation to carry out mining in accordance with all other provisions as applicable under the Mines Act, 1952, Mines and Minerals (Development and Regulation) Act, 1957, Indian Explosives Act, 1884, Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986 and the rules made thereunder, Wild Life (Protection) Act, 1972, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981;

4. Accordingly, for the time being you are advised to submit the Draft Contract Agreement on Form MC-I (in Five copies) appended to the State Rules-2012, on plain papers along with other requisite documents including a solvent surety(s) for a sum equal to the amount of the annual bid for execution of the agreement, within a period of 90 days from the date of issue of this bid acceptance letter and the LoI. You should also furnish an affidavit to the effect that you will immediately deposit the requisite stamp duty as per out of the related Court cases as stated under para 3(viii) above.

5. Please note that one Sh. Rajbir Singh had filed a CWP bearing No. 27700 of 2013 before the Hon'ble Punjab & Haryana High Court challenging (i) commencement of contract

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

period after 12 months from the date of acceptance of highest bid/issuance of "Letter of Intent" or from date of obtaining of environmental clearance from competent authority which ever is earlier and (ii) payment of rent and compensation to surface right holder/land owners from where mining operations are to be carried out. Therefore, commencement of period of contract & payment of compensation to land owners shall be as per final outcome of court order in said CWP. Accordingly, the auction was conducted subject to outcome of above case, hence this acceptance /LoI is being issued subject to the outcome in CWP No. 27200 of 2013 pending before Hon'ble Punjab & Haryana High Court.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. East Block/YNR B 3/2015/ Dated: 19.06.2015

A copy is forwarded to the following for information and necessary action please:-

1. The Chairman, Haryana State Pollution Control Board, Panchkula.
2. The Deputy Commissioner, Yamuna Nagar.
3. The Mining Officer, Mines & Geology Department, Yamuna Nagar.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. East Block/YNR B 3/2015/ Dated: 19.06.2015

A copy is forwarded to Sh. Bharat Wadhwa S/o Sh. Radhey Shyam, R/o House No. 676, Sector-13, Urban Estate, Karnal, the authorized person/Director who gave highest bid on behalf of "JSM Foods Private Limited" for information and necessary action please.

Mining Officer,
for Director General Mines & Geology, Haryana.

APPRO...

Sr. No.	Name of Block/ Block No.	Name of the Village	Details of Khasra No/Killa No	Area (in hect.)	Reserve Price (in Crores per annum)	Period
			21, 22, 23 8//1, 2, 3, 9, 10, 11, 12, 19, 20, 21 6//1, 10, 11 9//1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25 17//3, 4, 5, 6, 7, 8, 14, 15, 16, 17, 25 18//1, 2, 9, 10, 11, 12, 13, 17, 18, 19/1, 19/2, 20/1, 20/2, 21, 22, 23, 24, 25 20//1/1, 1/2, 2, 3, 4, 7, 8			
2	Bailgarh South Block/ YNR B2	Bailgarh	54//2, 9/1, 9/2, 11, 12, 19, 20, 21 53//16, 25 56//5, 6, 7, 14, 15, 16, 17, 23, 24, 25 55//1, 10, 11, 20 72//3, 4/1/1, 4/1/2, 4/2, 5, 7, 8, 13, 14, 18, 19, 22, 23 73//1, 2, 9, 10, 11, 12/1, 12/2, 20, 21 74//15, 16/1/1, 16/1/2, 16/2, 17, 24, 25 85//3, 4/1, 4/2, 5, 7, 8, 9, 11, 12/1,12/2, 13, 14, 18, 19,20,21, 22 84//25 86/1/1, 1/2, 2, 10 87//4, 5, 6/1, 6/2, 7, 13, 14, 15, 17, 18, 22/1, 22/2, 23/1, 23/2 93//2, 10, 11	28.00	4.60	9
3	Mandoli Ghaggar East Block/ YNR B3	Mandoli Ghaggar	52//2, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 18, 23, 24, 25 53//1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24 58//1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 18, 19, 20 59//3, 4, 5, 6, 7, 8, 13, 14, 15, 16, 17, 18	20.18	3.30	10
4	Mandoli Ghaggar West Block/ YNR B4	Mandoli Ghaggar	53//5, 6, 15, 16/1, 16/2, 25 54//1 to 25 55//1, 2, 9, 10, 11,20 57//1 to 4, 7 to 13 58//5, 6, 15	25.56	4.20	7
5	Kanalsi Block/ YNR B5	Kanalsi	41//16, 24, 25 42//16 to 19, 20, 21,22 to25 43//16, 17 to 24, 25 44//1, 10, 11, 12, 19, 20, 21, 22 45//1, 2, 3 to 8, 9, 10 to11, 12, 13 to 18, 19, 20 to 21, 22, 23 to 24, 25/1, 25/2 46//1, 2, 3, 4, 5, 6, 7, 8, 9 to 17, 18, 19, 20, 21, 24, 25 47//3,4,5,6,7/1,7/2,8,9 min,11 min,12 to 25 48//16 min, 24 min, 25 52//4 min, 5, 6, 7, 15	44.14	7.25	9

Memorandum & Articles

of

Association

of

JSM FOODS PRIVATE LIMITED

(THE COMPANIES ACT, 1956)

(COMPANY LIMITED BY SHARES)

MEMORANDUM OF ASSOCIATION

OF

JSM FOODS PRIVATE LIMITED

I. The Name of the Company is JSM FOODS PRIVATE LIMITED.

II. The Registered Office of the Company will be situated in the National Capital Territory of Delhi.

III. The objects for which the Company is established are :-

(A) THE MAIN OBJECTS TO BE PURSUED BY THE COMPANY ON ITS INCORPORATION ARE:-

1. To carry on the business of manufacturing, trading, import and exports of all types of foods products, healthcare products, ingredients and additives, fast moving consumer goods and other related products.

2. To carry on in India or elsewhere the business to manufacture, produce, import, export, buy, sell, process, prepare, crush, refine, blend, filter, deodorize, disintegrate, clean, recover, amalgamate, mix, convert, purify, commercialize, grade, compound, disinfect, derive, excavate, explore & extract all kinds of vegetable oils, crude oils, refined oils, bleached and deodorized oils, hydrogenated oils, rice bran oils, deoiled cakes, poultry feeds, vegetable ghee, its derivatives, by-products, substances, ingredients, solvent extractions & residues from all types of oil seeds such as cotton seeds, soyabeans, ground nuts, castors, linseeds, sunflower, coconut, rapeseed, almond, sesamam, mustard, sea seed, grapeseed, mahuha, sal, ricebran ghani, etc., and to act as agent, broker, adatia, ware houser, stockist, distributor, marketing man, job worker, importer, exporter, buyer, seller, franchiser, C & F agent, concessionaire, transporter, supplier, consigner or dealer in all types of oils, oilseeds, deoiled cakes, organise solvents, solvent extracted products, gums, wax, sludge, oleaginous & saponacious substances, soap stock, chemical furfural & its derivatives, husks and other allied materials of whatsoever nature.

3. To carry on the business of manufacturing, trading, buying, selling, ginning, pressing, dealing in all types of Fast Moving Consumer Goods (FMCG) like oil, dhoop agarbatties, tobacco, cotton, kapas, ginning of cotton and all machines used for that purpose.

4. To carry on the business to manufacture, produce, process, convert, develop, distribute, derive, discover, grade, handle, manipulate, prepare, promote, supply, import, export, buy, sell and to act as agent, broker, concessionaires, consultants, collabrotor, job worker or otherwise to deal in all descriptions characteristics and application of Pesticides, insecticides, fungicides, organic, inorganic, farming, horticultural, agricultural, biological, pharmaceuticals and other chemicals, drugs, formulating, catalysts, reagents, mixtures, concentrates, lumps, powder, granule, solutions, derivatives, fluids.

Me21b674

JSM FOODS PVT. LTD.

(B) **THE OBJECTS INCIDENTAL OR ANCILLARY TO THE ATTAINMENT OF THE MAIN OBJECTS ARE :-**

1. To acquire by purchase, lease, exchange or otherwise any movable or immovable property and any rights or privileges which the Company may deem necessary or convenient for the purpose of its main business.

2. To enter into partnership or into any arrangement for sharing profits, union of interest, joint venture, reciprocal concession or co-operation with persons or companies carrying on or engaged in the main business or transaction of this Company.

3. To import, buy, exchange, alter, improve and manipulate in all kinds of plants, machinery, apparatus, tools and things necessary or convenient for carrying on the main business of the Company.

4. To vest any movable or immovable property, rights or interests required by or received or belonging to the Company in any person or company on behalf of or for the benefit of the Company and with or without any declared trust in favour of the Company.

5. To purchase or otherwise acquire, build, carry out, equip, maintain, alter, improve, develop, manage, work, control and superintend any plants, warehouse, sheds, offices, shops, stores, buildings, machinery, apparatus, labour lines, and houses, warehouses, and such other works and conveniences necessary for carrying on the main business of the Company.

6. To undertake or promote scientific research relating to the main business or class of business of the Company.

7. To acquire and takeover the whole or any part of the business, goodwill, trade-marks properties and liabilities of any person or persons, firm, companies or undertakings either existing or new, engaged in or carrying on or proposing to carry on business this Company is authorised to carry on, possession of any property or rights suitable for the purpose of the Company and to pay for the same either in cash or in shares or partly in cash and partly in shares or otherwise.

8. To negotiate and enter into agreements and contracts with Indian and foreign individuals, companies, corporations and such other organisations for technical, financial or any other such assistance for carrying out all or any the main objects of the Company or for the purpose of activity research and development of manufacturing projects on the basis of know-how, financial participation or technical collaboration and acquire necessary formulas and patent rights for furthering the main objects of the Company.

APPROVED

9. Subject to Sections 391 to 394, 394A of the Act, to amalgamate with any other company of which all or any of their objects companies having similar to the objects of the Company in any manner whether with or without the liquidation.

10. Subject to any law for the time being in force, to undertake or take part in the formation, supervision or control of the business or operations of any person, firm, body corporate, association undertaking carrying on the main business of the Company.

11. To apply for, obtain, purchase or otherwise acquire and prolong and renew any patents, patent-rights, brevets, inventions, processes, scientific technical or other assistance, manufacturing processes know-how and other information, designs, patterns, copyrights, trade-marks, licenses concessions and the like rights or benefits, conferring an exclusive or non-exclusive or limited or unlimited right of use thereof, which may seem capable of being used for or inconnection with the main objects of the Company or the acquisition or use of which may seem calculated directly or indirectly to benefit the Company on payment of any fee royalty or other consideration and to use, exercise or develop the same under or grant licenses in respect thereof or otherwise deal with same and to spend money in experimenting upon testing or improving any such patents, inventions, right or concessions.

12. To apply for and obtain any order under any Act or Legislature, charter, privilege concession, licence or authorisation of any Government, State or other Authority for enabling the Company to carry on any of its main objects into effect or for extending any of the powers of the Company or for effecting and modification of the constitution of the Company or for any other such purpose which may seem expedient and to oppose any proceedings or applications which may seem expedient or calculated directly or indirectly to prejudice the interest of the Company.

13. To enter into any arrangements with any Government or Authorities or any persons or companies that may seem conducive to the main objects of the Company or any of them and to obtain from any such Government, authority, person or company any rights, charters, contracts, licences and concessions which the Company may think desirable to obtain and to carry out, exercise and comply therewith.

14. To procure the Company to be registered or recognised in or under the laws of any place outside India and to do all act necessary for carrying on in any foreign country for the business or profession of the Company.

15. To draw, make, accept, discount, execute and issue bills of exchange, promissory notes bills of lading, warrants, debentures and such other negotiable or transferable instruments, of all types or securities and to open Bank Accounts of any type and to operate the same in the ordinary course of the Company.

16. To advance money either with or without security, and to such persons and upon such terms and conditions as the Company may deem fit and also to invest and deal with the money of the Company not immediately required, in or upon such investments and in such manner as, from time to time, may be determined, provided that the Company shall not carry on the business of banking as provided in the Banking Regulations Act, 1949.

17. Subject to section 58-A and 292, 293, 295 & 372A of the Act and the Regulations made thereunder and the Directions issued by the Reserve Bank of India, to receive money on deposit or loan and borrow or raise money in such manner and at such time or times as the Company thinks fit and in particular by the issue of debentures, debentures-stock, perpetual or otherwise and to secure the repayment of any money borrowed, raised or owing by mortgage, charge or lien upon all or any of the properties, or assets or revenues and profits of the Company both present and future, including its uncalled capital and also by a similar mortgage, charge or lien to secure and guarantee the performance by the Company or any other person or Company of any obligation undertaken by the Company or such other person or company to give the lenders the power to sale and such other powers as may seem expedient and purchase redeem or pay off any such securities.

18. To undertake and execute any trusts, the undertaking of which may seem to the Company desirable, either gratuitously or otherwise.

19. To establish, or promote or concur in establishing or promote any company for the purpose of acquiring all or any of the properties, rights and liabilities of the Company.

20. To sell, lease, mortgage, exchange, grant licenses and other rights improve, manage, develop and dispose of undertakings, investments, properties, assets and effects of the company or any part thereof for such consideration as may be expedient and in particular for any shares, stocks, debentures or other securities of any other such company having main objects altogether or in part similar to those of the Company.

21. Subject to the Provisions of Section 100 to 105 of the Act, to distribute among the members in specie or otherwise any property of the Company or any proceeds of sale or disposal of any property of the Company in the event of winding up.

22. To distribute as dividend or bonus among the member or to place to reserve or otherwise to apply, as the Company may, from time to time, determine any money received by way of premium on debentures issued at a premium by the Company and any money received in respect of forefeited shares, money arising from the sale by the Company of forefeited shares subject to the provisions of Sec. 78 of the Companies Act, 1956.

23. To employ agents or experts to investigate and examine into the conditions, prospects value, character and circumstances of any business concerns and undertakings and generally of any assets properties or rights which the Company purpose to acquire.

24. To accept gifts, bequests, devisers or donations of any movable or immovable property or any right or interests therein from members or others.

25. To create any reserve fund, sinking fund, insurance fund or any other such special funds whether for depreciation, repairing, improving, research, extending or maintaining any of the properties of the Company or for any other such purpose conducive to the interest of the Company.

APPROVED

26. Subject to the provisions of Section 292, 293, 293-A & 293-B of the Companies Act, 1956 to subscribe contribute, gift or donate any money, rights or assets for any national educational, religious, charitable, scientific, public, general or usual objects or to make gifts or donations of money or such other assets to any institutions, clubs, societies, associations, trusts, scientific research associations, funds, universities, college or any individual, body of individuals or bodies corporate.

27. To establish and maintain or procure the establishment and maintenance of any contributory or non-contributory pension or superannuation, provident or gratuity funds for the benefit of and give of procure the giving of the donations, gratuities pensions, allowances, bonuses or emoluments of any persons who are or were at any time in the employment or service of the company or any company which is a subsidiary of the Company or is allied to or associated with the Company or with any such subsidiary company or who are or were at any time Directors or officers of the Company or any other company as aforesaid and the wives, widows, families and dependents of any such persons and also to establish and subsidise and subscribe to any institutions, associations, club or funds calculated to be for the benefit of or advance aforesaid and make payments to or towards the insurance of any such persons as aforesaid and to do any of the matters aforesaid, either alone or in conjunction with any such other company as aforesaid.

28. To establish, for any of the main objects of the Company, branches or to establish any firm or firms at places in or outside India as the Company may deem expedient.

29. To pay for any property or rights acquired by or for any services rendered to the Company and in particular to remunerate any person, firm or company introducing business to the company either in cash or fully or partly-paid up shares with or without preferred or deferred rights in respect of dividend or repayment of capital or otherwise or by any securities which the company has power to issue or by the grant of any rights or options or partly in one mode and partly in another and generally on such terms as the company may determine, subject to the provision of section 314 of the act.

30. To pay out of the funds of the company all costs, charges and expenses of and incidental to the formation and registration of the company and any company promoted by the company and also all costs, charges, duties, impositions and expenses of and incidental to the acquisition by the company of any property or assets.

31. To send out to foreign countries, its director, employees or any other person or persons for investigation possibilities of main business or trade procuring and buying any machinery or establishing trade and business connections or for promoting the interests of the company and to pay all expenses incurred in the connection.

32. To compensate for loss of office of any Managing Director or Directors or other officers of the Company within the limitations prescribed under the Companies Act, 1956 or such other statute or rule having the force of law and to make payments to any person whose office of employment or duties may be determined by virtue of any transaction in which the Company is engaged.

33. To agree to refer to arbitration any dispute, present or future between the Company and any other company, firm, individual or any other body and to submit the same to arbitration in India or abroad either in accordance with Indian or any foreign system of law.

34. To appoint agents, sub-agents, dealers, managers canvassers, sales, representatives or salesmen for transacting all or any kind of the main business of which this Company is authorised to carry on and to constitute agencies of the Company in India or in any other country and establish depots and agencies in different parts of the world.

(C) THE OTHER OBJECTS ARE :-

1. To carry on the business as manufacturers, traders, importers and exporters of and dealers in aluminium utensils, steel utensils, and all other such types of utensils and kitchen requisities of all types.

2. To act as business consultant, give advice, to engage in dissemination of information in all aspects of business, organisation and industry in India and to advise upon the means and methods for extending and developing systems or processes relating to production, storage, distribution, marketing, and securing of orders for sale of good in India and abroad and/or relating to the rendering of services.

3. To carry on the business of running motor lorries, motor taxies, mini buses and conveyances of all kinds and to transport passengers, and goods and to do the business of common carriers.

4. To carry on business by whole sale or retail, or otherwise of interior decorators and furnishers, upholsters, and dealers in and hirers repairs, cleaners, stores and warehouses of furniture, carpets, linoleums furnishing fabrics and such other floor coverings, household utensils, china and glass goods, fittings, curtains and such other household requisites of all types.

5. To carry on the business as brewers, distillers, bottlers, canners preservers, coopers dehydrators, moteliers and merchants of and dealers in fruits, herbs, vegetables, plants and liquors by products therefrom, whether intoxicating or not, tonics, vitamin, beverages, flavoured drinks, nectar, punch aerated waters and drinks whether soft or otherwise.

6. To carry on the business of tobacconists in all its branches and to sell, make-up and manufacture tobacco, cigars, cigarettes and snuff.

7. To act as cargo agents, travel agents, insurance agents, ship brokers, charter party contractors, ship agents, packing forwarding and clearing agent, salvors, wreck removers wreck raisers, auctioneers, inspectors and observers of quality control custom house agents, commission agents and general sales agents for any of the air lines, steam ship companies, railway and transport companies or any such person.

8. To carry on the business of cold storage of fruits, vegetable seeds, fish, meat, agricultural products, milk, dairy products and such other perishable items of all types.

9. To carry on the business of production, distribution or exhibition of films and motion pictures and the running of theatres, cinemas, studios and cinematographic shows and exhibitions.

10. To trade, deal in and undertake manufacturing, of bricks, tiles, pipes, cement lime and building construction requisites and to carry on all or any of the business of builders, contractors, architects, decorators, furnishers and to acquire, hold, mortgage lease, take on lease, exchange or otherwise deal in lands, buildings, house, flats, bungalows, shops, here-dita-ments of any tenure or freehold for residential or businesses purposes.

11. To cultivate, grow, produce or deal in any agricultural, vegetable or fruit products and to carry on all or any of the businesses of farmers, dairyman, milk contractors, dairy farmers, millers, purveyors and vendors of milk and milk products, condensed milk and powdered milk, cream, cheese, butter, poultry, fruits, vegetables, cash crops and provisions of all kinds.

12. to cultivate, tea, coffee, cinchona and any other such similar product and to carry on the business of planters in all its branches, to carry on and do the business of cultivators, winners and buyers of every kind of vegetable mineral or such other product of soil, dispose of and deal in any such produce, either in its prepared, manufactured or raw state and either by wholesale or retail.

13. To carry on the business of manufacturers of or dealers in pulp and paper of all kinds and articles made from paper and pulp such as card boards and wall and ceiling papers and packaging cartons and newspapers and newsprints.

14. To carry on the business of purchase and sale of petroleum products, to act as dealers and distributors for petroleum companies, to run service stations for the repair and servicing of automobiles and to manufacture or deal in fuel oils, cutting oils and greases.

15. To carry on the business of iron-founders, makers of scientific, industrial and surgical instruments, mechanical engineers, and manufacturers of agricultural implements and other machinery, steel castings and forgings and malleable iron and steel castings, tools makers, brass founders, metal workers, boiler-makers, mill wrights, machinists, iron and steel converters, smiths, builders, painters, metallurgists, electrical engineers, water supply engineers, gas makers, farmers, printers, carriers and merchants and to buy , sell, manufacture, repair, convert, alter, let on hire and deal in machinery, implements and rolling stock.

16. To carry on the business of hoteliers, motoliers, restaurant owners, sweet-meat merchants, refreshments, room proprietors, refreshment contractors and own run garages, shops, stores, godowns, bars, refreshment rooms, cafetarias, discotheques, restaurants and places for sale, custody, bailment, deposit or protection of the valuable goods and commodities.

17. To carry on the business of manufacturing and dealing, in assembling, buying, selling, reselling, exchanging, altering repairing, importing, exporting, hiring, letting, on hire, distributing, or dealing in motor cars, motor cycles, scooters, motor buses, motor lorries, motor vans, trucks, locomotive engines, trains and, all other road and rail conveyances, ships, boats, barges, launches, steamers and other vessels, aeroplanes, aeroengines flying boats, hydroplanes, and aircrafts and aerial conveyances of every description and kind for transport or conveyance of passengers, merchandise or goods of description, whether propelled or moved or assisted by means of petrol, spirit, electricity, steam, oil vapour, gas, petroleum, mechanical, animal or any other such motive power of all types.

18. To carry on the business manufacturing, dying, colouring, spinning, weaving, buying selling, importing, exporting or otherwise dealing in all fabrics and other fibrous substances and preparations and manufacturers of and dealers in cotton, silk, woollen linen, hemp jute, rayon nylon, artificial silk and such other yarn and all kinds of woven synthetic blended textiles manufactured from such yarn.

19. To carry on the business manufacturers of and dealers in industrial machinery, bearings, speed reduction units, pumps, machine tools, agricutural machinery and earth-moving machinery including road rollers, bull-dozers, dumpers, scrapers loaders shovels and drag lines and light engineering, goods such as cycle and sewing machines.

20. To carry on the business of manufacturers of or dealers in ferrous or non-ferrous metals iron & steel aluminium, brass, tin, nickel, special, steel and their products.

21. To carry on the business of manufacturers, stockists, importers and exporters of and dealers, in engineering drawing sets, builders of requisites steel rules, measuring taps, cutting tools, hand tools, precision measuring tools, machine tools, garage tools, hardware tools, instruments, apparatus and such allied machinery, plant, equipment and appliances of all types.

22. To carry on the business as manufacturers, stockists, importers and exporters of and dealers in bolts, nuts, nails, hooks, and such other hardware items of all types.

23. To carry on business as manufacturers, stockists, importers, and exporters of and dealers in forging, castings, stampings, of all metals, machinery parts, moulds, press tools, jigs, fixtures and compression moulding, steel products and automobile parts.

24. To carry on business as manufacturers stockists, importers exporters and repairers of and dealers in dynamos, motors, armatures, magnets, batteries, conductors, insulators, transformers, convertors, switch-boards, cookers, engineers presses and insulating material.

25. To carry on business as manufacturers, stockists, importers and exporters of and dealers in weareable and unwearable fabrics, high density polythelene and polypropylene, woven snacks and trapaulins.

26. To carry on business as manufacturers of and dealers in and as stockists, importers, and exporters of packing material, jointing and belting materials, asbestos materials and fibres, insulation material and welding fluxes, cartons, containers, boxes and cases made of paper, boards, wood glass, plastic, pulp, cellulose films, polythene, rubber, metals, metal foils gelatine, tin flexible, treated, and laminated, or other materials.

27. To carry on business as manufacturers of and dealers in as stockists, importers and exporters of bottles, jars, fibrite boxes corrugated containers aluminium foils of all types, wooden drums, packing cases, rods, wires, ropes, strips, conductors equipment required for generation, distribution and transmission of electric energy, cables, motors, fans, lamps, batteries and accumulators.

28. To sell, breed, import, export, improve, prepare, deal and trade in cattle, bird, poultry, game, live and dead-stock of every description, eggs, pork-pipes sausages, pickles spices, sauces, jams, jelly, custard, prawn, potted meats, macaroni, spaghetti table delicacies, bread, biscuit, wine biscuits and such other farinaceous goods and products cocoa, confectionery, cakes and buns.

29. To carry on the traders and business of meal manufacturers, dealers in consumable stores and provisions of all kinds foods stuffs, grains flour, seeds folder, cane oils, corn, wheat, wheat products, stores, vegetable oils, ghee and vanaspati products.

30. To set up a tanners and to carry on the business as manufacturers of and dealers in and importers and exporters of leather and raw hides and skins.

31. To carry on the business as manufacturers of and dealers in or as stockists, importers, and exporters of plastics, synthetic resins, natural resins, polymer products and chemicals required for the manufacture, processing and fabrication of plastics and similar other such products, tubes pipes, sheets films whether moulded extruded casted, formed or foamed.

32. To purchase, hold and acquire mines, mining leases, mining rights, mining claims and metalliferous lands and explore, work, exercise, develop and turn to account all sorts of major and major minor minerals working of deposits of all kinds of minerals and subsoil materials and to crush, win, set, quarry, smelt, calcine, refine, dress, amalgamate, manipulate and prepare for market ores, metals, and mineral substances of all kinds and to carry on metallurgical operations in all its branches and to prepare, process, manufacture, assemble, fabricate, cast fit, press machine, treat, weld, harden, plate, temper anneal any kind of metals and consequential products.

33. To produce, manufacture, trade, deal in all dispose of alkalies, dyes, chemicals, acids, gases, compounds, fertilisers, chemical, products of every nature and description, intermediates, derivatives, all types of floatation regents wetting agents, insecticides, fumigates, dyestuffs, catalyic agents, direct colours, basic colours pigments, drugs, biological, pharmaceuticals, sermus, vitamin products, hormones and products, derived from phosphate

mines, limestone quarries, bauxide mines, petroleum, natural gas and other natural deposits useful or suitable in the manufacture of chemicals and chemical products and to undertake the business of spraying of pesticides.

34. To manufacture, generate, produce, sell, dispose of and deal in industrial gases domestic gases for heating and lighting gas, system, heat light or any other such motive power obtained by incinerating burning forest refuse, wood and plants.

35. To manufacture, buy, sell, import, export, alter, improve, manipulate, prepare for market, exchange, install, repair, service, let on hire and deal in all kinds of surgicals X-ray units, X-ray equipments, telecommunication machines, business machines, intercoms, teleprinters, dictating, and recording machines, broadcasting apparatuses, loud-speakers, radios, auto-radio reverberators, tape-players, cassette tapes, headphones, stereo-complex speakers, radios control equipments, cameras, binoculars, microscopes, projectors, telescopes, television sets, refrigerators, coolers, radars, computers and spare parts.

36. To procure of develop and supply technical know-how for the manufacture or processing the installation or erection of machinery or plant in the working or mines, oil wells or other sources of mineral deposits or in carrying out any operations relating to agriculture, animal husbandry, dairy or poultry-farming, forestry or fishery or rendering services in connection with the provision of such technical know-how.

37. To deal in foreign exchange, subject to approval of appropriate authorities.

38. To organise and carry on the business of advertisers, advertising agents, liputic by consultants and to organise propaganda and advertising campaigns by means of press advertisements, pamphlets, handbills, circulars, advertisement reels, posters, cinema slides or by any other such means of all types or through the means of radio television or any other such media of all types.

39. To undertake and execute, in India or any part of the world, turnkey projects for electrical installations, air-conditioning, refrigeration, heating, cooling, ventilation humidification sanitary, thermal and acoustic insulation work.

40. To carry on the business as manufacturers, traders, importers and exporters of and dealers, in all kinds of carpets and floor coverings, whether made of woollen, cotton, synthetic or such other fibres or fibrous materials of all types.

41. To carry on the business as traders, importers and exporters of and dealers, in cotton and jute, whether raw, semi-processed and all kinds of cotton and jute goods.

42. To carry on the business as shares and stocks brokers and to buy, sell and deal in all kind of shares stocks, securities, bonds, debentures, units and such other instruments of all types.

43. To carry on the business of public transporters and to pay all types of commercial vehicles such as Trucks, Tempos, and pick up vans for carrying goods or passengers anywhere in India.

44. To carry on the business as importers, export agents, distributors, stockists, contractors, suppliers, dealers of any kind and to act as manufactures, representatives, agents, brokers, commission agents and merchants of commodities, articles, products and merchants of any kind or nature.

45. To carry on the business of importers, exporters, dealers, traders, manufactures of traders, earthmoving equipments, cannel equipments, Fuel injection equipments, machine tools and such other allied products thereof.

46. To secure sound investment of foreign capital in Indian undertaking and enterprises and Indian capital in foreign undertaking and enterprises.

47. Subject to the approval of RBI under Reserve Bank of India Act, 1934, as amended by RBI (Amendment) Act, 1997, to carry on the business of leasing and hire purchase and to acquire to provide on lease or to be provided on hire purchase basis all types of industrial and offices, plant equipment, machinery, vehicles, buildings and real estate required for manufacturing, processing, transportation and trading business and such other commercial and service business related thereto.

48. Subject to the approval of RBI under Reserve Bank of India Act 1934, as amended by RBI (Amendment) Act, 1997, to Finance the industrial enterprises by way of lending and advancing money, machinery land, building, shed or such other things as may required by such industrial enterprises either with or without security and upon such terms and conditions as the Company may think fit and to guarantee or become securities for the performance of any agreement or contract entered into by industrial enterprises, with any financial institutions, banks or other parties for obtaining finance whether for its long terms capital, working capital, or for any deferred payment finance.

49. To undertake and transact all kinds of agency business and/or promote any business commercial or otherwise under sound principles and/or to act as distributors, agents, underwriters, brokers, estate agents, middleman, contract man, representation and indenting agent on commission, allowance, as may be deemed fit in all commodities, merchandise and such other allied articles/ lines of business.

50. To carry on the business of printing, publishing, multi-colour printing, plate making and to deal in printing ink, papers, printing machines and other printing materials.

51. To carry on the business of sale and purchase of industrial plots, Sheds, Factory building, constructions of commercial property, letting out of property, contractors for constructions of building, roads.

52. To invest, purchase, acquire, hold, underwrite, sell, exchange, deal in gilts, act as broker, sub-broker, receive or otherwise deal in shares, stocks, securities, deposits, units, real estates, debentures, debenture stock, bonds, trusts, instruments and all other type of securities and to render allied services, to act, arrange, manage and to provide all type of services as Managers to issue, advisors to issue underwriters, Registrar and transfer agents, portfolio Managers, financial consultants, brokers, factors, leasing, hire-purchase, installments, investments, commission agents, advertisers, stationers, printer, suppliers, convenciers, middlemen, consultants, representatives, indemnity and guarantee business to firms, association & joint ventures, promote companies and its allied activities to subscribe, purchase, take on lease or hire, or otherwise acquire membership of one or more stock exchange in India or abroad including OTCEI and to operate, run and manage the same.

53. To carry on the business of manufacturers, developers and to deal in computers, computer parts, hardware, software, internet, E-mail, website, fax, telex, telephones and other media of communication.

IV. The Liability of the members is Limited.

V. The Authorised Share Capital of the Company is Rs. 20,00,000/- (Rupees Twenty Lacs) divided into 2,00,000 (Two Lacs) Equity Shares of Rs.10/- (Rupees Ten) each.



13

We the several persons whose names and addresses are subscribed, are desirous of being formed into a Company in pursuance of this Memorandum of Association and we respectively agree to take the number of shares in the Capital of the Company set opposite to our respective names.

Sl. No.	Name, Description Occupation and address of each Subscriber	No. of Equity Shares taken by each Subscriber	Signature of Subscribers	Name, address, Description occupation and Signature of witness or witnesses
1.	BHARAT WADHWA S/o Mr.Radhey Sham R/o House No. 676, Sector- 13, U.E. Karnal Haryana India-132001 Occupation: Business	5000	Sd/-	I hereby witness the signatures of subscribers. Sd/- (DINESH KHURANA) FCA M. No. 97508 S/o Sh. Darshan Kumar Khurana 230, Sector-12, Part-II, Karnal-132001, Haryana
2.	RADHAY SHYAM WADHWA S/o Mr. Tau Ram Wadhwa R/o V.P.O. G. Rao Yamuna Nagar Haryana India-135001 Occupation: Business	5000	Sd/-	
	TOTAL	10,000		

Place : New Delhi Dated this 18th day of February 2011

(THE COMPANIES ACT, 1956)

(COMPANY LIMITED BY SHARES)

ARTICLES OF ASSOCIATION

OF

JSM FOODS PRIVATE LIMITED

PRELIMINARY

1. Subject as hereinafter provided the Regulations contained in Table 'A' in the First Schedule to the Companies Act, 1956 shall apply to the Company.

INTERPRETATION

2. (1) In these Regulations :-

   (a) "Company" means **JSM FOODS PRIVATE LIMITED.**

   (b) "Office" means the Registered Office of the Company.

   (c) "Act" means the Companies Act, 1956, and any statutory modification thereof.

   (d) "Seal" means the Common Seal of the Company.

   (e) "Directors" means the Directors of the Company and includes persons occupying the position of the Directors by whatever names called.

   (2) Unless the context otherwise requires words or expressions contained in these Articles shall be the same meaning as in the Act, or any statutory modification thereof in force at the date at which these Articles become binding on the Company.

PRIVATE COMPANY

3. The Company is a Private Company within the meaning of Section 3(1) (iii) and 2(35) of the Companies Act, 1956 and accordingly :-

   (a) The right to transfer shares in the Company is restricted in the manner and to the extent hereinafter appearing.

(b) The number of members of the Company (exclusive of persons who are in the employment of the Company, and persons who having been formerly in the employment of the Company, were members of the Company while in the employment and have continued to be members after the employment ceased) shall be limited to fifty; provided that for the purpose of this definition where two or more persons jointly hold one or more shares in the Company, they shall, be treated as a single member, and.

(c) No invitation shall be issued to the public or subscribe for any shares in or debentures of the Company.

(d) Prohibits any invitation or acceptance of deposits from persons other than its members, directors and relatives.

SHARE CAPITAL

4. (a) The Authorised Share Capital of the Company shall be such amounts and be divided into such shares as may, from time to time, be provided in Clause V of the Memorandum of Association with power to increase or reduce the capital in accordance with the Company's regulations and legislative provisions for the time being in force in that behalf with the powers to divide the share capital, whether original increased or decreased into several classes and attach thereto respectively such ordinary, preferential or special rights and conditions in such a manner as may for the time being be provided by the Regulations of the Company and allowed by law.

(b) The minimum paid up Capital of the Company shall be Rs. 1,00,000/- (Rupees One Lac).

5. The business of the Company may be commenced soon after the incorporation of the Company as and when the Directors shall think fit notwithstanding that part of the shares have been allotted.

6. The shares shall be under the discretionary control of the Directors who may allot or otherwise dispose of the same.

7. The Company in general meeting may decide to issue fully paid up bonus share to the member if so recommended by the Board of Directors.

8. The certificate to share registered in the name of two or more person shall be delivered to first named person in the register and this shall be a sufficient delivery to all such holders.

LIEN

9. The Company shall have a first and paramount lien upon all the shares (not being a fully paid up share) registered in the name of such member (whether solely or jointly with others) and upon the proceeds of sale thereof for his debts, liabilities and engagements (whether presently payable or not) solely or jointly with any other person, to or with the Company, whether the period for the payment, fulfillment or discharge thereof shall have actually a lien or not and such lien shall extend to all dividends, from time to time, declared in respect of shares, subject to section 205 A of the Act. The Board of Directors may at any time declare any shares to be wholly or in part exempt from the provisions of this clause.

CALLS ON SHARES AND TRANSFER OF SHARES

10. The Directors are empowered to make call on members of any amount payable at a time fixed by them.

11. Any member desiring to sell any of his shares must notify the Board of Directors of the number of shares, the fair value and the name of the proposed transferee and the Board must offer to the other share holders the shares offered at the fair value and if the offer is accepted, the shares shall be transferred to the acceptor and if the shares or any of them, are not so accepted within one month from the date of notice to the Board the members proposing transfers shall, at any time within three months afterwards, be at liberty, subject to Articles 12 and 13 hereof, to sell and transfer the shares to any persons at the same or at higher price.

    In case of any dispute, regarding the fair value of the share it shall be decided and fixed by the Company's Auditor whose decision shall be final.

12. No transfer of shares shall be made or registered without the previous sanction of the Directors, expect when the transfer is made by any member of the Company to another member or to a member's wife or child or children or his heirs and the Directors may decline to give such sanction without assigning any reason subject to Section 111 of the Act.

13. The Directors may refuse to register any transfer of shares (1) where the Company has a lien on the shares or (2) where the shares are not fully paid up shares, subject to Section 111 of the Companies Act, 1956.

14. Subject to Section 111 of the Act, the Directors may in their discretion, without assigning any reason, refuse to register the transfer of any shares to any person, whom it shall, in their opinion, be undesirable in the interest of the Company to admit to membership.

15. At the death of any members his or her shares be recognised as the property of his or her heirs upon production of reasonable evidence as may required by the Board of Directors.

16. The instrument of transfer must be accompanied by the certificates of shares.

GENERAL MEETINGS

17. All General Meetings other than the Annual General Meeting shall be called Extra-ordinary General Meetings.

18. (a) The Board may whenever it thinks fit, call an Extra-ordinary General Meetings.

    (b) If at any time there are not within India directors capable of acting who are sufficient in number to form a quorum, any Director or at least any two members of the Company may call an Extra-ordinary General Meeting in the same manner, as nearly as possible, as that a meeting may be called by the Board.

19. At least twenty-one days, clear notice of General Meetings of the Company, specifying the day, hour and place of meeting and the objects shall be given. In every such notice calling meeting of the Company there will appear a statement that member is entitled to appoint proxy to attend and to vote instead of himself. A General Meeting may be

called after giving a notice shorter than twenty-one days if consent is accorded in case of any general meeting of all the members entitled to vote there at and in case of any other meeting by members holding not less than 95 (Ninety Five) present of the paid up share capital and is given a right to vote a meeting.

20. No business shall be transacted at any general meeting, unless quorum of members in present. At least two members present in person shall be quorum for general meeting.

21. The Chairman, if any, of the Board, shall preside as Chairman of all Board and general meetings, of the Company. If at any time the Chairman is not present within 15 minutes after the time appointed for holding the same, the Directors and members present shall elect one of the Directors present to be Chairman of such meeting. If no directors is present or unwilling to act as Chairman, the members may appoint one of their members as Chairman.

DIRECTORS

22. The number of Directors shall not be less than two and not more than twelve.

23. The following shall be the First Directors of the Company.

    1. RADHAY SHYAM WADHWA
    2. BHARAT WADHWA

24. The Directors may from time to time, appoint one or more of their body to the office of the Managing Director for one or more of the divisions of the business carried on by the Company and to enter into agreement with him in such terms and conditions as they may deem fit.

25. The Directors shall have the power, at any time and from time to time, to appoint any person as additional Director in addition to the existing Director so that the total number of Directors shall not at any time exceed the number fixed for Directors in these articles, Any Directors so appointed shall hold office only until the next following Annual General Meeting but shall be eligible thereof for election as Director.

26. The Managing Director may be paid such remuneration as may, from time to time, be determined by the Board and such remuneration as may be fixed by way of salary or commission or participation in profits or partly in one way or partly in another subject to the provisions of the Companies Act, 1956.

27. The quorum necessary for the transaction, of the business of the Board meeting subject to Section 287 of the Act, shall be one third of the total strength or at least two whichever is higher.

28. Subject to section 289 of the Act, a resolution in writing signed by at least two Directors except a resolution which the Act specifically required it to be passed at a Board meeting shall be effective for all purposes as a resolution passed at a meeting of Directors duly called, held and constituted.

29. Subject to provisions of Section 313 of the Act, a Director, who may be absent for a period, not less than 3 (three) months from the State in which the meeting of the Board are ordinarily held, have power to appoint any member of the Company elected by him as an alternate director by giving notice in writing under his name to the Board and at his discretion to remove, such alternate director. Such alternate Director shall vacate office when his appointee is present in person or cease to be director. Save as aforesaid such alternate director while so acting shall exercise and discharge all functions and powers and be subject to all the duties and limitations of the Director which he represents and shall be entitled to receive notice to attend and to vote a Director's Meeting on behalf of meeting attended by him.

30. The Director shall have power for engagement and dismissal of managers, engineers, assistants, clerks and others and shall have power of general direction, and management and superintendence, of the business of the company with full powers to do all such acts, matters and things deemed necessary, proper or expedient for carrying on the business and concern of the Company including the power to make such investment of the Company's fund as they shall think fit, subject to the limit fixed by the Board of Directors under Section 292 of the Act and sign contracts and to draw, make, sign, accept, endorse and negotiate on behalf of the Company all bills of exchange, promissory notes, hundies drafts, Government Promissory Notes and other Government securities and such other instruments.

31. The Director may delegate all or any of their powers to such other Directors, Managers or other persons as they think fit and shall have power to grant to any such person such power of attorney, as they deem expedient and such powers at pleasure to revoke, subject to Section 292 and 312 of the Companies Act, 1956.

32. Subject to Provision of the Companies Act, 1956 the director shall receive such remuneration for their services as may, from time to time, be determined by the Company in general meeting or may be contained in an agreement, if any, between the Company and any Director or Directors.

33. Subject to the provisions of the companies Act, 1956 and the Rules framed thereunder, each Director shall receive out of the funds of the Company by way of sitting fees for his services a sum not exceeding Rs.1,000/- (Rupees One Thousand) for every Board meeting attended by him.

34. A Director shall not be required to hold any qualification shares in the Company and also not required to retire by rotation.

35. The Director shall also be paid travelling and other expenses of attending and returing from meeting of the Board (including hotel expenses) and any other expenses properly incurred by them in connection with the business of the Company. The Directors may also be remunerated for any extra services done by them outside their ordinary duties as Director, subject to the provisions of Section 314 of the Act.

POWERS AND DUTIES OF DIRECTORS

36. The business of the Company shall be managed by the Board of Directors who may pay all such expenses preliminary and incidental to the promotion, formation, establishment and registration of the Company as they think fit and may exercise all such power of the Company and do on behalf of the Company all such acts as may be exercised or done by the Company in general meeting and are not barred by statue or by these Articles and are required to be exercised or done by the Company in General Meeting, subject nevertheless to any regulations of the Articles, to the provisions of the statue and to such regulations not being inconsistent with aforesaid regulations or provisions as may be prescribed by the Company in general meeting but no regulation made by the Company at the general meeting shall invalidate any prior act of the Directors which would have been valid if such regulations had not been made.

37. The Board of Directors may from time to time, pay to the members such interim dividends as appear to be justified from the profits of the Company.

BORROWING POWERS

38. Subject to section 58-A and 292 of the Companies Act. 1956, and Regulations made thereunder and Directions issued by the RBI the directors may, from time to time, raise or borrow any sums of money for and on behalf of the Company from the member or other persons, companies or banks or they may themselves advance money to the company on such interest as may be approved by the Directors.

39. The Directors may, from time to time, secure the payment of such money in such manner and upon such terms and conditions in all respects as they deem fit and in particular by the issue of bonds or debentures or by pledge, mortgage, charge or any other security on all or any properties of the Company (both present and future) including its uncalled capital for the time being.

40. Any debenture, bonds, or other securities may be issued at discount, premium or otherwise and with special privileges as to redemption, surrender, drawing and allotment of shares of the Company and otherwise.

OPERATION OF BANK ACCOUNTS

41. The Directors shall have the power to open bank accounts to sign cheques on behalf of the Company and to operate all banking accounts of the Company and to receive payments, make endorsements, draw and accept negotiable instruments, hundies and bills or may authorise any other person or persons to exercise such powers.

ACCOUNTS

42. (a) The Board shall, from time to time, determine whether and to what extent and at what, times and places and under what conditions or regulation the accounts and books of the Company or any of them shall be open to the inspection of members (not being Director).

(b) No members (not being Director) shall have any right of inspecting any accounts or books of account of the Company except as conferred by law or authorised by the Board or by the Company in General Meeting.

43. The Directors shall in all respect comply with the provisions of Section 209, 209A, 210, 211, 215, 216, 217, 218, 220, 221 and 222 of the Act, and profits and Loss Account, Balance Sheet and Auditors Report and every other document required by law to annexed or

attached as the case may be, to the Balance Sheet, to be sent to every member and debenture holder of the Company and every trustee for the holders of the debentures issued by the Company at least twenty one days before the date of Annual general meeting of the Company at which they are to be laid, subject to the provisions of section 219 of the Act.

AUDIT

44. (a) The first Auditor of the Company shall be appointed by the Board of Directors within one month from the date of registration of the Company and the Auditors so appointed shall hold office until the conclusion of the first Annual General Meeting.

(b) At each annual General Meeting the Company shall appoint an Auditor to hold Office from the conclusion of the Meeting till the conclusion of the next Annual General Meeting.

(c) The remuneration of the Auditor shall be fixed by the Company in the Annual General Meeting or in such manner as the Company in the Annual General Meeting may determine. In case of an Auditor appointed by the Board his remuneration shall be fixed by the Board.

COMMON SEAL

45. (a) The Common Seal of the Company may be made either of metal or of rubber as the directors may decide.

(b) The Board shall provide for the safe custody of the Company's Common Seal.

(c) The Seal shall not be affixed to any instrument except by the authority of a resolution of the Board or of a Committee of the Board authorised by it in that behalf and except in the presence of atleast one director who shall sign every instruments to which the seal of the Company if so affixed. The share certificate will, however, be signed and Sealed in accordance with Rule 6 of the Companies (Issue of Share Certificates) Rules, 1960.

SECRECY

46. Subject to the provisions of law of land and the act, every manager, auditor trustee, member of a committee, officer servant, agent accountant or other persons employed in the business of the company shall, if so required by the Board of Directors before entering upon his duties, sign, declaration, pledging himself to observe strict secrecy respecting all transactions of the Company with its customers and the state of account with individuals and in matters relating thereto and shall by such declaration pledge himself, not to reveal any of the matters which may come to his knowledge in the discharge of his duties except when required to do so by the directors or by any court of law and except so far as may be necessary in order to comply with any of the provisions in these presents.

WINDING UP

47. Winding up when necessary will be done in accordance with the requirements of the Companies Act, 1956 or statutory modification thereto.

INDEMNITY

48. Subject to the provisions of Section 201 of the Act, every Director, Manager, Auditor, Secretary and other officers or servants of the Company shall be indemnified, out of the assets of the Company against any bonafide liability incurred by him in defending any bonafide proceedings, whether civil or criminal, in which judgement is given in his favour or in which he is acquired or in connection with any application under section 633 of the Act, in which relief is granted to him by the Court.

8

Sl. No	Name, Description Occupation and address of each Subscriber	Signature of Subscribers	Name, address, Description occupation and Signature of witness or witnesses
1.	BHARAT WADHWA S/o Mr.Radhey Sham R/o House No. 676, Sector- 13, U.E. Karnal Haryana India-132001 Occupation: Business	Sd/-	I hereby witness the signatures of subscribers. Sd/- (DINESH KHURANA) FCA M. No. 97508 S/o Sh. Darshan Kumar Khurana 230, Sector-12, Part-II, Karnal-132001, Haryana
2.	RADHAY SHYAM WADHWA S/o Mr. Tau Ram Wadhwa R/o V.P.O. G. Rao Yamuna Nagar Haryana India-135001 Occupation: Business	Sd/-	

Place : New Delhi Dated this 18th day of February 2011

JSM FOODS PVT. LTD.

Auth. Sign./Director

Company Master Data

CIN	U14100DL2011PTC214636
Company Name	JSM FOODS PRIVATE LIMITED
ROC Code	RoC-Delhi
Registration Number	214636
Company Category	Company limited by Shares
Company SubCategory	Non-govt company
Class of Company	Private
Authorised Capital(Rs)	2000000
Paid up Capital(Rs)	1000000
Number of Members(Applicable in case of company without Share Capital)	0
Date of Incorporation	22/02/2011
Registered Address	HOUSE NO WZ 932/16 Floor Ground NEAR MCD SCHOOL VILLAGE BASAI DARAPUR New Delhi West Delhi DL 110015 IN
Address other than R/o where all or any books of account and papers are maintained	-
Email Id	mining.ynroffice1@gmail.com
Whether Listed or not	Unlisted
Suspended at stock exchange	-
Date of last AGM	29/09/2018
Date of Balance Sheet	31/03/2018
Company Status(for efiling)	Active

Charges

Assets under charge	Charge Amount	Date of Creation	Date of Modification	Status

No Charges Exists for Company/LLP

Directors/Signatory Details

DIN/PAN	Name	Begin date	End date	Surrendered DIN
02285284	SMARTH SAIN GUPTA	13/09/2017	-	
03268422	RADHAY SHYAM WADHWA	25/09/2017	-	
07937383	TANISH WADHWA	13/09/2017	-	

Director General, Mines and Geology, Haryana
30 Bays Building, Sector-17, Chandigarh.

From

The Director General,
Mines and Geology, Haryana,
30 Bays Building, Sector-17, Chandigarh.

JSM Foods Private Limited,
W Z/ 932, Basie Darapur, 1st Floor,
Near Senior Secondary School,
New Delhi-110015.

Memo No. DMG/HY/M.Plan/M.Ghaggar E Block/YNR B-3/2015/ 454
Dated Chandigarh, the 08-01-2016

Subject:- Submission of Mining Plan and Progressive Mine Closure Plan for Mandoli Ghaggar East Block/YNR B-3 Sand-Minor Mineral District Yamuna Nagar (Haryana) comprising an area of 20.18 hectares of M/s JSM Foods Private Limited, R/o 112, W Z/ 932, Basie Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015

Reference your letter dated Nil on the above noted subject.

2. You are aware that revised mining plan alongwith Progressive Mine Closure Plan in respect of an area of 25.56 hectares of land in respect of Mandoli Ghaggar East Block/YNR B-3, District Yamuna Nagar was submitted by your consultant (RQP) on 02.01.2016, which was found to be in order and vide this office letter no. DMG/HY/M.Plan/M.Ghaggar E Block/YNR B-4/2015/10476 dated 10.12.2015, you were directed to submit 6 copies for approval, so that final approved copies could be supplied to you and all concerned. However, you through your RQP submitted 06 copies vide letter 02.01.2016 for further necessary action.

3. Now, in exercise of the powers conferred by Sub Rule 4A of Rule 22 of the Mineral Concession Rules-1960 read with the State Government order No.1/7/103-2IBH-96 dated 25.2.2003, I hereby approve the above said Mining Plan alongwith Progressive Mine Closure Plan in respect of an area of 20.18 hectares of land in respect of Mandoli Ghaggar East Block/YNR B-3. The approval is subject to the following conditions:-

(i) That this "Mining Plan alongwith Progressive Mine Closure Plan" is approved without prejudice to any other laws applicable to the mine/area from time to time whether made by the Central Government or State Government or any other authority;

(ii) That this approval of the "Mining Plan alongwith Progressive Mine Closure Plan" of Mining does not in any way imply the approval of the State Government in terms of any other provisions of the Mines and Minerals (Development & Regulation) Act, 1957 or Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 or any other law including Forest (Conservation) Act, 1980 and Environment Protection Act, 1986 and rules framed there under;

(iii) That this "Mining Plan alongwith Progressive Mine Closure Plan" is being approved on the basis of data provided by you. In case, at any point of time

Director General, Mines and Geology, Haryana
30 Bays Building, Sector-17, Chandigarh.

any ambiguity in the same is found, the approval will be revoked without suspension of the mining operations and will be allowed to resume operations only after modification/rectification of the same, if so required.

(iv) That this "Mining Plan alongwith Progressive Mine Closure Plan" is approved without prejudice to any other order or direction from any court of any competent jurisdiction and is for a period of **five years** only and shall not be make you entitled for any extension of the lease period;

(v) That all the norms and provisions as envisaged in the Mining Plan would be adhered to during the working of mine; and

(vi) That the Financial Assurance of **Rs. 02,12,700/-** as required under the provisions of Rule 71(6) of 'Haryana Minor Mineral Concession, Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules, 2012, shall be furnished within a period of 60 days or before start of mining operations, whichever is earlier.

4 Further, as per condition no. (xvii) of the LoI dated 19.06.2015, the actual mining will be allowed to be commenced only after Prior Environmental Clearance from the Competent Authority as required under EIA notification dated 14/9/2006, as amended from time to time by the MoEF&F, GoI and guidelines/ circulars issued in this behalf.

(P.K. Sharma)
State Mining Engineer,
for Director General, Mines and Geology, Haryana

Enclosure: Mining Plan & Progressive Mine Closure Plan (2 copies).

Registered

Endst. No. DMG/HY/M.Plan/M.Ghaggar E Block/YNR 8-3/2015/ Dated:

A copy along with a copy of the duly approved Mining Plan and Progressive Mine Closure Plan is forwarded to the Director Mines Safety, Room No. 201-203, 2nd Floor, B-Block, CGO Complex-II, Hapur Road, Ghaziabad for information and necessary action.

-Sd-
State Mining Engineer,
for Director General, Mines and Geology, Haryana.

Enclosure: Mining Plan & Progressive Mine Closure Plan

Registered.

Endst. No. DMG/HY/M.Plan/M.Ghaggar E Block/YNR 8-3/2015/ Dated:

A copy along with a copy of the duly approved Mining Plan and Progressive Mine Closure Plan is forwarded to the Mining Officer, Mines and Geology Department, Yamuna Nagar for information and necessary action.

-Sd-
State Mining Engineer,
for Director General, Mines and Geology, Haryana

Enclosure: Mining Plan & Progressive Mine Closure Plan

Endst. DMG/HY/M.Plan/M.Ghaggar E Block/YNR 8-3/2015/ Dated:

A copy is forwarded to Shri S. N. Sharma, House No. 282, Sector 11-D, Faridabad (Haryana) for information and necessary action please.

R. S. Thakran

-Sd-
State Mining Engineer
for Director General, Mines and Geology, Haryana

HARYANA STATE POLLUTION CONTROL BOARD
SCO-131 Sector-17, HUDA Jagadhari Ph.01732-200137
Website – www.hspcb.gov.in E-Mail - hspcb.pkl@sifymail.com
Telephone No. – 0172-2577870-73

No. HSPCB/Consent/ : 313100417YAMCTE3814231 **Dated:30/03/2017**

To

M/s : JSM FOODS PVT LTD
VILL MANDOLI GHAGGAR EAST BLOCK 3
YAMUNANAGAR
135001

Sub. : Grant of consent to Establish to M/s JSM FOODS PVT LTD

Please refer to your application received on dated 2017-01-30 in regional office Yamuna Nagar.

With reference to your above application for consent to establish,M/s JSM FOODS PVT LTD is here by granted

consent as per following specification/Terms and conditions.

Consent Under	AIR/WATER/HWM
Period of consent	30/03/2017 - 29/03/2022
Industry Type	Mining and ore beneficiation
Category	RED
Investment	
1. Land (Rs.in LAKHS)	10
2. Building(Rs.in LAKHS)	7
Quantity of effluent	
1. Trade	1.0 KL/Day
2. Domestic	0.0 KL/Day
Number of outlets	1.0
Mode of discharge	
1. Domestic	Septic Tank
2. Trade	00
Domestic Effluent Parameters	
Trade Effluent Parameters	
Number of stacks	1
Height of stack	
1. 00	00 meter
Emission parameters	
1. SPM	00 Lts./Day
Capacity of boiler	
1. 00	00 Ton/hr
Type of Furnace	

1. 00	00
Type of Fuel	
1. Diesel	00 KL/Day

Terms and conditions

1. The industry has declared that the quantity of effluent shall be 11 KL/Day i.e 0KL/Day for Trade Effluent. 10 KL/Day for Cooling, 1 KL/Day for Domestic and the same should not exceed .

2. The above "Consent to Establish" is valid for 60 months from the date of its issue to be extended for another one year at the discretion of the Board or till the time the unit starts its trial production whichever is earlier. The unit will have to set up the plant and obtain consent during this period.

3. The officer/official of the Board shall have the right to access and inspection of the industry in connection with the various processes and the treatment facilities being provided simultaneously with the construction of building/machinery. The effluent should conform the effluent standards as applicable

4. That necessary arrangement shall be made by the industry for the control of Air Pollution before commissioning the plant. The emitted pollutants will meet the emission and other standards as laid/will be prescribed by the Board from time to time.

5. The applicant will obtain consent under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21/22 of the Air (Prevention & Control of Pollution) Act,1981 as amended to-date-even before starting trial production

6. The above Consent to Establish is further subject to the conditions that the unit complies with all the laws/rules/decisions and competent directions of the Board/Government and its functionaries in all respects before commissioning of the operation and during its actual working strictly.

7. No in-process or post-process objectionable emission or the effluent will be allowed, if the scheme furnished by the unit turns out to be defective in any actual experience

8. The Electricity Department will give only temporary connection and permanent connection to the unit will be given after verifying the consent granted by the Board, both under Water Act and Air Act.

9. Unit will raise the stack height of DG Set/Boiler as per Board's norms.

10. Unit will maintain proper logbook of Water meter/sub meter before/after commissioning.

11. That in the case of an industry or any other process the activity is located in an area approved and that in case the activity is sited in an residential or institutional or commercial or agricultural area, the necessary permission for siting such industry and process in an residential or institutional or commercial or agricultural area or controlled area under Town and Country Planning laws CLU or Municipal laws has to be obtained from the competent Authority in law permitting this deviation and be submitted in original with the request for consent to operate.

12. That there is no discharge directly or indirectly from the unit or the process into any interstate river or Yamuna River or River Ghaggar.

13. That the industry or the unit concerned is not sited within any prohibited distances according to the Environmental Laws and Rules, Notification, Orders and Policies of Central Pollution control Board and Haryana State Pollution Control Board.

14. That of the unit is discharging its sewage or trade effluent into the public sewer meant to receive trade effluent from industries etc. then the permission of the Competent Authority owing and operating such public sewer giving permission letter to his unit shall be submitted at time of consent to operate.

APPROVED
R. S. Thakran
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15. That if at any time, there is adverse report from any adjoining neighbor or any other aggrieved party or Municipal Committee or Zila Parishad or any other public body against the unit's pollution; the Consent to Establish so granted shall be revoked.

16. That all the financial dues required under the rules and policies of the Board have been deposited in full by the unit for this Consent to Establish.

17. In case of change of name from previous Consent to Establish granted, fresh Consent to Establish fee shall be levied.

18. Industry should adopt water conservation measures to ensure minimum consumption of water in their Process. Ground water based proposals of new industries should get clearance from Central Ground Water Authority for scientific development of previous resource.

19. That the unit will take all other clearances from concerned agencies, whenever required.

20. That the unit will not change its process without the prior permission of the Board.

21. That the Consent to Establish so granted will be invalid, if the unit falls in Aravali Area or non conforming area.

22. That the unit will comply with the Hazardous Waste Management Rules and will also make the non-leachate pit for storage of Hazardous waste and will undertake not to dispose off the same except for pit in their own premises or with the authorized disposal authority.

23. That the unit will submit an undertaking that it will comply with all the specific and general conditions as imposed in the above Consent to Establish within 30 days failing which Consent to Establish will be revoked.

24. That unit will obtain EIA from MoEF, if required at any stage.

25. In case of unit does not comply with the above conditions within the stipulated period, Consent to Establish will be revoked.

26. That unit will obtain consent to operate from the board before the start of product activity.

Specific Conditions

Other Conditions :

1. That unit will abide with all the condition mentioned in the Environmental clearance. 2. That unit will abide by the directions of CPCB/HSPCB/any other competent authority time to time 3. That unit will abide the directions/ orders of Honble Supreme court /High Court/NGT/any other court. 4. That the Project Proponent will abide by the recommendations of the HIGH POWER COMMITTEE CONSTITUTED by the Hon`ble NGT in the OA NO 184 OF 2013 in the case of GURPREET SINGH BAGGA vs MoEF & CC and subjected to final outcome/decision of the case. 5. That the unit will submit the Land Agreement between Farmers and the unit at the time of CTO application. 6. That the unit will obtained the CTO application before starting the Production Activity.

APPROVED

Regional Officer, Yamuna Nagar
For and on be half of chairman
Haryana State Pollution Control Board

HARYANA STATE POLLUTION CONTROL BOARD
SCO-131 Sector-17, HUDA Jagadhari Ph.01732-200137 Email:- hspcbroyr@gmail.com
E-mail: hspcb@hry.nic.in

No. HSPCB/Consent/ : 313100420YAMCTO7770692 **Dated:23/07/2020**

To.

M/s :JSM FOODS PVT LTD
VILL MANDOLI GHAGGAR EAST BLOCK 3

Subject: Grant of consent to operate to M/s JSM FOODS PVT LTD.

Please refer to your application no. 7770692 received on dated 2020-06-23 in regional office Yamuna Nagar.With reference to your above application for consent to operate,M/s JSM FOODS PVT LTD is here by granted consent as per following specification/Terms and conditions.

Consent Under	BOTH
Period of consent	01/10/2020 - 30/09/2021
Industry Type	Mining and ore beneficiation
Category	RED
Investment(In Lakh)	120.0
Total Land Area(Sq. meter)	201800.0
Total Builtup Area(Sq. meter)	201800.0
Quantity of effluent	
1. Trade	0.0 KL/Day
2. Domestic	0.5 KL/Day
Number of outlets	1.0
Mode of discharge	
1. Domestic	septic tank
2. Trade	
Domestic Effluent Parameters	
1. NA	
Trade Effluent Parameters	
1. NA	
Number of stacks	1
Height of stack	
1. NA	
Emission parameters	
1. SPM	100 mg/m3
Product Details	
1. SAND GRAVEL MINING	800 Metric Tonnes/day

Capacity of boiler	
1. NA	Ton/hr
Type of Furnace	
1. NA	
Type of Fuel	
1. NA	
Raw Material Details	
Sand Gravel Mining	800 Metric Tonnes/Day

Nirmal Kumar

Regional Officer, Yamuna Nagar
Haryana State Pollution Control Board.

Terms and conditions

1. The applicants shall maintain good house keeping both within factory and in the premises. All hose pipelines values, storage tanks etc. shall be leak proof. In plant allowable pollutants levels, if specified by State Board should be met strictly.
2. The applicant/company shall comply with and carry out directive/orders issued by the Board in this consent order at all subsequent times without negligence of his /its part. The applicant/company shall be liable for such legal action against him as per provision of the law/act in case of violation of any order/directives. Issued at any time and or non compliance of the terms and conditions of his consent order.
3. The applicant shall make an application for grant of consent at least 90 days before the date of expiry of this consent.
4. Necessary fee as prescribed for obtaining renewal consent shall be paid by the applicant alongwith the consent application.
5. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above required variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity of being heard vary all or such condition and there upon the applicant shall be bound to comply with the conditions so varied.
6. The industry shall provide adequate arrangement for fighting the accidental leakages, discharge of any pollutants gas/liquids from the vessels, mechanical equipment etc. which are likely to cause environment pollution.
7. The industry shall comply noise pollution (Regulation and control) Rules, 2000.
8. The industry shall comply all the direction/Rules/Instructions as may be issued by the MOEF/CPCB/HSPCB from time to time.
9. The industry shall ensure that various characteristics of the effluents remain within the tolerance limits as specified in EPA Standard and as amended from time to time and at no time the concentration of any characteristics should exceed these limits for discharge.
10. The industry would immediately submit the revised application to the Board in the event of any change in the raw material in process, mode of treatment/discharge of effluent. In case of change of process at any stage during the consent period, the industry shall submit fresh consent application alongwith the consent to operate fee, if found due, which may be on any account and that shall be paid by the industry and the industry would immediately submit the consent application to the Board in the event of any change during the year in the raw material,

quantity, quality of the effluent, mode of discharge, treatment facilities etc.

11. The officer/official of the Board shall reserve the right to access for the inspection of the industry in connection with the various process and the treatment facilities. The consent to operate is subject to review by the Board at any time.

12. Permissible limits for any pollutants mentioned in the consent to operate order should not exceed the concentration permitted in the effluent by the Board.

13. The industry shall pay the balance fee, in case it is found due from the industry at any time later on.

14. If the industry fails to adhere to any of the conditions of this consent to operate order, the consent to operate so granted shall automatically lapse.

15. If the industry is closed temporarily at its own, they shall inform the Board and obtain permission before restart of the unit.

16. The industry shall comply all the Directions/ Rules/Instructions issued from time to time by the Board.

Specific Conditions :

1 Unit will comply the Order of NGT, New Delhi vide Dated 01.06.2016 & 06.06.2016 in the case of the OA NO 184/2013, 176/2016 & 272/2016 in the case of GURPREET SINGH BAGGA vs MoEF & CC and subjected to final outcome/decision of the court.

2 Unit if found involved in illegal mining CTO so granted will be revoked .

3 Unit will abide the directions/ orders of Hon'ble Supreme court /High Court/NGT/any other court.

4 Unit will run and maintain the APCM & green belt.

5 The CTO is granted under Water Act 1974/ Air Act 1981 and if any violation reported against the unit at any stage, the closure action as per provisions of section 33 A of Water Act 1974 or 31 A of Air Act 1981 or under other relevant sections will be taken against the unit apart from prosecution against the unit and its partners/ proprietor/ stake holders /responsible person and unit will also be liable to pay the Environmental Compensation for the damage caused to the Environment because the act of omission and commission by the unit.

6 The project proponent will carry out the mining by open cast mechanized method. Light weight excavator will be used for digging and loading of minerals and tippers.

7 Unit will implement the Environment Management plan and will submit the recurring cost involved as per EC Condition and will also submit the detail of 5 persons engaged for implementation of Environment Management Plan.

8 Unit will submit the details of permission from CGWA if withdrawing ground water.

9 The mining operation shall be restricted to above ground water table and it should not intersect with ground water table.

10 The excavation will be carried out upto maximum depth of 3 meter from the surface of mineral deposit and not less than 1 meter from the water level of the River channel which ever reached earlier.

11 CSR activities by companies including the mining establishments has become mandatory upto 2% of their financial Turn-over, Socio Economic Development of the neighbourhood Habitats could be planned and executed by the Project Proponent more systematically based on the "Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment & Forest and its Regional Office located at Chandigarh on six monthly basis.

12 To maintain safety and stability of Riverbanks i.e. 3 meter or 10% of the width of the River whichever is more will be left intact as no mining zone.

13 No stream should be diverted for the purpose of sand mining. No natural water course and/ or water resources are obstructed due to mining operations. 14 Restricted working hours. Sand mining operation has to be carried out between 6 am to 7 pm.

15 The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Wheel washing facility should be installed and used.

16 Unit will comply with the traffic management plan.

17 Unit will do the sufficient no. of plantation as per commitment in EC.

18 Unit will provide the sufficient no. of sprinklers system and will maintain the same to for dust suppression and unit will also provide dedicated vehicles/tankers for water sprinkling.

19 Unit will comply the various conditions of Environment Clearance.

Nirmal Kumar Digitally signed by Nirmal Kumar Date: 2015.07.23 12:29:47 +05'30'

Regional Officer, Yamuna Nagar

Haryana State Pollution Control Board.

HARYANA STATE

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STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY HARYANA
Bay No. 55-58, Prayatan Bhawan, Sector-2, PANCHKULA

No. SEIAA-HR-2016/989 Dated: 21-12-2016

To

M/s JSM Foods Pvt. Ltd.
W-2/93, Basic Darapur, 1st Floor,
Near Senior Secondary School,
New Delhi-110015

Subject: Environmental Clearance for River Bed Mining of Minor Mineral "Mandoli Ghaggar East Block/YNR B3" at village Mandoli, Tehsil & District Yamuna Nagar Over an area of 20.18 Ha. By M/s JSM Foods Pvt. Ltd.

*****

This has reference to your online application no. nil dated 17.06.2016 addressed to Member Secretary, SEIAA Haryana for seeking prior environmental clearance for the above project under the EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., Form-1, Pre-feasibility report, copy of approved Mining Plan, EIA/EMP on the basis of approved TOR and the additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MoEF, GOI vide their Notification 21.08.2015, in its meetings held on 09.07.2016, 03.08.2016.

[2] The SEAC has examined the application and noted that the proposal is for River Bed Mining of Minor Mineral "Mandoli Ghaggar East Block/YNR B3" at village Mandoli, Tehsil & District Yamuna Nagar. The Letter of Intent (LOI) dated 19.06.2015. The lease has been granted for an area of 20.18 for 10 years out of which 6.0 Ha area is under restricted Zone. 14.18 Ha area free from restriction and the mining is proposed in this area only. The project proponent on 17.06.2016 submitted online application along with copy of approved Mining plan under category B-1(Now B-2) as no other mine lease area is also located within 500 mtr. The validity of Mining Scheme in the Mining plan is for 5 years. NOC from Forest Department has been Obtained. The project proposal has been appraise as per proper processor of EIA Notification i.e approval of TOR and Public Hearing.

Brief details of the project:

1.	Category/Item no. (in schedule):	1 (a) B-1 (Now B-2)
2.	Location of Project	Village Mandoli, Ghagga, Tehsil & District Yamunanagar
3.	Project Details Khasra No.	River Bed Mining of Sand minor mineral at over an area of 20.18 Ha

	"Mandoli Ghaggar West Block YNR B-3"	52/2,3,4,5,6,7,8,9,13,14,15,16,17,18,23,24,25 53/1,2,3,4,7,8,9,10,11,12,13,14,17,18,19,20,21,22,23 3,24 58/1,2,3,4,7,8,9,10,11,12,13,14,18,19,20 59/3,4,5,6,7,8,13,14,15,16,17,18
	Production capacity	8, 50, 000 TPA @ 113 Trips/day (25 Ton/Trip)
4.	Project Cost	1.2 crores
5.	Water Requirement & Source	52.82 KL Through Tankers Dust suppression 6.82 KLD Plantation 4 KLD Drinking 2 KLD
6.	Environment Management Plan Budget	11.80 lakh
7.	CSR Activates Budget	7.5 Lakh
8.	Production	The proposed production for the five years @ 8, 50, 000 TPA. The ultimate depth of Mining will be 3 meter. The elevation range of mine site is 269 amsl to 273 amsl.
9.	Corner Coordinates of the lease area	Block / Latitude / Longitude "Mandoli Ghaggar West Block YNR B-3" / 30°08'10"N / 77°24'43"E 30°08'28"N / 77°25'01"E
10.	Green belt plantation	Year of Plantation / Proposed Plantation I Yr / 800 Trees II Yr / 800 Trees III Yr / 800 Trees IV Yr / 800 Trees V Yr. / 800 Trees
11.	Machinery required	Excavator JCB Tipers Trucks, Water Tanker Light Vehicles Geep and Maintainance Van

The recommendation of SEAC and project details as given above was taken up for consideration in the 95th meeting held on 26.08.2016. It was observed by the Authority that Environment Clearance to this project on the following conditions:

C. SPECIFIC CONDITIONS:

(1) This Environment Clearance is granted for the proposed production for the five years 8, 50, 000 TPA. The ultimate depth of Mining will be 3 meter. The elevation range of mine site is 269 amsl to 273 amsl. The Corner Coordinates of the leased area are:

Block	Latitude	Longitude
"Mandoli Ghaggar West Block/YNR B-3"	30°08'10"N 30°08'28"N	77°24'43"E 77°25'01"E

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[2] The project proponent shall carry out mining activity strictly as per the approved Mining Plan.

[3] Environmental Clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the National Board of Wildlife, as applicable to the project.

[4] No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.

[5] The Project proponent shall obtain consent to Operate from the State Pollution control Board, Haryana and effectively implement all the conditions stipulated therein.

[6] Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the project and records maintained; also, Occupational health check-ups for workers having some aliments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for labour for ensuring good occupational environment for mine workers would also be adopted.

[7] Project Proponent shall appoint a Monitoring Committee to monitor the replenishment study, traffic management, levels of production, River Bank ension and maintenance of Road etc.

[8] The number of trips of the trucks shall not exceed the estimated quantity of 2833MT/day @ 113 Trips/day (25 Mt/Trip). Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/dumpers carrying the mineral should not be allowed to pass thought the villages.

[9] Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.

[10] Excavation will be carried out up to a maximum depth of 3 meters from surface of Mineral deposit and not less thanone meter from the water level of the river channel whichever is reached earlier.

[11] The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centre.

[12] Washing of all transport vehicles should be done inside the mining lease.

[13] Permanent pillars has to be constructed to demarcate width of extraction of Reserve of Minerals leaving 25% of River width from the bank with depth of 1.5m below the ground and 1.2 m above the ground to observe its stability.

[14] There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis in consultation with Regional Director, Central Groundwater Board and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.

[15] The Project Proponent shall also take all precautionary measures during mining operation for conservation and protection of endangered flora fauna, if any, spotted in the study area.

[16] 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.

[17] Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

[18] No River sand mining shall be allowed in flowing water and no mining is allowed in rainy season.

[19] The project proponent shall submit annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity/ production levels shall be decreased/ stopped accordingly till the replenishment is completed.

[20] In River flood plain mining a buffer of 3 meter to be left from river bank for mining.

[21] The project proponent shall ensure that no natural water course/water body shall be obstructed due to any operations.

[22] The dumping site selected and proposed shall used for OB dump at the designated site within the lease area per as per the approved time plan. In no case the overburden should be dumped outside the lease area.

[23] Garland drains shall be constructed to prevent the flow of the water in the mine.

[24] Green belt should be developed as per the proposed plantation as given in the proposal. Plantation should be carried out in phased manner.

[25] Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading

APPROVED

and unloading point and transfer points. It shall be ensured that the Ambient Air Quality Parameters conform to the norms prescribed by the CPCB

[26] Regular monitoring of ground water level and quality shall be carried out in and around the mine lease. The monitoring shall be carried out four times in a year- pre monsoon (April-May), monsoon (August), post monsoon (November), winter (January) and the data thus collected may be sent regularly to MOEF Regional Office, Chandigarh and Regional Director CGWB

[27] Data on ambient air quality and stack emissions shall be submitted to Haryana Pollution Control Board once in six months carried out by MOEF NABL CPCB Government approved lab.

[28] Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded. The project proponent shall ensure that the vehicle must have pollution under control certificate.

[29] The project proponent shall take all precautionary measures during mining operations for conservation and protection of endangered fauna, if any, spotted in the study area. A plan for conservation shall be drawn and got approved from the Chief Wildlife Warden of the State before start of mining operations. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the wildlife conservation plan so prepared specific to the project site shall be effectively implemented. A copy of action plan may be submitted to the HSPCB and MOEF, Regional Office, Chandigarh within 3 months..

[30] As envisaged, the Project Proponent shall invest at least an amount of Rs 11.80 Lakhs/annum as cost for implementing various environmental protection measures including recurring expenses per year.

[31] A sum of Rs. 7.5 Lakhs/annum shall be earmarked by the Project proponent for investment as CSR on socio economic up-liftment activities of the area particularly in the area of habitat, health or education, training programme of rural women & man provide the kit for employment generation. The proposal should contain provision for monthly medical camps, distributions of medicines and improvement in educational facilities in the nearby schools. Details of such activity along with time bound action plan be submitted to HSPCB SEIAA Haryana before the start of operation.

[32] Budgetary provision of Rs. 1.5 Lakhs/annum per year earmarked for the labours working in the Mine for all necessary infrastructure facilities such as health

facility, sanitation facility, fuel for cooking, along with safe drinking water, medical camps and toilets for women, creche for infants should be made and submitted to HSPCB at the time of CTE/CTO SEIAA Haryana. The housing facilities should be provided for mining labours.

[33] A Final Mine Closure Plan along with details of corpus fund shall be submitted to the SEIAA well within the stipulated period as prescribed in the relevant mineral concession rules 2012.

[34] The project proponent shall ensure that the EC letter as well as the status of compliance of EC conditions and the monitoring data are placed on company's website and displayed at the project site.

[35] The project proponent shall ensure that loading in Trucks do not exceed the norms fixed by the Transport Department as per relevant rules.

[36] The project proponent shall ensure approach roads are widened and strengthened as per requirements fixed by PWD and district administration before the start of the work.

[37] The project proponent shall ensure supply of drinking water through RO.

[38] The project proponent shall Strictly adhere to the sustainable sand mining management guidelines 2016, issued by MoEF &CC GoI on 15.03.2016 and shall ensure the complaince of the standard environmental conditions prescribed for the sand mining in the said guidelines, in addition to the conditions imposed in the environment clearance letter.

[39] The project proponent shall carry out mining in semi mechanized manner using manpower, Excavator / Tipers / Trucks / Water Tanker / light vechicles/Jeep Maintanance Van.

GENERAL CONDITIONS:

[i] Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

[ii] Any change in mining technology/scope of working shall not be made without prior approval of the SEIAA.

[iii] Any change in the calendar plan including excavation, quantum of mineral and waste shall not be made.

[iv] Periodic monitoring of ambient air quality shall be carried out for PM10, PM2.5,SO2 and NOx monitoring. Location of the stations (minimum 6) shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring shall be decided in consultation with the Haryana State Pollution Control Board (HSPCB). Six monthly reports of the data so collected shall be regularly

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submitted to the HSPCB/CPCB including the MOEF, Regional office, Chandigarh.

[v] Personnel working in dusty areas shall wear protective respiratory devices they shall also be provided with adequate training and information on safety and health aspects.

[vi] Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

[vii] The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the HSPCB and the Regional office of MOEF located at Chandigarh.

[viii] The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the northern Regional Office of MoEF, the respective Office of CPCB, HSPCB and SEIAA Haryana.

[ix] The above conditions will be enforced, inter alia, under the provision of the Water (Prevention & Control of Pollution) Act, 1974 the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act 1991 (all amended till date) and rules made hereunder and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Haryana and other Court of law relating to the subject matter.

[x] The Project proponent should inform the public that the project has been accorded Environment Clearance by the SEIAA and copies of the clearance letter are available with the Haryana State Pollution Control Board & SEIAA. This should be advertised within 7 days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region and the copy of the same should be forwarded to SEIAA Haryana. A copy of Environment Clearance conditions shall also be put on project proponent's web site for public awareness.

[xi] All the other statutory clearances such as the approvals for storage of diesel from the Chief Controller of Explosives, Fire department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (protection) Act, 1972 etc. shall be obtained, as may be applicable, by Project proponent from the competent authority before the start of mining operation.

[xii] That the grant of this EC is issued from the environmental angle only, and it do not absolve the project proponent from the other statutory obligations prescribed

under any other law or any other instrument in force. The sole and complete responsibility to comply with the conditions laid down in all other laws for the time being in force, rests with the industry and project proponent. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of National Green Tribunal Act, 2010.

[xiii] The methodology of mining shall be strictly as per orders passed by Hon'ble NGT & Hon'ble Supreme Court from time to time.

[xiv] The PP shall not disturb/damage the position of studs in river bed and also not to damage the river banks and not to degrade the river bed in any manner.

[xv] Any area which have been banned by any authority/courts shall not be used for mining activity.

[xvi] Distance of mining to be maintained from Pucca Hydraulic structure Bridge- shall be as per approved mining plan/ guideline issued by MoEF & CC / Court Orders.

[xvii] The PP will not violate any judicial orders/pronouncements issued by the Hon'ble Supreme Court/High Courts/NGT.

Chairman,
State Level Environment Impact
Assessment Authority, Haryana, Panchkula.

Endst. No. SEIAA/HR/2015 Dated: .....

A copy of the above is forwarded to the following:

1. The Director (IA Division), MoEF&CC, GoI, Indira Paryavaran Bhawan, Zor bagh Road, New Delhi.
2. The Regional office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay's no. 24-25, Sector 31-A, Dakshin Marg, Chandigarh.
3. The Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Pkl.
4. The Director General, Mines & Geology Department Haryana, Chandigarh.

Chairman,
State Level Environment Impact
Assessment Authority, Haryana, Panchkula.

APPROVED
R. S. Thakran
Director, Mines and Geology Haryana

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 1220052 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number: VEL/JSMFPL/A/01
Issue to: M/s JSM Foods Pvt. Ltd.
W2 93,Basie Darapur, 1st Floor,
Near Senior Secondary School,
New Delhi-110015

Name & Address of Project: Minor Minerals "Mandoli Ghaggar East Block/YNR B3", Area of 20.18 Ha., Village-Mandoli, Tehsil & Distt. Yamuna Nagar (HR)

Report No.: VEL/A/2009/18/007
Format No.: 7.8 F-01
Party Reference No.: NIL
Reporting Date: 22/09/2020
Period of Analysis: 18/09/2020 to 22/09/2020
Receipt Date: 18/09/2020

Sample Description : Ambient Air Quality Monitoring

General Information:-

Sample collected by	: Vardan EnviroLab Representative
Sampling Location	: Near Mine Site
Instrument Used	: RDS & FPS
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 17/09/2020to 18/09/2020
Time of Monitoring	: 09:10 AM to 09:10 AM
Ambient Temperature (°C)	: Min. 21.0 Max. 32.0
Surrounding Activity	: Human ,Vehicular& Other Mining Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if Any	: --
Sampling & Analysis Protocol	: IS-5182
Parameter Required	: $PM_{2.5}$, PM_{10}, NO_2 &SO_2

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS*
1.	Particulate Matter ($PM_{2.5}$)	#SOP No. VEL/SOP/01, Section No. SP 63	48.62	$\mu g/m^3$	60
2.	Particulate Matter (PM_{10})	IS: 5182 (P-23) Gravimetric Method	93.54	$\mu g/m^3$	100
3.	Nitrogen Dioxide (NO_2)	IS: 5182 (P-6) Jacob & Hochheiser	27.31	$\mu g/m^3$	80
4.	Sulphur Dioxide (SO_2)	IS: 5182 (P-2) Modified West and Gaeke	12.61	$\mu g/m^3$	80

* NAAQS – National Ambient Air Quality Standards, Schedule-VII, [Rule 3 (3B)], [Part-II-sec. -3(i)] 18.11.2009
# SOP- Laboratory Standard Operating Procedure

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

(Approved By)

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ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	VEL/JSMFPL/W/01	**Report No.:**	VEL/W/2005/06/000
Issue to:	M/s JSM Foods Pvt. Ltd. W2 93, Basie Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015	**Format No.:**	7.8 F-01
		Party Reference No.:	NIL
		Reporting Date:	11/05/2020
		Period of Analysis:	06/05/2020 to 11/05/2020
Name & Address of Project:	Minor Minerals "Mandoli Ghaggar East Block/YNR B3", Area of 20.18 Ha., Village-. Mandoli, Tehsil & Distt. Yamuna Nagar (HR)	**Receipt Date:**	06/05/2020
		Sampling Date:	06/05/2020
		Sampling Type:	Grab
Sample Description:	Ground water sample	**Preservation:**	Refrigerated
Sampling Location:	Near Mine Site	**Sample Quantity:**	2.0 Ltr
Sample Collected by:	Vardan Enviro Lab Representative		
Sampling & Analysis Protocol:	IS & APHA		

S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012	
					Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 °C)	APHA ,4500-H+ B Electrometric Method	7.51	--	6.5 to 8.5	No Relaxation
2.	Colour	APHA ,2120 B, Visual Comparison Method	*BDL (**DL 5Hazen)	Hazen	5	15
3.	Turbidity	APHA, 2130 B, Nephlelometric Method	*BDL (**DL 0. 1 NTU)	NTU	1	5
4.	Odour	APHA. 2150 B , Threshold Test Method	Agreeable	--	Agreeable	Agreeable
5.	Taste	APHA , 2160 B, Threshold Test Method	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	182.32	mg/l	200	600
7.	Calcium as Ca	APHA. 3500 Ca B, EDTA Titrimetric Method	50.62	mg/l	75	200
8.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	140.54	mg/l	200	600
9.	Chloride as Cl	APHA. 4500-Cl- B, Argentometric Method	44.95	mg/l	250	1000
10.	#Cyanide as CN	APHA , 4500 CN- D	*BDL(**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B. Calculation Method	13.62	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	381.00	mg/l	500	2000
13.	Sulphate as SO_4	APHA , 4500 E, Turbidimetric Method	21.65	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F- D, SPADNS Method	0.38	mg/l	1.0	1.5
15.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	16.42	mg/l	45	No Relaxation
16.	Iron as Fe	APHA , 3500-Fe B 1.10 Phenanthroline Method	0.26	mg/l	0.3	No relaxation
17.	Aluminium as Al	APHA , 3111 B, Direct Nitrous Oxide, Acetylene Flame Method	*BDL(**DL 0.03-mg/l)	mg/l	0.03	0.2
18.	Boron	APHA. 4500B C, Carmine Method	*BDL(**DL 0.1 mg/l)	mg/l	0.5	1
19.	Total Chromium as Cr	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.03 mg/l)	mg/l	0.05	No Relaxation

Rupali Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED

(Approved By)

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www.vardan.co.in

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample No.: VEL/JSMFPL/W/01 — Report No: VEL/W/2005/06/009

S. No	Parameter	Test Method	Result	Unit	Limit of IS:10500-2012	
					Requirement (Acceptable) Limit	Permissible limit in the Absence of Alternate Source
20.	Phenolic Compounds	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.001 mg/l)	mg/l	0.001	0.002
21.	#Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.01mg/l)	mg/l	0.5	No Relaxation
22.	#Anionic Detergents as MBAS	APHA, 5540 C MBAS Method	*BDL(**DL 0.02 mg/l)	mg/l	0.2	1.0
23.	Zinc as Zn	APHA , 3111 B, Direct Air, Acetylene Flame Method	0.29	mg/l	5	15
24.	Copper as Cu	APHA , 3111 B, Direct Air, Acetylene Flame Method	0.18	mg/l	0.05	1.5
25.	Manganese as Mn	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.06 mg/l)	mg/l	0.1	0.3
26.	Cadmium as Cd	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.003 mg/l)	mg/l	0.003	No Relaxation
27.	Lead as Pb	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.01 mg/l)	mg/l	0.01	No Relaxation
28.	Selenium as Se	APHA , 3114 B, Manual Hydride Generation	*BDL(**DL 0.01 mg/l)	mg/l	0.01	No Relaxation
29.	Arsenic as As	APHA , 3114 B, Manual Hydride Generation	*BDL(**DL 0.01 mg/l)	mg/l	0.01	0.05
30.	Mercury as Hg	APHA , 3112 B, Cold Vapor Method	*BDL (**DL 0.001 mg/l)	mg/l	0.001	No Relaxation
31.	Total Coliform	IS 1622,1981 (RA-2019)	<2	MPN/100ml	Shall not be detectable in any 100 ml sample	
32.	E. Coli	IS 1622,1981 (RA-2019)	Absent	MPN/100ml	Shall not be detectable in any 100 ml sample	

Note: - *BDL-Below Detection Limit, **DL- Detection Limit
#These parameter are not covered in our NABL scope.

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED
R. S. Thakran
M.Sc.

VARDAN ENVIRO
(Approved By)
Authorised Signatory

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	VEL/JSM/W/01	**Report No.:**	VEL/W/2009/18/001
Issued To:	M/s JSM Foods Pvt. Ltd. W2 93,Basic Durapur, 1st Floor, Near Senior Secondary School, New Delhi-110015	**Format No.:**	7.8 F-01
		Party Reference No.:	NIL
Name of the Project:	Minor Minerals "Mandoli Ghaggar East Block/YNR 83", Area of 29.18 Ha, Village-Mandoli, Tehsil & Distt, Yamuna Nagar (HR).	**Reporting Date:**	22/09/2020
Sample Description:	Surface water Sample		
Sampling Location:	Up Stream	**Period of Analysis:**	18/09/2020-22/09/2020
Sample Collected by:	Vardan Enviro Lab Representative	**Receipt Date:**	18/09/2020
Preservation:	Refrigerator	**Sampling Date:**	18/09/2020
Sampling and Analysis Protocol:	IS-2296-1982, APHA & SOP	**Sampling Quantity:**	2.0 Ltr
		Sampling Type:	Composite

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	APHA ,4500-H⁺ B Electrometric Method	7.63	--
2.	Colour	APHA ,2120 B, Visual Comparison Method	34.00	Hazen
3.	Turbidity	APHA, 2130 B, Nephelometric Method	48.00	NTU
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--
5.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	251.74	mg/l
6.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	46.30	mg/l
7.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	168.41	mg/l
8.	Chloride as Cl	APHA, 4500-Cl⁻ B, Argentometric Method	67.70	mg/l
9.	Residual free Chlorine	APHA, 4500 Cl B Iodometric Method	*BDL(**DL 0.20mg/l)	mg/l
10.	#Cyanide as CN	APHA , 4500 CN⁻ D	*BDL(**DL 0.02 mg/l)	mg/l
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	20.13	mg/l
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	459.00	mg/l
13.	Total Suspended solids	APHA,2540 D Gravimetric Method	76.00	mg/l
14.	Dissolved Oxygen	APHA,4500 O B Iodometric Method	5.5	mg/l
15.	Sulphate as SO^{2}	APHA , 4500 E, Turbidimetric Method	42.57	mg/l
16.	Fluoride as F	APHA , 4500-F D, SPADNS Method	0.46	mg/l
17.	BOD (3 Days at 27°C)	APHA, 5210 C / IS 3025,P-44	11.00	mg/l
18.	COD	APHA, 5220 B, Open Reflux Method	32.00	mg/l

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED

(Approved By)

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample No.: VEL/JSM/W/01			Report No.: VEL/W/2009/1/002	
S. No.	Parameter	Test-Method	Result	Unit
19.	Conductivity	APHA, 2510 B, Conductivity Meter Method	765	ms/cm
20.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	21.47	mg/l
21.	Sodium as Na	APHA,3500 Na B, Flame Photometric Method	46.00	mg/l
22.	Potassium as K	APHA 3500 K B, Flame Photometric Method	19.00	mg/l
23.	Iron as Fe	APHA , 3500-Fe B 1,10 Phenanthroline Method	0.36	mg/l
24.	Aluminium as Al	APHA , 3111 DNitrous Oxide Acetylene Flame Method	*BDL(**DL 0.03 mg/l)	mg/l
25.	Boron	APHA, 4500B C, Carmine Method	*BDL	mg/l
26.	Chromium as Cr	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.01 mg/l)	mg/l
27.	Phenolic Compounds	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.001 mg/l)	mg/l
28.	#Mineral Oil	Clause 6 of IS 3025(Part 39)	*BDL(**DL 0.01mg/l)	mg/l
29.	#Anionic Detergents as MBAS	APHA, 5540 C MBAS Method	*BDL(**DL 0.02 mg/l)	mg/l
30.	Zinc as Zn	APHA , 3111 B, Direct Air, Acetylene Flame Method	1.64	mg/l
31.	Copper as Cu	APHA , 3111 B, Direct Air, Acetylene Flame Method	0.51	mg/l
32.	Manganese as Mn	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.10 mg/l)	mg/l
33.	Cadmium as Cd	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.001 mg/l)	mg/l
34.	Total Coliform	IS 1622:1981,RA-2019	1040	MPN/100ml
35.	Fecal Coliform	IS 1622:1981,RA-2019	840	MPN/100ml

Note: -*BDL-Below Detection Limit, **DL- Detection Limit. #These parameter are not covered in our NABL scope.

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED
P. C. Thakral
Mgr.

VARDAN ENVIRO
(Approved By)

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	VEL/JSM/W/02		
Issued To:	M/s JSM Foods Pvt. Ltd. W2 93,Basic Durapur, 1st Floor, Near Senior Secondary School, New Delhi-110015.	**Report No.:**	VEL/W/2009/18/002
		Format No.:	7.8 F-01
		Party Reference No.:	NIL
Name of the Project:	Minor Minerals "Mandoli Ghaggar East Block/VNR B3", Area of 20.18 Ha, Village-Mandoli, Tehsil & Distt. Yamuna Nagar (HR).		
Sample Description:	Surface water	**Reporting Date:**	22/09/2020
Sampling Location:	Down Stream	**Period of Analysis:**	18/09/2020-22/09/2020
Sample Collected by:	Vardan Enviro Lab Representative	**Receipt Date:**	18/09/2020
Preservation:	Refrigerator	**Sampling Date:**	18/09/2020
Sampling and Analysis Protocol:	IS-2296-1982, APHA & SOP	**Sampling Quantity:**	2.0 Ltr
		Sampling Type:	Composite

S. No.	Parameter	Test Method	Result	Unit
1.	pH (at 25 °C)	APHA ,4500-H+ B Electrometric Method	7.27	--
2.	Colour	APHA ,2120 B, Visual Comparison Method	31.00	Hazen
3.	Turbidity	APHA, 2130 B, Nephelometric Method	46.00	NTU
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--
5.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	258.00	mg/l
6.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	61.72	mg/l
7.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	233.30	mg/l
8.	Chloride as Cl	APHA, 4500-Cl- B, Argentometric Method	128.41	mg/l
9.	Residual free Chlorine	APHA, 4500 Cl B Iodometric Method	*BDL(**DL 0.20mg/l)	mg/l
10.	#Cyanide as CN	APHA , 4500 CN- D	*BDL(**DL 0.02 mg/l)	mg/l
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	20.41	mg/l
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	571.00	mg/l
13.	Total Suspended solids	APHA,2540 D Gravimetric Method	83.00	mg/l
14.	Dissolved Oxygen	APHA,4500 O B Iodometric Method	5.1	mg/l
15.	Sulphate as SO_4^{2-}	APHA , 4500 E, Turbidimetric Method	43.50	mg/l
16.	Fluoride as F	APHA , 4500-F- D, SPADNS Method	0.46	mg/l
17.	BOD (3 Days at 27°C)	APHA, 5210 C / IS 3025,P-44	12.00	mg/l
18.	COD	APHA, 5220 B, Open Reflux Method	39.00	mg/l

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED

(Approved By)

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Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 1220052 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample No.: VEL/JSM/W/02			Report No.: VEL/W/2009/18/002	
S. No.	Parameter	Test-Method	Result	Unit
19.	Conductivity	APHA, 2510 B, Conductivity Meter Method	952	mS/cm
20.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	23.84	mg/l
21.	Sodium as Na	APHA,3500 Na B, Flame Photometric Method	42.00	mg/l
22.	Potassium as K	APHA 3500 K B, Flame Photometric Method	19.00	mg/l
23.	Iron as Fe	APHA , 3500-Fe B 1,10 Phenanthroline Method	0.50	mg/l
24.	Aluminium as Al	APHA , 3111 DNitrous Oxide Acetylene Flame Method	*BDL(**DL 0.03 mg/l)	mg/l
25.	Boron	APHA, 4500B C, Carmine Method	*BDL	mg/l
26.	Chromium as Cr	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.01 mg/l)	mg/l
27.	Phenolic Compounds	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.001 mg/l)	mg/l
28.	#Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.01mg/l)	mg/l
29.	#Anionic Detergents as MBAS	APHA, 5540 C MBAS Method	*BDL(**DL 0.02 mg/l)	mg/l
30.	Zinc as Zn	APHA , 3111 B, Direct Air, Acetylene Flame Method	1.36	mg/l
31.	Copper as Cu	APHA , 3111 B, Direct Air, Acetylene Flame Method	0.50	mg/l
32.	Manganese as Mn	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.10 mg/l)	mg/l
33.	Cadmium as Cd	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.001 mg/l)	mg/l
34.	Total Coliform	IS 1622:1981,RA-2019	1020	MPN/100ml
35.	Fecal Coliform	IS 1622:1981,RA-2019	865	MPN/100ml

Note: -*BDL-Below Detection Limit, **DL- Detection Limit, #These parameter are not covered in our NABL scope.

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED
R. S. Thakran
Mines and Geology, Haryana

VARDAN ENVIRO
(Approved By)
Authorised Signatory

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ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	VEL/JSMFPL/AN/01	Report No.:	VEL/AN/2009/18/007
Issue to:	M/s JSM Foods Pvt. Ltd. W2 93, Basic Daraput, 1st Floor, Near Senior Secondary School, New Delhi-110015	Format No.:	7.8 F-01
		Party Reference No.:	NIL
		Reporting Date:	22/09/2020
		Receipt Date:	18/09/2020
Name & Address ofProject:	Minor Minerals "MandoliGhaggar East Block/YNR B3", Area of 20.18 Ha., Village-Mandoli, Tehsil &Distt. Yamuna Nagar (HR)		
Sample Description:	Ambient Noise Level Monitoring		

General Information:-

Sample collected by	: VardanEnviro Lab Representative
Sampling Location	: **Near Mine Site**
Instrument Used	: Sound Level Meter
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **17/09/2020 to 18/09/2020**
Time of Monitoring	: 06:00 AM to 06:00AM
Surrounding Activity	: Human ,Vehicular& Other Mining Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if Any	: No any
Sampling & Analysis Protocol	: IS-9989
Sampling Duration	: 24 Hours
Parameter Required	: L_{max},L_{min}&L_{eq}

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	L_{max}	IS 9989	78.4	71.9	dB(A)
2.	L_{min}	IS 9989	58.6	49.5	dB(A)
3.	L_{eq}	IS 9989	70.82	65.94	dB(A)
4.	*DGMS Limits in dB (*A) Leq (Mining Area)	-	75.00	70.00	dB(A)

Note- *A "decibel" is a unit in which noise is measured. *DGMS -Directorate General of Mine Safety

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED
R. G. Thakran
ME

VARDAN ENVIRO
(Approved By)
Authorised Signatory

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	VEL/ JSM /S/01	Report No.:	VEL/S/2009/18/003
Issued To:	M/s JSM Foods Pvt. Ltd. W2 93, Basic Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015	Format No.:	7.8 F-04
		Party Reference No.:	NIL
		Reporting Date:	22/09/2020
Name & Address of Project:	Minor Minerals "Mandoli/Chaggar East Block/YNR B3", Area of 20.18 Ha. Village-Mandoli, Tehsil &Distt. Yamuna Nagar (HR)	Period of Analysis:	18/09/2020 to 22/09/2020
		Receipt Date:	18/09/2020
Sample Description:	Soil Sample	Sampling Date:	17/09/2020
Sampling Location:	Near Mine Site	Type of Sampling:	Composite
Sampling & Analysis Protocol:	IS 2720, USEPA 3050B & USDA	Sample Quantity:	2.0 Kg
		Packing Status:	Temp Sealed

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	IS : 2720 (P-26) by pH Meter	7.52	--
2.	Conductivity	IS:14767 by Conductivity meter	0.341	mS/cm
3.	Soil Texture	IS : 2720 (P-22, RA2003)	Sandy Loam	--
4.	Color	*SOP , SP-78,Issue No.-01& Issue Date-14/02/2013	Blackish	--
5.	Water holding capacity	*SOP , SP-81,Issue No.-01& Issue Date-14/02/2013	41.60	%
6.	Bulk density	*SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	1.52	gm/cc
7.	Chloride as Cl	*SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	40.61	mg/100g
8.	Calcium as Ca	*SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	62.79	mg/100g
9.	Sodium as Na	*SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	25.92	mg/kg
10.	Potassium as K	*SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	61.42	kg/hec.
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method	0.56	%
12.	Magnesium as Mg	*SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	13.15	mg/100g
13.	Available Nitrogen as N	IS:14684 Distillation Method	215.00	kg/hec.
14.	Available Phosphorus	*SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	21.62	kg/hec.
15.	Zinc (as Zn)	USEPA 3050B	14.28	mg/kg
16.	Manganese (as Mn)	USEPA 3050B	1.43	mg/kg
17.	Lead (as Pb)	USEPA 3050B	1.24	mg/kg
18.	Cadmium (as Cd)	USEPA 3050B	1.72	mg/kg
19.	Chromium (as Cr)	USEPA 3050B	1.46	mg/kg
20.	Copper (as Cu)	USEPA 3050B	2.84	mg/kg

*SOP-Laboratory standard operating procedure

Rupali Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED

VARDAN ENVIRO LAB
(Approved By)
Authorised Signatory

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WATER BALANCE

FOR

M/S JSM FOODS PRIVATE LIMITED

BOULDER, GRAVEL & SAND MINE (MINOR MINERAL)

OF

MANDOLI GHAGGAR EAST BLOCK (YNR B-3)

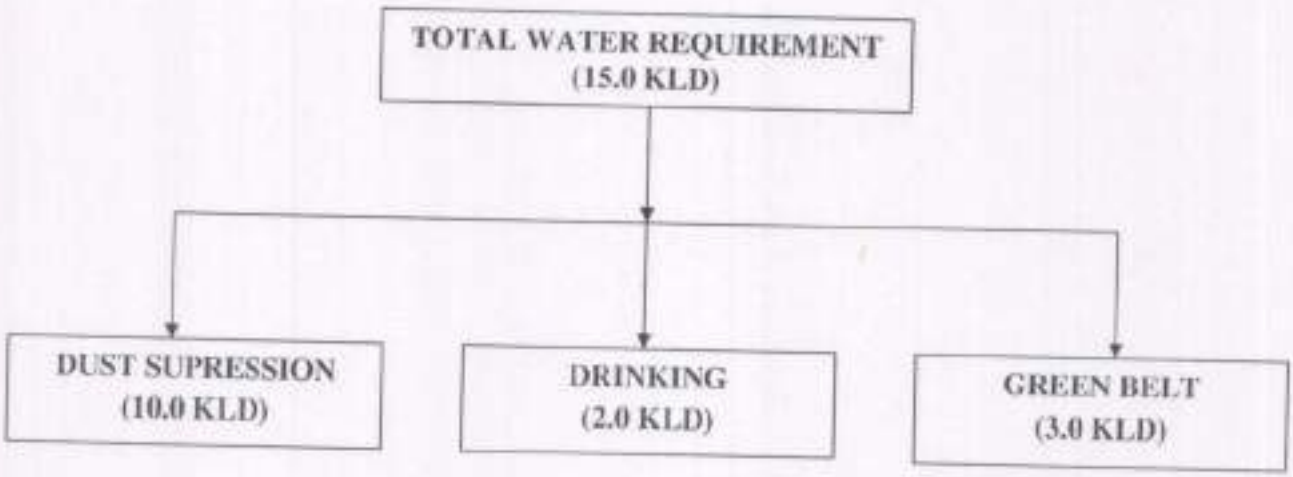
VILLAGE- MANDOLI,

TEHSIL-YAMUNA NAGAR

DISTRICT-YAMUNANAGAR

STATE-HARYANA

TOTAL LEASE AREA-20.18 Hect. (NON-FOREST)





खनन योजना तैयार करने हेतु
योग्य व्यक्ति के रूप में
मान्यता का प्रमाणपत्र

(खनिज रियायत नियमावली 1960 के नियम 22(डी) के अंतर्गत)

श्री किरीट आचार्य

वल्द श्री प्रमोद राय आचार्य

निवासी 70/30 पटेल मार्ग, मानसरोवर, जयपुर

द्वारा अपनी योग्यताओं और अनुभव का संतोषप्रद प्रमाण प्रस्तुत करने के फलस्वरूप खनिज रियायत नियमावली, 1960 के नियम 22(डी) के अंतर्गत उन्हें एतद्द्वारा खनन योजना तैयार करने हेतु योग्य व्यक्ति के रूप में मान्यता प्रदान की जाती है ।

उनका पंजीयन क्रमांक RQP/AJM/230/2003/A है ।

यह मान्यता दिनांक 22 जनवरी 2018 को समाप्त होने वाली दस वर्षों की अवधि के लिए वैध है ।

स्थान : अजमेर
दिनांक : 23-01-2008

L. Jha 23/1/08
क्षेत्रीय खान नियंत्रक
भारतीय खान ब्यूरो

APPROVED

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CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON TO PREPARE MINING PLANS

(Under Rule 22 (c) of Mineral Concession Rules 1960)

Shri ....KIRTI KUMAR ACHARYA..... resident of .....Bhilwara, Rajasthan....., son of .....Shri Pramod Kumar Acharya....., having given satisfactory evidence of his qualifications and experience is hereby granted recognition under Rule 22 (c) of the Mineral Concession Rules, 1960 as a Qualified Person to prepare Mining Plans.

His registration number is RQP/TS-UDP/063/89/A

This recognition is valid for a period of two years ending .....23-10-1991.....

नवीनीकृत.....तक
Renewed up 23-10-93
17.9.91
क्षेत्रीय खान नियन्त्रक
भारतीय खान ब्यूरो

(H.N. WANARI)
Regional Controller of Mines
Indian Bureau of Mines
..Nagpur.....

Place: Nagpur
Date : 24-10-1989

APPROVED
R. S. Thakran
ME
Director of Mines and Geology, Hariyana

Scanned by CamScanner

REPLENISHMENT STUDY REPORT

for

MANDOLI GHAGGAR EAST BLOCK (YNR B-3)

VILLAGE- MANDOLI

TEHSIL & DISTRICT-YAMUNANAGAR

STATE-HARYANA

TOTAL LEASE AREA-20.18 Hect. (NON-FOREST)

PRODUCTION CAPACITY – 850000 T/ANNUM

M/S JSM FOODS PRIVATE LIMITED

Mr. Tanish Wadhwa (Authorized Signatory)
676, Sector-13, Karnal
e-mail: jsmfoodsmandoli@gmail.com
Phone : 9996015005



Vardan Environet

(A NABET Accredited Consultant)
82A,Sector-5, IMT Manesar ,Gurgaon
Phone /Fax.;0124-4291036,9929108691
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INDEX

Sr.No.	Description	Page No.
1	The Project	1-2
2	Object of Replenishment Study	2
3	Need for present annual Replenishment Study	2-3
4	Replenishment Study	3
4.1	General Introduction	3-5
4.2	Physiographic	5
4.3	Drainage	6
4.4	Sedimentation, Assessment & Infrastructure	6-8
5	Approach & Methodology	9



Map

Sr. No.	Details of Annexure	Page No.
1	Pre-Monsoon Contour Map	10
2	Post-Monsoon Contour Map	11
3	Composite Section of Pre and Post map	12

Table

Sr. No.	Description	Page No.
1	Calculation of sand Replenished	13-21

Figure

Sr. No.	Description	Plate No
Fig -1	Mine Site Photo	22-23



SUBJECT : REPORT ON REPLENISHMENT STUDY FOR BOULDER, GRAVEL & SAND MINOR MINERAL MINES OF MANDOLI GHAGGAR EAST BLOCK/YNR B-3, -(RIVER BED), DISTRICT: YAMUNANAGAR. Lease Area: 20.18 ha. Production: 8,50,000 T Per Annum

References :

a) Environmental Clearance vide letter no. F No. J-11015/215/2016-IA II(M) dated 09th April, 2018

1) **The Project :**

M/s Mubarikpur Royalty Company was the highest bidder for the boulder, gravel and Sand of MandoliGhaggar East Block/YNR B-3 for which e-auction was held on 10-06-15 and 11-06-2015. A Letter of Intent has been issued by the Director General Mines & Geology Department, Haryana vide letter no DMG/Hy/Cot/MandoliGhaggar East Block/YNR B-3/YNR B-1/2015/ /dated 19-06-2015 for Mining of Boulder, Gravel & Sand (Minor Mineral) in revenue village MandoliGhaggar East Block/YNR B-3, over an area of 20.18 hectares in District- Yamunanagar , Haryana for a period of 10 years. This is River Bed Block.

Name of Block	Nme of Village	Details of Khasra No/Kila Nos	Area of block in ha
MandoliGhaggar East Block/YNR B-3	Mandoli Ghaggar	**52//2,** 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 18, 23, 24, 25 **53//1,** 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24 **58//1,** 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 18, 19, 20 **59//3,** 4, 5, 6, 7, 8, 13, 14, 15, 16, 17,18	20.18

Co-ordinates of the lease area as under

Pillar number	Latitudes	Longitudes
BP-1	N30° 08' 26.69"	E77° 25' 01.91"
BP-2	N30° 08' 26.69"	E77° 25' 21.23"
BP-3	N30° 08' 22.73"	E77° 25' 21.18"
BP-4	N30° 08' 22.73"	E77° 25' 18.73"
BP-5	N30° 08' 20.75"	E77° 25' 18.71"

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BP-6	N30° 08' 20.75"	E77° 25' 20.12"
BP-7	N30° 08' 18.77"	E77° 25' 18.62"
BP-8	N30° 08' 18.77"	E77° 25' 16.23"
BP-9	N30° 08' 16.79"	E77° 25' 16.21"
BP-10	N30° 08' 16.79"	E77° 25' 13.75"
BP-11	N30° 08' 12.83"	E77° 25' 13.70"
BP-12	N30° 08' 12.83"	E77° 25' 11.26"
BP-13	N30° 08' 10.85"	E77° 25' 11.24"
BP-14	N30° 08' 10.85"	E77° 25' 01.71"

The area is approachable from various nearest towns as detailed below

Village MandoliGhaggar is very well connected with Metalled road. Yamunanagar Railway Terminus is about 15 km from the miningarea.

Delhi ISBT is about 230 Km and Yamunanagar is about 15 km NW from the miningarea. State Headquarters Chandigarh is about 90 km in the North West of the miningarea.

2) Objective for Replenishment Study

The requirements of the "Replenishment Study" as per the terms of EC letter are as below:

Additional Conditions of EC (A-vi) The proponent should carry out replenishment study annually to ascertain the quantity of material replenished and production should not be more than the quantity replenished. In case the material replenished is more than the quantity mentioned in this Environmental Clearance then quantity that can be excavated is limited to 8,50,000 TPA (ROM). The proponent will submit the replenishment study report to Regional Office, MoEF&CC every year. The proponent should carry out a comprehensive replenishment study considering data collected at same location and at same time for at least three years and same needs to be submitted to Regional Office, MoEF&CCafter every three years.



3) Need for present Annual Replenishment Study

- As per Additional Conditions of EC (A-vi) , the Project Proponent should carry out replenishment study annually to ascertain the quantity of material replenished.
- The proponent will submit the replenishment study report to Regional Office, MoEF&CC every year. The proponent should carry out a comprehensive replenishment study considering data collected at same location and at same time for at least three years and same needs to be submitted to Regional Office, MoEF&CC, New Delhi after every three years;

Project Proponent,M/s Mubarikpur Royalty CompanyappointedM/SVardanEnviroNet, Gurgaon, an Environmental Consulting Company forundertaking:

a) Pre-monsoon survey and replenishment study
b) Post-monsoon survey and replenishment study
c) To prepare composite sections of pre and post monsoon survey findings
d) To calculate the volume of sand replenished during study period.
e) Finally to prepare "Replenishment Study Report" and to submit it to the Regional Office, MoEF&CC.

4. Replenishment Study

4.0 Period of Survey for sedimentation survey and replenishment study

Pre-monsoon: 15th to 20th June, 2020

Post-monsoon: 18th to 21stSeptember, 2020

4.1 General Introduction:

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are Non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin. But its over-exploitation and indiscriminate mining supersedes replenishment &optimum extraction is overtaken by profits, extraction has exceeded its replenishment rate and it neglects laws of mineral conservation.

Sand mining has become a widely spread activity and does not require a huge set up or technology, the number of ventures has increased extensively and it has become a footloose industry in itself but the backward-forward linkages are becoming stronger as many are getting employed as well as the construction activity / industry requires this mineral at consistent rates. In the state of Punjab, sand has been declared as an essential commodityso as to control its extraction and sale price. Andhra Pradesh on the other hand is heading towards a lottery system. Riverine environmental systems are unique in them and provide environmental services, natural resources to meet variety of needs of urban and rural communities. The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance. Rivers also act as natural administrative boundariesamong the states and this gives rise to improper and unclear demarcation of boundaries as the river keeps changing its course from time to time thereby unclear administrative controls and mechanisms becomes a point of excuse for administration for any illegal activity taking in this disputed area. River Yamuna near Dakpathar barrage leaves Uttarakhand and enters Himachal Pradesh.

The YAMUNA RIVER is the biggest tributary of the river Ganga in North India. Its source in the Yamunotry glacier at an elevation of 6387 mtrs on South western sides of Banderpooch crests in the lower Himalayan ranges. The overall span of the Yamuna river is 1376 Kms (855 miles) with catchment area of 366223 square km (141,399 square km). This encompasses 40.2 % of the whole Ganga valley, prior to joining Ganga at TriveniSangam in Allahabad (UP)

Itinerary of Yamuna River:

The river passes through many states such as Uttrakhand, UP, Haryana, going across to HP and then Delhi. With yearly discharge of around 10,000 cubic billion meters (cbm) and consumption of 4400 cbm (of which irrigation comprises 96%), the river represents above 70% of water provision of Delhi. Yamuna water are fairly good quality for its entire span from Yamunotri in Himalayan ranges to Wazirabad in Delhi, the length of which is around 375 Kms.

Itinerary of Drainage area of Yamuna:

The origin of Yamuna is situated in the Yamunotri glacier at an elevation of 6387 mtrs on SE sides of Banderpooch crests, which are located in the Mussoorie range of lower Himalayan range in Uttrakashi district of Uttrakhand, to the North of Haridwar. From this place Yamuna runs to South around 200 Kms across the Shivalik mountain ranges and lower Himalayan ranges.

A significant portion of its beginning of Drainage basin (with total area of 2320 square km) is situated in HP and a major tributary sapping the upper drainage basin in the Tons, which is also biggest and most extensive tributary of the Yamuna. Other tributaries in the area are the Rishi Ganga, Giri, Hanuman Ganga, Kunta& Bata, which sap the upper drainage basin of the huge Yamuna river. Subsequently, the river moves down the terrains of Doon basin at Dakpathar close to Dehradun, in this place water is redirected into a channel for the purpose of electricity generation. Once it goes across the sikh religious place of Ponta Sahib, the river arrives at Tajewala in the YAMUNANAGAR district of Haryana where a dam was constructed in 1873. This dam is the origin of the two major channels or water courses – Eastern Yamuna Canal and Western Yamuna Canal and both drain in UP & Haryana.

The Western Yamuna Canal (WYC) traverses Karnal, Yamunanagar and Panipat prior to arriving at the Haiderpur water treatment plant, which provides a portion of municipal water provisions of Delhi. The Yamuna also forms natural boundary between the states of Uttrakhand& HP and also amid the states of UP and Haryana.

Together with the Ganga to which it flows almost parallel once it meets the Indo-Gangetic plateau, the biggest Alluvial productive area in the World, it forms the Ganges-Yamuna Doab are stretched across 69,000 square Km which is 33% of the whole area.

Drainage system is the pattern formed by streams, rivers and lakes in a drainagebasin. In a drainage system, streams or rivers always connect together to formnetworks. Many factors such as topography, soil type, bedrock type, climate &vegetation cover influence input, output and transport of sediment and water in adrainage basin (Charlton, 2008). These factors also influence the nature of thepattern of water bodies (Twidale, 2004). As a consequence, drainage pattern canreflect geographical characteristics of a river network to a certain extent. There areseveral types of drainage pattern. So far, much research has been done on thedescription of drainage patterns in geology and hydrology (e.g. Howard, 1967;Lambert, 1998; Twidale, 2004; Pidwirny, 2006).

In addition, sediment transport knowledge is important in river restoration,ecosystem protection, navigation, watershed studies and reservoir management.Bed load represents the lower portion of sediment load in natural rivers. Fluvialsediment load materials are transported by rivers. Sediment load can be dividedinto bed load and suspended load based on the mode of transport. Bed load istransported close to the bed where particles moved by rolling, sliding, or dissolving(Adegbola, 2012). Xiaoqing (2003) explained that bed load transport in naturalrivers is a complicated event.

Its movement is quite uneven in both the transverse & longitudinal directions, which vary considerably.

4.2 Physiography:

The area forms a part of the Indo-Gangetic plains and exhibit flat terrain withgeneral slope from north to south. The area is devoid of any prominent topographic features. However, a natural depression exists in north & northwest of Gohana(29°08'22"N & 76°42'55"E). The maximum elevation of the plain is 230m above mRL. Topographically the district can be divided into the following units.

Active flood plains along the present day course of the river Yamuna in eastern part of the district. These are generally bordering the active flood plains and are wider, low lying flat tracts.

4.3 Drainage:

The Yamuna which marks the eastern boundary of the Haryana State as well asSonipat district provides the major drainage in the area. The River Yamuna emerges from Yamunotri off the Bansur-Punch glacier in TehriGarhwal district ofUttarakhand at an elevation of 6330 meters. It emerges into the plains from thefoothills at Kalesar just north of Tajewala.The area constitutes alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The general slope of the area is southwards.The Yamuna Rivers are plays an important role for the nation and provide water

required by Besides, mining activities are also being carried out in the rivers for the developmental process.Di-siltation (remove of excess sand and stone from river bed) of the river helps tomaintain the carrying capacity and provides protection from flooding duringmonsoon season. Further, continuous flow of river is essential for ecological andeconomic needs such as irrigation and biodiversity etc. Drainage study of the river helps to understand potential carrying capacity of water during pre-monsoon& post monsoon season which is generated from rainfall in the watershed and quantity of di-siltation of rivers under mining affected areas. Drainage and replenishment study was carried out in Yamuna River, Haryana was found with ephemeral streams. Quantification and estimation of river bed material (RBM) was accomplished by followed three scientific approaches i. e. mapping of watersheds by using Arc GIS software & and ERDAS software using analysis, survey of proposed mining area and grain size distribution

of sand and gravelvarious sectors such as irrigation, drinking, recreation and industrial requirements etc.

4.4 Sedimentation. Assessment and Infrastructure

Dandy&Bolton formula is often used to check whether the sedimentation yield exceedsthe replenishment rate but the whole question is whether there is adequate monitoringof the river basin, the answer is no as hydrological stations are sparsely spread. Theformula uses catchment area and mean annual runoff as key determinants to give ayield value. It does not differentiate in basin wide smaller streams and theircharacteristics. CWC distinguishes river basins as classified and non-classified, as perthe latest hydrological data for unclassified River basins, there are 122 GDSW (Gauge,Discharge, Sediment & Water Quality) sites in 12 such basins, the number was 147 in2005. This brings in context the whole issue of scientific mining, thereby indicating that the monitoring of sediment yield in rivers / streams within the river basins is essential toarrive at extraction rates and express and conduct environmental studies based onthese basin wide characteristics which should become part of the 'Terms of Reference'.

Sedimentation, in the geological sciences, process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs. The term is commonly used as a synonym for sedimentary petrology and sedimentology.The physics of the most common sedimentation process, the settling of solid particles from fluids, has long been known. The settling velocity equation formulated in 1851 by G.G. Stokes is the classic starting point for any discussion of the sedimentation process. Stokes showed that the terminal settling velocity of spheres in a fluid was inversely proportional to the fluid's viscosity and directly proportional to the density difference of fluid and solid, the radius of the spheres involved, and the force of gravity. Stokes' equation is valid, however, only for very small spheres (under 0.04 millimetre [0.0015 inch] in diameter) and hence various modifications of Stokes' law have been proposed for nonspherical particles and particles of larger size.

No settling velocity equation, however valid, provides a sufficient explanation of even the basic physical properties of natural sediments. The grain size of the classic elements and their sorting, shape, roundness, fabric, and packing are the results of complex processes related not only to the

density and viscosity of the fluid medium but also to the translational velocity of the depositing fluid, the turbulence resulting from this motion, and the roughness of the beds over which it moves. These processes also are related to various mechanical properties of the solid materials propelled, to the duration of sediment transport, and to other little-understood factors.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits laid down in different geographic and geomorphic environments. Great efforts have been made to differentiate between continental, near-shore, marine, and other deposits in the geologic record. The classification of environments and criteria for their recognition is still a subject of lively debate. The analysis and interpretation of ancient deposits has been advanced by the study of modern sedimentation. Oceanographic and limnologicexpeditions have shed much light on sedimentation in the Gulf of Mexico, the Black Sea, and the Baltic Sea, and in various estuaries, lakes, and fluvial basins in all parts of the world.

Chemical sedimentation is understood in terms of chemical principles and laws. Although the famous physical chemist J.H. van't Hoff applied the principles of phase equilibrium to the problem of crystallizing brines and the origin of salt deposits as early as 1905, little effort was made to apply physical chemistry to the problems of chemical sedimentation. More recently, however, there has been investigation of the role of the redox (mutual reduction and oxidation) potential and pH (acidity–alkalinity) in the precipitation of many chemical sediments, and a renewed effort has been made to apply known thermodynamic principles to the origin of anhydrite and gypsum deposits, to the chemistry of dolomite formation, and to the problem of the ironstones and related sediments.

The factors which affects the "Computation of Sediment" :-

a) Geomorphology & Drainage Pattern : The following geomorphic units plays important role :

- Structural Plain
- Structural Hill
- Structural Ridge
- Denudation Ridge & Valley
- Plain & Plateau of Gangetic plain



- Highly Dissected pediment
- Un dissected pediment

b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)

c) Drainage System/Pattern of the area (Drainage Density = ...Km/Sq Km of Yamuna River

d) Rainfall & Climate : Year wise Rainfall data for previous 10 years of Yamuna Basin/River

e) As per Dandy & Bolton study "Sediment Yield" can be related to i) Catchment Area and ii) Mean Annual Run-off

5. Approach & Methodology Followed for Replenishment Study:-

a) Pre-monsoon survey of River bed with the help of GPS and Drone

b) Grid pattern 30 m x 20 m (30 m along the length of the river and 20 m along width of the river) or part thereof.

c) To draw pre-monsoon contour map (Base map considered as per approved mining plan)

d) Post-monsoon survey of River bed with the help of GPS and Drone

e) Same Grid pattern (30 m x 20 m) or part thereof was considered for survey.

f) To draw post-monsoon contour map (Base map considered as per approved mining plan)

g) To draw composite sections of Pre and post monsoon maps. This will determine the depth and volume of sand replenished.

h) Finally to calculate the volume of sand with grid pattern of 30 m x 20 m multiplied by depth of replenishment.

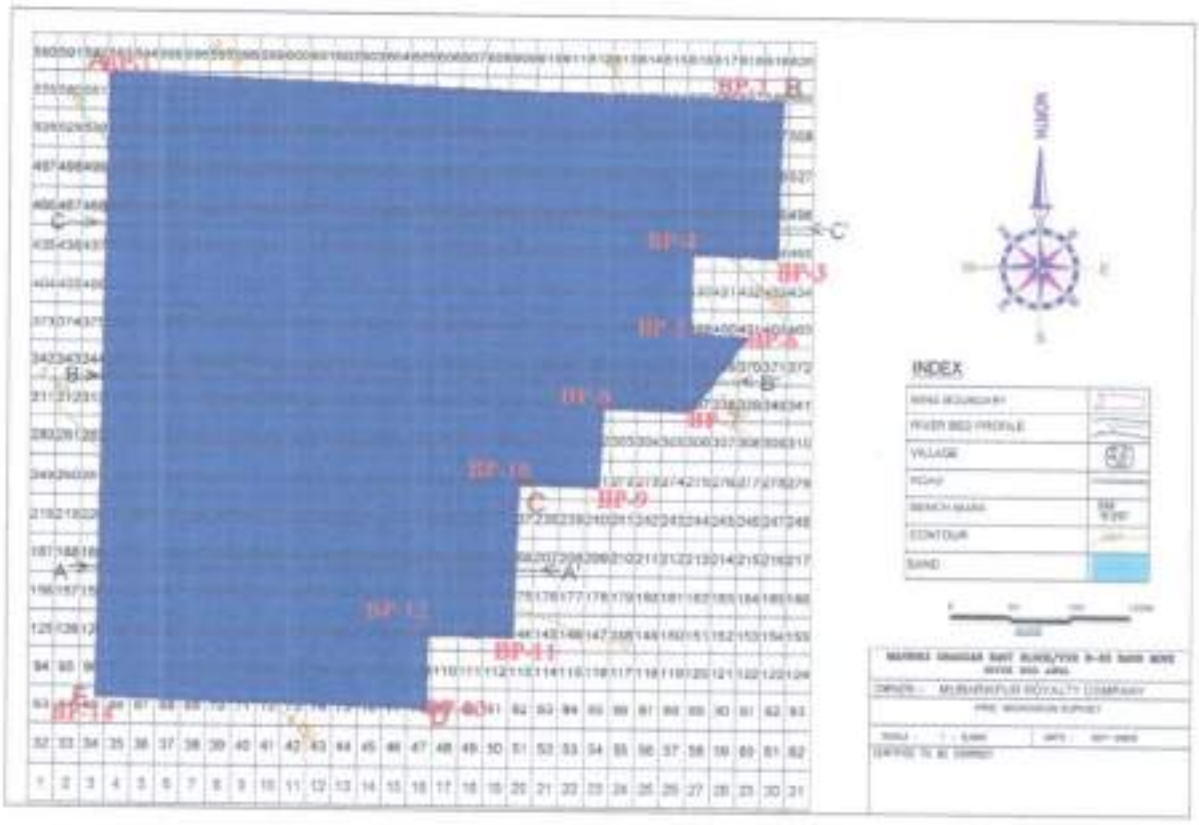
i) The tonnage of replenishment will be volume of sand multiplied by density of sand (which is 2 T per Cubic m)

5i) **Software & Equipment Deployed**

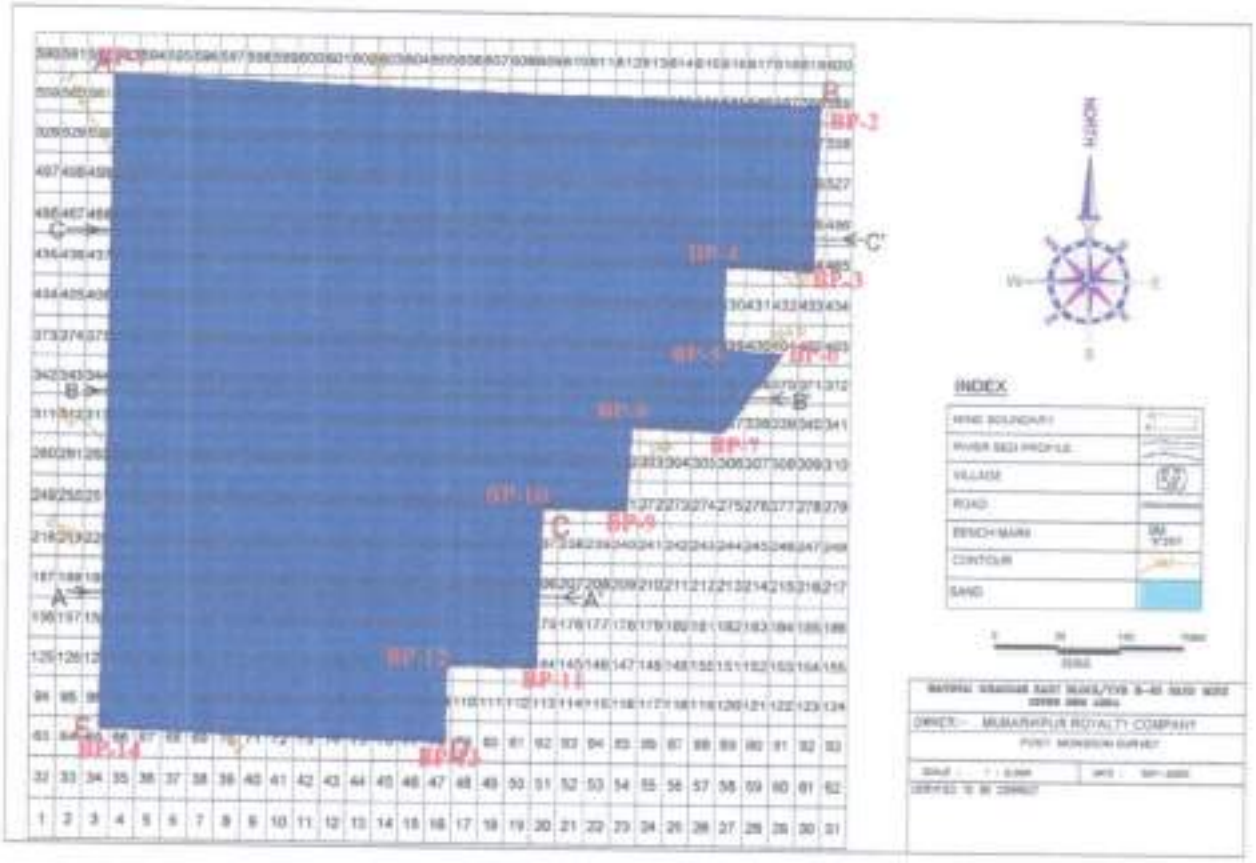
- **GPS**
- **Drone**
- **Drone Mapper (Software)**
- **Arc-Gis 10.8 (Software)**
- **Autocad 2011 (Software)**



a) Pre-monsoonContour Map (Grid Pattern 30m x 20m or part thereof)

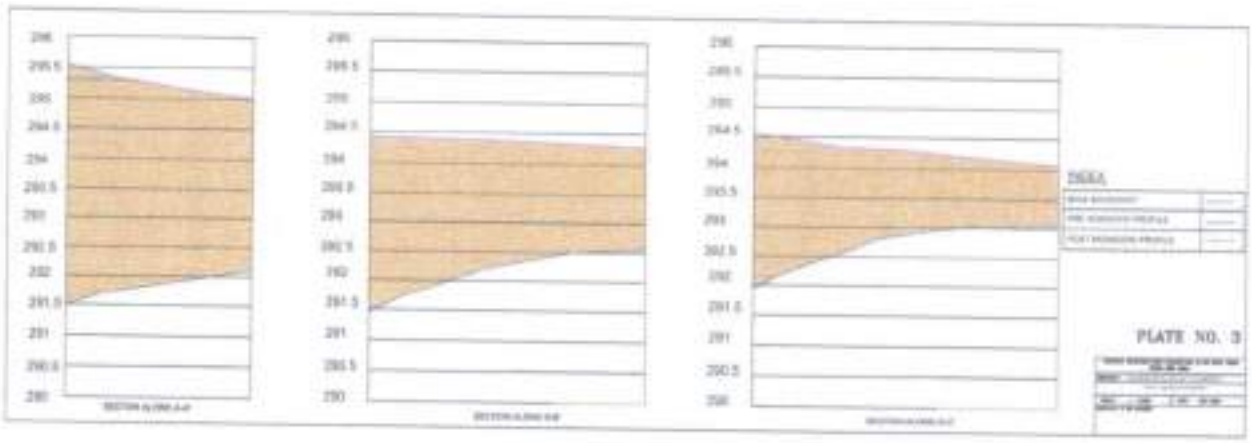


b) Post-monsoon Contour map (Grid Pattern : 30m x 20m or part thereof)



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c) Composite section of Pre & Post Monsoon Contour Map



d) Tonnage Calculation of Sand Replenished

Grid	Grid Area	Pre Monsoon Elevation	Post Monsoon Elevation	Difference of Elevation (Pre And Post Monsoon) in m	Tonnage	Mineable Reserve for 3 mtr Depth of Send	Mineable Reserve Tonnage
68	20	291.5	295.5	4	160	3	120
69	20	291.5	295.5	4	160	3	120
70	20	291.5	295.5	4	160	3	120
97	550	291.5	295.5	4	4400	3	3300
98	600	291.5	295.5	4	4800	3	3600
99	600	291.5	295.5	4	4800	3	3600
100	600	291.5	295.5	4	4800	3	3600
101	600	291.5	295.5	4	4800	3	3600
128	550	291.5	295.5	4	4400	3	3300
129	600	291.5	295.5	4	4800	3	3600
130	600	291.5	295.5	4	4800	3	3600
131	600	291.5	295.5	4	4800	3	3600
132	600	291.5	295.5	4	4800	3	3600
159	550	291.5	295.5	4	4400	3	3300
160	600	291.5	295.5	4	4800	3	3600
161	600	291.5	295.5	4	4800	3	3600
162	600	291.5	295.5	4	4800	3	3600
163	600	291.5	295.5	4	4800	3	3600
190	550	291.5	295.5	4	4400	3	3300
191	600	291.5	295.5	4	4800	3	3600
192	600	291.5	295.5	4	4800	3	3600
193	600	291.5	295.5	4	4800	3	3600
221	550	291.5	295.5	4	4400	3	3300
222	600	291.5	295.5	4	4800	3	3600
223	600	291.5	295.5	4	4800	3	3600
224	600	291.5	295.5	4	4800	3	3600
71	20	291.5	295	3.5	140	3	120
72	20	291.5	295	3.5	140	3	120
73	20	291.5	295	3.5	140	3	120
74	20	291.5	295	3.5	140	3	120
75	20	291.5	295	3.5	140	3	120
76	20	292	295	3	120	3	120
77	20	292	295	3	120	3	120
78	20	292	295	3	120	3	120
102	600	291.5	295	3.5	4200	3	3600
103	600	291.5	295	3.5	4200	3	3600
104	600	291.5	295	3.5	4200	3	3600

105	600	291.5	295	3.5	4200	3	3600
106	600	291.5	295	3.5	4200	3	3600
107	600	292	295	3	3600	3	3600
108	600	292	295	3	3600	3	3600
109	100	292	295	3	600	3	600
133	600	291.5	295	3.5	4200	3	3600
134	600	291.5	295	3.5	4200	3	3600
135	600	291.5	295	3.5	4200	3	3600
136	600	291.5	295	3.5	4200	3	3600
137	600	292	295	3	3600	3	3600
138	600	292	295	3	3600	3	3600
139	600	292	295	3	3600	3	3600
140	100	292	295	3	600	3	600
141	100	292	295	3	600	3	600
142	100	292	295	3	600	3	600
143	100	292	295	3	600	3	600
164	600	291.5	295	3.5	4200	3	3600
165	600	291.5	295	3.5	4200	3	3600
166	600	292	295	3	3600	3	3600
167	600	292	295	3	3600	3	3600
168	600	292	295	3	3600	3	3600
169	600	292	295	3	3600	3	3600
170	600	292	295	3	3600	3	3600
171	600	292	295	3	3600	3	3600
172	600	292	295	3	3600	3	3600
173	600	292	295	3	3600	3	3600
174	580	292	295	3	3480	3	3480
194	600	291.5	295	3.5	4200	3	3600
195	600	291.5	295	3.5	4200	3	3600
196	600	292	295	3	3600	3	3600
197	600	292	295	3	3600	3	3600
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203	600	292	295	3	3600	3	3600
204	600	292	295	3	3600	3	3600
205	580	292	295	3	3480	3	3480
225	600	291.5	295	3.5	4200	3	3600
226	600	292	295	3	3600	3	3600
227	600	292	295	3	3600	3	3600

228	600	292	295	3	3600	3	3600
229	600	292	295	3	3600	3	3600
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231	600	292	295	3	3600	3	3600
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233	600	292	295	3	3600	3	3600
234	600	292	295	3	3600	3	3600
235	600	292	295	3	3600	3	3600
236	600	292	295	3	3600	3	3600
252	550	291.5	295	3.5	3850	3	3300
253	600	291.5	295	3.5	4200	3	3600
254	600	291.5	295	3.5	4200	3	3600
255	600	292	295	3	3600	3	3600
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263	600	292	295	3	3600	3	3600
264	600	292	295	3	3600	3	3600
265	600	292	295	3	3600	3	3600
266	600	292	295	3	3600	3	3600
267	600	292	295	3	3600	3	3600
268	250	292	295	3	1500	3	1500
269	250	292	295	3	1500	3	1500
270	250	292	295	3	1500	3	1500
271	50	292	295	3	300	3	300
283	550	291.5	295	3.5	3850	3	3300
284	600	291.5	295	3.5	4200	3	3600
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295	600	292	295	3	3600	3	3600

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301	600	292	295	3	3600	3	3600
302	150	292	295	3	900	3	900
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332	600	292.5	294.5	2	2400	2	2400
333	300	292.5	294.5	2	1200	2	1200
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337	100	292.5	294.5	2	400	2	400
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453	600	292.5	294.5	2	2400	2	2400
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470	600	292	294.5	2.5	3000	2.5	3000
471	600	292	294.5	2.5	3000	2.5	3000
472	600	292	294.5	2.5	3000	2.5	3000
473	600	292	294.5	2.5	3000	2.5	3000
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475	600	292.5	294.5	2	2400	2	2400

476	600	292.5	294.5	2	2400	2	2400
477	600	292.5	294.5	2	2400	2	2400
478	600	292.5	294.5	2	2400	2	2400
479	600	292.5	294.5	2	2400	2	2400
500	300	292	294.5	2.5	1500	2.5	1500
501	600	292	294.5	2.5	3000	2.5	3000
502	600	292	294.5	2.5	3000	2.5	3000
503	600	292	294.5	2.5	3000	2.5	3000
504	600	292	294.5	2.5	3000	2.5	3000
505	600	292.5	294.5	2	2400	2	2400
506	600	292.5	294.5	2	2400	2	2400
507	600	292.5	294.5	2	2400	2	2400
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531	300	292	294.5	2.5	1500	2.5	1500
532	600	292	294.5	2.5	3000	2.5	3000
533	600	292	294.5	2.5	3000	2.5	3000
534	600	292	294.5	2.5	3000	2.5	3000
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536	600	292.5	294.5	2	2400	2	2400
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538	600	292.5	294.5	2	2400	2	2400
539	600	292.5	294.5	2	2400	2	2400
562	200	292	294.5	2.5	1000	2.5	1000
563	400	292	294.5	2.5	2000	2.5	2000
564	400	292	294.5	2.5	2000	2.5	2000
565	400	292	294.5	2.5	2000	2.5	2000
566	400	292	294.5	2.5	2000	2.5	2000
567	400	292.5	294.5	2	1600	2	1600
568	250	292.5	294.5	2	1000	2	1000
569	250	292.5	294.5	2	1000	2	1000
570	250	292.5	294.5	2	1000	2	1000
455	600	292.5	294	1.5	1800	1.5	1800
456	600	292.5	294	1.5	1800	1.5	1800
457	600	292.5	294	1.5	1800	1.5	1800
458	600	292.5	294	1.5	1800	1.5	1800
459	600	293	294	1	1200	1	1200
460	550	293	294	1	1100	1	1100
461	250	293	294	1	500	1	500
462	250	293	294	1	500	1	500
463	250	293	294	1	500	1	500
464	20	293	294	1	40	1	40
480	600	292.5	294	1.5	1800	1.5	1800

481	600	292.5	294	1.5	1800	1.5	1800
482	600	292.5	294	1.5	1800	1.5	1800
483	600	292.5	294	1.5	1800	1.5	1800
484	600	292.5	294	1.5	1800	1.5	1800
485	600	292.5	294	1.5	1800	1.5	1800
486	600	292.5	294	1.5	1800	1.5	1800
487	600	292.5	294	1.5	1800	1.5	1800
488	600	292.5	294	1.5	1800	1.5	1800
489	600	293	294	1	1200	1	1200
490	600	293	294	1	1200	1	1200
491	600	293	294	1	1200	1	1200
492	600	293	294	1	1200	1	1200
493	600	293	294	1	1200	1	1200
494	600	293	294	1	1200	1	1200
495	150	293	294	1	300	1	300
509	600	292.5	294	1.5	1800	1.5	1800
510	600	292.5	294	1.5	1800	1.5	1800
511	600	292.5	294	1.5	1800	1.5	1800
512	600	292.5	294	1.5	1800	1.5	1800
513	600	292.5	294	1.5	1800	1.5	1800
514	600	292.5	294	1.5	1800	1.5	1800
515	600	292.5	294	1.5	1800	1.5	1800
516	600	292.5	294	1.5	1800	1.5	1800
517	600	292.5	294	1.5	1800	1.5	1800
518	600	292.5	294	1.5	1800	1.5	1800
519	600	293	294	1	1200	1	1200
520	600	293	294	1	1200	1	1200
521	600	293	294	1	1200	1	1200
522	600	293	294	1	1200	1	1200
523	600	293	294	1	1200	1	1200
524	600	293	294	1	1200	1	1200
525	600	293	294	1	1200	1	1200
526	150	293	294	1	300	1	300
540	600	292.5	294	1.5	1800	1.5	1800
541	600	292.5	294	1.5	1800	1.5	1800
542	600	292.5	294	1.5	1800	1.5	1800
543	600	292.5	294	1.5	1800	1.5	1800
544	600	292.5	294	1.5	1800	1.5	1800
545	600	292.5	294	1.5	1800	1.5	1800
546	600	292.5	294	1.5	1800	1.5	1800
547	600	292.5	294	1.5	1800	1.5	1800
548	600	292.5	294	1.5	1800	1.5	1800

APPROVED

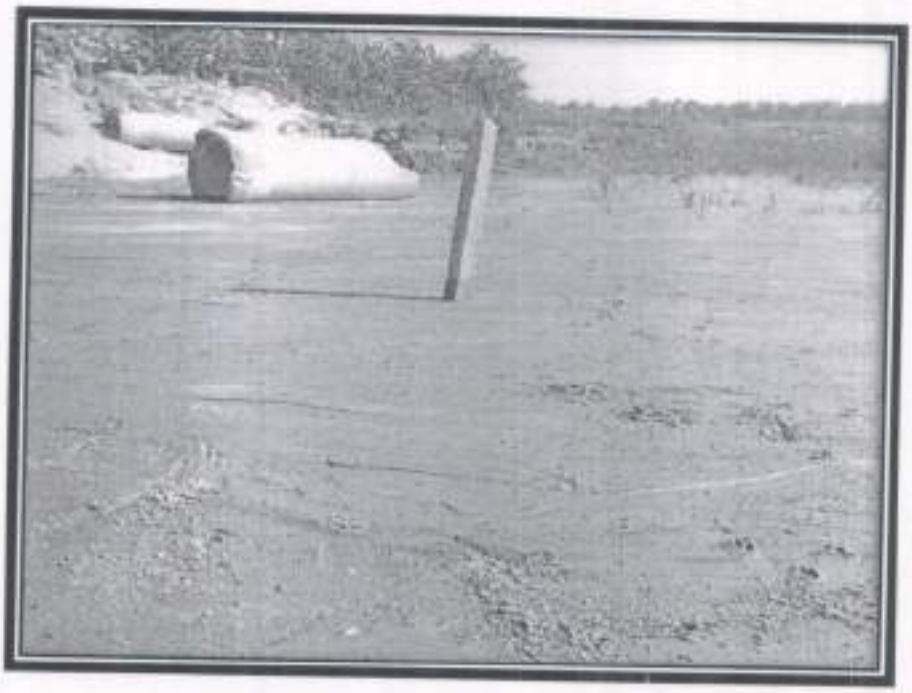
549	600	293	294	1	1200	1	1200
550	600	293	294	1	1200	1	1200
551	600	293	294	1	1200	1	1200
552	600	293	294	1	1200	1	1200
553	600	293	294	1	1200	1	1200
554	600	293	294	1	1200	1	1200
555	600	293	294	1	1200	1	1200
556	600	293	294	1	1200	1	1200
557	150	293	294	1	300	1	300
571	250	292.5	294	1.5	750	1.5	750
572	250	292.5	294	1.5	750	1.5	750
573	250	292.5	294	1.5	750	1.5	750
574	250	292.5	294	1.5	750	1.5	750
575	200	292.5	294	1.5	600	1.5	600
576	200	292.5	294	1.5	600	1.5	600
577	200	292.5	294	1.5	600	1.5	600
578	200	292.5	294	1.5	600	1.5	600
579	200	292.5	294	1.5	600	1.5	600
580	200	293	294	1	400	1	400
581	150	293	294	1	300	1	300
582	150	293	294	1	300	1	300
583	150	293	294	1	300	1	300
584	150	293	294	1	300	1	300
585	150	293	294	1	300	1	300
586	150	293	294	1	300	1	300
587	150	293	294	1	300	1	300
588	20	293	294	1	40	1	40
					915130		876510

Conclusion

Replenishment Study for the year 2020 reveals that there is replenishment (Natural Reclamation Rainfed Water Containing Sand) of approximately, 8,76,510 MTof Boulder, Gravel and Sand.



G) Site Photographs





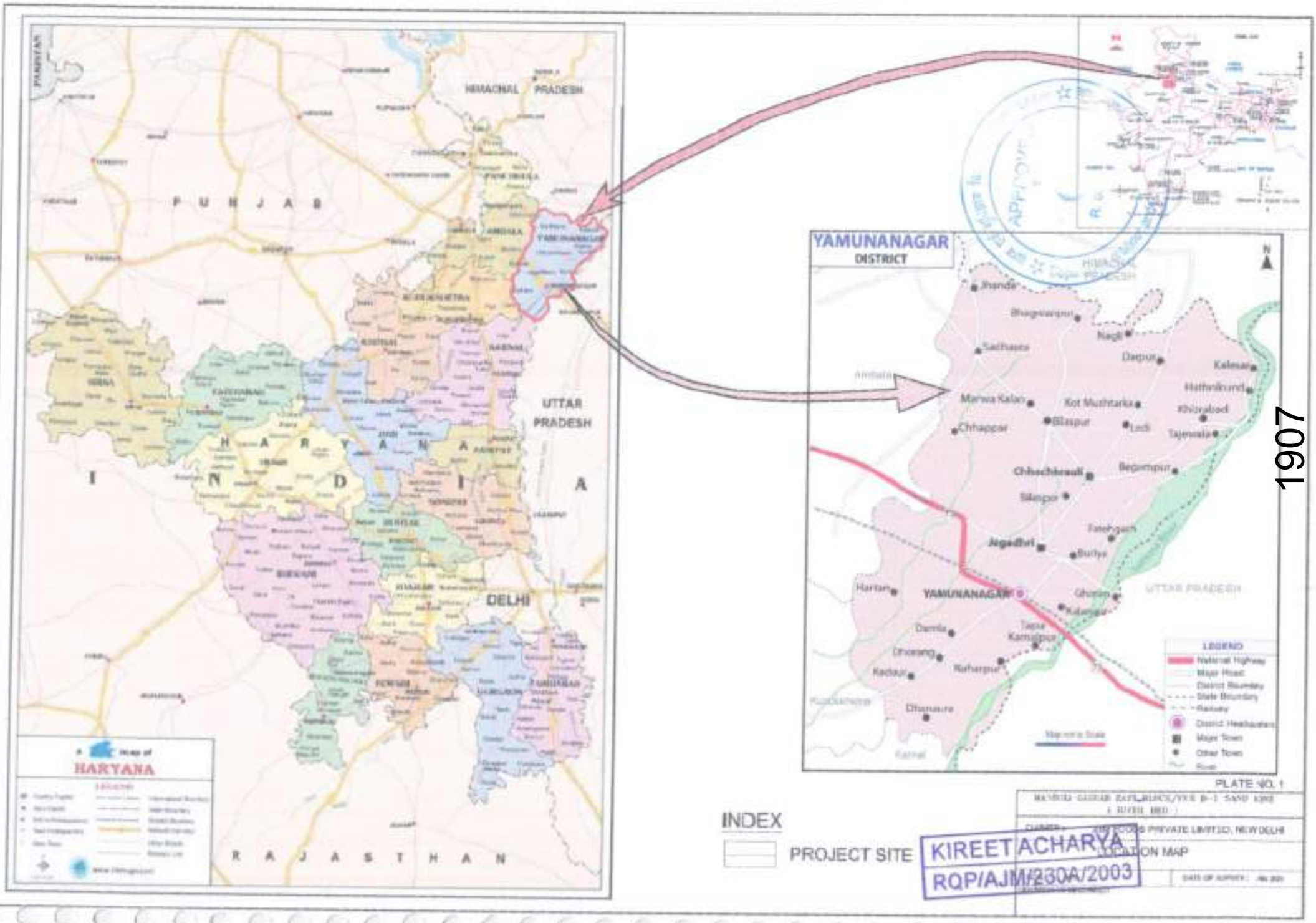
GPS coordinates

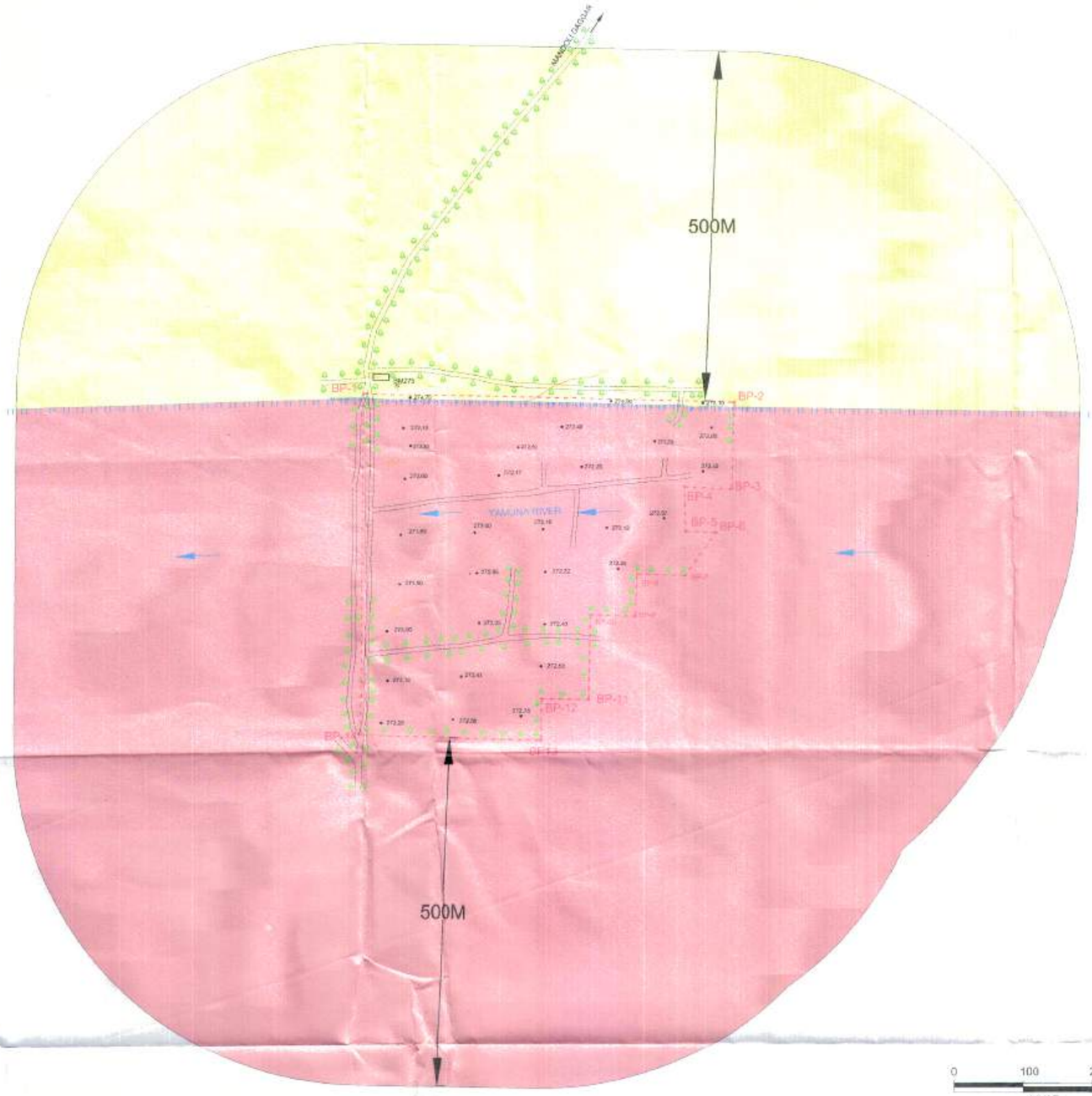
Pillar number	Latitudes	Longitudes
BP-1	N30° 08' 26.69''	E77° 25' 01.91''
BP-2	N30° 08' 26.69''	E77° 25' 21.23''
BP-3	N30° 08' 22.73''	E77° 25' 21.18''
BP-4	N30° 08' 22.73''	E77° 25' 18.73''
BP-5	N30° 08' 20.75''	E77° 25' 18.71''
BP-6	N30° 08' 20.75''	E77° 25' 20.12''
BP-7	N30° 08' 18.77''	E77° 25' 18.62''
BP-8	N30° 08' 18.77''	E77° 25' 16.23''
BP-9	N30° 08' 16.79''	E77° 25' 16.21''
BP-10	N30° 08' 16.79''	E77° 25' 13.75''
BP-11	N30° 08' 12.83''	E77° 25' 13.70''
BP-12	N30° 08' 12.83''	E77° 25' 11.26''
BP-13	N30° 08' 10.85''	E77° 25' 11.24''
BP-14	N30° 08' 10.85''	E77° 25' 01.71''



583

1907


HIMACHAL PRADESH
PUNJAB
UTTAR PRADESH
HARYANA
INDIA
DELHI
RAJASTHAN
Map of
HARYANA
YAMUNANAGAR
DISTRICT
Jhandi
Bhagwanpur
Nagli
Sadhaura
Daipur
Kalesar
Hathnikund
Mariwa Kalan
Kot Mushtarka
Khizrabad
Chhappar
Bilaspur
Lodi
Tajewala
Chhachhrauli
Begumpur
Sikrpur
Fatehgarh
Jagadhri
Buriya
Harian
YAMUNANAGAR
Ghodan
Kalanaur
Damla
Tapsa
Kamalpur
Dhoraing
Raharpur
Kadaur
Dharsaura
UTTAR PRADESH
LEGEND
National Highway
Major Road
District Boundary
State Boundary
Railway
District Headquarters
Major Town
Other Town
River
N
INDEX
PROJECT SITE
PLATE NO. 1
LOCATION MAP
KIREET ACHARYA
RQP/AJM/230A/2003



INDEX

MINE BOUNDARY	
RIVER BED PROFILE	
ROAD	
BENCH MARK	BM T-273
CONTOUR	272
WASTE LAND	
AGRICLTURE LAND	

PLATE NO. 8

MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE
(RIVER BED)

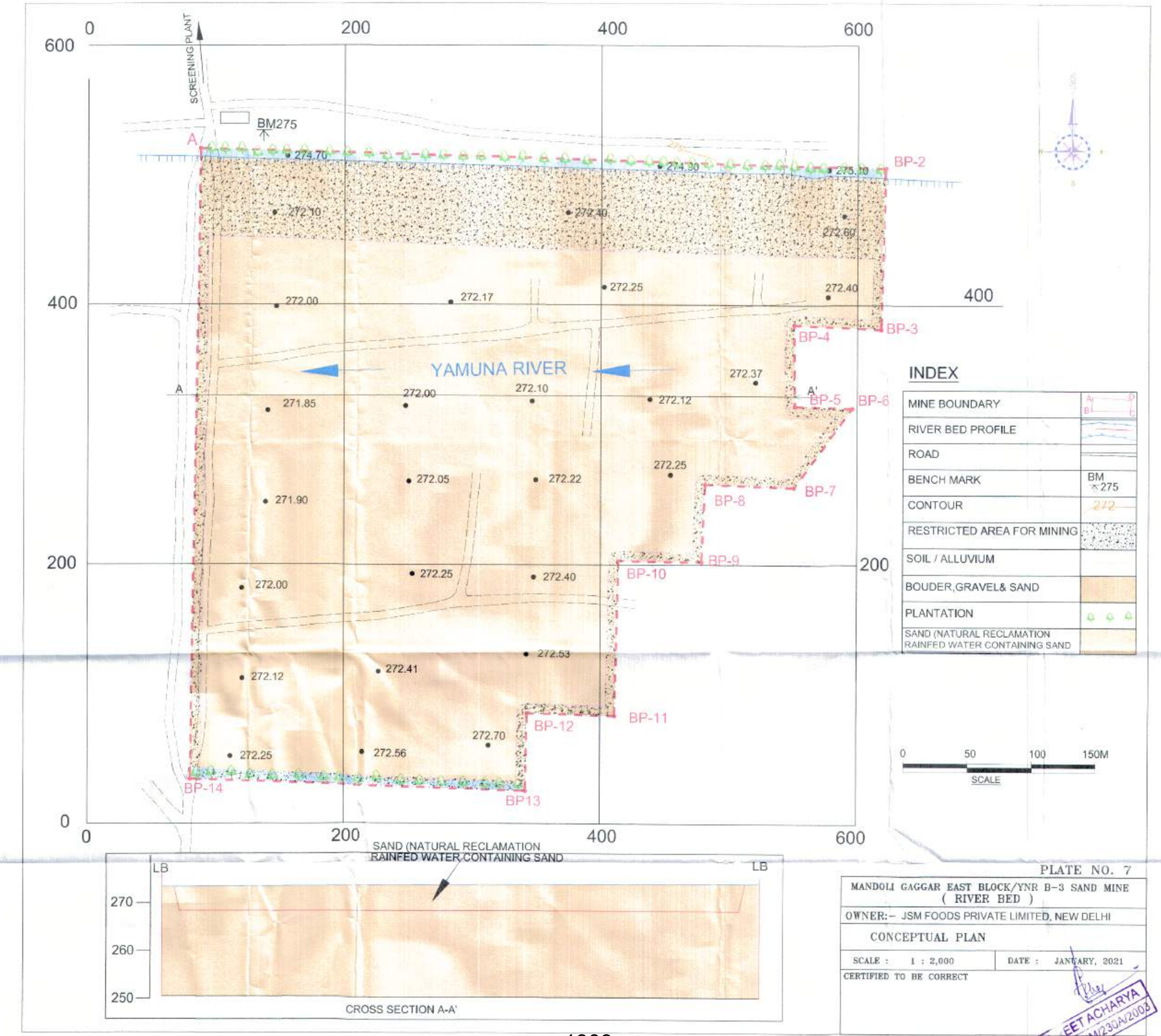
OWNER:– JSM FOODS PRIVATE LIMITED, NEW DELHI

ENVIRONMENT PLAN

SCALE : 1 : 5,000 DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A


0
200
400
600
SCREENING PLANT
BM275
A
274.70
274.30
275.30
BP-2
272.10
272.40
272.60
272.00
272.17
272.25
272.40
BP-3
BP-4
YAMUNA RIVER
272.37
A'
271.85
272.00
272.10
272.12
BP-5
BP-6
272.25
271.90
272.05
272.22
BP-8
BP-7
BP-9
BP-10
272.00
272.25
272.40
272.53
272.12
272.41
BP-11
BP-12
272.70
272.25
272.56
BP-14
BP13
SAND (NATURAL RECLAMATION
RAINFED WATER CONTAINING SAND
LB
LB
270
260
250
CROSS SECTION A-A'
INDEX
MINE BOUNDARY
RIVER BED PROFILE
ROAD
BENCH MARK
BM 275
CONTOUR
272
RESTRICTED AREA FOR MINING
SOIL / ALLUVIUM
BOUDER,GRAVEL& SAND
PLANTATION
SAND (NATURAL RECLAMATION
RAINFED WATER CONTAINING SAND
0
50
100
150M
SCALE
APPROVED
PLATE NO. 7
MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE
(RIVER BED)
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI
CONCEPTUAL PLAN
SCALE : 1 : 2,000
DATE : JANUARY, 2021
CERTIFIED TO BE CORRECT
RQP/AJM/230A/2008

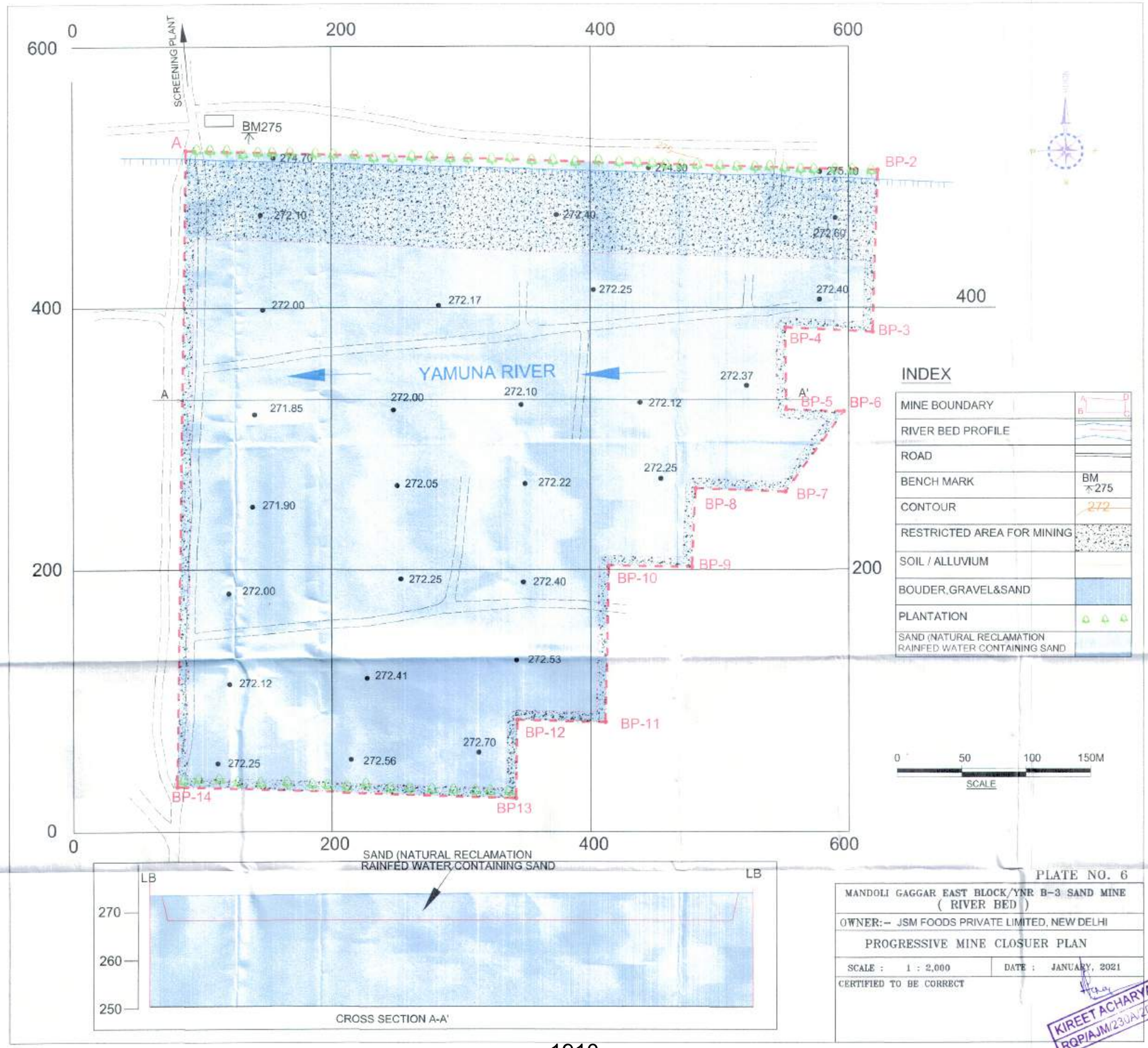


PLATE NO. 6

MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE (RIVER BED)
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI
PROGRESSIVE MINE CLOSUER PLAN
SCALE : 1 : 2,000 | DATE : JANUARY, 2021
CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A/2003

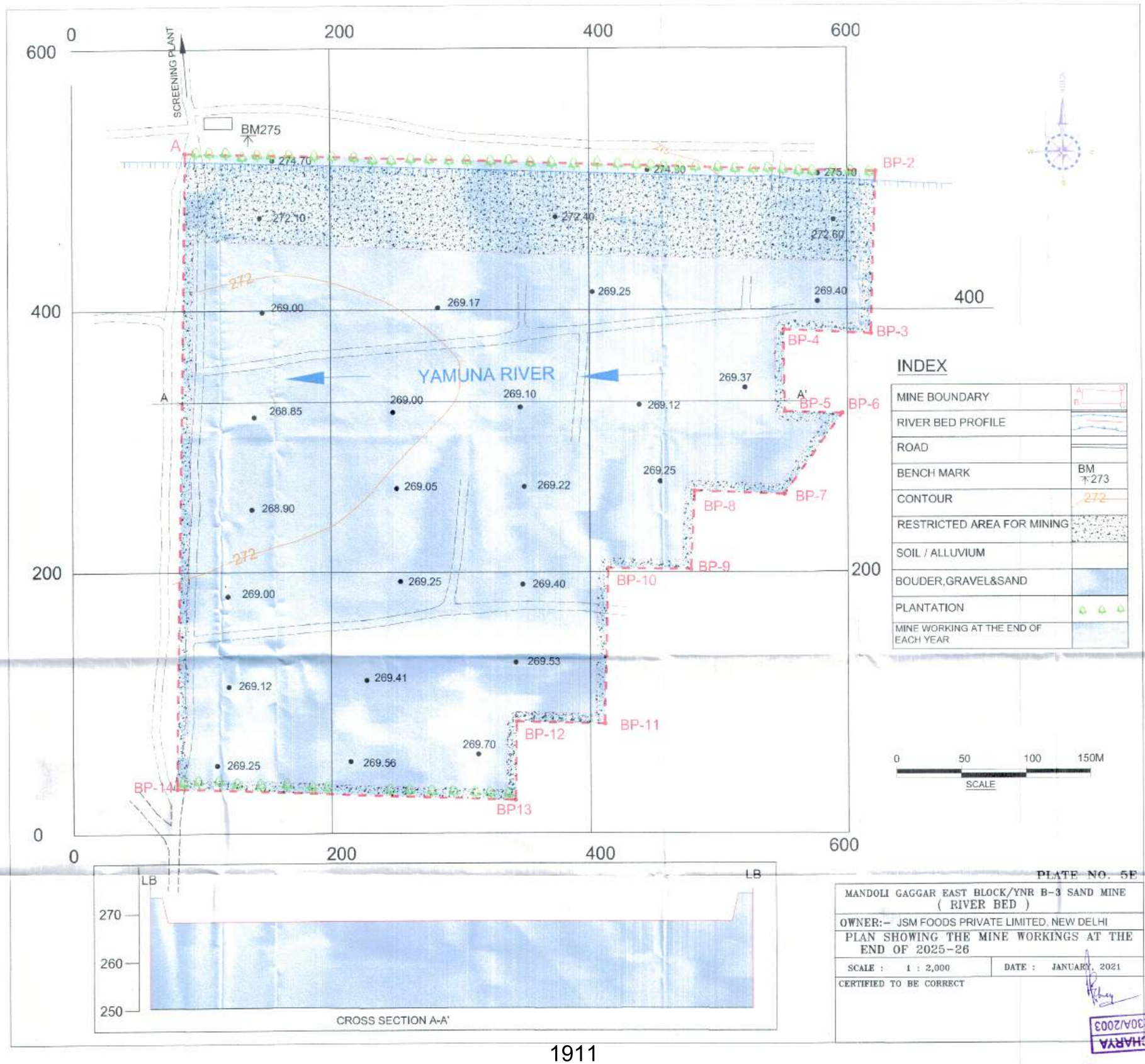


PLATE NO. 5E

MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE
(RIVER BED)

OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

PLAN SHOWING THE MINE WORKINGS AT THE END OF 2025-26

SCALE : 1 : 2,000 DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A/2003

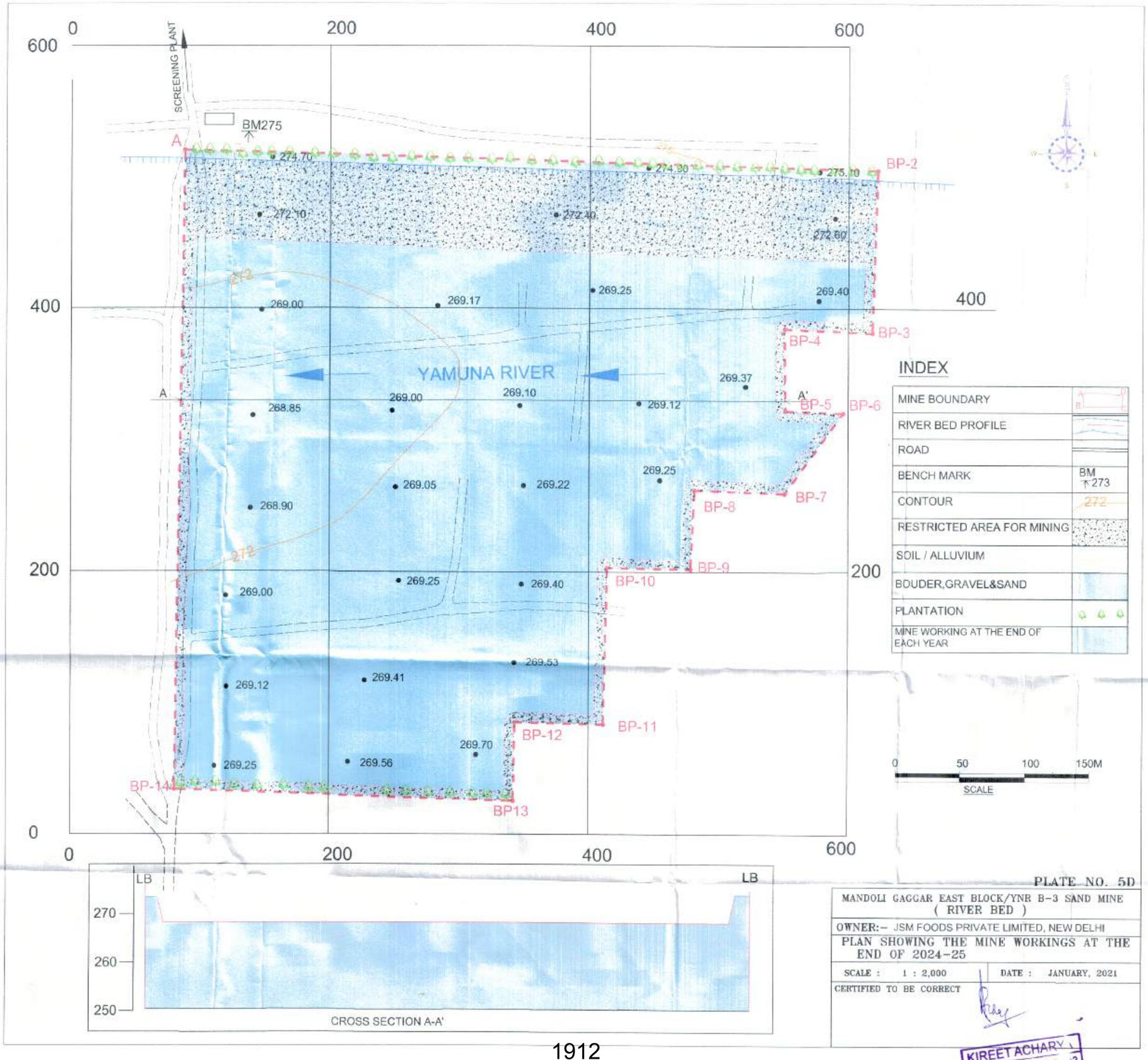


PLATE NO. 5D

MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE
(RIVER BED)

OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

PLAN SHOWING THE MINE WORKINGS AT THE END OF 2024-25

SCALE : 1 : 2,000 DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
ROP/AJM/230A

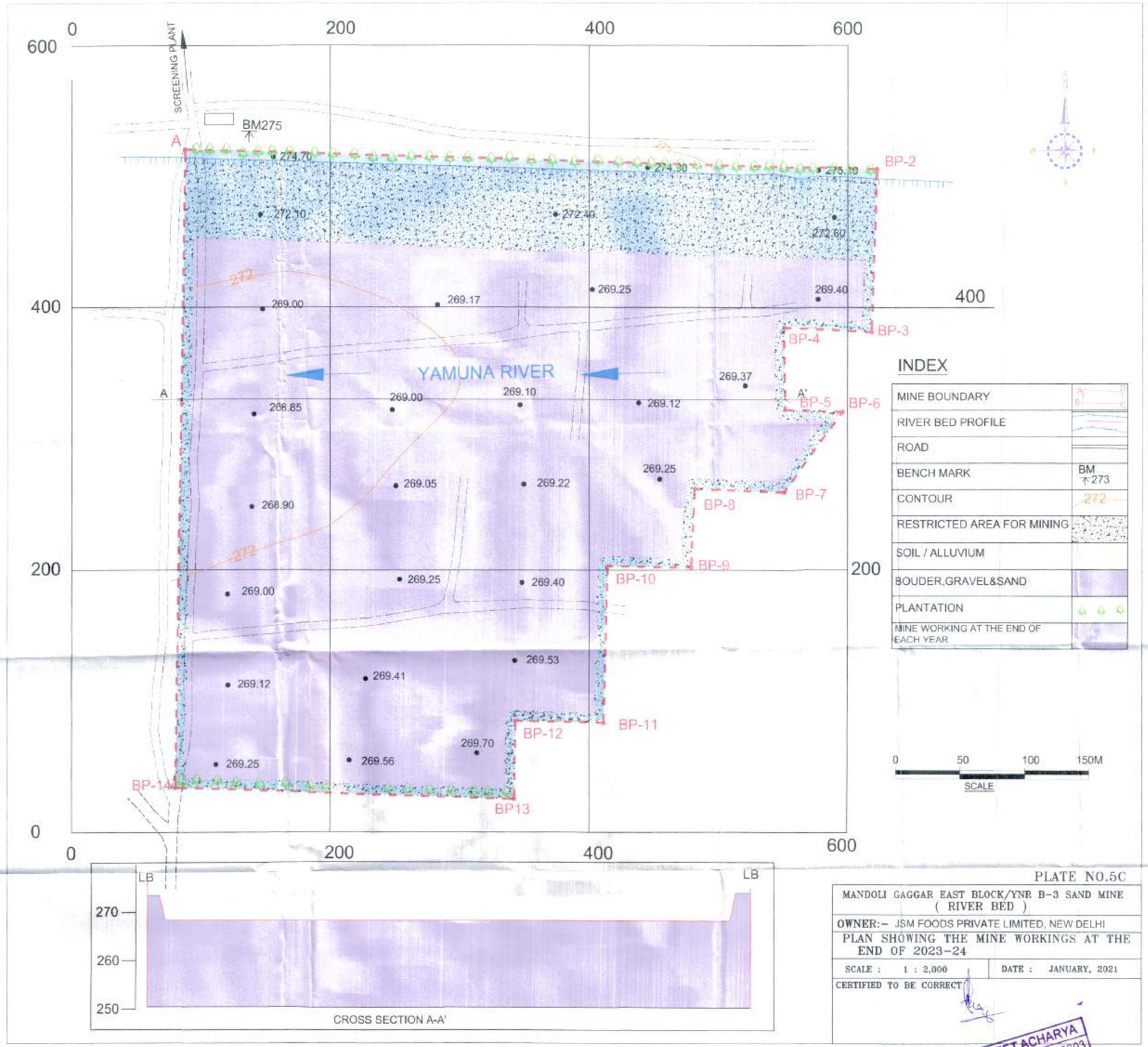


PLATE NO.5C

MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE
(RIVER BED)

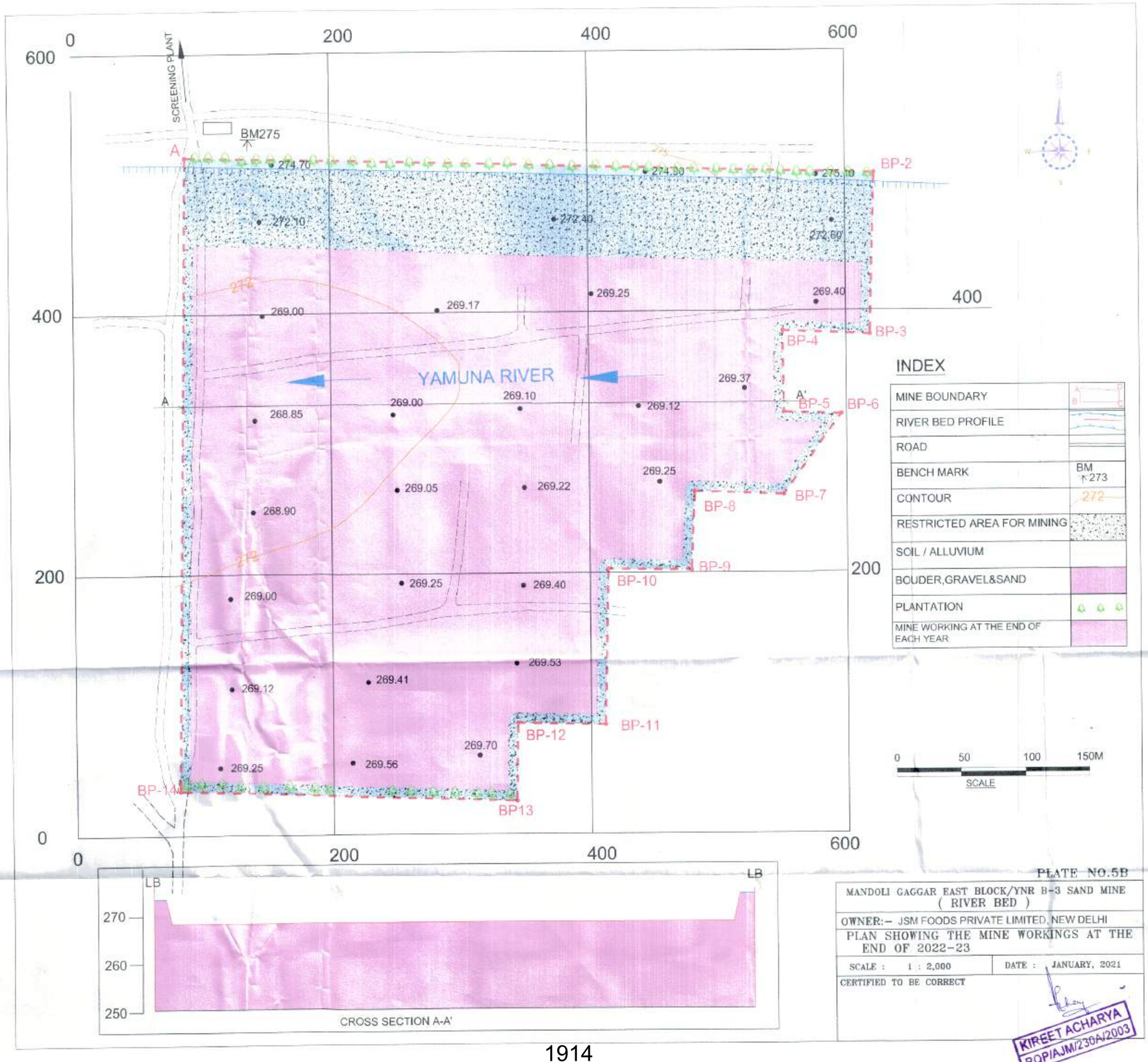
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

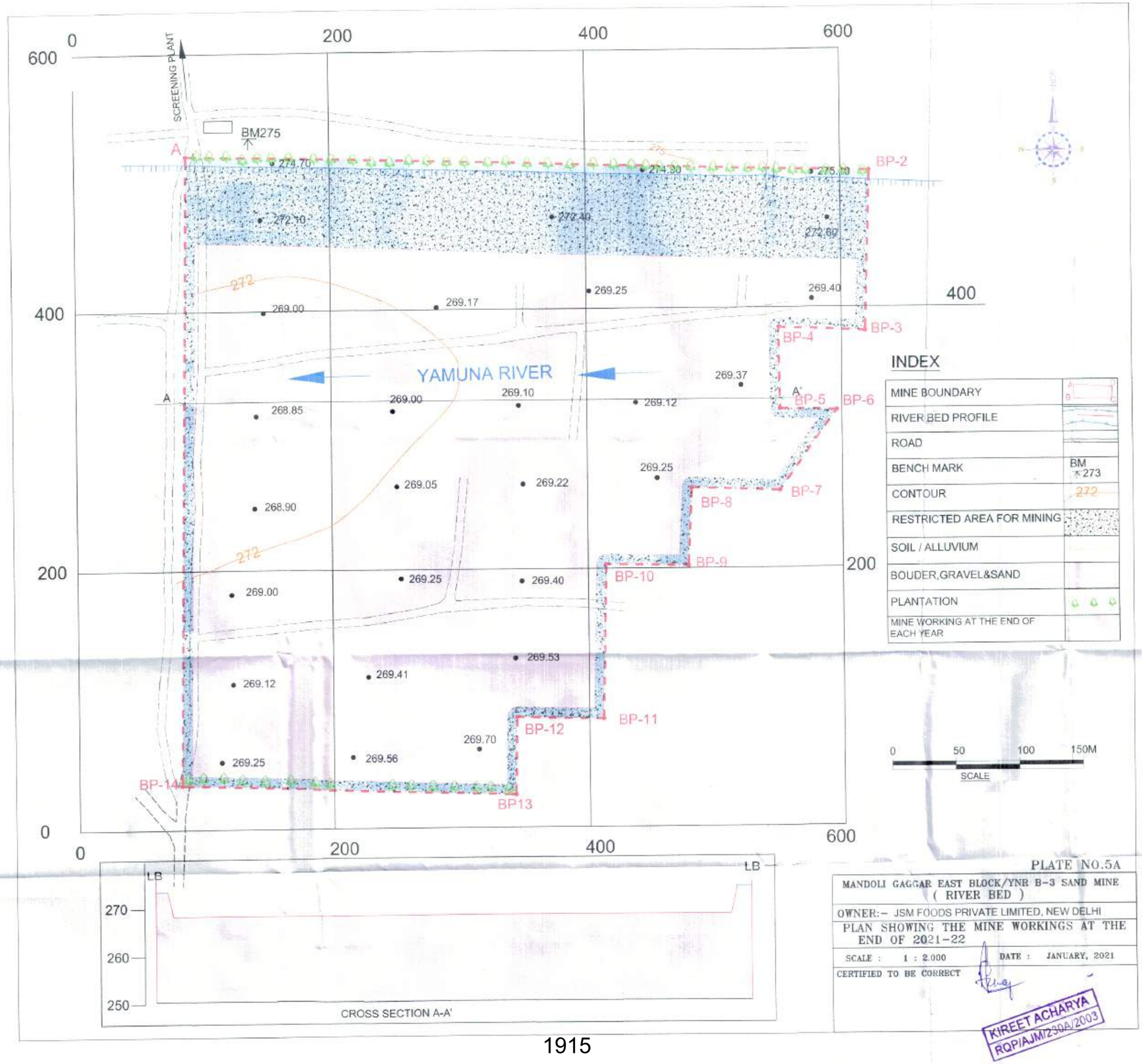
PLAN SHOWING THE MINE WORKINGS AT THE END OF 2023-24

SCALE : 1 : 2,000 | DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A/2003


0
200
400
600
SCREENING PLANT
BM275
A
274.70
274.30
275.10
BP-2
272.10
272.40
272.60
269.00
269.17
269.25
269.40
BP-3
BP-4
YAMUNA RIVER
269.37
A'
BP-5
BP-6
268.85
269.00
269.10
269.12
269.25
BP-7
BP-8
269.05
269.22
268.90
BP-9
BP-10
269.00
269.25
269.40
269.53
269.41
269.12
BP-11
BP-12
269.70
269.25
269.56
BP-14
BP13
LB
LB
270
260
250
CROSS SECTION A-A'
INDEX
MINE BOUNDARY
RIVER BED PROFILE
ROAD
BENCH MARK
BM ↑273
CONTOUR
272
RESTRICTED AREA FOR MINING
SOIL / ALLUVIUM
BOUDER,GRAVEL&SAND
PLANTATION
MINE WORKING AT THE END OF EACH YEAR
0
50
100
150M
SCALE
PLATE NO.5B
MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE
(RIVER BED)
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI
PLAN SHOWING THE MINE WORKINGS AT THE END OF 2022-23
SCALE : 1 : 2,000
DATE : JANUARY, 2021
CERTIFIED TO BE CORRECT
KIREET ACHARYA
RQP/AJM/230A/2003


0
200
400
600
SCREENING PLANT
BM275
A
A'
274.70
274.30
275.10
272.10
272.40
272.60
272
269.00
269.17
269.25
269.40
BP-2
BP-3
BP-4
BP-5
BP-6
BP-7
BP-8
BP-9
BP-10
BP-11
BP-12
BP13
BP-14
YAMUNA RIVER
269.37
269.00
269.10
269.12
268.85
269.05
269.22
269.25
268.90
269.00
269.25
269.40
269.53
269.41
269.12
269.70
269.56
269.25
INDEX
MINE BOUNDARY
RIVER BED PROFILE
ROAD
BENCH MARK
BM 273
CONTOUR
272
RESTRICTED AREA FOR MINING
SOIL / ALLUVIUM
BOUDER,GRAVEL&SAND
PLANTATION
MINE WORKING AT THE END OF EACH YEAR
0
50
100
150M
SCALE
LB
LB
270
260
250
CROSS SECTION A-A'
PLATE NO.5A
MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE
(RIVER BED)
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI
PLAN SHOWING THE MINE WORKINGS AT THE END OF 2021-22
SCALE : 1 : 2,000
DATE : JANUARY, 2021
CERTIFIED TO BE CORRECT
KIREET ACHARYA
RQP/AJM/230A/2003

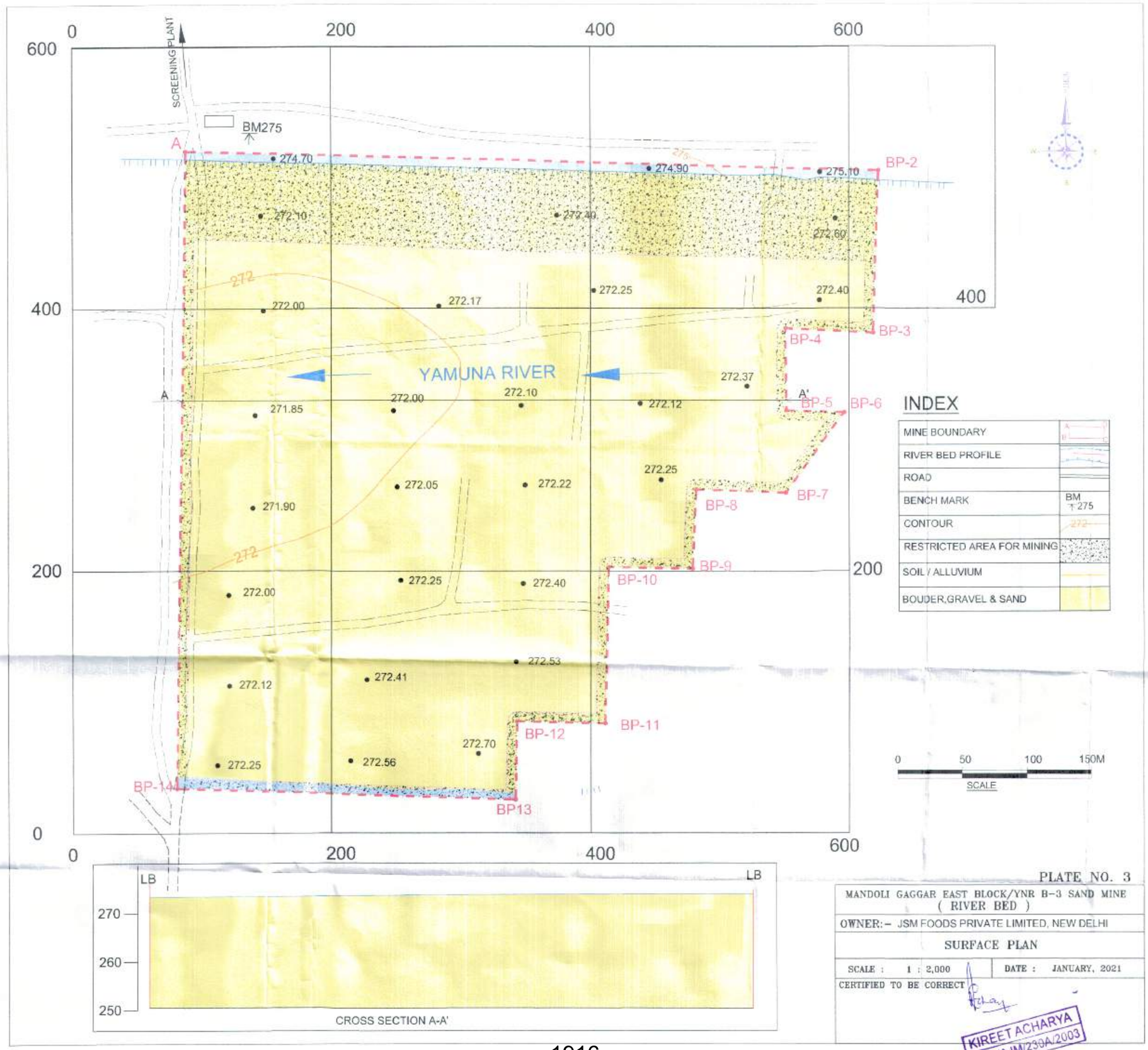


PLATE NO. 3

MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE
(RIVER BED)

OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

SURFACE PLAN

SCALE : 1 : 2,000 | DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/239A/2003

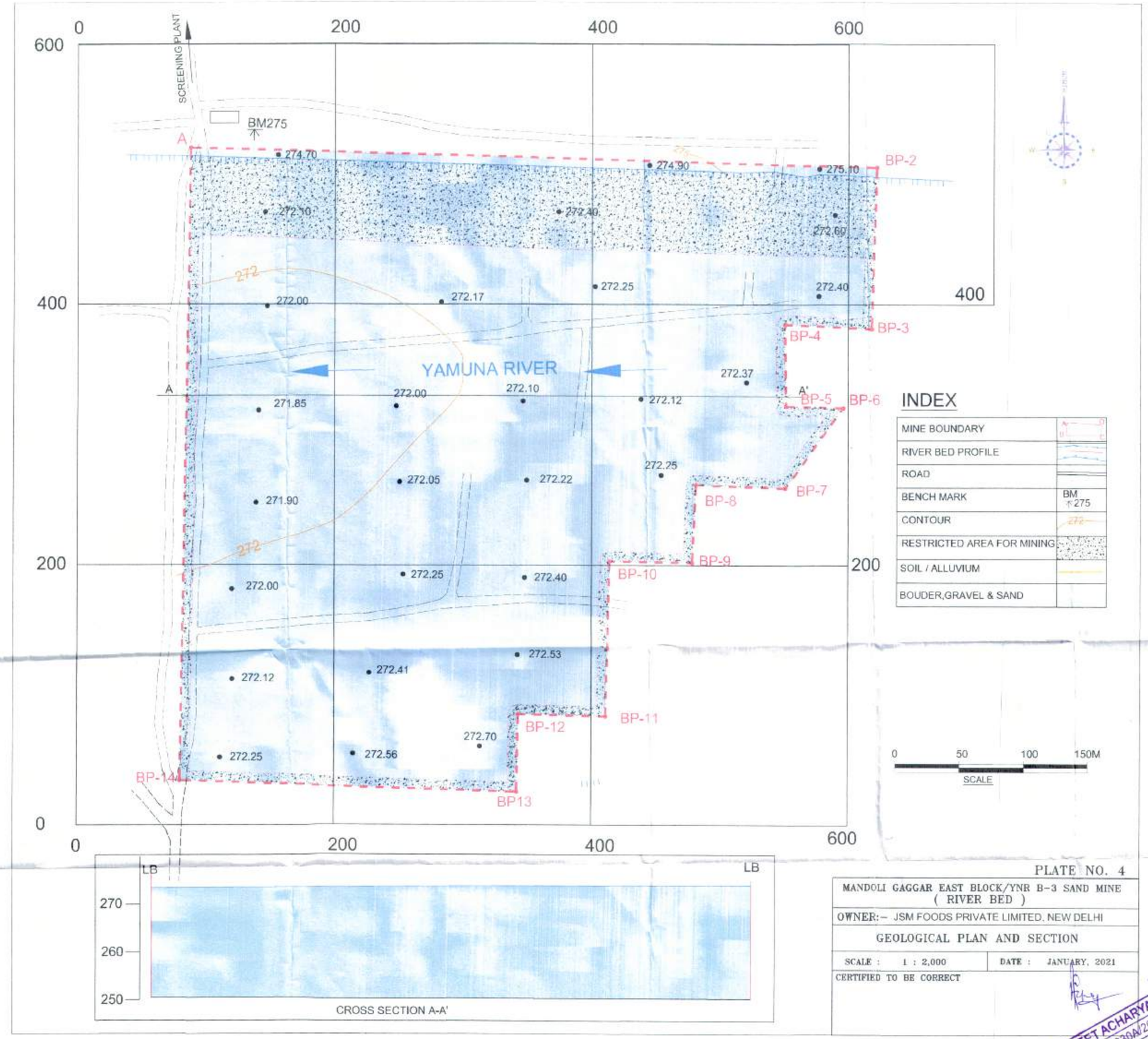


PLATE NO. 4

MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE
(RIVER BED)

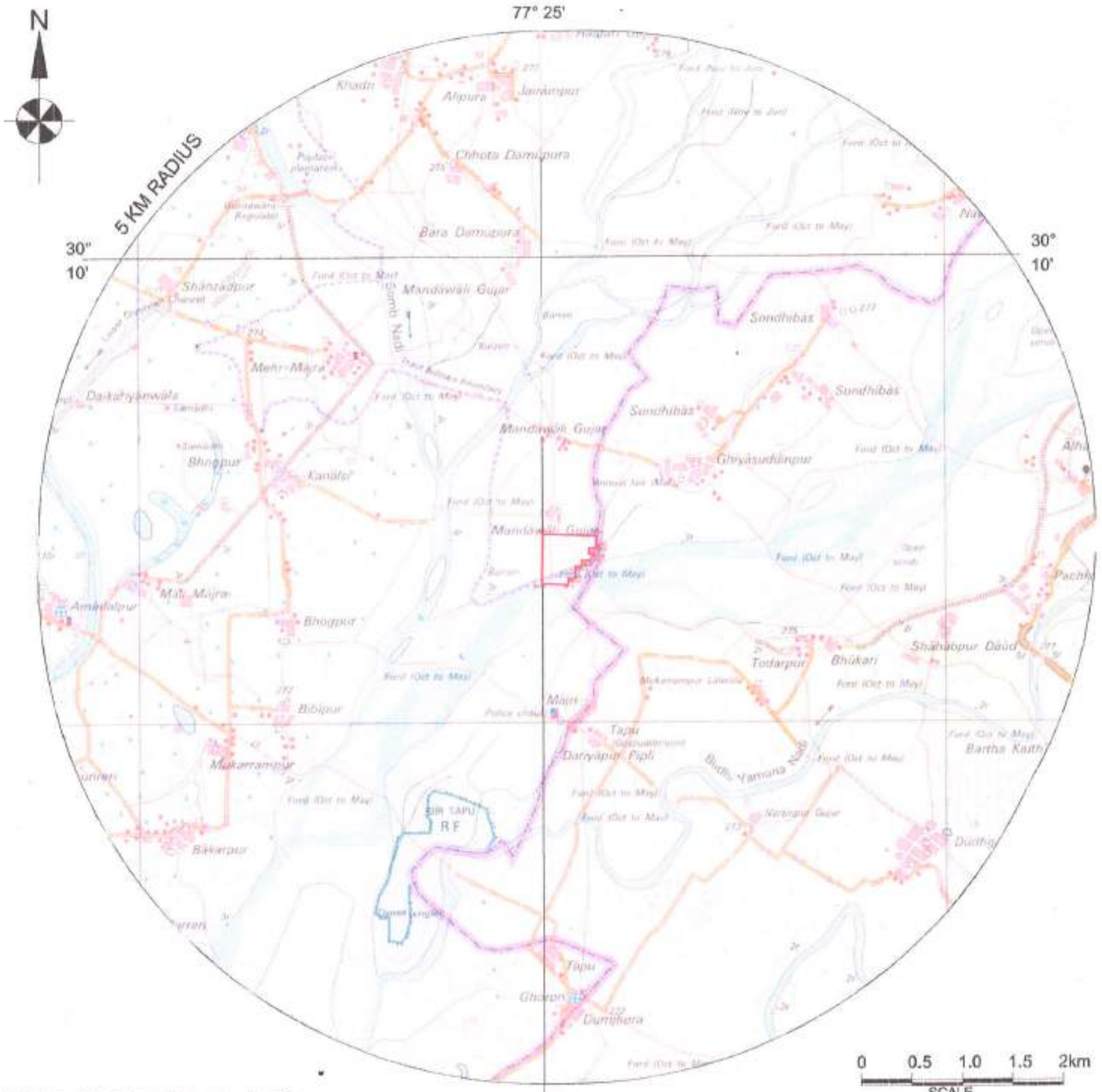
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

GEOLOGICAL PLAN AND SECTION

SCALE : 1 : 2,000 DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A/2003



APPROVED

PLATE NO. 2

MANDOLI GAGGAR EAST BLOCK/YNR B-3 SAND MINE (RIVER BED)	
OWNER:– JSM FOODS PRIVATE LIMITED, NEW DELHI	
KEY PLAN	
SCALE : 1 : 50,000	DATE : JANUARY, 2021
CERTIFIED TO BE CORRECT	
KIREET ACHARYA RQP/AJM/230A/2003	

ANNEXURE R 16/14

Cat. A Mech. O/C

MODIFIED MINING SCHEME

INCLUDING

PROGRESSIVE MINE CLOSURE PLAN

(Submitted Under Rule 70 (1) & 77(2) of Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012)

खान एवं भूविज्ञान विभाग, हरियाणा, पंचकूला
Department of Mines and Geology
Haryana, Panchkula
APPROVED
With Conditions
शर्तों के साथ अनुमोदित
Vide Letter No. DMG/MY/ Mandoli Ghaggar B-4
निर्देशांक/Dated 4008 to 4011 BY 12/10/2021
Mining Engineer

FOR

BOULDER, GRAVEL & SAND MINE (MINOR MINERAL)

OF

MANDOLI GHAGGAR WEST BLOCK (YNR B-4)
VILLAGE- MANDOLI, TEHSIL-YAMUNA NAGAR

DISTRICT-YAMUNANAGAR, STATE-HARYANA

TOTAL LEASE AREA-25.56 Hect. (NON-FOREST)

PRODUCTION CAPACITY – 1191000 T/ANNUM

LEASE PERIOD – 7 YEARS

PERIOD OF MINING SCHEME – 2 YEARS

APPLICANT

M/S JSM FOODS PRIVATE LIMITED
Mr. Tanish Wadhwa (Authorized Signatory)
676, Sector-13, Karnal
e-mail: jsmfoodsmandoli@gmail.com
Phone : 9996015005

Prepared By
KIREET ACHARYA (RQP/AJM/230A/2003)
Phone 0141-2786183, 9414163053, acharyak12@gmail.com

JSM FOODS PVT. LTD.

WZ/932, BASIE DARAPUR, 1ST FLOOR,
NEAR SENIOR SECONDARY SCHOOL, NEW DELHI-110015

A. CONSENT LETTER/ UNDERTAKING/ CERTIFICATE

FROM THE APPLICANT

01 The Modified Mining Scheme in respect of "MandoliGhaggarWest Block/YNR B-4"sand mine over an area of25.56 Hect., near village MandoliGhaggarwest, Tehsil Jagadhri,DistrictYamunanagar, State Haryana, under Rule 70(1) Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 & 23 of MCDR 2017 has been prepared by Qualified Person Kireet Acharya. This is to request the Director, Department of Mines and Geology Haryana, to make any further correspondence regarding any correction of the Mining Plan/Scheme of Mining with the said Qualified person at his address below :-

Sh. Kireet Acharya
70/30 Patel Marg,Mansarovar,
Jaipur 202020 (Rajasthan),
Mobile No. 9414163053
Email - acharyak12@gmail.com

We hereby undertake that all modifications / updating as made in the said Mining Plan/Scheme of Mining by the said recognized person be deemed to have been made with our knowledge and consent and shall be acceptable on us and binding in all respects.

02 It is certified that the CCOM Circular No-2/2010 will be implemented and complied with when an authorized agency is approved by the State Government.

03 It is certified that the Progressive Mine Closure plan of "MandoliGhaggarWest" Block/YNR B-4" Boulder, Gravel and Sand mine near villageMandoliGhaggarWest over an area of 25.56 Ha. complies with all statutory rules, Regulations, Orders made by the Central or State Government, Statutory organization, Court etc which have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities. The information furnished in the Progressive Mine Closure plan is true and correct to the best of our knowledge and records.

04 "The provisions of Mines Act, Rules and Regulations made there under have been observed in the Modified Mining Scheme over an area of 25.56 hectare , District Yamunanagar, State Haryana belonging to M/s. JSM Foods Pvt. Ltd.and where specific permissions are required, the applicant will approach the D.G.M.S. Further, standards prescribed by D.G.M.S. in respect of miners' Health will be strictly implemented"

Place: YAMUNANAGAR

Date10.09.2021

For M/s. JSM Foods Pvt. Ltd.

For JSM FOODS PVT. LTD.

Auth.Sign.

APPROVED

JSM FOODS PVT. LTD.

WZ/932, BASIE DARAPUR, 1ST FLOOR,
NEAR SENIOR SECONDARY SCHOOL, NEW DELHI-110015

AUTHORISATION

I, TANISH WADHWA Director of M/s. JSM Foods Pvt. Ltd., Mining site at Village MandoliGhaggar West, Block YNR/B-4, Tehsil Jagadhri, Distt Yamuna Nagar, hereby authorizeShriKireetAcharya, (RQP/AJM/230/2003/A) to prepare the Modified Mining Scheme including Progressive Mine Closure Plan (Review & Mining scheme) under Haryana Minor Mineral Concession, Stocking,Transportation of Minerals and Prevention of Illegal Mining Rules, 2012, in respect of minor mineral mines of "Boulder, Gravel and Sand" of "M/s. JSM Foods Pvt. Ltd" over an area of 25.56 hectare in Tehsil Jagadhri, District Yamunanagar, State Haryana.

I request the Director General, Department of Mines & Geology, Govt. of Haryana, Chandigarh, to make further correspondence regarding re-submission/ modification / withdrawal and to collect the approved copies of the aforesaid Mining Plan Including Progressive Mine Closure Plan with the said recognized person on his following address: -

Kireet Acharya
(RQP/AJM/230/2003/(A)
70/30 Patel Marg, Mansarovar
Jaipur 302020
E-mail-acharyak12@gmail.com
Mobile: 9414163053

APPROVED

M/s JSM Foods Pvt. Ltd.
For JSM FOODS PVT. LTD.
Auth. Sign.

Place: YAMUNANAGAR
Date: 10.09.2021

CERTIFICATE FROM QP

The provisions of the mineral Conservation and Development Rules 2017 made under section 18 of the Mines & Minerals (Development & Regulation) Act 1957, have been observed in the preparation of the Modified Mining Scheme and PMCP for Mandoli Ghaggar West Block (YNR B4) Boulder, Gravel & Sand Mine over and area of 25.56 ha., of M/s JSM Foods Private Limited R/o 676, Sector -13, Karnal in village Mandoli, Tehsil & District- Yamuna Nagar, Haryana state and whenever specific permissions are required, the applicant will approach the concerned authorities of State Mines and Geology Department. The information furnished in the Mining Scheme/ Review of Mining Plan and PMCP are true and correct to the best of our knowledge.

Place: Jaipur
Date

KIREET ACHARYA
(Kireet Acharya)
RQP/AJM/238/2003/(A)

APPROVED

S.No	TABLE OF CONTENTS
	Introductory notes
1.0	General Information
2.0	Location and accessibility
	Details of approved mining plan/scheme
	Review of earlier approved proposal
PART -A	Geology and Exploration
2.0	Mining
	Underground Mining
3.0	Mine Drainage
4.0	Stacking Of Mineral Reject /Sub Grade Material and Disposal Of Waste
5.0	Use of Mineral And Mineral Reject
6.0	Processing of Mineral Rejects
7.0	Site services
8.0	Progressive Mine Closure Plan

LIST OF PLATES	Scale	Plate no.
Location Map	-	1
Key Map	-	2
Surface Plan	1:2000	3
Geological Plan and Sections	1;2000	4
Year wise Development Plans and Sections (2021-2022)	1:2000	5A
Year wise Development Plans and Sections (2022-2023)	1:2000	5B
Progressive Mine Closure plan	1:2000	6
Conceptual Plan and Section	1:2000	7
Environment Plan	1:5000	8



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LIST OF ANNEXURES

Annexure No.	Particulars
1.	Consent & undertaking by the owner
2.	Letter of Authorization by owner for preparation of mining plan to Qualified person
3.	Copy of Aadhar card and Pan card of owner/authorized signatory
4.	Copy of LOI & MOA
5	Copy of approval letter of first Mining plan
6.	Copy of Environment Clearance
7.	Air Quality Monitoring Report
8	Water Quality Monitoring Report
9	Noise Monitoring Report
10	Soil Monitoring Report
11	Mine Water Balance Chart
12	Copy of Qualification and experience of qualified person
13	Copy of Replenishment studies
14	Copy of Air & Water Consent Given By State Govt.
15	GPS coordinates



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INTRODUCTORY NOTES

M/S JSM Foods Private Limited was established in 2005 with vision to be the most reputed group in India's as leading property developers and restaurants business. The company having office at WZ/932 Basie Darapur First Floor, Near Secondary School New Delhi registered with state department and since then been engaged in contract mining mainly for Boulder, sand, gravel and various other minerals involving operations like removal of overburden, mining, logistics etc. JSM is one of Haryana state's leading sand mining company in private sector with annual turnover of apprx. INR 50 Cr. the year ended 2019. The promoters of JSM are engaged in Chain of Restaurants, Real estate and Mining, trading of sand, aggregates in Haryana, Uttar Pradesh and Delhi.

Govt. of Haryana, Department of Mines and Geology conducted auction of Boulder, Gravel and Sand minor mineral mine of "Mandoli Ghaggar West Block /YNR B-4. M/S JSM Foods Private Limited company was considered as highest bidder by paying Rs.04,20,50,000 crores/- for the Mandolai Ghaggar West Block YNR B-04, accordingly LOI was issued for tentative area 25.56 Ha. for 7 years. M/S JSM Foods Private Limited Company is one of the leading company in sand mining in the state of Haryana having vast experience in operating sand mines, Road - Building Construction and Marketing of building material in Yamunnagar and other parts of the state. The company is experienced having technical staffs and resources to work in mining since 10 years.

Subsequent to auction process by Department of Mines & Geology, Govt. of Haryana, issued the letter of intent for LOI grant **(Annexure-4)** vide letter no. DMG/HY/Cont./Mandoli Ghaggar west Block YNR B-4/2015/3918 dated 19.06.2015 in favor of M/S JSM Foods Private Limited Company was issued.

The period of lease shall be 07 years & the same shall commence with effect from the date of grant of Environment Clearance by Competent Authority or on expiry of a period of 12 months from the date of communication of acceptance of highest bid /issuance of **"Letter of Intent** "whichever is earlier.

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The first Mining Plan including Progressive Mine Closure Plan was got approved by the competent authority from DMG, Haryana vide letter no. DMG/HY/MP/Mandolai Ghaggar West Block YNR B-4 /2015 /441to 444 dated 8.1.2016 **Annexure-5.**

After obtaining requisite Environmental Clearance (EC) from the SEIAA, Haryana vide their letter no SEIAA/HR/2016/985 dated 21.12.2016, for production target of 1191000 TPA **(Annexure-6)** the lessee has started the sand, gravel mining operations with effect from 18.6.2017. After obtaining EC, Consent for Air, water and Hazardous substances from the state Pollution Control Board and finally the applicant started the mining work from July 2017 after executing Mining lease agreement and registration.

Initially the lessee started working in fresh and replenished area for which no history /record is available on account of yearly replenishment. The lease started working from a block measuring size 19.85 ha area. The present Lease holder commenced mining of boulder, gravel and sand to produce 1191000 MTPA from this area w.e.f. June 2017 by deploying heavy earth moving machineries. The mineral produced was sent to the construction sites operating nearby lease area.

Director General of mining and Geology, Haryana vide order no. DMG /Hy/ Cont./MG west block /YNR B-3/2015/514 dated 5.2.2021 under Rule 56(17) permitted the inclusion of additional mineral Boulder and Gravel with the sand mining contract .The total quantity of the Sand ,Boulder and gravel will not exceed to 1191000 Tons and shall obtain separate EC for the new product with signing a supplementary lease agreement and the period of associated mineral will be coterminous to the original lease agreement .The quantity of boulder and gravel will not be more than 27.45 % of permitted quantity in Environmental clearance % i.e. 326929.50 tons will be Boulder and gravel.

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"The present document is submitted for Modified mining scheme for next two year (2021-2023) along with review of past Mining plan and PMCP under Rule 17(2)of MCR, 2016" for existing capacity of 1.191 MTPA under compliance of Haryana Minor Mineral Concession, Stocking and Transporting of Minerals and Prevention of Illegal Mining Rules- 2012 without changing in mining technology. There is no change in capacity and methodology.



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1.0 GENERAL INFORMATION

a.)	**Name of the Lessee** **i) Nominated Owner**	M/S JSM Foods Private Limited company Mr. Tanish Wadhwa (Authorized Signatory) 676, Sector-13, Karnal e-mail: jsmfoodsmandoli@gmail.com Phone : 9996015005
	iii) Head Office	M/S JSM Foods Private Limited 676, Sector-13, Karnal e-mail: jsmfoodsmandoli@gmail.com Phone : 9996015005
	iv) Site address	M/S JSM Foods Private Limited company Village –Mandolai Ghaggar West Block YNR B-3 Tehsil -Chhachroli Distt. Yamuna agar Haryana
	Rule 45 IBM Registration Number	-NA-
	Mining Lease code	---
b.)	**Status of the Applicant**	It is a private Company having experience in sand Mining, transportation and marketing of minerals and products.
	Name of the Directors /partners	Name, address and Photo indentify of owners /partners are placed as 1. Smarth sain Gupta S/o Vipin Gupta 2. Radhey shyam Wadhwa s/o Tau Ram Wadhwa 3. Tanish wadhwa S/O Manoj Kumar 676 Sector 13 Karnal, Haryana
c.)	**Minerals which are included in the PL**	It is an auctioned block from Department of Mines and Geology Department , Govt. of Haryana
d).	**Mineral (s) which is/are included in the Lease Deed**	Boulder, Gravel and Sand as minor minerals
e.).	**Minerals which are the lessee indents to mine**	Boulder, Gravel and Sand as minor minerals
f.)	**Name of Qualified person , who prepare the Mining Plan with PMCP-**	

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	Lessee appointed following qualified person for preparation the Mining plan with PMCP. whose Name, address, Qualification and Experience are as under - Sh. Kireet Acharya MGE CONNECT.COM 70/30 Patel Marg, Mansarovar Jaipur 202020 (Raj.) Mobile No. 9414163053 Email – acharyak12@gmail.com Master of Science in Geology from Kurukshetra University having 42 years experience in Mining Industry, Copy of Degree, experience and RQP certificate are placed as **(Annexure-12)**	
g)	**Name of a Person employed under clause I of Sub rule (1) of rule 42 of MCDR, 1988 (Applicable for Scheme of Mining only)** **Address-** **Phone number /mobile number** **Fax Number** **Registration Number** **Date of Grant /Renewal**	Statutory mining persons are employed as per Rules of MCDR, 2017 and Regulations of MMR-2016. 1.Shri Sohan Singh Mines Manager (Mines) C/0 JSM Foods Private Limited company Village –Mandolai Ghaggar West Block B-3 Block YNR/B-3 Tehsil -Chhachroli Distt. Yamuna nagar Haryana Phone : - 7018661867

2.0 LOCATION AND ACCESSIBILITY

	Lease details	The sand mine 25.56 hect. is a open cast fully mechanized sand mine for which LOI was issued in favour to M/s. JSM Foods Private Limited vide letter no. DMG/HY/Cont./Mandolai Ghaggar west /YNR B-4/2015/3918 dated 19.06.2015 by following bidding process and the first Mining Plan including Progressive Mine

		Closure Plan was got approved by the competent authority Department of Mines and Geology, Haryana vide letter no. DMG/HY/Cont./Mandolai Ghaggar west /YNR B-4/2015/441 to 444 dated 8.1.2016 **(Annexure-5)** and The Environment Clearance was obtained, lease deed was executed and registered by applicant. **Annexure-6)**
a)	**Name of mine**	Mandoli Ghaggar West Block YNR B4 sand mine
b)	**Mine code**	M.L. No. YNR/B4
c)	**Location of mine/ area** **Village,** **Tehsil,** **Police station –** **Post office** **District,** **PIN**	 Mandoli Ghaggar West Block B-4 Block, YNR –B07 Chhachroli Yamunanagar Yamunanagar Yamunanagar
d)	**Details of applied/ lease area with location plan-**	Granted Lease area is 25.56 hectare (Location plan is enclosed as (**Plate-1.)**
	Forest (Specify)- **Protected-** **Notified-**	There is no forest land, The lease area falls in gram Panchyat land, A Govt. Land.
	Non Forest **a) Govt. waste land** **b) Grazing Land** **c) Agriculture land** **d)Others (specify)** **Total area**	 25.56 hect. (Govt land) Nil NIL NIL 25.56 hect.
e)	**Area**	25.56 hect. Mandolai Ghaggar West Block YNR B-4
	Khasra No.	**53//5,6,15,16/1,16/2,25** **54//1 to 25** **55//1,2,9,10,11,20** **57//1 to 4,7 to 13**

		58//5,6,15 as Govt. Land, The GPS coordinates of each turning point has been shown on Khasara map placed as **Annexure-15**
		25.56 Hectares
f)	**Whether the area falls under Coastal Regulation Zone (CRZ)? If yes, details Thereof**	NA
	Existence of public road/railway line, if any nearby and approximate distance-	Lease area is well connected with a metallic road, Yamunanagar railway station is 25 kms from the mining lease area. Delhi ISBT is about 240 Kms and Yamuna nagar is 25 kms district head quarter, UT head quarter is Chandigarh is located 100kms north west of lease area. All nearby villages like Chhachroli, Jagadhari, Yamunanagar and kurukshetra have police statin, Electricity and education facilities

c) Attach a general location map showing area and access routes. It is preferred that the area be marked on a Survey of India topographical map or a cadastral map or forest map as the case may be. However, if none of these are available, the area may be shown on an administrative map.

The detail of the land covered in the lease area notified by Haryana Govt.on 27.4.2015 and subsequent corrigendum dated 19.5.2015 are described in above para. Coordinates of the lease area and important boundary pillars are as under-

YNR B-04:

Pillar number	Latitudes	Longitudes
BP-1	N30° 08' 26.69"	E77° 24' 42.04"
BP-2	N30° 08' 26.69"	E77° 25' 01.64"
BP-3	N30° 08' 10.85"	E77° 25' 01.47"
BP-4	N30° 08' 10.85"	E77° 24' 59.02"
BP-5	N30° 08' 9.25"	E77° 24' 59.00"
BP-6	N30° 08' 8.32"	E77° 24' 51.62"
BP-7	N30° 08' 8.21"	E77° 24' 44.27"
BP-8	N30° 08' 22.73"	E77° 24' 44.44"
BP-9	N30° 08' 22.73"	E77° 24' 42.97"
BP-10	N30° 08' 23.33"	E77° 24' 42.97"
BP-11	N30° 08' 24.27"	E77° 24' 42.02"

* The GPS coordinates of each turning point has been shown on surface plan, geological plan and year wise plans and Khasara map placed as **Annexure -15**

DETAILS OF APPROVED MINING PLAN / SCHEME OF MINING (if any)

S. N	Date and reference of earlier approved MP/SOM				
	Type of document & rule under which prepared	Approval letter no & date	Lease area for which approval given (ha)	Date of Approval	Proposal from – to
a)	Mining Plan under Rule Haryana Miner Mineral Concession, Storage,	Vide letter no.. DMG/HY/Cont./Mandolai Ghaggar west	25.56 ha.	08.1.2016	5 years

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	Transportation and prevention of illegal Mining rules -2012) For fresh grant of lease area.	/YNR B-4/2015/441-444 dated 8.1.2016 **(Annexure -5)**			
b)	**Modified Mining plan**	-	Not applied	-	-
c)	**Details of last modifications if any (for approved MP/SOM, indicating date of approval, reason for modification the previous approved period) of**				
	First mining plan was approved by Department of Mines and Geology vide letter No. DMG/HY/Cont./Mandolai Ghaggar west /YNR B-4/2015/441-444dated 8.1.2016 for 1.191 MTPA of ROM **(Annexure5)**				
	REVIEW OF EARLIER APPROVED PROPOSAL -				
	Items	**Proposals**	**Achievement**	**Remarks**	
a)	Exploration by Bore holes / Trail pits / Trenches on Geological axis	Replenishment study of river sediment /sand, gravel was proposed at the time of grant of lease and subsequently at the commencement of next scheme. as area falls along **river bed**	As per detailed study of lease area conducted in 2016 it was established that 15,33,600 Ton Geological reserves per year were available and total 83,41,200 Tons mineable reserves and a mine of **11,91,000** TPA sand mine can be planned	No deviation observed	
b)	Number of sand pits	Mining was proposed to be carried out from the identified	Sand Mining was carried out as per	No deviation	

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	proposed for production	and earmarked block year wise	year wise proposals	observed
c)	Location of Development	East to west direction	The mining was continuing from North to South direction as proposed in the approved Plan. **(Surface Plan -3)**	No deviation observed

d.	**Top Soil**			
	Year	**Proposed**	**Achievement**	**Remarks**
	2016-17	0	0	No top soil was observed and recovered from the river bed
	2017-18	0	0	
	2018-19	0	0	
	2019-20	0	0	
	2020-21	0	0	
	Total	**0**	**0**	

e)	**Quantity of overburden (T)**			
	Year	Proposal	Achievement	Remarks
	2016-17	0	0	No overburden was estimated in past plan period and no over burden was recovered as such no deviation is found
	2017-18	0	0	
	2018-19	0	0	
	2019-20	0	0	
	2020-21	0	0	
	Total	0	0	

f)	**Quantity of Reject**			
	Year	Proposal	Achievement	Remarks

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	2016-17	0	0	All sand recovered was homogenous and found useful, thus no reject was there. Hence no deviation was found
	2017-18	0	0	
	2018-19	0	0	
	2019-20	0	0	
	2020-21	0	0	
	Total	0	0	

g)	Quantity of ROM production in Tonnes *Sept.2020			
	Year	Proposal Tons	Achievement	Remark
	2016-17	11,91,000	-	Due to fluctuation in demand in construction industry the quantity of ROM varied. No deviation is considered
	2017-18	11,91,000	1109691	
	2018-19	11,91,000	1002680	
	2019-20	11,91,000	1158503	
	2020-21	11,91,000	-	
	Total	5955000	13270874	

h)	Production of Saleable Sand and Gravel in tonnes *----------2020			
	Year	Proposal	Achievement *	Remark
	2016-17	11,91,000	-	Due to fluctuation in demand in construction industry the quantity of ROM varied. No deviation is considered
	2017-18	11,91,000	1109691	
	2018-19	11,91,000	1002680	
	2019-20	11,91,000	1158503	
	2020-21	11,91,000	-	
	Total	5955000	13270874	

i)	Layout parameters			
	Item	Proposal	Achievement *	Remark
j)	Location of	Top soil generation was not	No location was	No

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	topsoil dumps	ancipated thus a location for storage of top soil was not planned	planned for top soil storage	deviation found
k)	Stacking of mineral	Sand and Gravel was not proposed to be directly loaded in to trucks and location for storage of mineral was not planned	No location was planned for mineral stacking	No deviation found
l)	Location of OB & mineral reject dumps	No reject was anticipated	Total mineral as sand and gravel was found usefull	No deviation found
m)	Height of benches width of benches Bench Slope		Maintained to mark level	No deviation found
n)	Area under backfilling of mined out area	The mined out area was proposed to be back filled by replenishment every year.	It was ensured mined out area is back filled by leaving a barrier after every 50 meter and it was achieved every year a regular back filling	No deviation found
o)	Plantation /Afforestation	500 plants per year were proposed along the river bank and other feasible sites during five years plan period	Total 500 no. of plants were grown in plan period for development of green belt of 7.5 meter wide and office area.	No Deviation found
p)	Green belt	A margin of 7.5 meter was proposed to be left as	Green belt margin7.5 meter is left for	No deviation

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		safety barrier	plantation except the main course of river .	found
q)	Number of settling ponds	Not proposed	None	No deviation found
r)	Processing of mineral	Sand ,Boulder ,Gravel ROM was not proposed to be screened and sized as found directly saleable	No screening / sizing facility was installed	No deviation is found
s)	UPL limit	It was proposed to work 3 meter above the water level	Complied to work up to UPL limit	No deviation is found

r) REVIEW OF FINANCIAL ASSURANCE

In present document past five year proposals of Mining scheme with PMCP for Top soil, ROM production, Overburden, mineral reject, land use, Plantation, environmental management have been discussed considering capacity of 1.191 Million ton per annum for past five years proposals (2016-2021) under as per Rule 70(1) and 77 (2) of Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules -2012. Item wise details are as under-

S.No.	Item Details	Proposed for use	Actual area as on date Sept . 2020	Remarks
i.	Area under Mining	19.85	16.0	16.0 hect. per year area has been broken area for mining and rest area is as unused
ii.	Storage of top soil	0	0	No Soil generated during the last 5 years, plantation was

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				done over the road, village and green belt area.
iii.	Waste dump site	0	0	No waste generated during last 5 years no stacking was required
v.	Mineral Storage	0	0	On account of,direct loading no mineral stock was proposed at the mine
vi.	Infrastructure, Work shop, Admin building, weigh bridge etc.	0	0	Office and other infrastructure facilities are already made outside lease
vii.	Roads	0	0	-
viii.	Railways	0	0	-
ix.	Tailing Pond	0	0	-
x.	Effluent Treatment Plant-	0	0	-
xi.	Mineral Separation Plant	0	0	-
xii.	Township area	0	0	-
xii	Green belt	2.556	2.556	-
Xiii	Others (Undisturbed)			-

	Give status of compliance of violations pointed out			
S.no	**Date of inspection**	**Violation date**	**Rule violated**	**Compliance status**
1.	Mining was done as per Haryana Minor Mineral Concession stocking and transporting of minerals and prevention of illegal mining rules -2012 and MMDR Act. No violation was pointed out by State and Central Authorities			
s	**Indicate and give details of any Suspension /Closure/ Prohibitory order issued by any Government agency under any rule or Court of law**			

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	In compliance to the Hon'ble NGT order dated 01.6.2016 passed in original application no.176 of 2016 (earlier OA no.184/2013 and original application no.272 of 2016 in the matter of Gurpreet Singh Bagga v/s MoEFCC and Ors. and Ganga Jamuna Mining Company V/S state of Haryana ,It was decided tht mining contractors even ifare having all clearances in District Yamuna nagar shall comply with the directions of the NGT . Accordingly Mining work was suspended till the Hon'ble NGT modifying its order dated 1.06.2016 . Accordingly the working was suspended wef 20.9.2016 in view of Hon'ble NGT order and subsequent order from Department of Mines and Geology ,Haryana.DMG letter no.DMG/HY/OA/no.481 of 2016/YNR/4962 dated 20.9.2016
t	**In case the MP/SOM is submitted under rules 9 and 10 of the MCDR'88 or under rule 17(2) of the MCR'2016 for approval of modification, specify reason and justification for modification under these rules.** No Modification was sought by applicant during the past plan period



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PART - A

Briefly describe the Topography, drainage pattern, vegetation, climate, rainfall data of the lease area

PHYSIOGRAPHY, DRAINAGE AND CLIMATE

Yamuna Nagar district of Haryana located in north-eastern part of Haryana State and lies between 29° 55': 30° 31' north latitudes and 77° 00': 77° 35' east longitudes. The district is bounded, in north by Himachal Pradesh, in the east by Uttar Pradesh, in west by Ambala district, in south by Karnal and Kurukshetra districts. Total geographical area of the district is 1768 sq.km and comprises 4% of total area of State. Yamuna Nagar district is divided into one sub-division and six-development blocks viz. Bilaspur, Chachrauli, Jagadhri, Mustafabad, Radaur and Sadhaura. Yamuna Nagar is thickly populated district and density of population is 589 persons per Km2, which is higher than State average of 478 persons per Km2. The population of the district is 12, 14,162 as per 2011 census 801337 persons

PHYGIOGRAPHY

The district is divided into five Physiographic units

- Siwaliks
- Dissected Rolling Plains
- Interfluvial Plains
- Active And Recent Flood Plains
- Relict Plains



a) Siwaliks hills -

Siwalik hill ranges occupy the northern fringe of Yamuna Nagar district and attain the height up to 950m AMSL. The hills are about 500m high with respect to the adjacent alluvial plains. These are characterized by the broad tableland topography that has been carved into quite sharp slopes by numerous ephemeral streams come down to

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the outer slopes of the Siwaliks and spread much of gravels boulders, pebbles in the beds of these streams.

b) Dissected rolling plains (kandi belt) - A dissected rolling plain in the northern parts of district is a transitional tract between Siwaliks hills and alluvial plains. It is about 25 km wide and elevation varies between 250 and 375m AMSL.

c) Interfluvial plains - This tract is part of higher ground between Ghaggar and Chautang and includes high mounds and valleys. In general, the slope is from northeast to southwest.

d) Active and recent flood plains - This plain is narrow tract along river Yamuna in the district.

e) Relict wedge plain - This is almost in alignment to the surface water divide between the westward flowing Ghaggar and eastward flowing Yamuna River.

DRAINAGE

The district is mainly drained by the rivers Yamuna, Markanda and its tributaries. Markanda is tributary of river Ghaggar and drains major part of the district. The high land between Markanda River and small rivulets of River Yamuna acts as basin boundary between west flowing rivers of Indus system and east flowing rivers of Ganga basin. River Yamuna drains eastern part of the district and acts as boundary between Haryana and Uttar Pradesh State.

Yamuna Nagar district is bestowed with rich water resources, both surface as well as ground water resources. The ground water is major sources of irrigation in the district. Nearly 40% of area is irrigated by canal water. Distributaries in the district are 21.45 Km long. Two major canals passing through the district are Western Yamuna Canal and augmentation canal. Length of unlined WJC is 63.64km whereas augmentation canal is 22.54 km long. Net irrigated area is 1130Km2 whereas, gross irrigated area 1860Km2.

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Percentage of gross area irrigated to total cropped area is 91.6%. Systematic hydro geological surveys in the district was carried out by

Geological Survey of India during 1956-61.Re-Appraisal Hydro Geological Surveys in the district were carried out by Central Ground Water Board, during 1975-77,1981- 82 and 1988-89.detailed hydro geological and water balance studies were carried out under Ghaggar and Upper Yamuna Projects. Ground water exploration has been carried out in various phases and so far 5 exploratory wells, 15 slim holes and 15 piezometers have been constructed in the district.

CLIMATE

The climate of Yamunanagar district can be classified as subtropical monsoon, mild dry winter, hot summer and sub-humid which is mainly dry with very hot summer and cold winter except during monsoon season when moist air of oceanic origin penetrate into the district. The hot weather season starts from mid March to last week of the June followed by the south west monsoon which lasts up to September. The transition period from September to November forms the post monsoon season. The winter season starts late in November and remains up to first week of March.

Rainfall: The normal annual rainfall of the district is 1076 mm, and is unevenly distributed over the area. The average rainy days are 44. The south west monsoon sets in from last week of June and withdraws in the end of September, contributing about 81% of normal annual rainfall. July and August are the wettest months. Rest19% rainfall is received during non-monsoon period in the wake of western disturbances and thunderstorms. Generally rainfall in the district increases from southwest to northeast. The mean maximum temperature is 40.8° C(May & June)and mean minimum is 6.8° C (January) of the district.

Normal Annual Rainfall: 1076 mm

Normal monsoon Rainfall: 879 mm

Temperature

Mean Maximum: 40.8°C (May & June)
Mean Minimum : 6.8 °C (January)
Normal Rainy days : 44



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HYDROGEOLOGY

The ground water exploration in the district reveals that clay group of formations dominates over the sand group in the district area. Ground water in the district occurs in the alluvium under water table and semi-confined to confined conditions. These aquifers consist of sand, silt, gravels and kankar associated with clay and form highly potential aquifers. In alluvium, the permeable granular zones comprise fine to medium grained sand and occasionally coarse sand and gravel. Their lateral and as well as vertical extent is extensive. In Kandi belt, which has not been explored fully boulders cobbles and pebbles, constitutes the major aquifer horizon. Siwalik Hills occupy marginal areas in the northeastern parts of the district constitute a low potential zone. In Kandi areas, the shallow aquifers are isolated lenses embedded in clay beds whereas aquifers in alluvial areas occur on regional scale and have pinching and swelling disposition and are quite extensive in nature. These aquifers generally consists sands (fine to coarse grained) and gravels and are often intercepted by clay and kankar. These aquifers are under unconfined.

Under ground water exploration programme nine exploratory wells were drilled in the district. On average 3-12 of granular zones were deciphered in the depth range down to 450 m bgl. Exploratory wells drilled in depth range of 130 and 180 m bgl yield discharge in the range of 2700 to 4900 lpm for drawdown of 6.0 m to 12.0 m and Transmissivity of aquifers range between 1500 to 4900 m2/day. The yield potentials of aquifer below 200.0m bgl are yet to be evaluated.

DEPTH TO WATER LEVEL

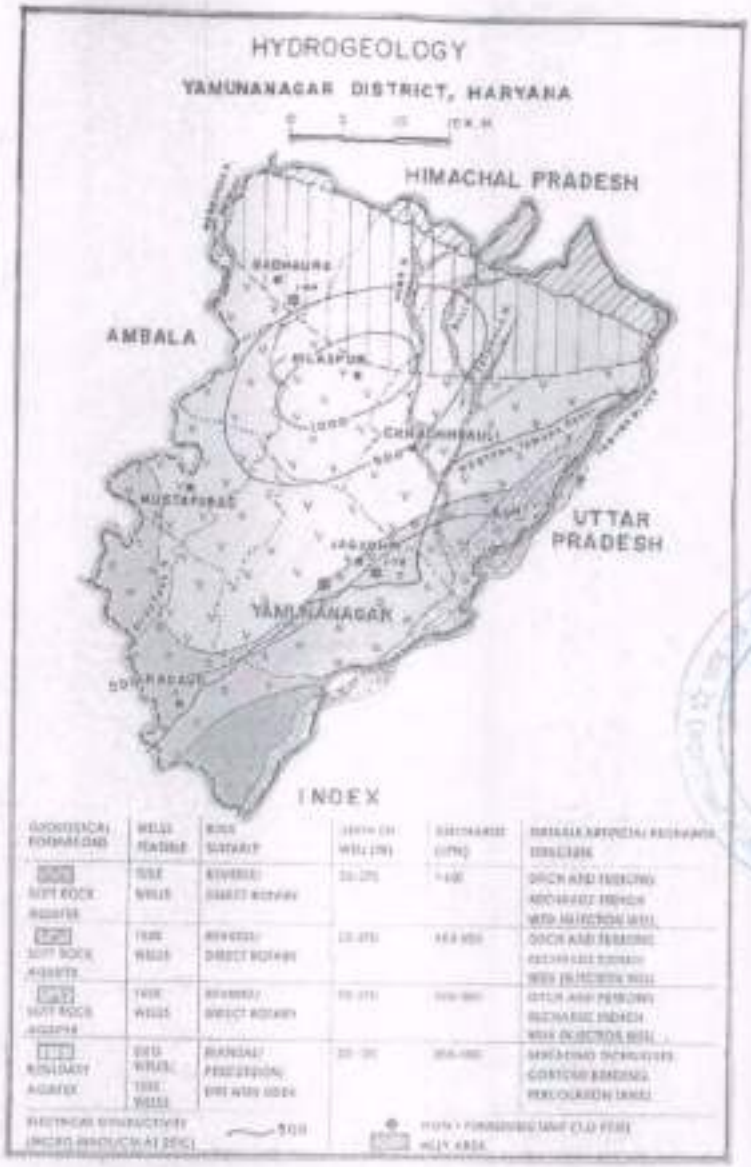
The depth to water level during pre-monsoon period in the district ranges between 2.07m bgl at Choli and 15.32m bgl at Khizrabad. However, in major part of district water level ranges between 5.0m bgl and 10.0m bgl. The Depth to water level during pre-monsoon period in the district ranges between 1.57m bgl at Choli and 18.41m bgl at Bahadurpur. However, in major part of district water level ranges between 5.0m bgl and 15.0m bgl. Appraisal of water level data of May and November reveals that some parts of the district have experienced water level decline whereas in other parts rise in

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water level has been recorded. Maximum decline of -0.43m has been observed in area around Khizrabad and maximum rise of 0.39m was recorded at Sabri village. During

last ten years, majority of observation points in the district have shown declining trends ranging from 0.00013 m/yr to 0.389m/yr, however, area as not recorded any significant rise during last ten years. The discharge of the shallow tubewells tapping unconfined aquifers is tube wells ranges from 100 lpm to 500 lpm with moderate Drawdown values. Near Manakpur, a phreatic aquifer extending down to 88.0m bgl has Transmissivity value of 2500m2/day, lateral hydraulic conductivity of 31m /day.

(Source: District Groundwater Brochure CGWB).



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PART –A GEOLOGY AND EXPLORATION:

3.0 Brief descriptions of Regional Geology with reference to location of lease/applied area.

3.1 GEOLOGY OF THE AREA

i) Regional Geology

The north-eastern and central part of Haryana is predominantly characterized by sedimentary litho logy in the Sub-Himalayan zone comprising Subathus, Dagshais, Kasaulis and Siwaliks. A general Regional stratigraphic sequence in the area is given in Table.

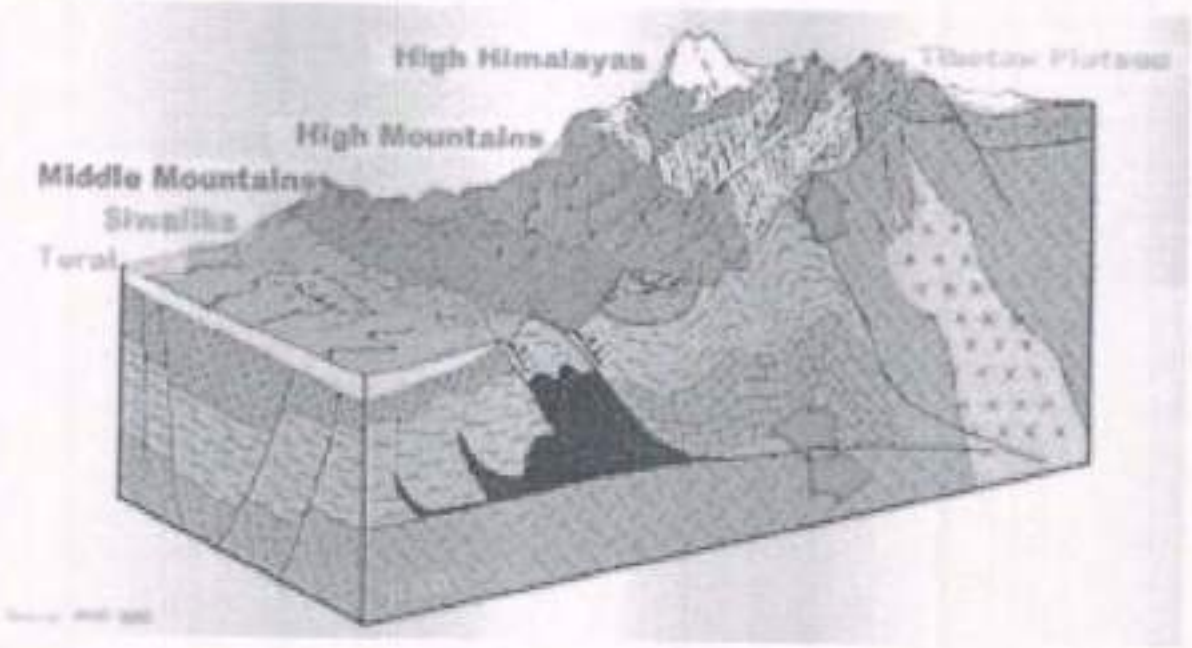
Table: Regional stratigraphic sequence

Age	Super group	group	Formation	litho logy
Holocene			Newer alluvium and Newer Aeolian Deposits	Gravel, Sand, silt, clay, lime sand, gypsum
Lower to upper Pleistocene			older alluvium and Older Aeolian Deposits	Gravel, grey sand, silt, clay, brown sand, calcrete
Lower to Middle Pleistocene	S I W A L I K	Upper Siwalik	Boulder Conglomerates formation	Conglomerate, sand sand, silt, clay
Upper Pliocene			Pinjore Formation	Coarse grit, red sand sand and clay, conglomerate
			Tatrot Formation	Friable Sand sand and variegated clay
		Middle Siwalik	Dhokpathan Formation	Brown sand sand and orange clay
Middle Miocene			Nagri Formation	Hard grey sand, muds and minor shale
		Lower Siwalik	Nahan Formation	Coarse grity, clay and red sand sand often calcareous, brownish shale with lignite lenticles, greenish white Quartzite
Lower Miocene		Sirmur	Kausauli Formation	Grey and green sand, green shale and grey clay
			Dagsai Formation	Purple and green sand sand, deep red gritty, clay, white and

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				sand with ferruginous concretions
Upper Eocene			Subathu formation	Sand sand with gritu clay. Impure fossiliferous lime sand calcareous slate, greenish shale and dark brown quartzite
Pre-proterozoic			Tunda pathar	Thickly bedded, stromatolite lime sand with carboniferous shale and quartzite

A schematic diagramme of Himalayas showing higher, middle and lower Himalayas including Shiwaliks is shown here below-



3.2 LOCAL GEOLOGY

The litho units encountered in the river bed and surrounding areas belongs to the Shivalik super groups. The sediments are river borne and has deposited in the riverbed and the flood plains. The different formations of the area belong to Shivalik Super group and are a mixture of boulders, pebbles, sand, silt and clay. The following sequences have been observed in the area.

1. Soil/Alluvium
2. Sand

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3. Gravel
4. Boulder

There is no clear demarcation between the litho units. They have been deposit in a mixed form. The Litho- units exposed in the flood plains belong to Shivalik Super-Group. The mineral Boulders, Gravel and sand have formed by weathering of rocks and then deposition on the flood plains of the rivers originated from the Shivaliks. These have been washed by rainwater during rainy season and deposited in flood plains and river beds in the form of boulders, gravels and sand of different sizes and shapes. These minerals are sorted by screening. The max depth of the minerals is not known.

Soil/alluvium varying in thickness from 0.5 -1.50m (Av.1.0mts) constitute the top horizons in the area suitable for agriculture. Yamuna River meanders through the area exposing the alluvium and soil at the banks. Sand is found in the river bed. Sand is deposited up to great depths. This bed is presently dry and water flows only during the rainy season The Sand exposed in the River bed of Yamuna and surrounding areas is the product of the deposition of the sediments brought and deposited in the flood plains of River Yamuna. These sediments are of recent geological formation. The litho-units exposed within the river and surrounding areas have formed as water borne sediments brought by flood water during rainy season every year and deposited in riverbed and flood plains. Geological map and section are enclosed as Plate – 04)

3.2.1.3 DESCRIPTION OF FORMATION

The description of Sand found in the lease area as minor mineral has been as under:

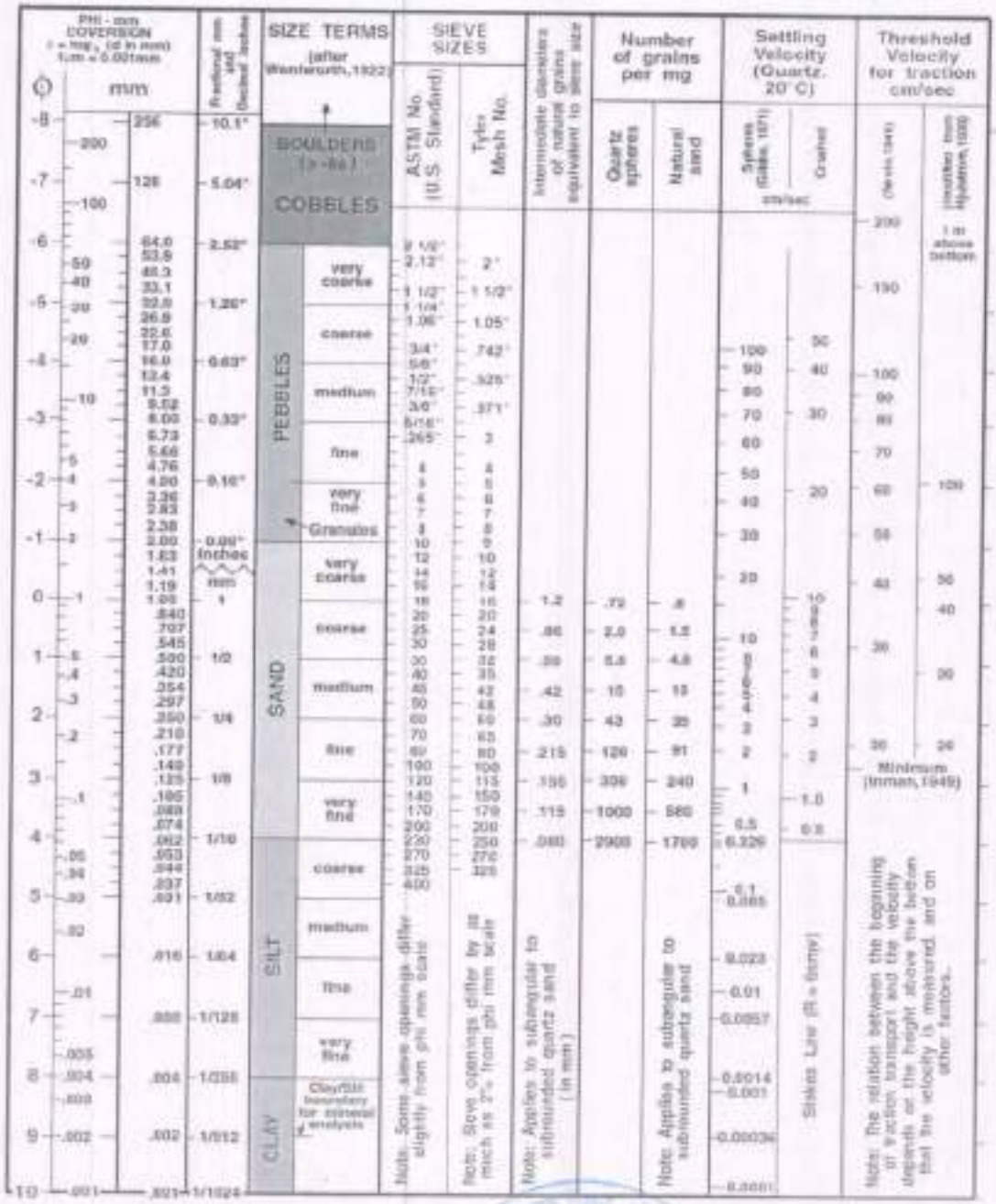
3.2.2(Sand)

Sediments of various sizes and in mixed form are predominantly deposited in the flood plains of River Yamuna and its tributaries. There is no perfect classification between boulders, cobbles, pebbles and sand. They are deposited in a mixed state. The classification is done by grab mining and the sediments are passed through different sieves in the screening plants.

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Sediments of various sizes and in mixed form are predominantly deposited in the flood plains/river bed and there is no perfect classification between sediments. These may be called as coarse sand, medium sand and fine sand. The term sand is used to denote an aggregate of rock grains greater than 1/16mm and less than 2 mm in diameter mineral.

Classification of Sediments (Wentworth-Grain Size-chart)



26

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3.2.5 PHYSICAL & CHEMICAL CHARACTERISTICS OF MINERAL

Technically, the size of boulders varies from 2.52 inches to up to 10.1 inches & pebbles range from 0.08 inches to 2.52 inches. Sand is merely a size category. Sand is particulate matter that's larger than silt and smaller than gravel. Different specialists set different limits for sand: Engineers call sand anything between 0.074 and 2 millimeter, or between a U.S. standard #200 sieve and a #10 sieve.

Soil scientists classify grains between 0.05 and 2 mm as sand, or between sieves #270 and #10.Sedimentologists categorise sand between 0.062 mm (1/16 mm) and 2 mm on the Wentworth scale, or 4 to −1 unit on the phi scale, or between sieves #230 and #10. In some other nations a metric definition is used instead, between 0.1 and 1 mm. From a geological viewpoint, sand is anything small enough to be carried by the wind but big enough that it doesn't stay in the air, roughly 0.06 to 1.5 millimeters. It indicates a vigorous environment.

COMPOSITION AND SHAPE OF MINERALS

Most boulders, gravels and sand is made of quartz or its microcrystalline cousin chalcedony, because that common mineral is resistant to weathering. The farther from its source rock sand is, the closer it is to impure quartz. But Yamuna sands contain quartz grains, tiny bits of rock (lithics), or dark minerals like lime sand and ferruginous concretions.

The size of the sediments is variable. The grains whether small or large are rounded in shape. Sand is grey, brown in color, coarse to fine grained. The present deposits are of good quality and can be used for building industries. There is no other use of this material.

ORIGIN & CONTROL OF MINERALISATION (ANNUAL REPLENISHMENT OF MINERAL IN RIVER BED/FLOOD PLAINS AREA VIS-À-VIS SEDIMENTATION)

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined

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it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs. The term is commonly used as a synonym for sedimentary petrology and sediment logy.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits lay down in different geographic and geomorphic environments.

The factors which affects the "Computation of Sediment":

a) Geomorphology & Drainage Pattern : The following geomorphic units plays important role :

- Structural Plain
- Structural Hill
- Structural Ridge
- Denudation Ridge & Valley
- Plain & Plateau of Gangetic plain
- Highly Dissected pediment
- Un dissected pediment

b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)

c) Drainage System/Pattern of the area (Drainage Density = ...Km/Sq. Km of Yamuna River

d) Rainfall & Climate : Year wise Rainfall data for previous 07 years of Yamuna Basin/River

e) As per Dandy & Bolton study "Sediment Yield" can be related to

i) Catchment Area and

ii) Mean Annual Run-off

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Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin.

The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance. River Yamuna near Dakpathar barrage leaves Uttarakhand and enters Himachal Pradesh.

The Yamuna river is the biggest tributary of the river Ganga in North India. Its source in the Yamunotry glacier at an elevation of 6387 mtrs on South western sides of Banderpooch crests in the lower Himalayan ranges. The overall span of the Yamuna river is 1376 Kms (855 miles) with catchment area of 366223 square km (141,399 square mile). This encompasses 40.2 % of the whole Ganga valley, prior to joining Ganga at Triveni Sangam in Allahabad (UP)

Itinerary of Yamuna River and its tributries

The river passes through many states such as Uttrakhand, UP, Haryana, going across to HP and then Delhi. With yearly discharge of around 10,000 cubic billion meters (cbm) and consumption of 4400 cbm (of which irrigation comprises 96%), the river represents above 70% of water provision of Delhi. Yamuna water are fairly good quality for its entire span from Yamunotri in Himalayan ranges to Wazirabad in Delhi, the length of which is around 375 Kms.

The origin of Yamuna is situated in the Yamunotri glacier at an elevation of 6387 mtrs on SE sides of Banderpooch crests, which are located in the Mussoorie range of lower

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Himalayan range in Uttrakashi district of Uttrakhand, to the North of Haridwar. From this place Yamuna runs to South around 200 Kms across the Shivalik mountain ranges and lower Himalayan ranges. A significant portion of its beginning of Drainage basin (with total area of 217.00 square km) is situated in HP and a major tributary sapping the upper drainage basin in the Tons, which is also biggest and most extensive tributary of the Yamuna. Other tributaries in the area are the Rishi Ganga, Giri, Hanuman Ganga, Kunta & Bata, which sap the upper drainage basin of the huge Yamuna river. Subsequently, the river moves down the terrains of Doon basin at Dak Pathar close to Dehradun, in this place water is redirected into a channel for the purpose of electricity generation. Once it goes across the sikh religious place of Ponta Sahib, the river arrives at Tajewala in the Yamunanagar district of Haryana where a dam was constructed in 1873. This dam is the origin of the two major channels or water courses – Eastern Yamuna Canal and Western Yamuna Canal and both drain in UP & Haryana. The Western Yamuna Canal (WYC) traverses Karnal, Yamunanagar and Panipat prior to arriving at the Haiderpur water treatment plant, which provides a portion of municipal water provisions of Delhi. The Yamuna also forms natural boundary between the states of Uttrakhand & HP and also amid the states of UP and Haryana. Together with the Ganga to which it flows almost parallel once it meets the Indo-Gangetic plateau, the biggest Alluvial productive area in the World, it forms the Ganges-Yamuna Doab are stretched across 69,000 square Km which is 33% of the whole area.

Table of Drainage Basin area of River Yamuna (square KM/square mile) with % of Drainage Basin

1. HP : 5799/2240 (1.6)
2. UP & Uttrakhand :74208/142 (21.50)
3. Rajasthan :102883/39739 (29.80%)
4. Haryana : 21265/8214(6.5%)
5. Delhi ; 1485/574(0.4%)
6. MP : 14023/5416 (40.6%)



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d.) Name of prospecting /exploration agency-

Department of Mines and Geology Haryana has identified potential segments in Yamuna river near yamunanagar district found depositional sites for sand. Accordingly department carved sand blocks for auction. Finding it low cost mineral and useful for common man No detailed exploration was proposed in the area .

As per environmental clearance condition no.19 the project proponent will submit annual replenishment studies by an authorized agency and in case the increment is lower than the approved rate of production than the mining activity shall be decreased /stopped accordingly till the replenishment is completed. Accordingly the project proponent appointed t M/S Vardan Environet (A NABET QCI accreditiated organization) Consultant to conduct Replenishment studies following MoEF& CC Guide lines of January ,2020 .

The study period was during the Pre-monsoon: 15th to 20th June, 2020 and Post-monsoon: 18th to 21stSeptember, 2020 using following Methodology and approach for studies

Approach & Methodology Followed for Replenishment Study:-

a) Pre-monsoon survey of River bed with the help of GPS and Unmaned Artificial Vehicles (UAV's)/Drone fitted with advance camera

b) Grid pattern 30 m x 20 m (30 m along the length of the river and 20 m along width of the river) or part thereof.

c) To draw pre-monsoon contour map (Base map considered as per approved mining plan)

d) Post-monsoon survey of River bed with the help of GPS and unmanned Drone

e) Same Grid pattern (30 m x 20 m) or part thereof was considered for survey.

f) To draw post-monsoon contour map (Base map considered as per approved mining plan)

g) To draw composite sections of Pre and post monsoon maps. This will determine the depth and volume of sand replenished.

h) Finally to calculate the volume of sand with grid pattern of 30 m x 20 m multiplied by depth of replenishment.

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i) The tonnage of replenishment will be volume of sand multiplied by density of sand (which is 2 T per Cubic m)

e.) Details of prospecting/exploration already carried out:

1) Number of pits and trenches indicating dimensions, spacing etc along and across the strike/foliation with reference to geological plan.

Detail of Replenishment studies are places **Annexure -13**

2.) No. of bore hole indicating type(Core/RC/DTH) diameter, spacing inclination, ,collor level, depth etc. with standard borehole logs duly marked on geological plan and sections

No Bore hole/ DTH /RC/Augur holes are required in view of low priced mineral in shallow deposits.

3) Details of samples analysis.

The Sand deposits are mainly consisting of quartz- feldspar and other flaky minerals constituting mainly silicates thus regular sample of the area are not required in view of low cost mineral as per MEMC Rules 2015,

4.) Expenditure incurred in various prospecting operations.

No expenditure incurred on exploration as mineralization is exposed very well and also further exposed on account of mining pit .

f.) The surface plan of the lease area may be prepared on a scale of 1: 1000 or 1: 2000 with contour interval of maximum of 10 m depending upon the topography and size of the area duly marked by grid lines showing all features indicated under Rule 32(1) of MCDR 2017.

Updated Surface plan dated 14.06.2020 is enclosed as **Plate 3.**

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g.) For preparation of geological plan, surface plan prepared on a scale of 1: 1000 or 1: 2000 scale specified under para 1.0 (f) of Part A of the format may be taken as the base plan. The details of exploration already carried out along with supporting data for existence of mineral, locations proposed exploration, various litho-units along with structural features, mineralized/ore zone with grade variation if any may be marked on the geological plan along with other features indicated under Rule 32(2) of MCDR 2017.

Surface Geological plan is enclosed as **Plate-4.**

h.) Geological sections may be prepared on natural scale of geological plan at suitable interval across the lease area from boundary to boundary.

Surface Geological sections are enclosed as **Plate-4.**

i.) Broadly indicate the future programme of exploration with due justification(duly marking on Geological plan year wise location in different colours) taking into consideration the future tentative excavation programme planned in next five years as in table below: -

The area is fully exposed along the river bed section with the sand resources and also exposed contemporary to mining in past years. Sufficient data are available there to prepare the mining scheme for next five year thus, No additional exploration is proposed in the area

j.) Total Geological, Mineable/ Recoverable Reserves & Resources as per UNFC classification

Proved Reserves

Replenishment Survey by Unmaned Artificial Vehicles (UAV's)/Drone survey technology reveled incremental in reserves estimated 11,52,200 Tons per annum are shown in study report as Annexure 13

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• Following special conditions those are applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas are considered while calculating the reserves of this area:

• (i) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge on up-stream side and ten times the span of such bridge on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

• (ii) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorized by him;

• (iii) The maximum depth of mining in the river-bed shall not exceed three meter from the un-mined bed level at any point in time with proper bench formation;

• (iv) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

• (v) In case of areas permitted for excavation outside river/rivulets i.e. areas adjoining to rivers/rivulets, no mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 metres in case of Tangri, and Ghaggar river and 100 meters on either side of all other rivers/ rivulets;

(vi) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology, a safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf.

vii) The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws.



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ix) A barrier of 7.5 m width will be left from the mining area boundary, .

Basis of Mineral Reserves Calculation

Mineral Reserves falling outside the river bed area has been calculated taking the maximum permissible depth of 3 m from the river bed surface RL.

- The bulk density of Sand is considered 2.0
- Volumetric method is adopted for calculating reserves of Sand.
- The mineable reserves are calculated by deducting "Blocked Geological Reserves on account of river banks, lease boundary, railway line, highways, bridges, anicuts (where ever applicable) from total proved Geological Reserves".
- It is considered that river bed Sand shall be replenished every year as evident from preceding paragraph (3.2.6) on " Annual Replenishment of Mineral in River Bed Area vis-à-vis Sedimentation"

UNFC classification – Codes of UNFC are followed for reserve calculation

UNFC is a three digit code based system, the economic viability axis representing the first digit, the feasibility axis the second digit and the geological axis the third digit. Each digit provided.

- Codes 1, 2 and 3 in decreasing order. The highest category of resources under UNFC system has code (111) and for lowest category the code is (334).
- Code (111): This code is provided for the economically mineable part of the measured mineral resources (proved category reserves).
- Code (121): This code is provided for the economically mineable part of the indicated mineral resources (probable category reserves).
- Code (211): The part of the measured mineral resources (proved category), which as per feasibility study has not found economically mineable. The reserves blocked in 7.5 meters buffer zone and 50 meters from permanent structure.

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- Code (222): The part of the indicated mineral resources (probable category), which as per feasibility study has not found economically mineable. The reserves blocked in 7.5 meters buffer zone and 50 meters from permanent structure.
- Code (333): Tonnage, Grade and mineral contents can be estimated with low level of confidence and resources are also inferred from geological
- The reserves of Sand calculated by volumetric method and are summarized here below:

Table: Geological Reserves

S.No.	Nature of Land	Lease area in Hectares	Total Proved Geological Reserves MT=Grid area x Depth x BD (A)	Block area due to safety barrier and bench slopes	Blocked Geological reserves (B)	Total Mineable Reserves A-B+C for 10 years	Planned Production
1	River Bed	25.56	1533600 T X 07 years =10735200	5.7 ha.	342000x07 = 2394000	8341200	1191600 Ton per year

k.) Furnish detailed calculation of reserves /resource section wise of reserves

Details of Reserves calculation and blocked reserves under pit slopes and benches and safety barrier are calculated and Reserves as on Sept.2020.

Resources and reserves within the lease have been arrived after applying results /Feasibility /prefeasibility study and economic valuation of deposit based on various factors such as :

a) Mining method, recovery factor, mining losses, processing factor

Open cast mechanized using heavy machineries mining method is proposed and recovery factor for saleable sand is considered s 100% , only no waste is likely to be generated .All sand fractions are saleable

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b) Cut off grade, ultimate pit depth proposed

No cut off grade is there as all mineral is saleable

c) Mineral /ore blocked due to benches , barriers, pillars, road, railways, river ,nala, reservoir, Electric line and other statuary barriers, under forest, sanctuaries etc. where necessary permissions are not available

Mineral shall be blocked only in safety barrier of 7.5 meter wide green belt and under benche slopes as a part of statutory provisions .Other features like road, nala, reservoir and HT lines are not found in the area.

Depletion of Mineral in last five years period from 01.05.2016 to Sept 2020 are as under -

Year	Past Proposal of ROM	Achieved ROM in T.
2016-2017	11,91,000	*Work suspended on account of Hon'ble NGT order
2017-2018	11,91,000	1109691
2018-2019	11,91,000	1002680
2019-2020	11,91,000	1158503
2020-2021	11,91,000	-
Total	5955000	13270874

*(*Up to Sept.2020)*

Anticipated life of mine

It is estimated that the entire mineral mined every year will be replenished. Therefore at the proposed rate of production the life of the mine is >5.0 years

	1)	Estimated mineable ROM being replenished	=	1252500Tons
	2)	Mineable Replenished Tonnage		1152200 Tons
	3)	Proposed Production every year	=	11,91,000 Tons
	4)	Depleted reserves in past plan period	=	13270874Tons
	5)	Balance Reserves after replenishment per year	=	1152200 Tons
		Anticipated life	=	>5.0 years approx. and more

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PART –B MINING

OPEN CAST MINING:

a.) Briefly describe existing and proposed method of excavation with all design parameters indicating plans and sections

As per previous mining plan some area was broken due to mining activities but the same area is back filled by fresh sand .During the past plan period only 13270874 Tons production was done and the working was suspended due to Hon'ble NGT order for some time . The year wise excavation was replenished in every monsoon season. In view of the same mining activities was continued to next block as per past proposal. On account of regular replenishment the no excavation left open for measurement. Fully mechanized opencast mining method was adopted in this mine to ensure the continuous supply of desired quantity and quality of sand to the nearby consumers in two shift working

Fresh area doesn't have top soil and overburden so directly sand in loose form loaded to tippers by loaders or by combination of dozer, excavator and dumpers without use of drilling and blasting.

The sand is excavated in bench of 3.0 meters or less .The working bench width is kept more than 10 m having pit slope 30°.The sand is loaded by excavator into dumpers.

As per directives of Director General of mining and Geology, Haryana vide order no. DMG /Hy/ Cont./MG east block /YNR B-3/2015/516 dated 5.2.2021 permitted inclusion of associated mineral as Boulder and Gravel with the sand mining contract .The quantity of the ROM comprising of Boulder , sand and gravel will not exceed to 11,91,000 Tons .The period of associated mineral will be Coterminous to the original lease agreement . Quantity of boulder and sand will be @27.45 % of ROM i.e.% 326929.50 tons per annum.

Proposed method of Mining

Mining activity will be carried out by open cast semi-mechanized method. Mining Contract has been allotted for a period of 7 years only. Mining area consist of 25.56 ha area in Mandolai Ghaggar West Block B-3 Block/YNR B-3 out of which about 6.0

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hectares area is under restricted zone. About 14.18 hectare area is free from restriction and therefore there are sufficient area for proposed mining after replenishment.

- No overburden/ waste material will be produced in river bed. No drilling/ blasting are required as the material is loose in nature.
- Light weight excavators will be used for loading of mineral in tippers.
- Proper benching of 1.5- 3.0 m height will be maintained and width of the bench will be around 20 m. The benches shall be maintained in the form of slices/strips parallel to the banks of river.
- Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season.
- Roads will be properly made and sprayed by water for suppression of dust.
- Roads in the mining area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20.
- Extraction activities will start in the blocks from the upstream side to downstream side. This will not obstruct the movement of water, if any, during monsoon period in the river course.
- In case during any period, the replenishment was found less than 1.5-3.0 m or depth of exaction, the mining during said period would restrict to depth which would not be more than 3 m of the original level of the river bed.

Total production envisaged is 3970 MT per day i.e. 159 trips@25Mt/trip). Activities will be carried out as per the production schedule given earlier. The mining quarry will be working as self sustained units with all facilities like site office, rest shelter, first aid and drinking water etc. All these mines will be connected suitably with communication system.

Roads will be properly made and sprayed by water for suppression of dust.
Roads in the mining area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20.



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Year	Production proposed				Area (ha) required per year .
	Trips/ day	Total ROM TPA	Sand Qty. Ton	Boul.+ Gravel Qty. Ton (@27.45)	
2021-22	159	11,91,000	864070.50	326929.50	19.85
2022-23	159	11,91,000	864070.50	326929.50	19.85

b.) Indicate year-wise tentative Excavation indicating development, ROM, pit wise as in table below- *Bulk Density of mineral is assumed to be = 2.0 T/ m³*

Annual production proposed =1191000 Tons /Annum (boulder and gravel @27.45 % of Total ROM quantity

Daily production proposed = 3970 Tons /day

Production programme is = 159 trips/ day @ 25 ton per trip .

Working days have been taken as 300 days per annum.

Projected Production per Year = 300 x3970=1190000 Tons(1.191 Million MT)

Table: Two Years Proposed Production Details (MT/A)

II) Dump re-handeling (for the purpose of recovery of mineral:

No permanent dump will be re-handled and no dump shall be created during the plan period

c.)Enclose Individual year wise development plans and sections showing pit layouts, dumps, stacks of mineral reject, if any, etc. In case of A category mine .Composite development plan showing pit layout ,dumps stacks , mineral rejects if any and year wise sections in case of B category.

Year wise development plan and section have been prepared as 5A to 5E and sections are also drawn showing all layout, slope ,gradient ,benches and proposed plan

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d. Describe briefly the layout of mine workings, pit road layout, the layout of faces and sites for disposal of overburden/waste along with ground preparation prior to disposal of waste, reject etc.

Lay out of mine working is given in year wise development plan and sections, **(Plate 5A, & 5B).**

Details of year wise progression of sand pit , opening RL and closing RL , Haul road from 2021-22 to 2022-23 at the end of each year are as under-

YEAR - 2021-22

During this year, the mining is proposed in same area after replenishment, from top RL 274.5 mRL , and bottom will reach to 270.5 mRL . Benches height will be of 1.5-3.0 meter height and width will be more than 20 meters .Total 11,91000 T ROM will be produced. Proposed working will be advanced from north to south side in all directions. During the year 19.85 ha. area will be broken. During the period no top soil , No OB is likely be generated . Plantation will be carried out in green belt area and connecting roads to main road in consultation with state govt. departments.. Similarly no mineral stock will be maintained as all mineral is directly saleable. Approach roads will be extended up to face with proper gradient of 1:20 ,

Mining will be carried out without disturbing the River Chanel Geometry, Bed Geomertry ,Sub-stratum composition and tubidites . All due care will be undertaken for in-stream biota , loss of riparian in stream biota .No working shall be carried out erosion site of river (Concave Sites) during the plan period . The details of mine layout for the year has been shown on **plate no.5A**

YEAR - 2022-23

During this year, the mining is proposed in same area after replanishment, from top RL 274.5 mRL , and bottom will reach to 270.5 mRL . Benches height will be of 1.5-3.0 meter height and width will be more than 20 meters .Total 11,91000 T ROM will be produced. Proposed working will be advanced from north to south side in all directions. During the year 19.85 ha. area will be broken. During the period no top

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soil , No OB is likely be generated . Plantation will be carried out in green belt area and connecting roads to main road in consultation with state govt. departments.. Similarly no mineral stock will be maintained as all mineral is directly saleable. Approach roads will be extended up to face with proper gradient of 1:20 ,

Mining will be carried out without disturbing the River Chanel Geometry, Bed Geomertry ,Sub-stratum composition and tubidites . All due care will be undertaken for in-stream biota , loss of riparian in stream biota .No working shall be carried out erosion site of river (Concave Sites) during the plan period . The details of mine layout for the year has been shown on **(Plate No.5B)**

f) CONCEPTUAL MINE PLANNING

Exploration proposed.

Mineral is being replenished by river Yamuna sediments and lying adjacent to river bed in post monsoon period , so exploration is not required as low cost commodity minor mineral. Exploration will not be required up to the conceptual period of mining scheme.

(i) Mine area will be worked in blocks for ease of operation. However, as the digging depth will be restricted to 1.5-3.0 m only in river bed and material will still be available below. This will be further replenished during rainy season. Blocks will be worked systematically as the width is limited while length is much more.

(ii) Sequence of working has been shown on Plate no -4. As the mining contract period is only 09 years, some of the area will be left un-worked at the end of contract period.

(iii) Final Slope Angle To Be Adopted

Height of the bench is limited to 1.5-3.0 m only and width will be more than the height of the bench. Bank side natural slope will not be disturbed. This will prevent collapse of bank and erosion. During plan period workings will be carried out in the designated khasras only & workings will ensure safety, remove congestion of vehicles



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and will have better control and management. The final slope angle of the benches at conceptual stage will be 30 ^{0} and haul road gradient will be maintained to 1:20.

Ultimate Capacity Of Dumps

There will be no burden removal / generation during the plan period. Therefore no site is designated for dumps.

a) Land use Pattern of Mining Area at Various Stages

Land use pattern will be as follows:

Sr.No.	Particulars	Present Land Use (ha)
1	Restricted Safety Zone/7.5m mining area boundry,	5.7
2	Infrastructure (Office,temp. Shelters etc.	0.0
3	Area available for mining	19.85
4	Unworked	0.00
	Total	25.56

LAND USE PLANING AT THE END OF LEASE PERIOD

Sr.No.	Particulars	At the end of 5th year (ha)
1	Safety Zone 7.5m mining area boundry, /restricted area	5.7
2	Infrastructure (Office,temp. Shelters etc.	0.0
3	Reclaimed area	19.85
4	Unworked	0.00
5	Plantation*(Out side)	0.0
	Total	25.56

*Plantation in 1.0 ha land will be done under social forestry on restricted area/ lease boundary and land available from Panchayat by the end of mine life

* Plantation & infrastructure In restricted area only

Generation of Top soil & its preservation

No top Soil will be available up to the conceptual period , if any negligible quantity

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will be used as and when required for plantation .

Post mining land use & reclamation:-

The reject and waste generation from year 2021-23 will be almost Nil/ negligible thus back filling will not be possible. However the plantation at green belt will be done at village area / roads and govt. premises .This will be undertaken under specific permission from the Govt. Department. About 1.0 hect. area will be covered under green belt plantation by local species. In all 33% lease will be covered by afforestation as per EIA guide lines

.

Year wise plantation proposals for next two years.

Year	No of plants	Area	Survival rate	Species of plants
2021-22	1250	0.50	About 90%	Arjun, Karanj, Mango, Jamun, Imli, Peltafar, Acacia, Kathal, Cenmia, Neem, Gulmohar, and other local species
2022-23	1250	0.50	About 90%	--Do--
Total	2500	1.0		--Do--

PROTECTIVE WORK FOR ENVIRONMENT:-

1. Anti smog gun will beused for dust suppression
2. Water will be sprayed on haul road to arrest the dust particles.
3. Regular Air, water and noise monitoring will be done.
4. Plantation will be done to dampen the dust and noise.
5. Proper maintenance of all machinery will be carried to minimize the noise levels ,
6. Only trained operators will be allowed to operate,
7. All machines will be used at optimum capacity

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8. Heavy earth moving machineries will be used under the strict supervision of certified personals
9. Workers and operators working near machine sites will be provided with PPE's.
10. Mining will be restricted to 3 meter above the water in river channel
11. No aquatic floura and fauna will be disturbed
12. Pit slope will be maintained to 30° in view of loose mineral, it will be strictly ensured to maintain slope low for better safety to avoid failure of slope by mining.
13. Proper gradient will be kept along slopes and ingress of any unauthorized person shall be restricted.
14. Ear muff fitted Helmets & safety shoes will be provided to workers.

iii.) EXTENT OF MECHANIZATION

In view to produce 1.191 Million ton from the mining area the project proponent has deployed earth moving machineries with the following assumptions -

S.no.	Assumptions	Unit
1	No. of shift per day	2
2	No. of working day	300
3	Bulk density of sand/boulder/gravel	2.0
4	Availability of equipments	75%
5	Fill factor of excavator bucket	0.80
6	Hours of working per shift	6.00

Loading /excavating equipments

The number of loading/excavating equipment as envisaged to be provided is given below in view of enhanced rock volume , the calculation in terms of adequacy of equipments are given below-

Requirement of Excavators:

Annual proposed Sand in tones = 1191000 Tons

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S.No.	Particular	Capacity	No.
1	Total no of working days	300	
2	Excavators	2.0 M^3	3
3	Hydraulic excavator capacity	2.0 M^3	
4	Dumper Capacity 25.0Tons	25.0Tons	159
5	Water Tanker	4000 liters	2
6	Light vehicles	1	1
7	Maintenance van	1	1

Thus 3 shovels +1 standby will be required to meet the current production

Requirement of Dumpers

The produced ROM shall be sold from the ex pit thus the trucks will be deployed as per the demand. As per targeted quantity 159 nos. of trucks of 25 Ton capacity per day will be required to transport the production

C. List of Machineries owned by company

The Project proponent has deployed a fleet of heavy machineries, its capacity, make and no. are tabulated as under :

Sr. No	Make	Description	Units
1	Local	Water tankers	1
2	Ashok Leyland	Dumpers	159
3	local	Compressor	1
4	Kirloskar	Pumps	1
5	Maruti	Service van	1

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The company has sufficient fleet of machineries to meet the production and development requirements. Additional machinery and trucks will be on hired basis as and when required.

DRILLING & BLASTING

Not applicable

A. UNDER GROUND MINING

Not applicable, it is an open cast mine

3.0 MINE DRAINAGE

The River Yamuna flows from N to S which originates from the Himalayas provides the major drainage in the mining area. The general slope of the land surface is From E-W and elevation of the mining area varies from 261.40 mRL in the north end side of the mining area to 260.15 mRL in south end side of the mining area. There is flow of water in the river bed in a narrow area in post monsoon period. Area is having 1067 mm rainfall in a year. During rainy season, catchment water flows in the river. During dry period the Sand is excavated which gets replenished during rainy period. No mining activities will be carried out during rainy season when there is water flowing in the working area. There will be no intersection of water table as working will be carried out upto 3.0 m depth only from surface of river bed while the water level is 5 - 10 m below the UPL.

3.1 Drainage around and within mine:

The mining area will become a depression, which warrants accumulation of water during rainy season. The pit will become a depression and will help in faster recharge of water in the aquifer

3.2 DEWATERING:

Since the depth of mining proposed is only 1.5-3.0 meters near the river bed, the same being above the water table of the area, there will be no chance of encountering the

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ground water table during the mining operations. No dewatering of the ground water is proposed.

3.3 Water Requirement

The requirement of water for the project will be as under and it will be sourced through hired tankers and locally tube wells

Sr.no	Activity	Requirement in KLD	Source
1	Dust suppression	13.0	Hired Tankers
2	Drinking	2.77	Hired Tankers
3	Green belt	3.0	Hired Tankers
	Total	**18.77**	

a) Minimum and maximum depth of water table based on observations from nearby wells and water bodies

The River Yamuna flows from N to S which originates from the Himalayas provides the major drainage in the mining area. The general slope of the land surface is From E-W and elevation of the mining area varies from 261.40 mRL in the north end side of the mining area to 260.15 mRL in south end side of the mining area.The proposed production for the two years is @ 1191000 TPA. The ultimate pit limit is 3 m bgl or 2 meter above water table whichever comes first

There is flow of water in the river channel in a narrow area in post monsoon period. Area is having 1067 mm rainfall in a year. During rainy season, catchment water flows in the river. During dry period the Sand is excavated which gets replenished during rainy period. No mining activities will be carried out during rainy season when there is water flowing in the working area. There will be no intersection of water table as working will be carried out upto 1.5-3.0 m depth only from surface of river bed while the water level is 5 -10 m below the surface of river bed.

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b) Indicate maximum and minimum depth of Workings.

During the plan period the depth of mining at the end of year 2021-23 working will be up to 270.5 mRL, i.e 3 mtr above from ground water level So water level will not be intersected .

c) Quantity and quality of water likely to be encountered, the pumping arrangements and places where the mine water is finally proposed to be discharged

The quality of water analyzed is observed with in permissible limit. No toxic elements have been observed in the water. The water is drinkable and potable. Water quality report is enclosed herewith as **Annexure -8 .**

d) Describe regional and local drainage pattern. Also indicate annual rain fall, catchments area, and likely quantity of rain water to flow through the lease area, arrangement for arresting solid wash off etc.

The area does not have any other source of water except river or manmade (Public water supply system), so the Rain water is the only source of water to meet the domestic and industrial need of company establishments.

4.0 STACKING OF MINERAL REJECT /SUB GRADE MATERIAL AND DISPOSAL OF WASTE

a) Indicate briefly the nature and quantity of top soil, overburden / waste and Mineral Reject to be disposed off.

Type of waste generated during the year.

1. No top Soil found in area.
2. Mineral sand consisting of rounded to sub subrounded fine rock of sub Himalayan region .

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3. No mineral subgrade / Reject found in the river bed

b) The proposed dumping ground within the lease area be proved for presence or absence of mineral and be outside the UPL unless simultaneous backfilling is proposed or purely temporary dumping for a short period is proposed in mineralized area with technical constraints & justification.

No external sand/gravel is dump is proposed. All the waste & OB will be dumped at periphery for temporary period in the lease area. After complete exhaustion of mineral in the area backfilling will be done with the available waste and plantation will done by spreading top soil over it.

Maximum Height & Spread of the Dump :

During plan period no waste dump shall be made, the waste generated during period of mining scheme shall be used in selling as associated mineral as per permission granted by Mines department .

c) Attach a note indicating the manner of disposal of waste, configuration and sequence of year wise build up of dumps along with the proposals for Protective measures.

It will not be required no OB /waste will be generated. all mineral is saleable .

5.0USE OF MINERAL AND MINERAL REJECT

a) Describe briefly the requirement of Mineral :

The main mineral is sand , Boulder and Gravel hence the entire mineral of this mine is used for construction purpose only and source material for production of sand aggregates of different sizes .

b) Give brief requirement of intermediate industries involved in upgradation of mineral before its end-use.

Not applicable

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c) Give detail requirements for other industries, captive consumption, export, associated industrial use etc.

The sand produced from the mine is being used in the manufacturing of aggregates by crushers which are located outside lease „

e) Give details of processes adopted to upgrade the ROM to suit the user requirements.

Not applicable

6.0 PROCESSING OF ROM AND MINERAL REJECT

a) If processing / beneficiation of the ROM or Mineral Reject is planned to be conducted, briefly describe nature of processing / beneficiation. This may indicate size and grade of feed material and concentrate (finished marketable product), recovery etc.

The overall quality of ROM sand is suitable for manufacturing of sand aggregate purpose and filler purpose. no sand will be sub grade , The sand will be crushed to supply for a specific size to the customers ,hence beneficiation / processing will be required .As masonry sand is low cost mineral Thus no beneficiation investigation has been proposed.

6.10 EXISTING METHOD OF BENEFICIATION:

Crushing: There is no mineral crushing, screening and beneficiation facility set up with the mine lease area M/S JSM Foods Private Limited has planned direct sell of ROM to nearby construction sites

b) Give a material balance chart with a flow sheet or schematic diagram of the processing procedure indicating feed, product, recovery, and its grade at each stage of processing.

All sizes of crushing will be saleable including fine dust .thus 100 % ROM and processed material will be balanced, no loss is anticipated

c) Explain the disposal method for tailings or reject from the processing plant.

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Not anticipated tailing or rejects

d) Quantity and quality of tailings /reject proposed to be disposed, size and capacity of tailing pond, toxic effect of such tailings, if any, with process adopted to neutralize any such effect before their disposal and dealing of excess water from the tailings dam.

Not applicable

e) Specify quantity and type of chemicals if any to be used in the processing plant.

Not applicable

f) Specify quantity and type of chemicals to be stored on site / plant.

Not applicable

g) Indicate quantity (cum per day) of water required for mining and processing and sources of supply of water, disposal of water and extent of recycling. Water balance chart may be given.

Total water requirement for the proposed working will be 18.77 KLD per day for dust suppression and drinking purpose , as such there is no tailing /waste water discharge . Water balance chart is attached as **Annexure-11**. The Permission Consent to establish and consent to operate have been obtained from HSPCB .Govt. of Haryana.

7.0 OTHER

a) SITE SERVICES

(A) A well constructed mine manager office, stores, First aid center, rest shelters, toilets, drinkable water facilities, canteen facilities and workshop have already been provided for this lease area and within the adjoining lease area of 300 meters . Proper space is available to keep the registers and records during working hours.

(B) visiting doctor facility is provide located in the plant area, So only first aid kits & first aid box are proposed at mine site for giving first aid to the injured persons if,

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any. Record of pre and during medical examination is kept, and no health hazard is found during the mining working

(C) A well equipped workshop and repair facilities are available for carrying out preventive maintenance, minor and major repairs, rebuilding and complete overhauling of mining equipment.

(D) Permanent facility for workmen, guest houses are within 5 km from Pichopa mine site .Further additional all facilities, Gramin bank, post office, hospitals etc are available at mandolai Yamunnagar .

b) EMPLOYMENT POTENTIAL

Following statutory and workmen employed are employed at the mine in site two shift working

S. No.	Category	Numbers
1	Mines manger	1
2	Foreman/mates	2
3	Skilled personnel	10
4	Semi-skilled personnel	20
5	Unskilled	8
Total		40

The excising man power will remain continue and additional man power will be deployed as per requirement.

8.0 PROGRESSIVE MINE CLOSURE PLAN UNDER RULE 27 OF MCDR' 2017

This is an existing area being worked by mechanized way, in lease area of 25.56 hect. falls in Topographic sheet no. H43W2 falling near village Mandolai, District Yamunanagar .A key plan of lease area and surrounding area with 5.0 kms radius is

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marked .The total lesase area is barren land as per revenue records of the mine. There is no protected forest, reserve forest and archeological monument in the granted area..The same has been recovered and being used under due permission from the state govt.

REVIEW OF IMPLEMENTATION OF MINING PLAN INCLUDING FIVE YEAR PROGRESSIVE CLOSURE PLAN UP TO FINAL CLOSURE OF MINE

8.1 Reason of closure: It is a granted area and minerisation is replenished every year so during plan period closure action is not proposed. Unrestricted area is back filled with minerals and closure is not proposed considering mineral conservation and extraction.

8.1.1 Statuary obligation:

1. The project proponent is working while taking all safety measures and compiling all statuary obligations of MMR 1961, MMDR ACT.1957,IE Act. 1884 and Air(prevention and control of pollution) Act.1981 and water (prevention and control of pollution) Act.1981 etc.
2. The mining contractor is bound to submit the Progressive mine closure plan either with Mining plan or Scheme of Mining.
3. Mining contractor is bound to follow the terms and conditions as will be stipulated in the mining contract.
4. In addition to it the rules pertaining to the Protection of Environment i.e Environment Act. Environment Rules and other associated rules for the protection of environment will have to be followed.
5. During the course of mining the rules stipulated in Mines Act, Mines rules Metalliferous Mines Regulation 1961 and Haryana Minor Mineral Concession storage ,transportation and prevention of Illegal Mining Rules -2012 will be followed.
6. All other rules pertaining to the mining existing at that time will be followed during the course of mining activities.

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8.1.2 Closure plan preparations

Name, address and registration number of the recognized persons who prepared the progressive closure plan and name and address of the executing agency who is involved in the preparation of progressive mine closure plan.

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Regd. No RQP/AJM/230/2003/A (Annexure-12)

8.1.3 Regional Geology ,local geology ,Reserves and Method of mining already described

8.1.3 Environment Base line information: Details of status of baseline Information with regard to Existing land use pattern indicating the area degraded due to mining, roads, processing plant, workshop, township etc are shown in tabular form.

8.1.4 EXISTING LAND USE PATTERN

The lease area is falling in govt. land (25.56 hect.), others type of land is not found in the area . total lease area the mineralized area and part of area is broken for mining purpose .The present land use pattern of the lease area is tabulated as follows: -

Sr.No.	Particulars	Present Land Use (ha)
1	Restricted Safety Zone/7.5m mining area boundry,	5.7
2	Infrastructure (Office,temp. Shelters etc.	0.00
3	Area available for mining	19.85
4	Unworked	0.0
	Total	25.56

LAND USE PLANING AT THE END OF LEASE PERIOD

Sr.No.	Particulars	At the end of 5th year (ha)
1	Safety Zone/7.5m mining area boundry,	5.7
2	Infrastructure (Office,temp. Shelters etc.	0.00
3	Reclaimed area	19.85
4	Unworked	0.0
5	Plantation*	0.0
	Total	25.56

Plantation 1.0 Ha. out side along road, village*



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*Plantation in 1.0 ha land will be done under social forestry on land available from Panchayat by the end of mine life

* Plantation & infrastructure In restricted area only

8.1.2 Water regime

The area constitutes almost alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The elevation of the area above mean sea level is about 260.6 m aMSL. The general slope of the area is southwards. Area is having 1076 mm rainfall in a year. During rainy season, catchment water flows in the river.

There will be no intersection of water table as working will be carried out upto 3.0 m depth only from surface.

8.1.3 Water Quality

The area constitutes almost alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The elevation of the area above mean sea level is about 260.6 m aMSL. The general slope of the area is southwards. Area is having 1076 mm rainfall in a year. During rainy season, catchment water flows in the river. There will be no intersection of water table as working will be carried out upto 1.5- 3.0 m depth only from surface.

8.1.4 Quality of air, ambient noise level.

The air noise level is much below the permissible level. Quality of air, water & Noise is monitored regularly at defined stations. The results of the study show that the observed values of base line information are within limits with reference to standard parameters. Air, water & Noise monitoring reports are enclosed as **Annexure-7-10.**

8.1.5 Air Quality Management:

The proposed mining method is not likely to produce much of dust and fugitive emissions to cause damage to ambient air quality of the area. Workers will be provided with personnel protective equipment like face mask, ear plug/ muffs.

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For air pollution management at the progressive mine closure of mine, green belt will be developed to prevent and control air pollution.

8.1.5. Waste Management:

As stated in mining method, there will be no waste of any kind. Therefore no waste management s required.

8.1.6 Top Soil Management

There will be no top soil in the river bed. Therefore no top soil handling is needed.

8.1.7 Tailing dam management

There is no proposal of beneficiation of mineral. No tailing dam is envisaged.

8.1.8 Infrastructure:

The infrastructure facilities like site office, first -aid station, rest shelter/ store, drinking water etc. will be established temporarily. At the time of closure there will be no problem to remove the same from the lease area..

8.1.9 Disposal of mining machinery:

Machinery is proposed on hire basis. Hence no decommissioning of mining machinery is proposed.

8.1.10 Safety & Security:

1. Safety measures will be implemented to prevent access to excavation area by un-authorized persons as per Mine Act 1952, MMR 1961.
2. Safety measures will be implemented as per Mine Act 1952, MMR 1961, Mines Rules 1955.
3. Provisions of MMR 1961 shall be followed strictly and all roads shall be 10 m wide and have a gradient of not more than 1 in 20.
4. Excavation will be not more than 3 m in river bed ..
5. Width of bench will be kept around 20.0 m for ease of operations and provide sufficient room for the movement of equipments.
6. Protective equipment like dust masks, ear plugs/ muffs and other equipments shall be provided for use by the work persons.
7. Notices giving warning to prevent inadvertent entry of persons shall be displayed at all conspicuous places and in particular near mine entries.

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8. Danger signs shall be displayed near the excavations.
9. Security guards will be posted.
10. In the event of temporary closer, approaches will be fenced off and notice displayed.

4.10 Disaster Management and Risk Assessment:

This should deal with action plan for high risk accidents like landslides, subsidence, flood, inundation in underground mines, fire, seismic activities, tailing dam failures etc. and emergency plan proposed for quick evacuation, ameliorative measures to be taken etc. The capability of lessee to meet such eventualities and the assistance to be required from the local authorities should be described.

- The shallow depth of activities outside the river bed mining will not involve any high risk accident due to side falls/collapse.
- There will be no mining whenever there is flow of water.
- The complete mining operation will be carried out under the Management and control of experienced and qualified Mines Manager having Certificate of Competency to manage the mines granted by DGMS.
- All the provisions of Haryana Minor Mineral Concession rules , Mines Act 1952, MMR 1961 and Mines Rules 1955, and other laws applicable to mine will strictly be complied with.
- During heavy rainfall the mining activities will be closed.
- All persons in supervisory capacity will be provided with proper communication facilities.

Competent persons will be provided First Aid Kits which they will always carry.

8.11 Care and Maintenance during Temporary Discontinuance:

In case of any temporary discontinuance due to court order or due to statutory requirement or any other unforeseen circumstance following measures shall be taken for care, maintenance and monitoring of conditions.

- Notice of temporary discontinuance of work in mine shall be given to the DGMS as per the MMR 1961.



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- All the mining machinery shall be shifted to a safe place.
- Entrance to the mine or part of the mine, to be discontinued shall be fenced off. Fencing shall be as per the circular 11/1959 from DGMS.
- Security Guards shall be posted for the safety and to prevent any unauthorized entry to the area.
- Carry out regular maintenance of the facilities/area detailed below in such a way as would have been done as if the mines were operation:
  1. Mine roads and approach roads,
  2. Fencing on approach roads,
  3. Checking and maintenance of machines and equipment,
  4. Drinking water arrangements,
  5. Mine office, first aid stations etc.
- Competent persons shall inspect the area regularly.
- Air, water and other environmental monitoring shall be carried out as per EIA and IBM Guideline.
- Care and upkeep of plantation shall be carried out on regular basis.
- Status of the working and status monitoring for re-opening of the mines shall be discussed daily.

In case of discontinuance due to any natural calamities/abnormal conditions, mining operation will be restarted as early as possible after completing rescue work, restoring safety and security, repairs of roads etc.

8.2 IMPACT ASSESSMENT:

8.2.1 Land area indicating the area likely to be degraded due to quarrying, dumping, roads, workshop, processing plant, tailing pond/dam, township etc.

Due to mining activities, the present land use pattern will be definitely change, the land will be degraded as pit size will increased & waste removed during mining operation will be systematically backfilled with the balance waste .The disturbed area due to mining , transportation , and temporary infrastructure will be levelled and put use for regressing as per MoEF&CC notification 2020.



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Land use pattern after end of the two year scheme period will be as follows.

S no.	Particulars	Area put on use at end of mining scheme
1	Area under mining	19.85
2	Storage for top soil	0.00
3	Waste dump	0.00
4	Mineral storage	0.00
5	Infrastructure -workshop, Administrative, building etc.	0.00
6	Roads	0.00
7	Railways	0.00
8	Tailing pond	0.00
9	Mineral Separation Plant	0.00
10	Afforestation	0.00
11	Others (Green belt)	5.70
12	Undisturbed area	0.0
13	**Grand Total**	**25.56 hect.**

The likely depth of the pit at the end of mining scheme period will be up to 270.5 mRL.

8.2.2 Impact on Air Environment

The mining activity does have some impacts on air quality. The major contribution to the air pollution by sand mining is the rise in Suspended Particulate Matter (SPM) due to generation of dust by movement of fleet of dumpers, trucks, jeep etc. Transportation will also give rise to generation of NO_x and SO_2. Heavy vehicles cause emission of NO_2, SO_2 and CO. To prevent air born particles at the time of loading water spraying over haul road will be done. Within sand mining pit area where water sprinklers are not installed, water spraying by water tankers are done to prevent dust generation.

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Periodical Air sampling and analysis is done by NABL labs and the results are within the range. (**Annexure-7)**

8.2.3 Impact on Water Environment

The mining operations will not interfere with natural drainage pattern and river channel will not be obstructed in any case .

The water will pass freely during rainy season through broken block area and backfilled by sand and gravel .No waste dumps are there thus the quality of water and mineral will be deteriorated. In absence of toxic minerals, the quality of water will not get any adverse impact.

In order to avoid soil erosion & carry-over of the material with rain water,bank slope is kept to 30° , which is on quite safer side . Rain water from pits , river channel , pit sumps, shall be not pumped out and no water reservoir shall be made .Water in small quatity shall be brought through the open aqua duct. The water will seep to river channel owing to high porosity and permeability of sand and gravel . Thus there will be no loss of water Periodical water sampling and analysis is done by NABL labs and the results are within the range.**(Annexure -8)**

8.2.4 Impact on Noise levels

In Mine area noise level will be is increased by movement of dumpers , loading of minerals by excavators , and Movement of LMVs etc. The noise level in the working environment are compared with the standards prescribed by Occupational Safety and Health Administration (OSHA-USA) which has been adopted and enforced by the Govt. of India through model rules framed under Factories Act. These standards have been established with emphasis on reducing the hearing loss and consequential effects. The summary of the permissible exposures in cases of continuous noise as per above rules is give below:-

Noise at lower levels (sound pressure) is quite acceptable and does not have any bad effect on human being but when it is abnormally high, it incurs some maleficent effects on human beings. Sufficiently loud noise may cause the following adverse effects:-

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(i) Damage hearing and health,
(ii) Interfere with work task,
(iii) Interfere with speech communication,
(iv) Cause irritation,
(v) Affect inter-room privacy,
(vi) Interfere with sleep,
(vii) Cause annoyance,

Noise survey is done regularly. Report of Noise survey is attached All the HEMM operators have been provided with ear muff mounted Helmet, also they have been trained & motivate to use them. Periodical Noise monitoring is being done by NABL labs and the results are within the range .**(Annexure -9).**

8.2.5 Vibration levels (due to blasting)

No blasting will be there and movement of heavy machinery will cause vibration effect negligible. It is not proposed to periodically measure / monitoring of ground vibrations, ..

8.2.7 Impact on Acid mine drainage

No acid mine drainage is expected.

8.2.8 Impact on Surface subsidence

No surface subsidence is expected.

8.2.9 Impact on Socio-economics

The mining of and sand and Gravel will promotr the construction activities in the region and will create direct and indirect employment opportunities to 500 peoples. It has not only helped in improving and developing the infrastructure of the area but also changed the economic pattern of the area. M/S JSM foods private Limited has made provided renal accommodation to employees with all basic amenities. Plantations ,

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light and drinking water and coolers are provided under, Schools, post office, bank, hospitals, shopping center, facilities are available at Nearby village .

Due to mining activities no evacuation of human settlement is involved. The mining operations will not cause any adverse impact on socio economic environment of the area. The Social & Demographic Profile of the area improves by having an economic activity near the villages by direct and in direct jobs.

8.2.10 Historical monuments etc.

There is no historical monument, place of worship falls in the buffer and core zone .

ENVIRONMENT MANAGEMENT PLAN

9.0 MEASURES TAKEN AND TO BE TAKEN FOR LAND RESTORATION, RECLAMATION AND PLANTATION IN/ OR NEARBY MINING AREA

- Envisaged mining operation will be carried out in the River bed only. There will be no mining activities when there is flow of water in the working zones. During rainy season, the activities will be stopped, if there is flow in the mine.
- Besides resource extraction, following activities will be kept in view:

a) Protection and restoration of ecological system

b) Prevent damages to the soil erosion in the nearby areas by making soil bund on the lease boundry

c) Protect riverine configuration such as bank erosion, change of water course gradient, flow regime etc.

d) Prevent contamination of ground water

Safeguard Measures

While carrying out mining activity following measures will be taken:

- Mining activities will be carried out only in dry bed. No in stream mining will be practiced.
- Identification of river stretches for mining will be completed.
- There will be no mining near the banks and same would be restricted with central 3/4th of the river bed. This is to protect the bank erosion and river migration.

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- Mineral Sand from river will be restricted to a maximum depth of 3.0 m from the existing bed level. This is for safety and sustainability.
- As the mining area is quite large and long in length, systematic extraction will be carried out to prevent seasonal scouring and enhanced erosion.
- Extraction will be carried out in a manner that there is no obstruction to flow of water, if any, during rainy season.

Mining on the concave side of the river channel would be avoided to prevent bank erosion. Similarly meandering segment of river will be selected to prevent natural eroding banks and to promote mining on natural building (aggrading) meanders component

Reclamation of Mined out Area (plate no.6)

There is no generation of OB/ waste material in case of river bed mining. No backfilling has been proposed in the excavated zone in river bed. River bed will be replenished by sediments during rainy season.

9.1 GREENBELT DEVELOPENT

In order to restore the environment and ecological balance in the area affected by mining, a forestation is considered to be an effective measure. Afforestation is a major thrust area in pollution control of mining. Afforestation is suitable for detecting, recognizing and reducing air pollution effects. Tree functions as sinks of air pollutants, besides their bio-aesthetical values, owing to its large surface area. The green belt supplements Oxygen to the atmosphere and combat air pollution effectively and aesthetic beauty and landscape of the area improves. It also checks soil erosion and make eco-system and climate more conducive.

Following factors will be considered while selecting species for plantation:-

i) Fast growing plant species shall be preferred.
ii) The plant will be of deep rooting system.
iii) The plant will be perennially green to improve aesthetic beauty of the area.
iv) The plant species will be adoptable to the local climatic conditions.

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v) Native plant species will be planted.

Afforestation programme shall be carried out basically, along the mine boundaries and roads as permitted by land owners. The mining area is devoid of any vegetation, will not cause any harm to riparian vegetation cover. It is proposed to have plantation on both sides of the roads as greenbelt to provide cover against dust dissemination. As per EIA guide lines 33% area of lease will be taken for Plantation , social forestry programme in villages, school and the areas allocated by the Panchayat/ State authorities.

Native plants like Neem, shisham, , Mango and other local species will be planted. A suitable combination of trees that can grow fast and also have good leaf cover shall be adopted to develop the greenbelt. It is proposed to plant 1250 no's of native species along with some fruit bearing and medicinal trees during the plan period.

YEAR WISE GREENBELT PROGRAMME

Year	Saplings to be planted	Survival 80 %	Species	Place of Plantation
2021-22	1250	1000	Neem, , Mango, Shisham, Sirish, Babool, Gulmohar	Along the roads, in schools and public building and other social forestry programme.
2022-23	1250	1000		
Total	2500	2000		

11.0 MEASURES TAKEN AND TO BE TAKEN FOR PROTECTION OF ENVIRONMENT IN AND AROUND MINING AREA

- Mining activities will be confined to 3.0 m depth.
- All link roads from the mining area to the tar road will be properly sprayed with water for dust suppression.

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- Greenbelt and plantation on road side will help in dust suppression and will also reduce noise level.
- Plantation will improve ecology and aesthetic beauty of the area
- Measures will be taken to prevent the workings from extending in safety zones, cutting the banks and exceeding 3.0 m depth limit from the river bed surface.

12.0 MEASURES TAKEN AND TO BE TAKEN FOR DUMPING OVERBURDEN, STACKING OF TOP SOIL AND UTILIZATION OF TOP SOIL

There is no top soil in the river bed mining. If any soil is required to be removed the same will be used to strengthen the river banks.

13.0 MEASURES TAKEN AND TO BE TAKEN FOR THE CONTROL OF WATER, NOISE AND AIR POLLUTION

Air Pollution:

Emission of gases and dust takes place due to movement of vehicles. Spraying of water and plantation along the road side prevents the spread of dust. Plantation also acts as barrier for restricting pollution. Impact on air environment has been assessed taking in to consideration the proposed production and increase emissions. The sources of air pollution are given below:

- Operation of mining machinery/ loading operations
- Transportation of mineral
- Wind erosion from barren area and river bed
- Emission of gases and dust due to movement of vehicles



MEASURES FOR DUST SUPPRESSION & CONTROL OF AIR POLLUTION:

Control of Air Pollution Due To Dust, Exhaust Emissions or Fumes During Mining or Processing Operations For Minor Mineral & Related Activities and Containing the Same Within Permissible Limits Specified Under : -

1. Plantation road side as it will prevent the spreading of dust.
2. Water spraying will be done twice in a day over the haul road & roads leading to adjoining state roads.
3. Dust respirators will be provided to the operators of the heavy earth moving machineries.
4. Preventive maintenance shall be carried out of equipment.
5. At every work place where, the air borne dust generated, to be sampled and the concentration of the respirable dust will be determined regularly. If any measurement at any workplace and at source, the concentration in excess of 50% or 75% of the available concentration of permissible limit then measurements shall be carried on, at intervals not exceeding 3 months or 1 month respectively.
6. Silencers will be fitted to the dumpers.

The following table indicates the concentration of Ambient Air as per the CPCB guidelines:

Air pollutants released during production can be checked by:

- Dust suppression system/ water spraying would be adopted at mine working and loading points
- Excavation operations to be suspended during very strong wind conditions
- Afforestation will be carried out for control of dust
- Plantation with wide canopy trees along approach road will help in dust suppression
- Persons to be provided with dust mask and other personal protective equipments, particularly during summer months and dust storm periods

Transportation

- Regular water spraying on haulage roads during mineral transportation by water sprinklers,
- Avoid over loading of tippers & consequent spillage on the roads,

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- Mineral carrying trucks will be effectively covered by tarpaulin to avoid escape of fines to atmosphere,
- Air quality shall be regularly monitored both in the core zone and the buffer zone.

Controlling of NOx level

The source of NOx is due to vehicular emission. This can be controlled by proper maintenance and servicing of vehicles. Only P.U.C. certificated vehicles will be permitted

Noise Pollution

There is no drilling and blasting for mineral extraction. Noise pollution due to transportation will not cause any problem to the inhabitants of this area because there is no human settlement in close proximity to the link roads in mining area.Effective steps will be taken to keep the noise level well below the DGMS prescribed limit of 85 dBA.

Noise control is achieved by the following:

- Proper care and maintenance of the equipments will be carried out.
- Personal protective equipments will be provided to the workers.

15.0 DETAILS OF HEALTH CHECKUP AND INSURANCE OF ALL THE EMPLOYED PERSONS (FOR EXISTING MINING AREA)

The lease will comply with the recent provisions of medical examination as per Mines Rule 1955 both at times of appointment and at least once in five year. Medical camps will be organized for this activity. Necessary record and return will be sent to respective authorities Insurance of all employees as per the rules will be carried out.

15.1 Corporate Social Responsibility

As a corporate responsibility following measures along with budget provision is proposed for improving the conditions of persons in and around the project area:

The Yamuna nagar district of Haryana State is relatively less developed in respect of employment and facilities. Thus, it can be seen that the proposed project offers good potential for the local people for employment directly and indirectly. The Project Affected Persons, if any, of the lease area will be provided with compensation or job or indirect employment such as business, contract works etc. With the starting of mining operation, employment/business opportunity will increase and welfare amenities such as free medical facilities, conveyance, school, free education, drinking water supply etc will be available for the area.

The details of benefits to the people in the adjoining villages are discussed here under:

a) Employment

From the study of socio economic environment at the study area it is quite evident that the area is not quite developed as far as job opportunities and living standard of the population is concerned. Apart from cultivation, agriculture, etc mining, industries and ancillary activities play an important source of livelihood in this as well as adjoining districts.

With the start of mining operations, various employment opportunities will be generated. Several persons will be benefited with mining works, employment through contractor, running of jeep and buses, canteens, different kind of shops and transport related business avenues.

(b) Educational facilities

Industrial on-job training will be provided to the interested local people and the trained people will be absorbed in jobs as per the requirement of the project. Proponent will also provide full cooperation and monitory assistance for adult education programme. Other activities proposed are :

1. Targeted programmes for primary education for specially girl child

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2. Augmentation of infrastructure and equipments, furniture, blackboard, toilets etc in schools
3. Scholarships to meritorious students
4. Adult education & awareness about saving & investment plans.
5. Partnerships in state sponsored education programmes
6. School wall boundary maintenance
7. Existing govt. school strengthening by boundary wall construction, construction of toilets, roof repair, drinking water taps, etc.

Capacity building activities such as following will be undertaken:

1. Scholarship for ITI training outside for 10 persons
2. Sponsorship of land losers / wards for full term courses
3. Short term courses for skill up gradation
4. Vocational training (dairy, poultry, bee keeping, sericulture)
5. Specific Programmes for Ladies (stitching, embroidery, tailoring etc)

(c) Medical facilities

Project shall provide aid to improve the existing medical facilities in the villages and also improve awareness and provide sufficient training in hygiene, sanitation and proper diet. Some of the activities that can be carried out are as follows:

1. Mobile Clinic with testing and diagnostic facilities
2. Health Camps for Family Planning, HIV/AIDS and other communicable diseases.
3. Addressing local health related issues through audio visuals and group meetings
4. Subsidized treatment in hospital with which tie-up will be there

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5. Specific Programmes for hygiene and sanitation
6. Helping aids to each category of physically challenged as per requirement
7. Eye camps to address the issue of cataracts specially

(d) Infrastructure facilities

Infrastructure facilities like road, Post & Telegraph, Telephone, Banks etc are basics for each and every area. These facilities are already well developed in the surrounding areas. The lessee will take various steps for upliftment of the basic amenities of the area by providing drinking water, communication facilities, etc. Construction of roads, drainage, community halls, school buildings, health centers, street lighting, equipments to educational institutions, public utilities, sanitation facilities, etc in nearby area will be undertaken.

15.2 Fund Provision for Environmental Management

It is proposed to create an Environment Management Fund. The contractor shall deposit/pay an amount equal to 10% of the due contract money along with installments towards the 'Mines and Minerals Development, Restoration and Rehabilitation fund.

8.3 PROGRESSIVE RECLAMATION PLAN:

As the mineral potential will be a continuous process every year in the area and none of the part is will be left as void/ depression available for reclamation . , under the circumstances the back filling and progressive reclamation plan is not feasible.

8.3.1. Mined-Out Land:

Backfilling by fresh mineral sand will be resume with natural flow of river water during the plan period so manual / mechanized process will not be involved

8.3.2 Topsoil Management:

There is no topsoil available in the area. Hence, no stock will be maintained. if soil observed in any part shall be scrapped and shall be collected and stacked separately to be used in plantation.

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8.3.3 Tailings Dam Management:

Tailing dam is not required and not proposed in the mining plan hence this para does not apply.

8.3.4 Acid mine drainage, if any and its mitigative measures.

No acid mine drainage is expected, hence no management required.

8.3.5 Surface subsidence mitigation measures through backfilling of mine voids or by any other means and its monitoring mechanism.

Not Applicable

8.3.6 Information on protective measures for reclamation and Rehabilitations work -

Plantation programme is proposed a long haul road, office, nearby roads and nearby villages outside the lease area for year 2021-2023. Green belt plantation covering an area 1.0 hectares will be carried out on along the 7.5 meter periphery of lease area and afforestation of 1.0 hectares is proposed along the haul road , office ,workshop area

Year	No of plants	Area	Survival rate	Local Species of plants
2021-22	1250	0.50	80%	Neem, kikar ,Kikar kabli ,siras, pipal ficus , cicus, hareda, badberi , Sisam, or any other local species in consultation of forest office
2022-23	1250	0.50	80%	
Total	**2500**	**1.0**		

9.3.7 Regrassing proposal

The area after mining activity will again be backfilled by fresh sand and gravel every year , thus the regressing will be done over it . The back filled area and undisturbed area will be taken up for plantation and regressing as MoEFCC notification dated 16.1.2020 for the growth of grass ,fodder in the mining area

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The project proponent shall after ceasing the mining operations undertake regressing in the mining area and any other area which may have been disturbed due to their mining activities and restore the land to the condition which is fit for the growth of regrassing, fodder for flora and fauna etc .Necessary undertaking shall be given by project proponent to Mines and Geology Department ,Haryana .

8.4 Disaster Management and Risk Assessment:

The topography of the area is such that, there are no chances of landslide, subsidence, inundation, fire, and seismic activities. No tailing dam exists in the area, so there is no chance of failure of this. The management of M/S JSM Foods Private Limited is fully capable to handle risk assessment and disaster management. The mining activities in the lease area are proposed as per regulations of the MMR-1961. First aid facilities are available at the mines site office. Competent persons (first aid trained) appointed as mining mate, Manager will provide first aid to injured person, if any. Trained persons kept first-aid kits with them. Transportation facilities for the injured persons are available at site for this purpose. Hospital facility is located in the colony at about 5.0 from lease area, Communication facility is available at mine.

In an emergency following person may contact.

1. Shri Tanish Wadhwa (Authorized person)

M/S JSM Foods Private Limited

R/o 676, Sector-13, Karnal

Mobile No. 99960-15005

jsmfoodsmandoli@gmail.com

2. Shri Sohan singh

Mines Manager

M/S JSM Foods Private Limited

Village –Mandolai Ghaggar West Block YNR B-4,

Distt. Yamuna agar

Haryana

Phone : 70186-61867



8.5 CARE AND MAINTENANCE DURING TEMPORARY DISCONTINUANCE:

In case of any temporary discontinuance of the mining activities, the guards will watch & ward to prevent any in advert entry of the unauthorized person also All entries to the mine shall be properly closed. The duty & responsibility of mines manager is to visit all sites & to check, the fencing, waste dump etc. during the working & in the period of the temporary discontinuance of the mining activities. the infrastructure facilities will continue to be used to maintain in safe working.

8.6 OCCUPATIONAL HEALTH AND SAFETY

The lease will comply with the recent provisions of OSHW code 2020 for contract workers also to medical examination in addition to as per Mines Rule 1955 both at times of appointment and at least once in year. Medical camps will be organized for this activity. Necessary record and return will be sent to respective authorities Insurance of all employees as per the rules will be carried out.

To prevent the occupational disease / health hazards, suitable measures are proposed in drilling & excavation operations. This will prevent the inhalation of the dust by the workers. The workers will be periodically medically examined under Rule 29(b) of Mines Rule. If any worker found to have contracted with any occupational disease, he will be immediately removed from the affected area and will be provided with proper medical care as per provision of Mines Rule.

In case of any injury to the worker during work, the following measures will be taken:

(i) The workers will be immediately provided the first aid by a trained worker.

(ii) For safety practices during mining, the workers will be provided proper safety wearing and equipments such as hand gloves, safety boots, helmets, earplugs and life jackets etc.

(iii) A First Aid Box will always be provided to the mining mate/ mines foreman, to attend minor injuries.

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All the workers will be given vocational training every year on safety aspects in mining by the trained Vocational Training Officers. Apart from this all safety precaution will be taken as per Act, Rules, Regulation and Byelaws made there under.

8.7 ECONOMIC REPERCUSSION OF CLOSURE OF MINE AND MANPOWER RETRENCHMENTS

Mining contract area is granted for a period of 09 years only. As per the production programme envisaged, at the end of contract period, still sufficient Replenished un-worked area would be left available for continuing production activities . Hence, closure is not planned. There will be no affect on the man power as the persons belong to nearby villages and will have an option either to be available for employment for the next contract or do the agriculture in their fields.

8.8 TIME SCHEDULING FOR ABANDONMENT

The mining area has enormous potential for continuance of operations even after the expiry of the awarded period. The details of time schedule of all abandonment will be given at the time of final closer plan. Mining activities are confined 3.0m. depth, relatively shallow depth of workings which will be reclaimed every year during rainy season.

8.9 ANDONMENT COST

As at present mining is not going to be closed so abandonment cost could not be assessed. However based on the progressive mine closure activities during the plan period, cost is assessed as given below:

ACTIVITY	YEAR					Rate	Amount (in Lakhs)
	2021-22	2022-23	2023-24	2024-25	2025-26		
Plantation (in no.)	1250	1250	-	-	-	@ 100 Rs per sapling and maintenance cost	2.50
Plantation cost in Rs							
Wire fencing (meter)	500	500	-	-		@ of 100 Rs per meter	1.0
Wire fencing cost	50000	50000	-				
						Total	3.50

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8.10 FINANCIAL ASSURANCE:

The Indian Bureau of mines has given guidelines for calculation of FA, The amount calculated for the purpose of Financial Assurance is based on the CCOM's Circular no. 4 dated 2006, and Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules -2012." the computation of FA is based on the area put to use and area considered fully reclaimed. The particulars of area are as below-.

Table indicating the break-up of areas in the Mining Lease for calculation of Financial Assurance

S no.	Particulars	Area put on use at start of plan in hect.	Additional requirement of area during plan period in hect.	Total Area in hect.	Area considered as fully reclaimed & rehabilitated in hect.	Net area considered for calculation in hect.
1	Area under mining	0.00	19.85 per year	19.85	NIL	19.85
2	Storage for top soil	0.0	0.0	0.0	Nil	0.0
3	Waste dump site	0.0	0.0	0.00	Nil	0.00
4	Mineral storage	0.0	0.0	0.0	Nil	0.0
5	Infrastructure (work shop, administrative building etc.), electric lines.	0.0	0.0	0.0	0.00	0.0
6	Road (Kacha way)	0.00	0.00	0.00	Nil	0.00
7	Railways	Nil	Nil	Nil	Nil	Nil
8	Mineral separation plant	Nil	Nil	Nil	Nil	Nil
9	Township area	Nil	Nil	Nil	Nil	Nil
10	Undisturbed	0.0	0.0	0.0	0-00	0.0
11	Afforestation	0.00	0.00	0.00	0.00	0.0
12	Others (green belt)	5.7	0.0	5.7	0.0	0.0
	Grand Total	**5.7**	**19.85**	**25.55**	**0.0**	**19.85**

CALCULATION OF FINANCIAL ASSURANCE

The financial assurance is applicable for the area put to use by project proponent and area reclaimed and habilitated under the provisions. The total broken area at the end of the scheme will be 19.85 hectares. The calculation of financial assurance will be based on the provisions made by state govt. as per Financial security under Haryana

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Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 .The FA is calculated @15000/- per hectare or maximum to Rs.100000/- in case of minor minerals .The same is required to be deposited at the grant of mining lease .

In case of any deficit amount the Project proponent will comply and deposit in account of Department of Mines and Geology department, Government of Haryana

9.0 CERTIFICATE

It is enclosed with the report.

10.0 PLAN AND SECTION

Plan and section are prepared and enclosed with the mining plan.

Dated-
Place- Jaipur

(Kireet Acharya)
Qualified Person

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JSM FOODS PVT. LTD.

WZ/932, BASIE DARAPUR, 1ST FLOOR,
NEAR SENIOR SECONDARY SCHOOL, NEW DELHI-110015

A. CONSENT LETTER/ UNDERTAKING/ CERTIFICATE

FROM THE APPLICANT

01 The Modified Mining Scheme in respect of "MandoliGhaggarWest Block/YNR B-4"sand mine over an area of25.56 Hect., near village MandoliGhaggarwest, Tehsil Jagadhri,DistrictYamunanagar, State Haryana, under Rule 70(1) Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 & 23 of MCDR 2017 has been prepared by Qualified Person Kireet Acharya. This is to request the Director, Department of Mines and Geology Haryana, to make any further correspondence regarding any correction of the Mining Plan/Scheme of Mining with the said Qualified person at his address below :-

Sh. Kireet Acharya
70/30 Patel Marg,Mansarovar,
Jaipur 202020 (Rajasthan),
Mobile No. 9414163053
Email - acharyak12@gmail.com

We hereby undertake that all modifications / updating as made in the said Mining Plan/Scheme of Mining by the said recognized person be deemed to have been made with our knowledge and consent and shall be acceptable on us and binding in all respects.

02 It is certified that the CCOM Circular No-2/2010 will be implemented and complied with when an authorized agency is approved by the State Government.

03 It is certified that the Progressive Mine Closure plan of "MandoliGhaggarWest" Block/YNR B-4" Boulder, Gravel and Sand mine near villageMandoliGhaggarWest over an area of 25.56 Ha. complies with all statutory rules, Regulations, Orders made by the Central or State Government, Statutory organization, Court etc which have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities. The information furnished in the Progressive Mine Closure plan is true and correct to the best of our knowledge and records.

04 "The provisions of Mines Act, Rules and Regulations made there under have been observed in the Modified Mining Scheme over an area of 25.56 hectare , District Yamunanagar, State Haryana belonging to M/s. JSM Foods Pvt. Ltd.and where specific permissions are required, the applicant will approach the D.G.M.S. Further, standards prescribed by D.G.M.S. in respect of miners' Health will be strictly implemented"

Place: YAMUNANAGAR

Date:10.09.2021

For M/s. JSM Foods Pvt. Ltd.

For JSM FOODS PVT. LTD.

Auth.Sign.

JSM FOODS PVT. LTD.

WZ/932, BASIE DARAPUR, 1ST FLOOR,
NEAR SENIOR SECONDARY SCHOOL, NEW DELHI-110015

AUTHORISATION

I, TANISH WADHWA Director of M/s. JSM Foods Pvt. Ltd., Mining site at Village MandoliGhaggar West, Block YNR/B-4, Tehsil Jagadhri, Distt Yamuna Nagar, hereby authorizeShriKireetAcharya, (RQP/AJM/230/2003/A) to prepare the Modified Mining Scheme including Progressive Mine Closure Plan (Review & Mining scheme) under Haryana Minor Mineral Concession, Stocking,Transportation of Minerals and Prevention of Illegal Mining Rules, 2012, in respect of minor mineral mines of "Boulder, Gravel and Sand" of "M/s. JSM Foods Pvt. Ltd" over an area of 25.56 hectare in Tehsil Jagadhri, District Yamunanagar, State Haryana.

I request the Director General, Department of Mines & Geology, Govt. of Haryana, Chandigarh, to make further correspondence regarding re-submission/ modification / withdrawal and to collect the approved copies of the aforesaid Mining Plan Including Progressive Mine Closure Plan with the said recognized person on his following address: -

Kireet Acharya
(RQP/AJM/230/2003/(A)
70/30 Patel Marg, Mansarovar
Jaipur 302020
E-mail-acharyak12@gmail.com
Mobile: 9414163053

APPROVED

M/s JSM Foods Pvt. Ltd.
For JSM FOODS PVT. LTD.
Auth.Sign.

Place: YAMUNANAGAR
Date: 10.09.2021

JSM FOODS PVT. LTD.

WZ/932, BASIE DARAPUR, 1ST FLOOR,
NEAR SENIOR SECONDARY SCHOOL, NEW DELHI-110015

A. CONSENT LETTER/ UNDERTAKING/ CERTIFICATE FROM THE APPLICANT

01 The Modified Mining Scheme in respect of "MandoliGhaggar East Block/YNR B-3"sand mine over an area of20.18Hect., near village MandoliGhaggar East, Tehsil Jagadhri,DistrictYamunanagar, State Haryana, under Rule 70(1) Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 & 23 of MCDR 2017 has been prepared by Qualified Person Kireet Acharya. This is to request the Director, Department of Mines and Geology Haryana, to make any further correspondence regarding any correction of the Mining Plan/Scheme of Mining with the said Qualified person at his address below :-Sh. Kireet Acharya
70/30 Patel Marg,Mansarovar,
Jaipur 202020 (Rajasthan),
Mobile No. 9414163053
Email – acharyak12@gmail.com

We hereby undertake that all modifications / updating as made in the said Mining Plan/Scheme of Mining by the said recognized person be deemed to have been made with our knowledge and consent and shall be acceptable on us and binding in all respects.

02 It is certified that the CCOM Circular No-2/2010 will be implemented and complied with when an authorized agency is approved by the State Government.
03 It is certified that the Progressive Mine Closure plan of "MandoliGhaggar East" Block/YNR B-3" Boulder, Gravel and Sand mine near villageMandoliGhaggar Eastover an area of 20.18 Ha. complies with all statutory rules, Regulations, Orders made by the Central or State Government, Statutory organization, Court etc which have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities. The information furnished in the Progressive Mine Closure plan is true and correct to the best of our knowledge and records.
04 "The provisions of Mines Act, Rules and Regulations made there under have been observed in the Mining Scheme over an area of 20.18 hectare , District Yamunanagar, State Haryana belonging to M/s. JSM Foods Pvt. Ltd.and where specific permissions are required, the applicant will approach the D.G.M.S. Further, standards prescribed by D.G.M.S. in respect of mines' Health will be strictly implemented".

For JSM FOODS PVT. LTD.

Place: ----------

Date----------

For M/s. JSM Foods Pvt. Ltd.

Auth. Sign.

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JSM FOODS PVT. LTD.

WZ/932, BASIE DARAPUR, 1ST FLOOR,
NEAR SENIOR SECONDARY SCHOOL, NEW DELHI-110015

A. CONSENT LETTER/ UNDERTAKING/ CERTIFICATE

FROM THE APPLICANT

01 The Modified Mining Scheme in respect of "MandoliGhaggarWest Block/YNR B-4"sand mine over an area of25.56 Hect., near village MandoliGhaggarwest, Tehsil Jagadhri,DistrictYamunanagar, State Haryana, under Rule 70(1) Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 & 23 of MCDR 2017 has been prepared by Qualified Person Kireet Acharya. This is to request the Director, Department of Mines and Geology Haryana, to make any further correspondence regarding any correction of the Mining Plan/Scheme of Mining with the said Qualified person at his address below :-

Sh. Kireet Acharya
70/30 Patel Marg,Mansarovar,
Jaipur 202020 (Rajasthan),
Mobile No. 9414163053
Email – acharyak12@gmail.com

We hereby undertake that all modifications / updating as made in the said Mining Plan/Scheme of Mining by the said recognized person be deemed to have been made with our knowledge and consent and shall be acceptable on us and binding in all respects.

02 It is certified that the CCOM Circular No-2/2010 will be implemented and complied with when an authorized agency is approved by the State Government.

03 It is certified that the Progressive Mine Closure plan of "MandoliGhaggarWest" Block/YNR B-4" Boulder, Gravel and Sand mine near villageMandoliGhaggarWest over an area of 25.56 Ha. complies with all statutory rules, Regulations, Orders made by the Central or State Government, Statutory organization, Court etc which have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities. The information furnished in the Progressive Mine Closure plan is true and correct to the best of our knowledge and records.

04 "The provisions of Mines Act, Rules and Regulations made there under have been observed in the Modified Mining Scheme over an area of 25.56 hectare , District Yamunanagar, State Haryana belonging to M/s. JSM Foods Pvt. Ltd.and where specific permissions are required, the applicant will approach the D.G.M.S. Further, standards prescribed by D.G.M.S. in respect of miners' Health will be strictly implemented".

For JSM FOODS PVT. LTD.

Place: ----------

Date----------

For M/s. JSM Foods Pvt. Ltd.

APPROVED
R. S. Thakran
MC

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आयकर विभाग
INCOME TAX DEPARTMENT

भारत सरकार
GOVT. OF INDIA

स्थायी लेखा संख्या कार्ड
Permanent Account Number Card



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हस्ताक्षर/ Signature



18082017

APPROVED
R. S. Thakran

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Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

Registered
From

The Director General,
Mines & Geology Department, Haryana
30 Bays building, Sector-17,
Chandigarh.

To

JSM Foods Private Limited,
W Z/ 932, Basie Darapur, 1st Floor,
Near Senior Secondary School,
New Delhi-110015.

Memo No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/3918
Dated Chandigarh, the 19.06.2015

Subject: **Acceptance of the highest bid/ in respect of the Sand minor mineral mines of "Mandoli Ghaggar West Block/YNR B 4" having Tentative Area of 25.56 hectares in the district Yamuna Nagar, offered in e-auction held on 10.06.2015 and 11.06.2015 and issue of Letter of Intent (LoI) – regarding.**

You participated in the in the e- auction held on 10.06.2015 and 11.06.2015 on the State Government web portal https://haryanaeprocurement.gov.in after accepting the terms and conditions of the auction notice DMG/HY/e Auction/YNR/2015/2150 dated 27.04.2015 and Corrigendum DMG/HY/e-Auction/YNR/Corr./2015/3358 dated 19.05.2015 in order to obtain mining contracts of minor mineral mines of the district Yamuna Nagar. You offered the highest bid of Rs. 04,20,50,000/- [Rs. Four crore twenty lakh fifty thousand only] per annum, against the Reserve Price of Rs. 04,20,00,000/- per annum, for obtaining the Mining Contract of Minor Mineral Mines namely 'Mandoli Ghaggar West Block/YNR B 4' for extraction of Sand having tentative area of 25.56 hectares. The details of the khasra numbers of the tentative area under above said Mining Block is attached as Annexure 'A'.

2. You are hereby informed that the State Government has accepted the highest bid of Rs. 04,20,50,000/- [Rs. Four crore twenty lakh fifty thousand only] offered by you in respect of the above said minor mineral mines of 'Mandoli Ghaggar West Block/YNR B 4' under the provisions of the Haryana Minor Mineral Concession, Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules-2012 (State Rules). Accordingly, you have become the successful bidder in respect of Mandoli Ghaggar West Block/YNR B 4 of the district Yamuna Nagar.

3. The State Government having accepted the aforementioned highest bid offered by you, the Department is pleased to issue this letter of Intent (LoI) in your favour in respect of the Mining Block/area namely 'Mandoli Ghaggar West Block/YNR B 4' subject to the following terms and conditions:

APPROVED
R. S. Thakur

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

(i) The period of contract shall be **07 years** and the same shall commence with effect from the date of grant of environmental clearance by competent authority or on expiry of a period of 12 months from the date of this communication of acceptance of highest bid/ issuance of **"Letter of Intent"**, whichever is earlier.

(ii) You may note that the detail of the area of the mining blocks is tentative and was notified "on as is where is basis" **(refer condition no. 4 of the notice)**. In case of any inadvertent mistake, if any, the same would be rectified/ corrected before execution of the agreement **(refer condition no. 3 of the notice)**;

(iii) No request regarding reduction in bid amount on account of reduction in land/area of the Mining Block, including due to change in description of khasra numbers/location etc. at any stage will be entertained on any ground including loss/reduction of area for mining on account of compliance of applicable laws/restrictions. Needless to state that this also includes the changes, if any, as per condition no. 3 of auction notice.

(iv) The amount of the highest successful bid i.e. **Rs. 04,20,50,000/-** [Rs. Four crore twenty lakh fifty thousand only] per annum shall be the "Annual Contract Money" payable by you as the contractor in the manner prescribed in the contract agreement to be executed on form MC-1 appended to State Rules;

(v) The above said annual contract money shall be increased at the rate of 25% on completion of each block of three years. Accordingly, the year-wise amount of the annual contract money shall be as per details given below:

Sr. No.	Year of the Contract Period	Annual contract Money
1	First Year	Rs. 04,20,50,000 /-
2	Second Year	Rs. 04,20,50,000 /-
3	Third Year	Rs. 04,20,50,000 /-
4	Fourth Year	Rs. 05,25,62,500/-
5	Fifth Year	Rs. 05,25,62,500/-
6	Sixth Year	Rs. 05,25,62,500/-
7	Seventh Year	Rs. 06,57,03,125/-

(vi) As per the terms and conditions of the grant, you are liable to deposit **Rs. 01,05,12,500/-** i.e. equal to 25% of the annual bid amount as "security deposit" out of which you have already deposited an amount of **Rs. 42,05,000/-** (Rs. Forty two lakh five thousand only) i.e. equal to 10% of the annual bid amount as 'initial bid security' after the conclusion of e-auction. The balance amount of **Rs. 63,07,500/-** of the bid security i.e. 15% of the annual bid amount alongwith one month's advance contract money shall be deposited before commencement of the mining operations or before expiry of the period of 12 months, whichever is earlier;

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

(vii) You shall execute an Agreement Deed in Form MC-1 appended to the Haryana Minor Mineral Concession, Stocking, Transportation of Mineral & Prevention of Illegal Mining Rules-2012 (the State Rules 2012) within a period of 90 days from the date of issuance of this communication/ grant of LoI;

(viii) It may be pointed out that as per existing applicable rates the contract agreement had to be executed on Non Judicial Stamp papers worth Rs. 14,98,100/- (Rs. Fourteen lakh ninety eight thousand one hundred only). However, you are aware that M/s Om Minerals, one of the LoI holders (who participated in the auctions held in December 2013) has filed a CWP No.7991 of 2014, before the Hon'ble Punjab & Haryana High Court. Further a few other similarly situated LoI holders have also filed separate CWP's before the Hon'ble Punjab and Haryana High Court challenging demand/ levy of Stamp Duty on execution of 'Contract Agreement'. The said matter is still pending for adjudication. Accordingly, the present auction was conducted subject to outcome of said cases. Therefore, the charging of stamp duty for the execution of contract agreement shall be as per final outcome of the said CWP's.

(ix) The Contract Agreement would also be required to be got Registered on payment of the applicable Registration fee;

(x) In case you fail to execute the Agreement Deed within the prescribed period of 90 days, this LoI shall be deemed to have been revoked and the amount of initial bid security deposited at the time of auction shall be forfeited. Further, the balance amount of 15% towards the bid security, amounting to Rs. 63,07,500/-being the 15% of the annual bid amount, shall be recovered as arrears of land revenue and, you, as the LoI holder/ defaulter, shall be debarred from participation in any future auctions for a period of 5 years;

(xi) You shall also furnish a solvent surety for a sum equal to the amount of the annual bid for execution of the Agreement. In case the surety offered by the contractor(s) during the subsistence of the contract is not found solvent, the contractor(s) shall offer another solvent surety and a supplementary deed shall be executed to this effect;

(xii) After execution of Agreement, either before commencement of the mining operation or before expiry of the period of 12 months from the date of issuance of this LoI, whichever is earlier, in case of failure to deposit the balance 15% amount towards security [as required under clause (v) above] the acceptance of bid/issuance of LoI/execution of agreement shall be deemed to have been revoked and 10% amount

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deposited towards as initial bid security at the time of auction shall stand forfeited. Further, un-paid 15% amount towards security shall be recovered as arrears of land revenue and you shall debarred from participation in any subsequent bids for a period of 5 years;

(xiii) You shall be liable to deposit the contract money in advance at monthly intervals as per provisions of Contract Agreement i.e. from the date of commencement of the contract Agreement;

(xiv) You shall also deposit/ pay an additional amount equal to 10% of the due contract money along with the monthly installments towards the 'Mines and Minerals Development, Restoration and Rehabilitation Fund'.

(xv) You shall also be liable to pay advance income tax as per provisions of Section 206(c) of income tax act in addition to contract money, payable as per terms and conditions of contract agreement.

(xvi) On enhancement of the contract money with the expiry of every three years period, you shall deposit the balance amount of security so as to upscale the security amount equal to 25% of the revised annual contract money as applicable for one year with respect to the next block of three years. No interest, whatsoever, shall be payable on the security amount deposited under the prescribed security head of the government.

(xvii) You shall prepare a Mining Plan along with the Mine Closure Plan (Progressive & Final) as per chapter 10 of the State Rules for the "Mining Block" and shall not commence mining operations in any area except in accordance with such Mining Plan duly approved by an officer authorised by the Director, mines & Geology, in this behalf.

(xviii) Further, the actual mining will be allowed to be commenced only after prior Environmental Clearance is obtained by you as the LoI holder/mining contractor for the Mining Block from the Competent Authority as permitted by the competent Authority required under EIA notification dated 14/9/2006, as amended from time to time by the MoE&F, GoI and guidelines/ circulars issued in this behalf.

(xix) The Mining contractor to whom mining rights have been granted through this contract would also be liable to pay the following to the landowners to undertake mining operations:

(a) Annual rent in respect of the land area blocked under the concession but not being operated, and

(b) Rent plus compensation in respect of the area used for actual mining operations.

(xx) The amount of annual rent and the compensation shall be settled mutually between the landowner and the mining contractor. In case of non-settlement of the rent and compensation, the same shall be decided by the District Collector concerned in accordance with the provisions contained in Chapter 9 of the "Haryana Minor Mineral Concession, Stocking, and Transportation of Minerals and Prevention of Illegal Mining Rules, 2012";

(xxi) The total mineral excavated and stacked by the concession holder within the area granted on mining contract shall not exceed two times of the average monthly production as per approved Mining Plan at any point of time;

(xxii) The Mining Contractor shall not stock any mineral outside the concession area granted on mining contract, without obtaining a valid license as per provisions contained in Chapter 14 of the State Rules;

(xxiii) The contractor shall not carry out any mining operations in any reserved/ protected forest or any area prohibited by any law in force in India, or prohibited by any authority without obtaining prior permission in writing from such authority or officer authorized in this behalf. In case of refusal of permission by such authority or officer authorized in this behalf, contractor(s) shall not be entitled to claim any relief in payment of contract money on this account;

(xxiv) Following are the general/ special conditions applicable for excavation of minor mineral(s) from river beds in order to ensure safety of river-beds, structures and the adjoining areas:

(a) No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge structure on up-stream side and ten times the span of such bridge structure on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;

(b) There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorised by him;

(c) The maximum depth of mining in the river-bed shall not exceed three meters from the un-mined bed level at any point in time with proper bench formation;

(d) Mining shall be restricted within the central 3/4th width of the river/ rivulet;

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(e) No mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 meters in case of Tangri, Markanda and Ghaggar and 100 meters on either side of all other rivers/ rivulets. (This clause is applicable for mining outside river bed area);

(f) Any other condition(s), as may be required by the Irrigation Department of the state from time to time for river-bed mining in consultation with the Mines & Geology Department, may be made applicable to the mining operations in river-beds.

(xxv) A safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf. Further, the depth of excavation of mineral shall not exceed nine meters (9m) at any point of time.(This clause is applicable for mining outside river bed area);

(xxvi) The contractor shall not undertake any mining operations in the area granted on mining contract without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws;

(xxvii) The contractor shall be under obligation to carry out mining in accordance with all other provisions as applicable under the Mines Act, 1952, Mines and Minerals (Development and Regulation) Act, 1957, Indian Explosives Act, 1884, Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986 and the rules made thereunder, Wild Life (Protection) Act, 1972, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981;

4. Accordingly, for the time being you are advised to submit the Draft Contract Agreement on Form MC-I (in Five copies) appended to the State Rules-2012, on plain papers along with other requisite documents including a solvent surety(s) for a sum equal to the amount of the annual bid for execution of the agreement, within a period of 90 days from the date of issue of this bid acceptance letter and the LoI. You should also furnish an affidavit to the effect that you will immediately deposit the requisite stamp duty as per out of the related Court cases as stated under para 3(vii) above.

5. Please note that one Sh. Rajbir Singh had filed a CWP bearing No. 27700 of 2013 before the Hon'ble Punjab & Haryana High Court challenging (i) commencement of contract period after 12 months from the date of acceptance of highest bid/issuance of "Letter of Intent" or from date of obtaining of environmental clearance from competent authority

Director General, Mines and Geology Department Haryana
30-Bays Building, Sector-17, Chandigarh.

which ever is earlier and (ii) payment of rent and compensation to surface right holder/land owners from where mining operations are to be carried out. Therefore, commencement of period of contract & payment of compensation to land owners shall be as per final outcome of court order in said CWP. Accordingly, the auction was conducted subject to outcome of above case, hence this acceptance /LoI is being issued subject to the outcome in CWP No. 27700 of 2013 pending before Hon'ble Punjab & Haryana High Court.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/ Dated. 19.06.2015

A copy is forwarded to the following for information and necessary action please:-

1. The Chairman, Haryana State Pollution Control Board, Panchkula.
2. The Deputy Commissioner, Yamuna Nagar.
3. The Mining Officer, Mines & Geology Department, Yamuna Nagar.

Mining Officer,
for Director General Mines & Geology, Haryana.

Endst.No. DMG/HY/Cont/M. G. West Block/YNR B 4/2015/ Dated: 19.06.2015

A copy is forwarded to Sh. Bharat Wadhwa S/o Sh. Radhey Shyam, R/o House No. 676, Sector-13, Urban Estate, Karnal, the authorized person/Director who gave highest bid on behalf of 'JSM Foods Private Limited' for information and necessary action please.

Mining Officer,
for Director General Mines & Geology, Haryana.

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Sr. No.	Name of Block/ Block No.	Name of the Village	Details of Khasra No/Killa No	Area (in hect.)	Reserve Price (in Crores per annum)	Period
			21, 22, 23 8//1, 2, 3, 9, 10, 11, 12, 19, 20, 21 6//1, 10, 11 9//1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25 17//3, 4, 5, 6, 7, 8, 14, 15, 16, 17, 25 18//1, 2, 9, 10, 11, 12, 13, 17, 18, 19/2, 20/1, 20/2, 21, 22, 23, 24, 25 20//1/1, 1/2, 2, 3, 4, 7, 8			
2	Bailgarh South Block/ YNR B2	Bailgarh	54//2, 9/1, 9/2, 11, 12, 19, 20, 21 53//16, 25 56//5, 6, 7, 14, 15, 16, 17, 23, 24, 25 55//1, 10, 11, 20 72//3, 4/1/1, 4/1/2, 4/2, 5, 7, 8, 13, 14, 18, 19, 22, 23 73//1, 2, 9, 10, 11, 12/1, 12/2, 20, 21 74//15, 16/1/1, 16/1/2, 16/2, 17, 24, 25 85//3, 4/1, 4/2, 5, 7, 8, 9, 11, 12/1,12/2, 13, 14, 18, 19,20,21, 22 84//25 86//1/1, 1/2, 2, 10 87//4, 5, 6/1, 6/2, 7, 13, 14, 15, 17, 18, 22/1, 22/2, 23/1, 23/2 93//2, 10, 11	28.00	4.60	9
3	Mandoli Ghaggar East Block/ YNR B3	Mandoli Ghaggar	52//2, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 18, 23, 24, 25 53//1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24 58//1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 18, 19, 20 59//3, 4, 5, 6, 7, 8, 13, 14, 15, 16, 17,18	20.18	3.30	10
4	Mandoli Ghaggar West Block/ YNR B4	Mandoli Ghaggar	55//5, 6, 15, 16/1, 16/2, 25 54//1 to 25 56//1, 2, 9, 10, 11,20 57//1 to 4, 7 to 13 58//5, 6, 15	25.56	4.20	7
5	Kanalsi Block/ YNR B5	Kanalsi	41//16, 24, 25 42//16 to 19, 20, 21,22 to25 43//16, 17 to 24, 25 44//1, 10, 11, 12, 19, 20, 21, 22 45//1, 2, 3 to 8, 9, 10 to11, 12, 13 to 18, 19, 20 to 21, 22, 23 to 24, 25//1, 25/2 46//1, 2, 3, 4, 5, 6, 7, 8, 9 to 17, 18, 19, 20, 21, 24, 25 47//3,4,5,6,7//1,7/2,8,9 min,11 min,12 to 25 48//16 min, 24 min, 25 52//4 min, 5, 6, 7, 15	44.14	7.25	9

Memorandum & Articles

of

Association

of

JSM FOODS PRIVATE LIMITED



(THE COMPANIES ACT, 1956)

(COMPANY LIMITED BY SHARES)

MEMORANDUM OF ASSOCIATION

OF

JSM FOODS PRIVATE LIMITED

I. The Name of the Company is JSM FOODS PRIVATE LIMITED.

II. The Registered Office of the Company will be situated in the National Capital Territory of Delhi.

III. The objects for which the Company is established are :-

(A) THE MAIN OBJECTS TO BE PURSUED BY THE COMPANY ON ITS INCORPORATION ARE:-

1. To carry on the business of manufacturing, trading, import and exports of all types of foods products, healthcare products, ingredients and additives, fast moving consumer goods and other related products.

2. To carry on in India or elsewhere the business to manufacture, produce, import, export, buy, sell, process, prepare, crush, refine, blend, filter, deodorize, disintegrate, clean, recover, amalgamate, mix, convert, purify, commercialize, grade, compound, disinfect, derive, excavate, explore & extract all kinds of vegetable oils, crude oils, refined oils, bleached and deodorized oils, hydrogenated oils, rice bran oils, deoiled cakes, poultry feeds, vegetable ghee, its derivatives, by-products, substances, ingredients, solvent extractions & residues from all types of oil seeds such as cotton seeds, soyabeans, ground nuts, castors, linseeds, sunflower, coconut, rapeseed, almond, sesamam, mustard, sea seed, grapeseed, mahuha, sal, ricebran ghani, etc., and to act as agent, broker, adatia, ware houser, stockist, distributor, marketing man, job worker, importer, exporter, buyer, seller, franchiser, C & F agent, concessionaire, transporter, supplier, consigner or dealer in all types of oils, oilseeds, deoiled cakes, organise solvents, solvent extracted products, gums, wax, sludge, oleaginous & saponacious substances, soap stock, chemical furfural & its derivatives, husks and other allied materials of whatsoever nature.

3. To carry on the business of manufacturing, trading, buying, selling, ginning, pressing, dealing in all types of Fast Moving Consumer Goods (FMCG) like oil, dhoop agarbatties, tobacco, cotton, kapas, ginning of cotton and all machines used for that purpose.

4. To carry on the business to manufacture, produce, process, convert, develop, distribute, derive, discover, grade, handle, manipulate, prepare, promote, supply, import, export, buy, sell and to act as agent, broker, concessionaires, consultants, collabrotor, job worker or otherwise to deal in all descriptions characteristics and application of Pesticides, insecticides, fungicides, organic, inorganic, farming, horticultural, agricultural, biological, pharmaceuticals and other chemicals, drugs, formulating, catalysts, reagents, mixtures, concentrates, lumps, powder, granuls, solutions, derivatives, fluids.

M921b874

JSM FOODS PVT. LTD.

Director

(B) **THE OBJECTS INCIDENTAL OR ANCILLARY TO THE ATTAINMENT OF THE MAIN OBJECTS ARE :-**

1. To acquire by purchase, lease, exchange or otherwise any movable or immovable property and any rights or privileges which the Company may deem necessary or convenient for the purpose of its main business.

2. To enter into partnership or into any arrangement for sharing profits, union of interest, joint venture, reciprocal concession or co-operation with persons or companies carrying on or engaged in the main business or transaction of this Company.

3. To import, buy, exchange, alter, improve and manipulate in all kinds of plants, machinery, apparatus, tools and things necessary or convenient for carrying on the main business of the Company.

4. To vest any movable or immovable property, rights or interests required by or received or belonging to the Company in any person or company on behalf of or for the benefit of the Company and with or without any declared trust in favour of the Company.

5. To purchase or otherwise acquire, build, carry out, equip, maintain, alter, improve, develop, manage, work, control and superintend any plants, warehouse, sheds, offices, shops, stores, buildings, machinery, apparatus, labour lines, and houses, warehouses, and such other works and conveniences necessary for carrying on the main business of the Company.

6. To undertake or promote scientific research relating to the main business or class of business of the Company.

7. To acquire and takeover the whole or any part of the business, goodwill, trade-marks properties and liabilities of any person or persons, firm, companies or undertakings either existing or new, engaged in or carrying on or proposing to carry on business this Company is authorised to carry on, possession of any property or rights suitable for the purpose of the Company and to pay for the same either in cash or in shares or partly in cash and partly in shares or otherwise.

8. To negotiate and enter into agreements and contracts with Indian and foreign individuals, companies, corporations and such other organisations for technical, financial or any other such assistance for carrying out all or any the main objects of the Company or for the purpose of activity research and development of manufacturing projects on the basis of know-how, financial participation or technical collaboration and acquire necessary formulas and patent rights for furthering the main objects of the Company.

9. Subject to Sections 391 to 394, 394A of the Act, to amalgamate with any other company of which all or any of their objects companies having similar to the objects of the Company in any manner whether with or without the liquidation.

10. Subject to any law for the time being in force, to undertake or take part in the formation, supervision or control of the business or operations of any person, firm, body corporate, association undertaking carrying on the main business of the Company.

11. To apply for, obtain, purchase or otherwise acquire and prolong and renew any patents, patent-rights, brevets, inventions, processes, scientific technical or other assistance, manufacturing processes know-how and other information, designs, patterns, copyrights, trade-marks, licenses concessions and the like rights or benefits, conferring an exclusive or non-exclusive or limited or unlimited right of use thereof, which may seem capable of being used for or inconnection with the main objects of the Company or the acquisition or use of which may seem calculated directly or indirectly to benefit the Company on payment of any fee royalty or other consideration and to use, exercise or develop the same under or grant licenses in respect thereof or otherwise deal with same and to spend money in experimenting upon testing or improving any such patents, inventions, right or concessions.

12. To apply for and obtain any order under any Act or Legislature, charter, privilege concession, licence or authorisation of any Government, State or other Authority for enabling the Company to carry on any of its main objects into effect or for extending any of the powers of the Company or for effecting and modification of the constitution of the Company or for any other such purpose which may seem expedient and to oppose any proceedings or applications which may seem expedient or calculated directly or indirectly to prejudice the interest of the Company.

13. To enter into any arrangements with any Government or Authorities or any persons or companies that may seem conducive to the main objects of the Company or any of them and to obtain from any such Government, authority, person or company any rights, charters, contracts, licences and concessions which the Company may think desirable to obtain and to carry out, exercise and comply therewith.

14. To procure the Company to be registered or recognised in or under the laws of any place outside India and to do all act necessary for carrying on in any foreign country for the business or profession of the Company.

15. To draw, make, accept, discount, execute and issue bills of exchange, promissory notes bills of lading, warrants, debentures and such other negotiable or transferable instruments, of all types or securities and to open Bank Accounts of any type and to operate the same in the ordinary course of the Company.

16. To advance money either with or without security, and to such persons and upon such terms and conditions as the Company may deem fit and also to invest and deal with the money of the Company not immediately required, in or upon such investments and in such manner as, from time to time, may be determined, provided that the Company shall not carry on the business of banking as provided in the Banking Regulations Act, 1949.

17. Subject to section 58-A and 292, 293, 295 & 372A of the Act and the Regulations made thereunder and the Directions issued by the Reserve Bank of India, to receive money on deposit or loan and borrow or raise money in such manner and at such time or times as the Company thinks fit and in particular by the issue of debentures, debentures-stock, perpetual or otherwise and to secure the repayment of any money borrowed, raised or owing by mortgage, charge or lien upon all or any of the properties, or assets or revenues and profits of the Company both present and future, including its uncalled capital and also by a similar mortgage, charge or lien to secure and guarantee the performance by the Company or any other person or Company of any obligation undertaken by the Company or such other person or company to give the lenders the power to sale and such other powers as may seem expedient and purchase redeem or pay off any such securities.

18. To undertake and execute any trusts, the undertaking of which may seem to the Company desirable, either gratuitously or otherwise.

19. To establish, or promote or concur in establishing or promote any company for the purpose of acquiring all or any of the properties, rights and liabilities of the Company.

20. To sell, lease, mortgage, exchange, grant licenses and other rights improve, manage, develop and dispose of undertakings, investments, properties, assets and effects of the company or any part thereof for such consideration as may be expedient and in particular for any shares, stocks, debentures or other securities of any other such company having main objects altogether or in part similar to those of the Company.

21. Subject to the Provisions of Section 100 to 105 of the Act, to distribute among the members in specie or otherwise any property of the Company or any proceeds of sale or disposal of any property of the Company in the event of winding up.

22. To distribute as dividend or bonus among the member or to place to reserve or otherwise to apply, as the Company may, from time to time, determine any money received by way of premium on debentures issued at a premium by the Company and any money received in respect of forefeited shares, money arising from the sale by the Company of forefeited shares subject to the provisions of Sec. 78 of the Companies Act, 1956.

23. To employ agents or experts to investigate and examine into the conditions, prospects value, character and circumstances of any business concerns and undertakings and generally of any assets properties or rights which the Company purpose to acquire.

24. To accept gifts, bequests, devisers or donations of any movable or immovable property or any right or interests therein from members or others.

25. To create any reserve fund, sinking fund, insurance fund or any other such special funds whether for depreciation, repairing, improving, research, extending or maintaining any of the properties of the Company or for any other such purpose conducive to the interest of the Company.

26. Subject to the provisions of Section 292, 293, 293-A & 293-B of the Companies Act, 1956 to subscribe contribute, gift or donate any money, rights or assets for any national educational, religious, charitable, scientific, public, general or usual objects or to make gifts or donations of money or such other assets to any institutions, clubs, societies, associations, trusts, scientific research associations, funds, universities, college or any individual, body of individuals or bodies corporate.

27. To establish and maintain or procure the establishment and maintenance of any contributory or non-contributory pension or superannuation, provident or gratuity funds for the benefit of and give of procure the giving of the donations, gratuities pensions, allowances, bonuses or emoluments of any persons who are or were at any time in the employment or service of the company or any company which is a subsidiary of the Company or is allied to or associated with the Company or with any such subsidiary company or who are or were at any time Directors or officers of the Company or any other company as aforesaid and the wives, widows, families and dependents of any such persons and also to establish and subsidise and subscribe to any institutions, associations, club or funds calculated to be for the benefit of or advance aforesaid and make payments to or towards the insurance of any such persons as aforesaid and to do any of the matters aforesaid, either alone or in conjunction with any such other company as aforesaid.

28. To establish, for any of the main objects of the Company, branches or to establish any firm or firms at places in or outside India as the Company may deem expedient.

29. To pay for any property or rights acquired by or for any services rendered to the Company and in particular to remunerate any person, firm or company introducing business to the company either in cash or fully or partly-paid up shares with or without preferred or deferred rights in respect of dividend or repayment of capital or otherwise or by any securities which the company has power to issue or by the grant of any rights or options or partly in one mode and partly in another and generally on such terms as the company may determine, subject to the provision of section 314 of the act.

30. To pay out of the funds of the company all costs, charges and expenses of and incidental to the formation and registration of the company and any company promoted by the company and also all costs, charges, duties, impositions and expenses of and incidental to the acquisition by the company of any property or assets.

31. To send out to foreign countries, its director, employees or any other person or persons for investigation possibilities of main business or trade procuring and buying any machinery or establishing trade and business connections or for promoting the interests of the company and to pay all expenses incurred in the connection.

32. To compensate for loss of office of any Managing Director or Directors or other officers of the Company within the limitations prescribed under the Companies Act, 1956 or such other statute or rule having the force of law and to make payments to any person whose office of employment or duties may be determined by virtue of any transaction in which the Company is engaged.

33. To agree to refer to arbitration any dispute, present or future between the Company and any other company, firm, individual or any other body and to submit the same to arbitration in India or abroad either in accordance with Indian or any foreign system of law.

34. To appoint agents, sub-agents, dealers, managers canvassers, sales, representatives or salesmen for transacting all or any kind of the main business of which this Company is authorised to carry on and to constitute agencies of the Company in India or in any other country and establish depots and agencies in different parts of the world.

(C) THE OTHER OBJECTS ARE :-

1. To carry on the business as manufacturers, traders, importers and exporters of and dealers in aluminium utensils, steel utensils, and all other such types of utensils and kitchen requisities of all types.

2. To act as business consultant, give advice, to engage in dissemination of information in all aspects of business, organisation and industry in India and to advise upon the means and methods for extending and developing systems or processes relating to production, storage, distribution, marketing, and securing of orders for sale of good in India and abroad and/or relating to the rendering of services.

3. To carry on the business of running motor lorries, motor taxies, mini buses and conveyances of all kinds and to transport passengers, and goods and to do the business of common carriers.

4. To carry on business by whole sale or retail, or otherwise of interior decorators and furnishers, upholsters, and dealers in and hirers repairs, cleaners, stores and warehouses of furniture, carpets, linoleums furnishing fabrics and such other floor coverings, household utensils, china and glass goods, fittings, curtains and such other household requisites of all types.

5. To carry on the business as brewers, distillers, bottlers, canners preservers, coopers dehydrators, motellers and merchants of and dealers in fruits, herbs, vegetables, plants and liquors by products therefrom, whether intoxicating or not, tonics, vitamin, beverages, flavoured drinks, nectar, punch aerated waters and drinks whether soft or otherwise.

6. To carry on the business of tobacconists in all its branches and to sell, make-up and manufacture tobacco, cigars, cigarettes and snuff.

7. To act as cargo agents, travel agents, insurance agents, ship brokers, charter party contractors, ship agents, packing forwarding and clearing agent, salvors, wreck removers wreck raisers, auctioneers, inspectors and observers of quality control custom-house agents, commission agents and general sales agents for any of the air lines, steam-ship companies, railway and transport companies or any such person.

R. S. Thakran

8. To carry on the business of cold storage of fruits, vegetable seeds, fish, meat, agricultural products, milk, dairy products and such other perishable items of all types.

9. To carry on the business of production, distribution or exhibition of films and motion pictures and the running of theatres, cinemas, studios and cinematographic shows and exhibitions.

10. To trade, deal in and undertake manufacturing, of bricks, tiles, pipes, cement lime and building construction requisites and to carry on all or any of the business of builders, contractors, architects, decorators, furnishers and to acquire, hold, mortgage lease, take on lease, exchange or otherwise deal in lands, buildings, house, flats, bungalows, shops, here-dita-ments of any tenure or freehold for residential or businesses purposes.

11. To cultivate, grow, produce or deal in any agricultural, vegetable or fruit products and to carry on all or any of the businesses of farmers, dairyman, milk contractors, dairy farmers, millers, purveyors and vendors of milk and milk products, condensed milk and powdered milk, cream, cheese, butter, poultry, fruits, vegetables, cash crops and provisions of all kinds.

12. to cultivate, tea, coffee, cinchona and any other such similar product and to carry on the business of planters in all its branches, to carry on and do the business of cultivators, winners and buyers of every kind of vegetable mineral or such other product of soil, dispose of and deal in any such produce, either in its prepared, manufactured or raw state and either by wholesale or retail.

13. To carry on the business of manufacturers of or dealers in pulp and paper of all kinds and articles made from paper and pulp such as card boards and wall and ceiling papers and packaging cartons and newspapers and newsprints.

14. To carry on the business of purchase and sale of petroleum products, to act as dealers and distributors for petroleum companies, to run service stations for the repair and servicing of automobiles and to manufacture or deal in fuel oils, cutting oils and greases.

15. To carry on the business of iron-founders, makers of scientific, industrial and surgical instruments, mechanical engineers, and manufacturers of agricultural implements and other machinery, steel castings and forgings and malleable iron and steel castings, tools makers, brass founders, metal workers, boiler-makers, mill wrights, machinists, iron and steel converters, smiths, builders, painters, metallurgists, electrical engineers, water supply engineers, gas makers, farmers, printers, carriers and merchants and to buy, sell, manufacture, repair, convert, alter, let on hire and deal in machinery, implements and rolling stock.

16. To carry on the business of hoteliers, motellers, restaurant owners, sweet-meat merchants, refreshments, room proprietors, refreshment contractors and own run garages, shops, stores, godowns, bars, refreshment rooms, cafetarias, discotheques, restaurants and places for sale, custody, bailment, deposit or protection of the valuable goods and commodities.

17. To carry on the business of manufacturing and dealing, in assembling, buying, selling, reselling, exchanging, altering repairing, importing, exporting, hiring, letting, on hire, distributing, or dealing in motor cars, motor cycles, scooters, motor buses, motor lorries, motor vans, trucks, locomotive engines, trains and, all other road and rail conveyances, ships, boats, barges, launches, steamers and other vessels, aeroplanes, aeroengines flying boats, hydroplanes, and aircrafts and aerial conveyances of every description and kind for transport or conveyance of passengers, merchandise or goods of description, whether propelled or moved or assisted by means of petrol, spirit, electricity, steam, oil vapour, gas, petroleum, mechanical, animal or any other such motive power of all types.

18. To carry on the business manufacturing, dying, colouring, spinning, weaving, buying selling, importing, exporting or otherwise dealing in all fabrics and other fibrous substances and preparations and manufacturers of and dealers in cotton, silk, woollen linen, hemp jute, rayon nylon, artificial silk and such other yarn and all kinds of woven synthetic blended textiles manufactured from such yarn.

19. To carry on the business manufacturers of and dealers in industrial machinery, bearings, speed reduction units, pumps, machine tools, agricutural machinery and earth-moving machinery including road rollers, bull-dozers, dumpers, scrapers loaders shovels and drag lines and light engineering, goods such as cycle and sowing machines.

20. To carry on the business of manufacturers of or dealers in ferrous or non-ferrous metals iron & steel aluminium, brass, tin, nickel, special, steel and their products.

21. To carry on the business of manufacturers, stockists, importers and exporters of and dealers, in engineering drawing sets, builders of requisites steel rules, measuring taps, cutting tools, hand tools, precision measuring tools, machine tools, garage tools, hardware tools, instruments, apparatus and such allied machinery, plant, equipment and appliances of all types.

22. To carry on the business as manufacturers, stockists, importers and exporters of and dealers in bolts, nuts, nails, hooks, and such other hardware items of all types.

23. To carry on business as manufacturers, stockists, importers, and exporters of and dealers in forging, castings, stampings, of all metals, machinery parts, moulds, press tools, jigs, fixtures and compression moulding, steel products and automobile parts.

24. To carry on business as manufacturers stockists, importers exporters and repairers of and dealers in dynamos, motors, armatures, magnets, batteries, conductors, insulators, transformers, convertors, switch-boards, cookers, engineers presses and insulating material.

APPROVED
R. S. Thakran
Mr.

25. To carry on business as manufacturers, stockists, importers and exporters of and dealers in weareable and unwearable fabrics, high density polythelene and polypropylene, woven snacks and trapaulins.

26. To carry on business as manufacturers of and dealers in and as stockists, importers, and exporters of packing material, jointing and belting materials, asbestos materials and fibres, insulation material and welding fluxes, cartons, containers, boxes and cases made of paper, boards, wood glass, plastic, pulp, cellulose films, polythene, rubber, metals, metal foils gelatine, tin flexible, treated, and laminated, or other materials.

27. To carry on business as manufacturers of and dealers in as stockists, importers and exporters of bottles, jars, fibrite boxes corrugated containers aluminium foils of all types, wooden drums, packing cases, rods, wires, ropes, strips, conductors equipment required for generation, distribution and transmission of electric energy, cables, motors, fans, lamps, batteries and accumulators.

28. To sell, breed, import, export, improve, prepare, deal and trade in cattle, bird, poultry, game, live and dead-stock of every description, eggs, pork-pipes sausages, pickles spices, sauces, jams, jelly, custard, prawn, potted meats, macaroni, spaghetti table delicacies, bread, biscuit, wine biscuits and such other farinaceous goods and products cocoa, confectionery, cakes and buns.

29. To carry on the traders and business of meal manufacturers, dealers in consumable stores and provisions of all kinds foods stuffs, grains flour, seeds folder, cane oils, corn, wheat, wheat products, stores, vegetable oils, ghee and vanaspati products.

30. To set up a tanners and to carry on the business as manufacturers of and dealers in and importers and exporters of leather and raw hides and skins.

31. To carry on the business as manufacturers of and dealers in or as stockists, importers, and exporters of plastics, synthetic resins, natural resins, polymer products and chemicals required for the manufacture, processing and fabrication of plastics and similar other such products, tubes pipes, sheets films whether moulded extruded casted, formed or foamed.

32. To purchase, hold and acquire mines, mining leases, mining rights, mining claims and metalliferrous lands and explore, work, exercise, develop and turn to account all sorts of major and major minor minerals working of deposits of all kinds of minerals and subsoil materials and to crush, win, set, quarry, smelt, calcine, refine, dress, amalgamate, manipulate and prepare for market ores, metals, and mineral substances of all kinds and to carry on metallurgical operations in all its branches and to prepare, process, manufacture, assemble, fabricate, cast fit, press machine, treat, weld, harden, plate, temper anneal any kind of metals and consequential products.

33. To produce, manufacture, trade, deal in all dispose of alkalies, dyes, chemicals, acids, gases, compounds, fertilisers, chemical, products of every nature and description, intermediates, derivatives, all types of floatation regents wetting agents, insecticides, fumigates, dyestuffs, catalyic agents, direct colours, basic colours pigments, drugs, biological, pharmaceuticals, sermus, vitamin products, hormones and products, derived from phosphate

mines, limestone quarries, bauxide mines, petroleum, natural gas and other natural deposits useful or suitable in the manufacture of chemicals and chemical products and to undertake the business of spraying of pesticides.

34. To manufacture, generate, produce, sell, dispose of and deal in industrial gases domestic gases for heating and lighting gas, system, heat light or any other such motive power obtained by incinerating burning forest refuse, wood and plants.

35. To manufacture, buy, sell, import, export, alter, improve, manipulate, prepare for market, exchange, install, repair, service, let on hire and deal in all kinds of surgicals X-ray units, X-ray equipments, telecommunication machines, business machines, intercoms, teleprinters, dictating and recording machines, broadcasting apparatuses, loud-speakers, radios, auto-radio reverberators, tape-players, cassette tapes, headphones, stereo-complex speakers, radios control equipments, cameras, binoculars, microscopes, projectors, telescopes, television sets, refrigerators, coolers, radars, computers and spare parts.

36. To procure of develop and supply technical know-how for the manufacture or processing the installation or erection of machinery or plant in the working or mines, oil wells or other sources of mineral deposits or in carrying out any operations relating to agriculture, animal husbandry, dairy or poultry-farming, forestry or fishery or rendering services in connection with the provision of such technical know-how.

37. To deal in foreign exchange, subject to approval of appropriate authorities.

38. To organise and carry on the business of advertisers, advertising agents, liputic by consultants and to organise propaganda and advertising campaigns by means of press advertisements, pamphlets, handbills, circulars, advertisement reels, posters, cinema slides or by any other such means of all types or through the means of radio television or any other such media of all types.

39. To undertake and execute, in India or any part of the world, turnkey projects for electrical installations, air-conditioning, refrigeration, heating, cooling, ventilation humidification sanitary, thermal and accoustic insulation work.

40. To carry on the business as manufacturers, traders, importers and exporters of and dealers, in all kinds of carpets and floor coverings, whether made of woollen, cotton, synthetic or such other fibres or fibrous materials of all types.

41. To carry on the business as traders, importers and exporters of and dealers, in cotton and jute, whether raw, semi-processed and all kinds of cotton and jute goods.

42. To carry on the business as shares and stocks brokers and to buy, sell and deal in all kind of shares stocks, securities, bonds, debentures, units and such other instruments of all types.

43. To carry on the business of public transporters and to pay all types of commercial vehicles such as Trucks, Tempos, and pick up vans for carrying goods or passengers anywhere in India.

44. To carry on the business as importers, export agents, distributors, stockists, contractors, suppliers, dealers of any kind and to act as manufactures, representatives, agents, brokers, commission agents and merchants of commodities, articles, products and merchants of any kind or nature.

45. To carry on the business of importers, exporters, dealers, traders, manufactures of traders, earthmoving equipments, cannel equipments, Fuel injection equipments, machine tools and such other allied products thereof.

46. To secure sound investment of foreign capital in Indian undertaking and enterprises and Indian capital in foreign undertaking and enterprises.

47. Subject to the approval of RBI under Reserve Bank of India Act, 1934, as amended by RBI (Amendment) Act, 1997, to carry on the business of leasing and hire purchase and to acquire to provide on lease or to be provided on hire purchase basis all types of industrial and offices, plant equipment, machinery, vehicles, buildings and real estate required for manufacturing, processing, transportation and trading business and such other commercial and service business related thereto.

48. Subject to the approval of RBI under Reserve Bank of India Act 1934, as amended by RBI (Amendment) Act, 1997, to Finance the industrial enterprises by way of lending and advancing money, machinery land, building, shed or such other things as may required by such industrial enterprises either with or without security and upon such terms and conditions as the Company may think fit and to guarantee or become securities for the performance of any agreement or contract entered into by industrial enterprises, with any financial institutions, banks or other parties for obtaining finance whether for its long terms capital, working capital, or for any deferred payment finance.

49. To undertake and transact all kinds of agency business and/or promote any business commercial or otherwise under sound principles and/or to act as distributors, agents, underwriters, brokers, estate agents, middleman, contract man, representation and indenting agent on commission, allowance, as may be deemed fit in all commodities, merchandise and such other allied articles/ lines of business.

50. To carry on the business of printing, publishing, multi-colour printing, plate making and to deal in printing ink, papers, printing machines and other printing materials.

51. To carry on the business of sale and purchase of industrial plots, Sheds, Factory building, constructions of commercial property, letting out of property, contractors for constructions of building, roads.

52. To invest, purchase, acquire, hold, underwrite, sell, exchange, deal in gifts, act as broker, sub-broker, receive or otherwise deal in shares, stocks, securities, deposits, units, real estates, debentures, debenture stock, bonds, trusts, instruments and all other type of securities and to render allied services, to act, arrange, manage and to provide all type of services as Managers to issue, advisors to issue underwriters, Registrar and transfer agents, portfolio Managers, financial consultants, brokers, factors, leasing, hire-purchase, installments, investments, commission agents, advertisers, stationers, printer, suppliers, convenciers, middlemen, consultants, repressntatives, indemnity and guarantee business to firms, association & joint ventures, promote companies and its allied activities to subscribe, purchase, take on lease or hire, or otherwise acquire membership of one or more stock exchange in India or abroad including OTCEI and to operate, run and manage the same.

53. To carry on the business of manufacturers, developers and to deal in computers, computer parts, hardware, software, internet, E-mail, website, fax, telex, telephones and other media of communication.

IV. The Liability of the members is Limited.

V. The Authorised Share Capital of the Company is Rs. 20,00,000/- (Rupees Twenty Lacs) divided into 2,00,000 (Two Lacs) Equity Shares of Rs.10/- (Rupees Ten) each.



13

We the several persons whose names and addresses are subscribed, are desirous of being formed into a Company in pursuance of this Memorandum of Association and we respectively agree to take the number of shares in the Capital of the Company set opposite to our respective names.

Sl. No.	Name, Description Occupation and address of each Subscriber	No. of Equity Shares taken by each Subscriber	Signature of Subscribers	Name, address, Description occupation and Signature of witness or witnesses
1.	BHARAT WADHWA S/o Mr.Radhey Sham R/o House No. 676, Sector- 13, U.E. Karnal Haryana India-132001 Occupation: Business	5000	Sd/-	I hereby witness the signatures of subscribers. Sd/- (DINESH KHURANA) FCA M. No. 97508 S/o Sh. Darshan Kumar Khurana 230, Sector-12, Part-II, Karnal-132001, Haryana
2.	RADHAY SHYAM WADHWA S/o Mr. Tau Ram Wadhwa R/o V.P.O. G. Rao Yamuna Nagar Haryana India-135001 Occupation: Business	5000	Sd/-	
	TOTAL	10,000		

Place : New Delhi Dated this 18th day of February 2011

(THE COMPANIES ACT, 1956)

(COMPANY LIMITED BY SHARES)

ARTICLES OF ASSOCIATION

OF

JSM FOODS PRIVATE LIMITED

PRELIMINARY

1. Subject as hereinafter provided the Regulations contained in Table 'A' in the First Schedule to the Companies Act, 1956 shall apply to the Company.

INTERPRETATION

2. (1) In these Regulations :-

   (a) "Company" means **JSM FOODS PRIVATE LIMITED.**

   (b) "Office" means the Registered Office of the Company.

   (c) "Act" means the Companies Act, 1956, and any statutory modification thereof.

   (d) "Seal" means the Common Seal of the Company.

   (e) "Directors" means the Directors of the Company and includes persons occupying the position of the Directors by whatever names called.

   (2) Unless the context otherwise requires words or expressions contained in these Articles shall be the same meaning as in the Act, or any statutory modification thereof in force at the date at which these Articles become binding on the Company.

PRIVATE COMPANY

3. The Company is a Private Company within the meaning of Section 3(1) (iii) and 2(35) of the Companies Act, 1956 and accordingly :-

   (a) The right to transfer shares in the Company is restricted in the manner and to the extent hereinafter appearing.



(b) The number of members of the Company (exclusive of persons who are in the employment of the Company, and persons who having been formerly in the employment of the Company, were members of the Company while in the employment and have continued to be members after the employment ceased) shall be limited to fifty; provided that for the purpose of this definition where two or more persons jointly hold one or more shares in the Company, they shall, be treated as a single member, and.

(c) No invitation shall be issued to the public or subscribe for any shares in or debentures of the Company.

(d) Prohibits any invitation or acceptance of deposits from persons other than its members, directors and relatives.

SHARE CAPITAL

4. (a) The Authorised Share Capital of the Company shall be such amounts and be divided into such shares as may, from time to time, be provided in Clause V of the Memorandum of Association with power to increase or reduce the capital in accordance with the Company's regulations and legislative provisions for the time being in force in that behalf with the powers to divide the share capital, whether original increased or decreased into several classes and attach thereto respectively such ordinary, preferential or special rights and conditions in such a manner as may for the time being be provided by the Regulations of the Company and allowed by law.

(b) The minimum paid up Capital of the Company shall be Rs. 1,00,000/- (Rupees One Lac).

5. The business of the Company may be commenced soon after the incorporation of the Company as and when the Directors shall think fit notwithstanding that part of the shares have been allotted.

6. The shares shall be under the discretionary control of the Directors who may allot or otherwise dispose of the same.

7. The Company in general meeting may decide to issue fully paid up bonus share to the member if so recommended by the Board of Directors.

8. The certificate to share registered in the name of two or more person shall be delivered to first named person in the register and this shall be a sufficient delivery to all such holders.

LIEN

9. The Company shall have a first and paramount lien upon all the shares (not being a fully paid up share) registered in the name of such member (whether solely or jointly with others) and upon the proceeds of sale thereof for his debts, liabilities and engagements (whether presently payable or not) solely or jointly with any other person, to or with the Company, whether the period for the payment, fulfillment or discharge thereof shall have actually a lien or not and such lien shall extend to all dividends, from time to time, declared in respect of shares, subject to section 205 A of the Act. The Board of Directors may at any time declare any shares to be wholly or in part exempt from the provisions of this clause.

CALLS ON SHARES AND TRANSFER OF SHARES

10. The Directors are empowered to make call on members of any amount payable at a time fixed by them.

11. Any member desiring to sell any of his shares must notify the Board of Directors of the number of shares, the fair value and the name of the proposed transferee and the Board must offer to the other share holders the shares offered at the fair value and if the offer is accepted, the shares shall be transferred to the acceptor and if the shares or any of them, are not so accepted within one month from the date of notice to the Board the members proposing transfers shall, at any time within three months afterwards, be at liberty, subject to Articles 12 and 13 hereof, to sell and transfer the shares to any persons at the same or at higher price.

    In case of any dispute, regarding the fair value of the share it shall be decided and fixed by the Company's Auditor whose decision shall be final.

12. No transfer of shares shall be made or registered without the previous sanction of the Directors, expect when the transfer is made by any member of the Company to another member or to a member's wife or child or children or his heirs and the Directors may decline to give such sanction without assigning any reason subject to Section 111 of the Act.

13. The Directors may refuse to register any transfer of shares (1) where the Company has a lien on the shares or (2) where the shares are not fully paid up shares, subject to Section 111 of the Companies Act, 1956.

14. Subject to Section 111 of the Act, the Directors may in their discretion, without assigning any reason, refuse to register the transfer of any shares to any person, whom it shall, in their opinion, be undesirable in the interest of the Company to admit to membership.

15. At the death of any members his or her shares be recognised as the property of his or her heirs upon production of reasonable evidence as may required by the Board of Directors.

16. The instrument of transfer must be accompanied by the certificates of shares.

GENERAL MEETINGS

17. All General Meetings other than the Annual General Meeting shall be called Extra-ordinary General Meetings.

18. (a) The Board may whenever it thinks fit, call an Extra-ordinary General Meetings.

    (b) If at any time there are not within India directors capable of acting who are sufficient in number to form a quorum, any Director or at least any two members of the Company may call an Extra-ordinary General Meeting in the same manner, as nearly as possible, as that a meeting may be called by the Board.

19. At least twenty-one days, clear notice of General Meetings of the Company, specifying the day, hour and place of meeting and the objects shall be given. In every such notice calling meeting of the Company there will appear a statement that member is entitled to appoint proxy to attend and to vote instead of himself. A General Meeting may be

called after giving a notice shorter than twenty-one days if consent is accorded in case of any general meeting of all the members entitled to vote there at and in case of any other meeting by members holding not less than 95 (Ninety Five) present of the paid up share capital and is given a right to vote a meeting.

20. No business shall be transacted at any general meeting, unless quorum of members in present. At least two members present in person shall be quorum for general meeting.

21. The Chairman, if any, of the Board, shall preside as Chairman of all Board and general meetings, of the Company. If at any time the Chairman is not present within 15 minutes after the time appointed for holding the same, the Directors and members present shall elect one of the Directors present to be Chairman of such meeting. If no directors is present or unwilling to act as Chairman, the members may appoint one of their members as Chairman.

DIRECTORS

22. The number of Directors shall not be less than two and not more than twelve.

23. The following shall be the First Directors of the Company.

    1. RADHAY SHYAM WADHWA
    2. BHARAT WADHWA

24. The Directors may from time to time, appoint one or more of their body to the office of the Managing Director for one or more of the divisions of the business carried on by the Company and to enter into agreement with him in such terms and conditions as they may deem fit.

25. The Directors shall have the power, at any time and from time to time, to appoint any person as additional Director in addition to the existing Director so that the total number of Directors shall not at any time exceed the number fixed for Directors in these articles. Any Directors so appointed shall hold office only until the next following Annual General Meeting but shall be eligible thereof for election as Director.

26. The Managing Director may be paid such remuneration as may, from time to time, be determined by the Board and such remuneration as may be fixed by way of salary or commission or participation in profits or partly in one way or partly in another subject to the provisions of the Companies Act, 1956.

27. The quorum necessary for the transaction, of the business of the Board meeting subject to Section 287 of the Act, shall be one third of the total strength or at least two whichever is higher.

28. Subject to section 289 of the Act, a resolution in writing signed by at least two Directors except a resolution which the Act specifically required it to be passed at a Board meeting shall be effective for all purposes as a resolution passed at a meeting of Directors duly called, held and constituted.

29. Subject to provisions of Section 313 of the Act, a Director, who may be absent for a period, not less than 3 (three) months from the State in which the meeting of the Board are ordinarily held, have power to appoint any member of the Company elected by him as an alternate director by giving notice in writing under his name to the Board and at his discretion to remove, such alternate director. Such alternate Director shall vacate office when his appointee is present in person or cease to be director. Save as aforesaid such alternate director while so acting shall exercise and discharge all functions and powers and be subject to all the duties and limitations of the Director which he represents and shall be entitled to receive notice to attend and to vote a Director's Meeting on behalf of meeting attended by him.

30. The Director shall have power for engagement and dismissal of managers, engineers, assistants, clerks and others and shall have power of general direction, and management and superintendence, of the business of the company with full powers to do all such acts, matters and things deemed necessary, proper or expedient for carrying on the business and concern of the Company including the power to make such investment of the Company's fund as they shall think fit, subject to the limit fixed by the Board of Directors under Section 292 of the Act and sign contracts and to draw, make, sign, accept, endorse and negotiate on behalf of the Company all bills of exchange, promissory notes, hundies drafts, Government Promissory Notes and other Government securities and such other instruments.

31. The Director may delegate all or any of their powers to such other Directors, Managers or other persons as they think fit and shall have power to grant to any such person such power of attorney, as they deem expedient and such powers at pleasure to revoke, subject to Section 292 and 312 of the Companies Act, 1956.

32. Subject to Provision of the Companies Act, 1956 the director shall receive such remuneration for their services as may, from time to time, be determined by the Company in general meeting or may be contained in an agreement, if any, between the Company and any Director or Directors.

33. Subject to the provisions of the companies Act, 1956 and the Rules framed thereunder, each Director shall receive out of the funds of the Company by way of sitting fees for his services a sum not exceeding Rs.1,000/- (Rupees One Thousand) for every Board meeting attended by him.

34. A Director shall not be required to hold any qualification shares in the Company and also not required to retire by rotation.

35. The Director shall also be paid travelling and other expenses of attending and returing from meeting of the Board (including hotel expenses) and any other expenses properly incurred by them in connection with the business of the Company. The Directors may also be remunerated for any extra services done by them outside their ordinary duties as Director, subject to the provisions of Section 314 of the Act.

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R. S. Thakran
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POWERS AND DUTIES OF DIRECTORS

36. The business of the Company shall be managed by the Board of Directors who may pay all such expenses preliminary and incidental to the promotion, formation, establishment and registration of the Company as they think fit and may exercise all such power of the Company and do on behalf of the Company all such acts as may be exercised or done by the Company in general meeting and are not barred by statue or by these Articles and are required to be exercised or done by the Company in General Meeting, subject nevertheless to any regulations of the Articles, to the provisions of the statue and to such regulations not being inconsistent with aforesaid regulations or provisions as may be prescribed by the Company in general meeting but no regulation made by the Company at the general meeting shall invalidate any prior act of the Directors which would have been valid if such regulations had not been made.

37. The Board of Directors may from time to time, pay to the members such interim dividends as appear to be justified from the profits of the Company.

BORROWING POWERS

38. Subject to section 58-A and 292 of the Companies Act, 1956, and Regulations made thereunder and Directions issued by the RBI the directors may, from time to time, raise or borrow any sums of money for and on behalf of the Company from the member or other persons, companies or banks or they may themselves advance money to the company on such interest as may be approved by the Directors.

39. The Directors may, from time to time, secure the payment of such money in such manner and upon such terms and conditions in all respects as they deem fit and in particular by the issue of bonds or debentures or by pledge, mortgage, charge or any other security on all or any properties of the Company (both present and future) including its uncalled capital for the time being.

40. Any debenture, bonds, or other securities may be issued at discount, premium or otherwise and with special privileges as to redemption, surrender, drawing and allotment of shares of the Company and otherwise.

OPERATION OF BANK ACCOUNTS

41. The Directors shall have the power to open bank accounts to sign cheques on behalf of the Company and to operate all banking accounts of the Company and to receive payments, make endorsements, draw and accept negotiable instruments, hundies and bills or may authorise any other person or persons to exercise such powers.

ACCOUNTS

42. (a) The Board shall, from time to time, determine whether and to what extent and at what, times and places and under what conditions or regulation the accounts and books of the Company or any of them shall be open to the inspection of members (not being Director).

(b) No members (not being Director) shall have any right of inspecting any accounts or books of account of the Company except as conferred by law or authorised by the Board or by the Company in General Meeting.

43. The Directors shall in all respect comply with the provisions of Section 209, 209A, 210, 211, 215, 216, 217, 218, 220, 221 and 222 of the Act, and profits and Loss Account, Balance Sheet and Auditors Report and every other document required by law to annexed or

attached as the case may be, to the Balance Sheet, to be sent to every member and debenture holder of the Company and every trustee for the holders of the debentures issued by the Company at least twenty one days before the date of Annual general meeting of the Company at which they are to be laid, subject to the provisions of section 219 of the Act.

AUDIT

44. (a) The first Auditor of the Company shall be appointed by the Board of Directors within one month from the date of registration of the Company and the Auditors so appointed shall hold office until the conclusion of the first Annual General Meeting.

(b) At each annual General Meeting the Company shall appoint an Auditor to hold Office from the conclusion of the Meeting til the conclusion of the next Annual General Meeting.

(c) The remuneration of the Auditor shall be fixed by the Company in the Annual General Meeting or in such manner as the Company in the Annual General Meeting may determine. In case of an Auditor appointed by the Board his remuneration shall be fixed by the Board.

COMMON SEAL

45. (a) The Common Seal of the Company may be made either of metal or of rubber as the directors may decide.

(b) The Board shall provide for the safe custody of the Company's Common Seal.

(c) The Seal shall not be affixed to any instrument except by the authority of a resolution of the Board or of a Committee of the Board authorised by it in that behalf and except in the presence of atleast one director who shall sign every instruments to which the seal of the Company if so affixed. The share certificate will, however, be signed and Sealed in accordance with Rule 6 of the Companies (Issue of Share Certificates) Rules, 1960.

SECRECY

46. Subject to the provisions of law of land and the act, every manager, auditor trustee, member of a committee, officer servant, agent accountant or other persons employed in the business of the company shall, if so required by the Board of Directors before entering upon his duties, sign, declaration, pledging himself to observe strict secrecy respecting all transactions of the Company with its customers and the state of account with individuals and in matters relating thereto and shall by such declaration pledge himself, not to reveal any of the matters which may come to his knowledge in the discharge of his duties except when required to do so by the directors or by any court of law and except so far as may be necessary in order to comply with any of the provisions in these presents.

WINDING UP

47. Winding up when necessary will be done in accordance with the requirements of the Companies Act, 1956 or statutory modification thereto.

INDEMNITY

48. Subject to the provisions of Section 201 of the Act, every Director, Manager, Auditor, Secretary and other officers or servants of the Company shall be indemnified, out of the assets of the Company against any bonafide liability incurred by him in defending any bonafide proceedings, whether civil or criminal, in which judgement is given in his favour or in which he is acquired or in connection with any application under section 633 of the Act, in which relief is granted to him by the Court.

8

Sl. No	Name, Description Occupation and address of each Subscriber	Signature of Subscribers	Name, address, Description occupation and Signature of witness or witnesses
1.	BHARAT WADHWA S/o Mr.Radhey Sham R/o House No. 676, Sector- 13, U.E. Karnal Haryana India-132001 Occupation: Business	Sd/-	I hereby witness the signatures of subscribers. Sd/- (DINESH KHURANA) FCA M. No. 97508 S/o Sh. Darshan Kumar Khurana 230, Sector-12, Part-II, Karnal-132001, Haryana
2.	RADHAY SHYAM WADHWA S/o Mr. Tau Ram Wadhwa R/o V.P.O. G. Rao Yamuna Nagar Haryana India-135001 Occupation: Business	Sd/-	

Place : New Delhi Dated this 18th day of February 2011

JSM FOODS PVT. LTD.

Auth. Sign./Director

Company Master Data

CIN	U14100DL2011PTC214636
Company Name	JSM FOODS PRIVATE LIMITED
ROC Code	RoC-Delhi
Registration Number	214636
Company Category	Company limited by Shares
Company SubCategory	Non-govt company
Class of Company	Private
Authorised Capital(Rs)	2000000
Paid up Capital(Rs)	1000000
Number of Members(Applicable in case of company without Share Capital)	0
Date of Incorporation	22/02/2011
Registered Address	HOUSE NO WZ 932/16 Floor Ground NEAR MCD SCHOOL VILLAGE BASAI DARAPUR New Delhi West Delhi DL 110015 IN
Address other than R/o where all or any books of account and papers are maintained	-
Email Id	mining.ynroffice1@gmail.com
Whether Listed or not	Unlisted
Suspended at stock exchange	-
Date of last AGM	29/09/2018
Date of Balance Sheet	31/03/2018
Company Status(for efiling)	Active

Charges

Assets under charge	Charge Amount	Date of Creation	Date of Modification	Status

No Charges Exists for Company/LLP

Directors/Signatory Details

DIN/PAN	Name	Begin date	End date	Surrendered DIN
02285284	SMARTH SAIN GUPTA	13/09/2017	-	
03268422	RADHAY SHYAM WADHWA	25/09/2017	-	
07937383	TANISH WADHWA	13/09/2017	-	

APPROVED R.S. Thakran ME

Department of Mines and Geology,
Haryana, Chandigarh
APPROVED
Vide letter No. DMG/MP/2015/YNR-V/3015
Dated 1/2/16
Executive Engineer

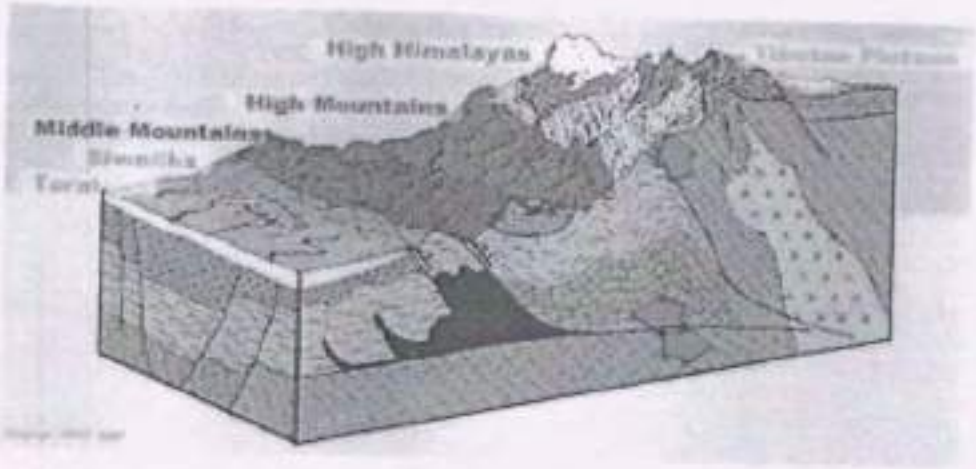
MINING PLAN AND PROGRESSIVE MINE CLOSURE PLAN

FOR

SAND MINE (MINOR MINERAL)

MANDOLI GHAGGAR WEST BLOCK (YNR-V)

(Lease area: 25.56 ha; Lease Period-7 years; Production –1.191 Million T/Annum)



SUBMITTED TO

JAN-2016

THE DIRECTOR GENERAL, MINES & GEOLOGY DEPARTMENT, HARYANA

APPLICANT	PREPARED BY
M/s JSM Foods Pvt., Ltd., WZ/932-Basie Darapur,1st floor near Senior Secondary school New Delhi-110015	S.N. SHARMA RQP/DDN/0135/2001-A House No. 282, sector 11-D, Faridabad (Haryana)

APPROVED
R. S. Thakran
ME
Department of Mines and Geology, Panchkula

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY HARYANA
Bay No. 55-58, Prayatan Bhawan, Sector-2, PANCHKULA.

No. SEIAA/HR/2016/985 Dated: 2-12-2016

To

M/s JSM Foods Pvt. Ltd.
W-293, Basic Duragar, 1st Floor
Near Senior Secondary School
New Delhi-110015

Subject: Environmental Clearance for River Bed Mining of Minor Mineral "Mandoli Ghaggar West Block/YNR 18-4" at village Mandoli, Tehsil & District Yamuna Nagar Over an area of 25.56 Ha. By M/s JSM Foods Pvt. Ltd.

This has reference to your online application no. nil dated 17.06.2016 addressed to Member Secretary, SEIAA Haryana for seeking prior environmental clearance for the above project under the EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., Form-1, Pre-feasibility report, copy of approved Mining Plan, EIA/EMP on the basis of approved TOR and the additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MoEF, GOI vide their Notification 21.08.2015, in its meetings held on 09.07.2016, 03.08.2016.

[2] The SEAC has examined the application and noted that the proposal is for River Bed Mining of Minor Mineral "Mandoli Ghaggar East Block YNR 18-4" at village Mandoli, Tehsil & District Yamuna Nagar. The Letter of Intent (LOI) dated 19.06.2015. The lease has been granted for an area of 25.56 for 5 years out of which 5.70 Ha area is under restricted Zone. About 19.86 Ha area free from restriction and the mining is proposed in this area only. The project proponent on 17.06.2016 submitted online application along with copy of approved Mining plan under category B-1 (1a). The validity of Mining Scheme in the Mining plan is for 5 years. NOC from Forest Department has been Obtained. The project proposal has been appraise as per prescribed processes of EIA Notification i.e approval of TOR and Public Hearing.

Brief details of the project:

1.	Category Item no. (as schedule)	1(a) B-1
2.	Location of Project	Village Mandoli, Tehsil & District Yamunanagar
3.	Project Details Khasra No.	River Bed Mining of Sand minor mineral at over an area of 25.56 Ha "Mandoli Ghaggar West Block/YNR 18-4" 52/5,6,15,16/1,16/2,25

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		55/1,2,9,10,11,12 57/3 to 4, 7 to 17 58/5,6,15
	Production capacity	11, 91, 000 TPA @ 159 Trips/day (25 Ton/Trip)
4.	Project Cost	1.5 crores
5.	Water Requirement & Source	18.77 KLD through Tankers Dust suppression — 13 KLD Plantation — 3 KLD Drinking — 2.77 KLD
6.	Environment Management Plan Budget	1.80 lakh
7.	CSR Activates Budget	7.5 Lakh
8.	Production	The proposed production for the five years is @ 11, 91, 000 TPA. The ultimate depth of Mining will be 3 meter. The alivation range of mine site is 268 amsl to 272 amsl.
9.	Corner Coordinates of the lease area	Block: "Mandoli Ghaggar West Block/YNR B-4" Latitude: 30°08'12"N; 30°08'28"N Longitude: 77°25'01"E; 77°25'21"E
10.	Green belt/ plantation	Year of Plantation / Proposed Plantation I Yr. — 800 Trees II Yr. — 800 Trees III Yr. — 800 Trees IV Yr. — 800 Trees V Yr. — 800 Trees
11.	Machinery required	Excavator JCB Tipers Trucks, Water Tanker Light Vehicles Geep and Maintanance Van

The recommendation of SEAC and project details as given above was taken up for consideration in the 95th meeting held on 26.08.2016. It was observed by the Authority that Environment Clearance to this project on the following conditions:-

D. SPECIFIC CONDITIONS:-

[1] This Environment Clearance is granted for the proposed production for the five years 11, 91, 000 TPA. The ultimate depth of Mining will be 3 meter. The alivation range of mine site is 268 amsl to 272 amsl. The Corner Coordinates of the leased area are

Block	Latitude	Longitude
"Mandoli	30°08'12"N	77°25'01"E
Ghaggar West"Block/YNR B-4"	30°08'28"N	77°25'21"E

[2] The project proponent shall carry out mining activity strictly as per the approved Mining Plan.

[3] Environmental Clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the National Board of Wildlife, as applicable to the project.

[4] No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.

[5] The Project proponent shall obtain consent to operate from the State Pollution control Board, Haryana and effectively implement all the conditions stipulated therein.

[6] Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial preventive measures taken accordingly. Recommendations of National Institute for labour for ensuring good occupational environment for mine workers would also be adopted.

[7] Project Proponent shall appoint a Monitoring Committee to monitor the replenishment study, traffic management, levels of production, River Bank erosion and maintenance of Road etc.

[8] The number of trips of the trucks shall not exceed the estimated quantity of 3970MT/day @ 159 Trips/day (25 Mt/Trip). Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/dumpers carrying the mineral should not be allowed to pass thought the villages.

[9] Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral, and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.

[10] Excavation will be carried out up to a maximum depth of 3 meters from surface of Mineral deposit and not less than one meter from the water level of the [illegible] channel whichever is reached earlier.

[11] The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the minerals shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centre.

[12] Washing of all transport vehicles should be done inside the mining lease.

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[13] Permanent pillars has to be constructed to demarcate width of extraction as Reserve of Minerals leaving 25% of River width from the bank with depth of 1.5m below the ground and 1.2 m above the ground to observe its stability.

[14] There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis in consultation with Regional Director, Central Groundwater Board and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.

[15] The Project Proponent shall also take all precautionary measures during mining operation for conservation and protection of endangered flora fauna, if any, spotted in the study area.

[16] 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.

[17] Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

[18] No River sand mining shall be allowed in flowing water and no mining is allowed in rainy season.

[19] The project proponent shall submit annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity/ production levels shall be decreased/ stopped accordingly till the replenishment is completed.

[20] In River flood plain mining a buffer of 3 meter to be left from river bank for mining.

[21] The project proponent shall ensure that no natural water course/water body shall be obstructed due to any operations.

[22] The dumping site selected and proposed shall used for OB dump in the designated site within the lease area per as per the approved mine plan. In no case the overburden should be dumped outside the lease area.

[23] Garland drains shall be constructed to prevent the flow of the water in the dump.

[24] Green belt should be developed as per the proposed plantation as given in the proposal. Plantation should be carried out in phased manner.

[25] Regular water sprinkling shall be carried out in critical areas prone to dust pollution and having high levels of SPM and RPM such as haul road, loading

and unloading point and transfer points. It shall be ensured that the Ambient Quality Parameters conform to the norms prescribed by the CPCB.

[26] Regular monitoring of ground water level and quality shall be carried out in and around the mine lease. The monitoring shall be carried out four times in a year pre monsoon (April-May), monsoon (August), post monsoon (November) winter (January) and the data thus collected must be sent regularly to MoEF Regional Office, Chandigarh and Regional Director, CGWB.

[27] Data on ambient air quality and stack emissions shall be submitted to Haryana Pollution Control Board once in six months carried out by MOEF/NABL/CPCB Government approved lab.

[28] Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded. The project proponent shall ensure that the vehicles must have pollution under control certificate.

[29] The project proponent shall take all precautionary measures during mining operations for conservation and protection of endangered fauna, if any, spotted in the study area. A plan for conservation shall be drawn and got approved from the Chief Wildlife Warden of the State before start of mining operations. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the wildlife conservation plan so prepared specific to the project site shall be effectively implemented. A copy of action plan may be submitted to the HSPCB and MOEF, Regional Office, Chandigarh within 3 months.

[30] As envisaged, the Project Proponent shall invest at least an amount of Rs 11.80 Lakhs/annum as cost for implementing various environmental protection measures including recurring expenses per year.

[31] A sum of Rs. 7.5 Lakhs/annum shall be earmarked by the Project proponent for investment as CSR on socio economic up-liftment activities of the area particularly in the area of habitat, health or education, training programme of rural women & men provide the kit for employment generation. The proposal should contain provision for monthly medical camps, distributions of medicines and improvement in educational facilities in the nearby schools. Details of such activity along with time bound action plan be submitted to HSPCB/SEIAA Haryana before the start of operations.

[32] Budgetary provision of Rs. 1.5 Lakhs/annum per year earmarked for the labours working in the Mine for all necessary infrastructure facilities such as health

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facility, sanitation facility, fuel for cooking, water with safe drinking water, medical camps and toilets for women, crèche for infants should be made and submitted to HSPCB at the time of CTE/ CTO/SEIAA Haryana. The following facilities should be provided for mining labours.

[33] A Final Mine Closure Plan along with details of corpus fund shall be submitted to the SEIAA well within the stipulated period as prescribed in the mines mineral concession rules 2012.

[34] The project proponent shall ensure that [illegible] letter as well as the status of compliance of EC conditions and the monitoring data are placed on company website and displayed at the project site.

[35] The project proponent shall ensure that loading in Trucks do not exceed the norms fixed by the Transport Department as per relevant rules.

[36] The project proponent shall ensure approach roads are widened and strengthened as per requirements fixed by PWD and district administration before the start of the work.

[37] The project proponent shall ensure supply of drinking water through RO.

[38] The project proponent shall Strictly adhere to the sustainable sand mining management guidelines 2016, issued by MoEF &CC GoI on 15.01.2016 and shall ensure the compliance of the standard environmental conditions prescribed for the sand mining in the said guidelines in addition to the conditions imposed in the environment clearance letter.

[39] The project proponent shall carry out mining in semi mechanized manner using manpower, Excavator Tipers Trucks / Water Tanker / light vechicles Jeep Maintanence Van.

GENERAL CONDITIONS:

[i] Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

[ii] Any change in mining technology scope of working shall not be made with out prior approval of the SEIAA.

[iii] Any change in the calendar plan including excavation, quantum of mineral and waste shall not be made.

[iv] Periodic monitoring of ambient air quality shall be carried out for PM10, PM2.5,SO2 and NOx monitoring. Location of the stations (minimum 6) shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring shall be decided in consultation with the Haryana State Pollution Control Board (HSPCB). Six monthly reports of the [illegible] shall be submitted

submitted to the HSPCB-CPCB including the MOEF, Regional office Chandigarh.

[v] Personnel working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

[vi] Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.

[vii] The funds earmarked for environmental protection measures shall be kept in a separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the HSPCB and the Regional office of MoEF located at Chandigarh.

[viii] The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the northern Regional Office of MoEF, the respective Office of CPCB, HSPCB and SEIAA Haryana.

[ix] The above conditions will be enforced, inter alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act 1991 (all amended till date) and rules made hereunder and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Haryana and other Court of law relating to the subject matter.

[x] The Project proponent should inform the public that the project has been accorded Environment Clearance by the SEIAA and copies of the clearance letter are available with the Haryana State Pollution Control Board & SEIAA. This should be advertised within 7 days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region and the copy of the same should be forwarded to SEIAA Haryana. A copy of Environment Clearance conditions shall also be put on project proponent's web site for public awareness.

[xi] All the other statutory clearances such as the approvals for storage of diesel from the Chief Controller of Explosives, Fire department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (protection) Act, 1972 etc. shall be obtained, as may be applicable, by Project proponent from the competent authority before the start of mining operation.

[xii] That the grant of this EC is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed

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R. G. Thakran
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under any other law or any other instrument in force. The sole and complete responsibility, to comply with the conditions laid down in all other laws for the time being in force, rests with the industry and project proponent. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of National Green Tribunal Act, 2010.

[xiii] The methodology of mining shall be strictly as per orders passed by Hon'ble NGT/ Hon'ble Supreme Court from time to time.

[xiv] The PP shall not disturb damage the position of studs in river bed and also not to damage the river banks and not to degrade the river bed in any manner.

[xv] Any area which have been banned by any authority courts shall not be used for mining activity.

[xvi] Distance of mining to be maintained from Pucca Hydraulic structure/ Bridges shall be as per approved mining plan/ guideline issued by MoEF & CC/ Court Orders.

[xvii] The PP will not violate any judicial orders/pronouncements issued by the Hon'ble Supreme Court/ High Courts/ NGT.

Chairman,
State Level Environment Impact
Assessment Authority, Haryana, Panchkula.

Endst. No. SEIAA/HR/2016/ Dated:

A copy of the above is forwarded to the following:

1. The Director (IA Division), MoEF&CC, GoI, Indira Paryavaran Bhavan, Jor bagh Road, New Delhi.
2. The Regional office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay no. 24-25, Sector 31-A, Dakshin Marg, Chandigarh.
3. The Chairman, Haryana State Pollution Control Board, C-11, Sector-6, PU.
4. The Director General, Mines & Geology Department Haryana, Chandigarh.

Chairman,
State Level Environment Impact
Assessment Authority, Haryana, Panchkula.

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 1220052 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	VEL/JSMFPL/A/01	Report No.:	VEL/A/2009/18/013
Issue to:	M/s JSM Foods Pvt. Ltd. W2 93,Basie Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015	Format No.:	7.8 F-01
		Party Reference No.:	NIL
		Reporting Date:	22/09/2020
		Period of Analysis:	18/09/2020 to 22/09/2020
Name & Address of Project:	Minor Minerals "MandoliGhaggar West Block/YNR B-4", Area of 25.56 Ha., Village-Mandoli, Tehsil &Distt. Yamuna Nagar (HR)	Receipt Date:	18/09/2020
Sample Description :	**Ambient Air Quality Monitoring**		

General Information:-

Sample collected by	: Vardan EnviroLab Representative
Sampling Location	: Near Mine Site
Instrument Used	: RDS & FPS
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 17/09/2020 to 18/09/2020
Time of Monitoring	: 09:00 AM to 09:00 AM
Ambient Temperature (°C)	: Min. 21.0 Max. 32.0
Surrounding Activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if Any	: –
Sampling & Analysis Protocol	: IS-5182
Parameter Required	: $PM_{2.5}$, PM_{10}, NO_2 &SO_2

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS*
1.	Particulate Matter ($PM_{2.5}$)	SOP No. VEL/SOP/01, Section No. SP 63	**51.30**	$\mu g/m^3$	60
2.	Particulate Matter (PM_{10})	IS: 5182 (P-23) Gravimetric Method	**93.41**	$\mu g/m^3$	100
3.	Nitrogen Dioxide (NO_2)	IS: 5182 (P-6) Jacob &Hochheiser	**26.81**	$\mu g/m^3$	80
4.	Sulphur Dioxide (SO_2)	IS: 5182 (P-2) Modified West and Gaeke	**10.54**	$\mu g/m^3$	80

* NAAQS – National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 18.11.2009
# SOP- Laboratory Standard Operating Procedure.

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED
R. S. Thakran
MD

VARDAN ENVIRO
(Approved By)
Authorised Signatory

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Vardan EnviroLab
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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	**VEL/JSMFPL/W/01**	**Report No.:**	**VEL/W/2005/06/003**
Issue to:	**M/s JSM Foods Pvt. Ltd. W2 93, Basic Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**11/05/2020**
		Period of Analysis:	**06/05/2020 to11/05/2020**
Name & Address of Project:	**Minor Minerals "Mandoli Ghaggar West Block/YNR B-4", Area of 25.56Ha. Village-Mandoli, Tehsil & Distt. Yamuna Nagar (HR)**	**Receipt Date:**	**06/05/2020**
		Sampling Date;	**05/05/2020**
		Sampling Type:	**Grab**
Sample Description:	**Ground water sample**	**Preservation:**	**Refrigerated**
Sampling Location:	**Near Mine Site**	**Sampling Quantity:**	**2.0 Ltr**
Sample Collected by:	**Vardan Enviro Lab Representative**		
Sampling & Analysis Protocol:	**IS & APHA**		

S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012	
					Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 °C)	APHA ,4500-H+ B Electrometric Method	7.67	--	6.5 to 8.5	No Relaxation
2.	Colour	APHA ,2120 B, Visual Comparison Method	*BDL (**DL 5Hazen)	Hazen	5	15
3.	Turbidity	APHA, 2130 B, Nephlelometric Method	*BDL (**DL 0. 1 NTU)	NTU	1	5
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--	Agreeable	Agreeable
5.	Taste	APHA , 2160 B, Threshold Test Method	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	193.48	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	42.73	mg/l	75	200
8.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	142.00	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl- B, Argentometric Method	37.50	mg/l	250	1000
10.	#Cyanide as CN	APHA , 4500 CN- D	*BDL(**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	21.11	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	410.00	mg/l	500	2000
13.	Sulphate as SO_4	APHA , 4500 E, Turbidimetric Method	23.68	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F D, SPADNS Method	0.42	mg/l	1.0	1.5
15.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	14.40	mg/l	45	No Relaxation
16.	Iron as Fe	APHA , 3500-Fe B 1,10 Phenanthroline Method	0.24	mg/l	0.3	No relaxation
17.	Aluminium as Al	APHA , 3111 B, Direct Nitrous Oxide, Acetylene Flame Method	*BDL(**DL 0.03 mg/l)	mg/l	0.03	0.2
18.	Boron	APHA, 4500B C, Carmine Method	*BDL(**DL 0.1 mg/l)	mg/l	0.5	1
19.	Total Chromium as Cr	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.03 mg/l)	mg/L	0.05	No Relaxation

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED
R. G. Thorat

VARDAN ENVIRO
(Approved By)
Authorised Signatory

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample No.: VEL/JSMFPL/W/01 — Report No: VEL/W/2005/06/003

S. No	Parameter	Test Method	Result	Unit	Limits of IS:10500: 2012	
					Requirement (Acceptable) Limit	Permissible limit in the Absence of Alternate Source
20.	Phenolic Compounds	APHA. 5530 C Chloroform Extraction Method	*BDL(**DL 0.001 mg/l)	mg/l	0.001	0.002
21.	#Mineral Oil	Clause 6 of IS 3025(Part 39)	*BDL(**DL 0.01mg/l)	mg/l	0.5	No Relaxation
22.	#Anionic Detergents as MBAS	APHA, 5540 C MBAS Method	*BDL(**DL 0.02 mg/l)	mg/l	0.2	1.0
23.	Zinc as Zn	APHA , 3111 B, Direct Air, Acetylene Flame Method	0.39	mg/l	5	15
24.	Copper as Cu	APHA , 3111 B, Direct Air, Acetylene Flame Method	0.21	mg/l	0.05	1.5
25.	Manganese as Mn	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.06 mg/l)	mg/l	0.1	0.3
26.	Cadmium as Cd	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.003 mg/l)	mg/l	0.003	No Relaxation
27.	Lead as Pb	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.01 mg/l)	mg/l	0.01	No Relaxation
28.	Selenium as Se	APHA , 3114 B, Manual Hydride Generation	*BDL(**DL 0.01 mg/l)	mg/l	0.01	No Relaxation
29.	Arsenic as As	APHA , 3114 B, Manual Hydride Generation	*BDL(**DL 0.01 mg/l)	mg/l	0.01	0.05
30.	Mercury as Hg	APHA , 3112 B, Cold Vapor Method	*BDL (**DL 0.001 mg/l)	mg/l	0.001	No Relaxation
31.	Total Coliform	IS 1622,1981 RA-2019	<2	MPN/100ml	Shall not be detectable in any 100 ml sample	
32.	E. Coli	IS 1622,1981 RA-2019	Absent	MPN/100ml	Shall not be detectable in any 100 ml sample	

Note: - *BDL-Below Detection Limit, **DL- Detection Limit
#These parameter are not covered in our NABL scope.

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED

VARDAN ENVIRO LAB (Approved Signatory)

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	VEL/JSM/W/01	Report No.:	VEL/W/2009/18/003
Issued To:	M/s JSM Foods Pvt. Ltd. W2 93,Basic Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015	Format No.:	7.8 F-01
		Party Reference No.:	NIL
Name of the Project:	Minor Minerals "Mandoli Ghaggar West Block/YNR B4", Area of 20.18 Ha, Village-Mandoli, Tehsil & Distt. Yamuna Nagar (HR).	Reporting Date:	22/09/2020
Sample Description:	Surface water Sample	Period of Analysis:	18/09/2020-22/09/2020
Sampling Location:	Up Stream	Receipt Date:	18/09/2020
Sample Collected by:	Vardan Enviro Lab Representative	Sampling Date:	18/09/2020
Preservation:	Refrigerator	Sampling Quantity:	2.0 Ltr
Sampling and Analysis Protocol:	IS-2296-1982, APHA & SOP	Sampling Type:	Composite

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	APHA ,4500-H⁺ B Electrometric Method	7.54	–
2.	Colour	APHA ,2120 B, Visual Comparison Method	34.00	Hazen
3.	Turbidity	APHA, 2130 B, Nephelometric Method	46.00	NTU
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	–
5.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	247.20	mg/l
6.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	45.12	mg/l
7.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	157.00	mg/l
8.	Chloride as Cl	APHA, 4500-Cl⁻ B, Argentometric Method	61.69	mg/l
9.	Residual free Chlorine	APHA, 4500 Cl B Iodometric Method	*BDL(**DL. 0.20mg/l)	mg/l
10.	#Cyanide as CN	APHA , 4500 CN⁻ D	*BDL(**DL. 0.02 mg/l)	mg/l
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	32.71	mg/l
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	468.00	mg/l
13.	Total Suspended solids	APHA,2540 D Gravimetric Method	71.00	mg/l
14.	Dissolved Oxygen	APHA,4500 O B Iodometric Method	5.3	mg/l
15.	Sulphate as SO_4^{2-}	APHA , 4500 E, Turbidimetric Method	41.50	mg/l
16.	Fluoride as F	APHA , 4500-F⁻ D, SPADNS Method	0.48	mg/l
17.	BOD (3 Days at 27°C)	APHA, 5210 C / IS 3025 P-44	12.00	mg/l
18.	COD	APHA, 5220 B, Open Reflux Method	34.00	mg/l

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

(Approved By)

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample No.: VEL/JSM/W/88			Report No.: VEL/W/2009/1003	
S. No.	Parameter	Test Method	Result	Unit
19.	Conductivity	APHA, 2510 B, Conductivity Meter Method	780	ms/cm
20.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	22.35	mg/l
21.	Sodium as Na	APHA,3500 Na B, Flame Photometric Method	48.00	mg/l
22.	Potassium as K	APHA 3500 K B, Flame Photometric Method	20.00	mg/l
23.	Iron as Fe	APHA , 3500-Fe B 1, 10 Phenanthroline Method	0.38	mg/l
24.	Aluminium as Al	APHA , 3111 DNitrous Oxide Acetylene Flame Method	*BDL(**DL 0.03 mg/l)	mg/l
25.	Boron	APHA, 4500B C, Carmine Method	*BDL	mg/l
26.	Chromium as Cr	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.01 mg/l)	mg/l
27.	Phenolic Compounds	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.001 mg/l)	mg/l
28.	#Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.01mg/l)	mg/l
29.	#Anionic Detergents as MBAS	APHA, 5540 C MBAS Method	*BDL(**DL 0.02 mg/l)	mg/l
30.	Zinc as Zn	APHA , 3111 B, Direct Air, Acetylene Flame Method	1.47	mg/l
31.	Copper as Cu	APHA , 3111 B, Direct Air, Acetylene Flame Method	0.53	mg/l
32.	Manganese as Mn	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.10 mg/l)	mg/l
33.	Cadmium as Cd	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.001 mg/l)	mg/l
34.	Total Coliform	IS 1622:1981,RA-2019	1010	MPN/100ml
35.	Fecal Coliform	IS 1622:1981,RA-2019	860	MPN/100ml

Note: -*BDL-Below Detection Limit, **DL- Detection Limit, #These parameter are not covered in our NABL scope.

APPROVED

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

VARDAN ENVIRO LAB (Approved Signatory)

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Vardan EnviroLab
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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	VEL/JSM/W/02	Report No.:	VEL/W/2009/18004
Issued To:	M/s JSM Foods Pvt. Ltd. W2 93,Basic Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015.	Format No.:	7.8 F-01
		Party Reference No.:	NIL
Name of the Project:	Minor Minerals "Mandoli Ghaggar West Block/YNR 84", Area of 20.18 Ha, Village-Mandoli, Tehsil & Distt. Yamuna Nagar (HR).	Reporting Date:	22/09/2020
Sample Description:	Surface water	Period of Analysis:	18/09/2020-22/09/2020
Sampling Location:	Down Stream	Receipt Date:	18/09/2020
Sample Collected by:	Vardan Enviro Lab Representative	Sampling Date:	18/09/2020
Preservation:	Refrigerator	Sampling Quantity:	2.0 Ltr
Sampling and Analysis Protocol:	IS-2296-1982, APHA & SOP	Sampling Type:	Composite

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	APHA ,4500-H+ B Electrometric Method	7.10	–
2.	Colour	APHA ,2120 B, Visual Comparison Method	31.00	Hazen
3.	Turbidity	APHA, 2130 B, Nephlelometric Method	49.00	NTU
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	–
5.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	236.00	mg/l
6.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	63.85	mg/l
7.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	237.58	mg/l
8.	Chloride as Cl	APHA, 4500-Cl- B, Argentometric Method	123.60	mg/l
9.	Residual free Chlorine	APHA, 4500 Cl B Iodometric Method	*BDL(**DL 0.20mg/l)	mg/l
10.	#Cyanide as CN	APHA , 4500 CN- D	*BDL(**DL 0.02 mg/l)	mg/l
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	18.63	mg/l
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	585.00	mg/l
13.	Total Suspended solids	APHA,2540 D Gravimetric Method	81.00	mg/l
14.	Dissolved Oxygen	APHA,4500 O B Iodometric Method	5.3	mg/l
15.	Sulphate as SO_4^{2-}	APHA , 4500 E, Turbidimetric Method	41.47	mg/l
16.	Fluoride as F	APHA , 4500-F- D, SPADNS Method	0.40	mg/l
17.	BOD (3 Days at 27°C)	APHA, 5210 C / IS 3025,P-44	13.00	mg/l
18.	COD	APHA, 5220 B, Open Reflux Method	36.00	mg/l

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED
R. S. Thakran

VARDAN ENVIRO (Approved Signatory)

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample No.: VEL/JSM/W/02			Report No.: VEL/W/2009/18/004	
S. No.	Parameter	Test-Method	Result	Unit
19.	Conductivity	APHA, 2510 B, Conductivity Meter Method	975	ms/cm
20.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	21.10	mg/l
21.	Sodium as Na	APHA 3500 Na B, Flame Photometric Method	43.00	mg/l
22.	Potassium as K	APHA 3500 K B, Flame Photometric Method	17.00	mg/l
23.	Iron as Fe	APHA , 3500-Fe B 1,10 Phenanthroline Method	0.36	mg/l
24.	Aluminium as Al	APHA , 3111 DNitrous Oxide Acetylene Flame Method	*BDL(**DL 0.03 mg/l)	mg/l
25.	Boron	APHA, 4500B C, Carmine Method	*BDL	mg/l
26.	Chromium as Cr	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.01 mg/l)	mg/l
27	Phenolic Compounds	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.001 mg/l)	mg/l
28.	#Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.01mg/l)	mg/l
29.	#Anionic Detergents as MBAS	APHA, 5540 C MBAS Method	*BDL(**DL 0.02 mg/l)	mg/l
30.	Zinc as Zn	APHA , 3111 B, Direct Air, Acetylene Flame Method	1.41	mg/l
31.	Copper as Cu	APHA , 3111 B, Direct Air, Acetylene Flame Method	0.59	mg/l
32.	Manganese as Mn	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.10 mg/l)	mg/l
33.	Cadmium as Cd	APHA , 3111 B, Direct Air, Acetylene Flame Method	*BDL(**DL 0.001 mg/l)	mg/l
34.	Total Coliform	IS 1622:1981,RA-2019	1040	MPN/100ml
35.	Fecal Coliform	IS 1622:1981,RA-2019	830	MPN/100ml

Note: -*BDL-Below Detection Limit, **DL- Detection Limit, #These parameter are not covered in our NABL scope.

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED
R. K. Gupta

VARDAN ENVIRO LAB (Approved By)

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	VEL/JSMFPL/AN/01	Report No.:	VEL/AN/2009/18/013
Issue to:	M/s JSM Foods Pvt. Ltd. W2 93, Basic Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015	Format No.:	7.8 F-01
		Party Reference No.:	NIL
		Reporting Date:	22/09/2020
		Receipt Date:	18/09/2020
Name & Address ofProject:	Minor Minerals "Mandoli Ghaggar West Block/YNR B-4", Area of 25.56 Ha., Village-Mandoli, Tehsil & Distt. Yamuna Nagar (HR)		
Sample Description:	**Ambient Noise Level Monitoring**		

General Information:-

Sample collected by	: Vardan Enviro Lab Representative
Sampling Location	: **Near Mine Site**
Instrument Used	: Sound Level Meter
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **17/09/2020 to 18/09/2020**
Time of Monitoring	: 06:00 AM to 06:00AM
Surrounding Activity	: Human, Vehicular& Other Mining Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if Any	: No any
Sampling & Analysis Protocol	: IS-9989
Sampling Duration	: 24 Hours
Parameter Required	: L_{max}, L_{min} & L_{eq}

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	L_{max}	IS 9989	75.3	71.6	dB(A)
2.	L_{min}	IS 9989	51.7	46.3	dB(A)
3.	L_{eq}	IS 9989	70.65	63.21	dB(A)
4.	*DGMS Limits in dB (*A) Leq (Mining Area)	-	74.00	70.00	dB(A)

Note- *A "decibel" is a unit in which noise is measured *DGMS -Directorate General of Mine Safety

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED
R. S. Thakran
(Approved By)

NOTE: a) The results listed refer only to the tested samples & applicable parameters
b) Total liabilities of our lab will be restricted to the invoice amount only
c) The sample will be destroyed after retention time unless otherwise specified
d) This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 1220052 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | OHSAS 18001

Test Report

Sample Number:	VEL/ JSM/S/01	Report No.:	VEL/S/2009/18/003
Issued To:	M/s JSM Foods Pvt. Ltd. W2 93, Basic Darapur, 1st Floor, Near Senior Secondary School, New Delhi-110015	Format No.:	7.8 F-01
		Party Reference No.:	NIL
		Reporting Date:	22/09/2020
Name & Address of Project:	Minor Minerals "Mandoli Ghaggar West Block/YNR B-4", Area of 25.56 Ha., Village-Mandoli, Tehsil & Distt. Yamuna Nagar (HR)	Period of Analysis:	18/09/2020 to 22/09/2020
		Receipt Date:	18/09/2020
		Sampling Date:	17/09/2020
Sample Description:	Soil Sample	Type of Sampling:	Composite
Sampling Location:	Near Mine Site	Sample Quantity:	2.0 Kg
Sampling & Analysis Protocol:	IS 2720, USEPA 3050B & USDA	Packing Status:	Temp Sealed

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	IS : 2720 (P-26) by pH Meter	7.71	--
2.	Conductivity	IS:14767 by Conductivity meter	0.314	mS/cm
3.	Soil Texture	IS : 2720 (P-22, RA2003)	Sandy Loam	--
4.	Color	*SOP , SP-78,Issue No.-01& Issue Date-14/02/2013	Blackish	--
5.	Water holding capacity	*SOP , SP-81,Issue No.-01& Issue Date-14/02/2013	36.52	%
6.	Bulk density	*SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	1.41	gm/cc
7.	Chloride as Cl	*SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	42.51	mg/100g
8.	Calcium as Ca	*SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	72.62	mg/100g
9.	Sodium as Na	*SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	24.32	mg/kg
10.	Potassium as K	*SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	59.64	kg/hec
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method	0.41	%
12.	Magnesium as Mg	*SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	18.65	mg/100g
13.	Available Nitrogen as N	IS:14684 Distillation Method	215.30	kg /hec
14.	Available Phosphorus	*SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	25.19	kg /hec
15.	Zinc (as Zn)	USEPA 3050B	16.82	mg/kg
16.	Manganese (as Mn)	USEPA 3050B	1.94	mg/kg
17.	Lead (as Pb)	USEPA 3050B	1.20	mg/kg
18.	Cadmium (as Cd)	USEPA 3050B	1.74	mg/kg
19.	Chromium (as Cr)	USEPA 3050B	1.51	mg/kg
20.	Copper (as Cu)	USEPA 3050B	2.21	mg/kg

*SOP-Laboratory standard operating procedure

Ruchi Chaudhary
(Tested By)
Analyst

Subodh Shekhawat
(Checked By)
Deputy Technical Manager

APPROVED
R. D. Thakran
VARDAN ENVIROLAB
(Approved By)
Authorised Signatory

NOTE: a) The results listed refer only to the tested samples & applicable parameters
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c) The sample will be destroyed after retention time unless otherwise specified
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WATER BALANCE

FOR

M/S JSM FOODS PRIVATE LIMITED

BOULDER, GRAVEL & SAND MINE (MINOR MINERAL)

OF

MANDOLI GHAGGAR WEST BLOCK (YNR B-4)

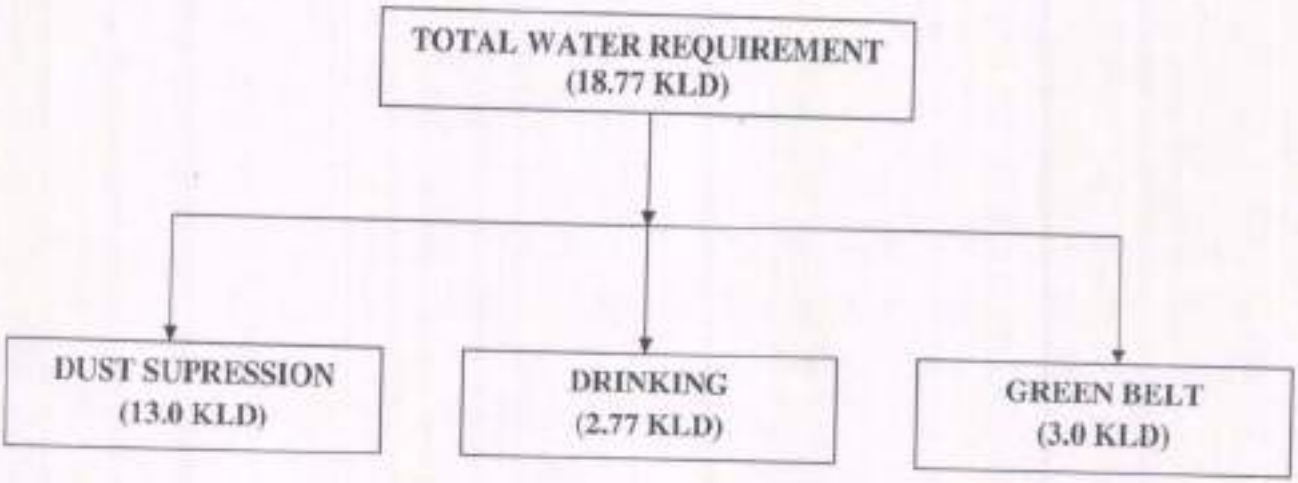
VILLAGE- MANDOLI,

TEHSIL-YAMUNA NAGAR

DISTRICT-YAMUNANAGAR

STATE-HARYANA

TOTAL LEASE AREA-25.56 Hect. (NON-FOREST)





खनन योजना तैयार करने हेतु
योग्य व्यक्ति के रूप में
मान्यता का प्रमाणपत्र

(खनिज रियायत नियमावली 1960 के नियम 22(सी) के अंतर्गत)

श्री किरीट आचार्य

पुत्र श्री प्रमोद राय आचार्य

निवासी 70/30 पटेल मार्ग, मानसरोवर, जयपुर

द्वारा अपनी योग्यताओं और अनुभव का संतोषप्रद प्रमाण प्रस्तुत करने के फलस्वरूप खनिज रियायत नियमावली, 1960 के नियम 22(सी) के अंतर्गत उन्हें एतद्द्वारा खनन योजना तैयार करने हेतु योग्य व्यक्ति के रूप में मान्यता प्रदान की जाती है ।

उनका पंजीयन क्रमांक RQP/AJM/230/2003/A है ।

यह मान्यता दिनांक 22 जनवरी 2013 को समाप्त होने वाली दस वर्षों की अवधि के लिए वैध है ।

स्थान : अजमेर
दिनांक : 23-01-2003

23/1/03
क्षेत्रीय खान नियंत्रक
भारतीय खान ब्यूरो

APPROVED
R. G. Thakran
IAS

Scanned by CamScanner

CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON TO PREPARE MINING PLANS

(Under Rule 22 (c) of Mineral Concession Rules 1960)

Shri ..... KIREET KUMAR ACHARYA ..... resident of ..... Bhilwara, Rajasthan ..... , son of .....Shri Pramod Kumar Acharya..... , having given satisfactory evidence of his qualifications and experience is hereby granted recognition under Rule 22 (c) of the Mineral Concession Rules, 1960 as a Qualified Person to prepare Mining Plans.

His registration number is RQP/TS-UDP/063/89/A

This recognition is valid for a period of two years ending .....23-10-1991.....

नवीनीकृत ..... तक
Renewed up 23-10-93

27.9.91
क्षेत्रीय खान नियन्त्रक
भारतीय खान ब्यूरो

(H.N. WANARE)
Regional Controller of Mines
Indian Bureau of Mines
..Nagpur.....

Place : Nagpur
Date : 24-10-1989

APPROVED
R. S. Thakran
I.G.

Scanned by CamScanner

REPLENISHMENT STUDY REPORT

for

MANDOLI GHAGGAR WEST BLOCK (YNR B-4)

VILLAGE- MANDOLI, TEHSIL-YAMUNA NAGAR

DISTRICT-YAMUNANAGAR, STATE-HARYANA

TOTAL LEASE AREA-25.56 Hect. (NON-FOREST)

PRODUCTION CAPACITY – 1191000 T/ANNUM

M/S JSM FOODS PRIVATE LIMITED

Mr. Tanish Wadhwa (Authorized Signatory)
676, Sector-13, Karnal
e-mail: jsmfoodsmandoli@gmail.com
Phone : 9996015005

Vardan Environet

(A NABET Accredited Consultant)
82A,Sector-5, IMT Manesar ,Gurgaon
Phone /Fax.;0124-4291036,9929108691
email: info@vardanenvironet.com



INDEX

Sr.No.	Description	Page No.
1	The Project	1-2
2	Object of Replenishment Study	2
3	Need for present annual Replenishment Study	2-3
4	Replenishment Study	3
4.1	General Introduction	3-5
4.2	Physiographic	5
4.3	Drainage	5-6
4.4	Sedimentation, Assessment & Infrastructure	6-8
5	Approach & Methodology	9



Map

Sr. No.	Details of Annexure	Page No.
1.	Pre-Monsoon Contour Map	10
2.	Post-Monsoon Contour Map	11
3.	Composite Section of Pre and Post map	12

Table

Sr. No.	Description	Page No.
1	Calculation of sand Replenished	13-23

Figure

Sr. No.	Description	Plate No
Fig -1	Mine Site Photo	23-24



SUBJECT : REPORT ON REPLENISHMENT STUDY FOR BOULDER, GRAVEL & SAND MINOR MINERAL MINES OF MANDOLI GHAGGAR EAST BLOCK/YNR B-4, -(RIVER BED), DISTRICT: YAMUNANAGAR, Lease Area: 25.56 ha, Production: 11,91,000 T Per Annum

References :

a) Environmental Clearance vide letter no. F.No. SEIAA/HR/2016/985 dated 21.12.2016

1) **The Project :**

M/s JSM Foods Pvt., Ltd., WZ/932-Basie Darapur,1st floor near Senior Secondary school New Delhi-110015were the highest bidder for the boulder, gravel and Sand of MandoliGhaggar West Block/YNR B-4 for which e-auction was held on 10-06-15 and 11-06-2015. A Letter of Intent has been issued by the Director General Mines & Geology Department, Haryana vide letter no DMG/Hy/Cont/MandoliGhaggar West Block/YNR B-4//2015/ /dated 19-06-2015 for Mining of Boulder, Gravel& Sand (Minor Mineral) in revenue village MandoliGhaggar West Block/YNR B-4, over an area of 25.56 hectares in District- Yamunanagar , Haryana for a period of 7 years

Name of Block	Nme of Village	Details of Khasra No/KilaNos	Area of block in ha
MandoliGhaggarWest Block/YNR B-4/	MandoliGhaggar	**52//2,** 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 18, 23, 24, 25 **53//**1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24 **58//**1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 18, 19, 20 **59//3**, 4, 5, 6, 7, 8, 13, 14, 15, 16, 17, 18	25.56

Mining Area forms a part of G. T. Sheet No's –53F/ 8

Co-ordinates of the lease area as under

Pillar number	Latitudes	Longitudes
BP-1	N30° 08' 26.69"	E77° 24' 42.04"

BP-2	N30° 08' 26.69"	E77° 25' 01.64"
BP-3	N30° 08' 10.85"	E77° 25' 01.47"
BP-4	N30° 08' 10.85"	E77° 24' 59.02"
BP-5	N30° 08' 9.25"	E77° 24' 59.00"
BP-6	N30° 08' 8.32"	E77° 24' 51.62"
BP-7	N30° 08' 8.21"	E77° 24' 44.27"
BP-8	N30° 08' 22.73"	E77° 24' 44.44"
BP-9	N30° 08' 22.73"	E77° 24' 42.97"
BP-10	N30° 08' 23.33"	E77° 24' 42.97"
BP-11	N30° 08' 24.27"	E77° 24' 42.02"

The area is approachable from various nearest towns as detailed below

Village MandoliGhaggar is very well connected with Metalled road. Yamunanagar Railway Terminus is about 15 km from the miningarea.

Delhi ISBT is about 230 Km and Yamunanagar is about 15 km NW from the miningarea. State Headquarters Chandigarh is about 90 km in the North West of the miningarea.

2) Objective for Replenishment Study

The requirements of the "Replenishment Study" as per the terms of EC letter are as below:

Additional Conditions of EC (A-vi) The proponent should carry out replenishment study annually to ascertain the quantity of material replenished and production should not be more than the quantity replenished. In case the material replenished is more than the quantity mentioned in this Environmental Clearance then quantity that can be excavated is limited to 11,91,000 TPA (ROM). The proponent will submit the replenishment study report to Regional Office, MoEF&CC every year. The proponent should carry out a comprehensive replenishment study considering data collected at same location and at same time for at least three years and same needs to be submitted to Regional Office, MoEF&CCafter every three years;

3) Need for present Annual Replenishment Study

- As per Additional Conditions of EC (A-vi) , the Project Proponent should carry out replenishment study annually to ascertain the quantity of material replenished.

- The proponent will submit the replenishment study report to Regional Office, MoEF&CC every year. The proponent should carry out a comprehensive replenishment study considering data collected at same location and at same time for at least three years and same needs to be submitted to Regional Office, MoEF&CC, New Delhi after every three years;

Project Proponent,M/s JSM Foods Pvt., Ltd., WZ/932-Basie Darapur,1st floor near Senior Secondary school New Delhi-110015ppointed M/SVardan EnviroNet, Gurgaon, an Environmental Consulting Company forundertaking

a) Pre-monsoon survey and replenishment study
b) Post-monsoon survey and replenishment study
c) To prepare composite sections of pre and post monsoon survey findings
d) To calculate the volume of sand replenished during study period.
e) Finally to prepare "Replenishment Study Report" and to submit it to the Regional Office, MoEF&CC.

4. Replenishment Study

4.0 Period of Survey for sedimentation survey and replenishment study

Pre-monsoon: 15th to 20th June, 2020

Post-monsoon: 18th to 21stSeptember, 2020



4.1 General Introduction:

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are Non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin. But its over-exploitation and indiscriminate mining supersedes replenishment &optimum extraction is overtaken by profits, extraction has exceeded its replenishment rate and it neglects laws of mineral conservation.

Sand mining has become a widely spread activity and does not require a huge set up or technology, the number of ventures has increased extensively and it has become a footloose industry in itself but the backward-forward linkages are becoming stronger as many are getting employed as well as the construction activity / industry requires this mineral at consistent rates. In the state of Punjab, sand has been declared as an essential commodityso as to control its extraction and sale price. Andhra Pradesh on the other hand is heading towards a lottery system. Riverine environmental systems are unique in them and provide environmental services, natural resources to meet variety of needs of urban and rural communities. The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance. Rivers also act as natural administrative boundariesamong the states and this gives rise to improper and unclear demarcation of boundaries as the river keeps changing its course from time to time thereby unclear administrative controls and mechanisms becomes a point of excuse for administration for any illegal activity taking in this disputed area. River Yamuna near Dakpathar barrage leaves Uttarakhand and enters Himachal Pradesh.

The YAMUNA RIVER is the biggest tributary of the river Ganga in North India. Its source in the Yamunotry glacier at an elevation of 6387 mtrs on South western sides of Banderpooch crests in the lower Himalayan ranges. The overall span of the Yamuna river is 1376 Kms (855 miles) with catchment area of 366223 square km (141,399 square km). This encompasses 40.2 % of the whole Ganga valley, prior to joining Ganga at TriveniSangam in Allahabad (UP).

APPROVED

Itinerary of Yamuna River:

The river passes through many states such as Uttrakhand, UP, Haryana, going across to HP and then Delhi. With yearly discharge of around 10,000 cubic billion meters (cbm) and consumption of 4400 cbm (of which irrigation comprises 96%), the river represents above 70% of water provision of Delhi. Yamuna water are fairly good quality for its entire span from Yamunotri in Himalayan ranges to Wazirabad in Delhi, the length of which is around 375 Kms.

Itinerary of Drainage area of Yamuna:

The origin of Yamuna is situated in the Yamunotri glacier at an elevation of 6387 mtrs on SE sides of Banderpooch crests, which are located in the Mussoorie range of lower Himalayan range in Uttrakashi district of Uttrakhand, to the North of Haridwar. From this place Yamuna runs to South around 200 Kms across the Shivalik mountain ranges and lower Himalayan ranges.

A significant portion of its beginning of Drainage basin (with total area of 2320 square km) is situated in HP and a major tributary sapping the upper drainage basin in the Tons, which is also biggest and most extensive tributary of the Yamuna. Other tributaries in the area are the Rishi Ganga, Giri, Hanuman Ganga, Kunta& Bata, which sap the upper drainage basin of the huge Yamuna river. Subsequently, the river moves down the terrains of Doon basin at Dakpathar close to Dehradun, in this place water is redirected into a channel for the purpose of electricity generation. Once it goes across the sikh religious place of Ponta Sahib, the river arrives at Tajewala in the YAMUNANAGAR district of Haryana where a dam was constructed in 1873. This dam is the origin of the two major channels or water courses – Eastern Yamuna Canal and Western Yamuna Canal and both drain in UP & Haryana.

The Western Yamuna Canal (WYC) traverses Karnal, Yamunanagar and Panipat prior to arriving at the Haiderpur water treatment plant, which provides a portion of municipal water provisions of Delhi. The Yamuna also forms natural boundary between the states of Uttrakhand& HP and also amid the states of UP and Haryana.

Together with the Ganga to which it flows almost parallel once it meets the Indo-Gangetic plateau, the biggest Alluvial productive area in the World, it forms the Ganges-Yamuna Doab are stretched across 69,000 square Km which is 33% of the whole area.

Drainage system is the pattern formed by streams, rivers and lakes in a drainagebasin. In a drainage system, streams or rivers always connect together to formnetworks. Many factors such as topography, soil type, bedrock type, climate &vegetation cover influence input, output and transport of sediment and water in adrainage basin (Charlton, 2008). These factors also influence the nature of thepattern of water bodies (Twidale, 2004). As a consequence, drainage pattern canreflect geographical characteristics of a river network to a certain extent. There areseveral types of drainage pattern. So far, much research has been done on thedescription of drainage patterns in geology and hydrology (e.g. Howard, 1967;Lambert, 1998; Twidale, 2004; Pidwirny, 2006).

In addition, sediment transport knowledge is important in river restoration,ecosystem protection, navigation, watershed studies and reservoir management.Bed load represents the lower portion of sediment load in natural rivers. Fluvialsediment load materials are transported by rivers. Sediment load can be dividedinto bed load and suspended load based on the mode of transport. Bed load istransported close to the bed where particles moved by rolling, sliding, or dissolving(Adegbola, 2012). Xiaoqing (2003) explained that bed load transport in naturalrivers is a complicated event.

Its movement is quite uneven in both the transverse & longitudinal directions, which vary considerably.

4.2 Physiography:

The area forms a part of the Indo-Gangetic plains and exhibit flat terrain withgeneral slope from north to south. The area is devoid of any prominent topographic features. However, a natural depression exists in north & northwest of Gohana(29°08'22"N & 76°42'55"E). The maximum elevation of the plain is 230m above mRL. Topographically the district can be divided into the following units.

Active flood plains along the present day course of the river Yamuna in eastern part of the district. These are generally bordering the active flood plains and are wider, low lying flat tracts.

4.3 Drainage:

The Yamuna which marks the eastern boundary of the Haryana State as well asSonipat district provides the major drainage in the area. The River Yamuna emerges from Yamunotri off the Bansur-Punch glacier in TehriGarhwal district ofUttarakhand at an elevation of 6330 meters. It emerges into the plains from thefoothills at Kalesar just north of Tajewala.The area constitutes alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The general slope of the area is southwards.The Yamuna Rivers are plays an important role for the nation and provide water

required by Besides, mining activities are also being carried out in the rivers for the developmental process.Di-siltation (remove of excess sand and stone from river bed) of the river helps tomaintain the carrying capacity and provides protection from flooding duringmonsoon season. Further, continuous flow of river is essential for ecological andeconomic needs such as irrigation and biodiversity etc. Drainage study of the river helps to understand potential carrying capacity of water during pre-monsoon& post monsoon season which is generated from rainfall in the watershed and quantity of di-siltation of rivers under mining affected areas. Drainage and replenishment study was carried out in Yamuna River, Haryana was found with ephemeral streams. Quantification and estimation of river bed material (RBM) was accomplished by followed three scientific approaches i. e. mapping of watersheds by using Arc GIS software & and ERDAS software using analysis, survey of proposed mining area and grain size distribution of sand and gravelvarious sectors such as irrigation, drinking, recreation and industrial requirements etc.

4.4 Sedimentation, Assessment and Infrastructure

Dandy&Bolton formula is often used to check whether the sedimentation yield exceedsthe replenishment rate but the whole question is whether there is adequate monitoringof the river basin, the answer is no as hydrological stations are sparsely spread. Theformula uses catchment area and mean annual runoff as key determinants to give ayield value. It does not differentiate in basin wide smaller streams and theircharacteristics. CWC distinguishes river basins as classified and non-classified, as perthe latest hydrological data for unclassified River basins; there are 122 GDSW (Gauge,Discharge, Sediment & Water Quality) sites in 12 such basins, the number was 147 in2005. This brings in context the whole issue of scientific mining, thereby indicating that the monitoring of sediment yield in rivers / streams within the river basins is essential toarrive at extraction rates and express and conduct environmental studies based onthese basin wide characteristics which should become part of the 'Terms of Reference'.

Sedimentation, in the geological sciences, process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs. The term is commonly used as a synonym for sedimentary petrology and sedimentology.The physics of the most common sedimentation process, the settling of solid particles from fluids, has long been known. The settling velocity equation formulated in 1851 by G.G. Stokes is the classic starting point for any discussion of the sedimentation process. Stokes showed that the terminal settling velocity of spheres in a fluid was inversely proportional to the fluid's viscosity and directly proportional to the density difference of fluid and solid, the radius of the spheres involved, and the force of gravity. Stokes' equation is valid, however, only for very small spheres (under 0.04 millimetre [0.0015 inch] in diameter) and hence various modifications of Stokes' law have been proposed for nonspherical particles and particles of larger size.

No settling velocity equation, however valid, provides a sufficient explanation of even the basic physical properties of natural sediments. The grain size of the classic elements and their sorting, shape, roundness, fabric, and packing are the results of complex processes related not only to the density and viscosity of the fluid medium but also to the translational velocity of the depositing fluid, the turbulence resulting from this motion, and the roughness of the beds over which it

moves. These processes also are related to various mechanical properties of the solid materials propelled, to the duration of sediment transport, and to other little-understood factors.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits laid down in different geographic and geomorphic environments. Great efforts have been made to differentiate between continental, near-shore, marine, and other deposits in the geologic record. The classification of environments and criteria for their recognition is still a subject of lively debate. The analysis and interpretation of ancient deposits has been advanced by the study of modern sedimentation. Oceanographic and limnologicexpeditions have shed much light on sedimentation in the Gulf of Mexico, the Black Sea, and the Baltic Sea, and in various estuaries, lakes, and fluvial basins in all parts of the world.

Chemical sedimentation is understood in terms of chemical principles and laws. Although the famous physical chemist J.H. van't Hoff applied the principles of phase equilibrium to the problem of crystallizing brines and the origin of salt deposits as early as 1905, little effort was made to apply physical chemistry to the problems of chemical sedimentation. More recently, however, there has been investigation of the role of the redox (mutual reduction and oxidation) potential and pH (acidity–alkalinity) in the precipitation of many chemical sediments, and a renewed effort has been made to apply known thermodynamic principles to the origin of anhydrite and gypsum deposits, to the chemistry of dolomite formation, and to the problem of the ironstones and related sediments.

The factors which affects the "Computation of Sediment" :-

a) Geomorphology & Drainage Pattern : The following geomorphic units plays important role :

- Structural Plain
- Structural Hill
- Structural Ridge
- Denudation Ridge & Valley
- Plain & Plateau of Gangetic plain
- Highly Dissected pediment
- Un dissected pediment



b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)

c) Drainage System/Pattern of the area (Drainage Density = ...Km/Sq. Km of Yamuna River

d) Rainfall & Climate : Year wise Rainfall data for previous 10 years of Yamuna Basin/River

e) As per Dandy & Bolton study "Sediment Yield" can be related to i) Catchment Area and ii) Mean Annual Run-off

5. Approach & Methodology Followed for Replenishment Study:-

a) Pre-monsoon survey of River bed with the help of GPS and Drone

b) Grid pattern 30 m x 20 m (30 m along the length of the river and 20 m along width of the river) or part thereof.

c) To draw pre-monsoon contour map (Base map considered as per approved mining plan)

d) Post-monsoon survey of River bed with the help of GPS and Drone

e) Same Grid pattern (30 m x 20 m) or part thereof was considered for survey.

f) To draw post-monsoon contour map (Base map considered as per approved mining plan)

g) To draw composite sections of Pre and post monsoon maps. This will determine the depth and volume of sand replenished.

h) Finally to calculate the volume of sand with grid pattern of 30 m x 20 m multiplied by depth of replenishment.

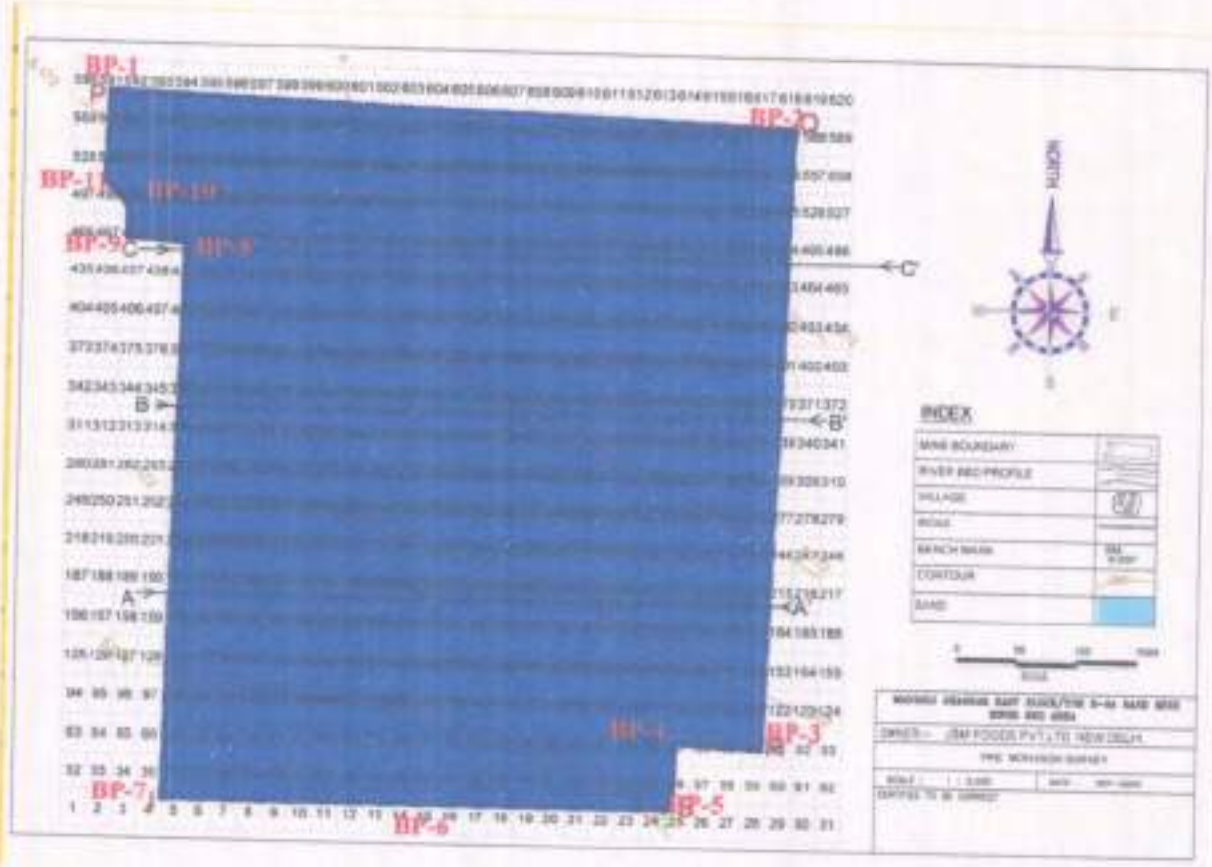
i) The tonnage of replenishment will be volume of sand multiplied by density of sand (which is 2 T per Cubic m)

5i) **Software & Equipment Deployed**

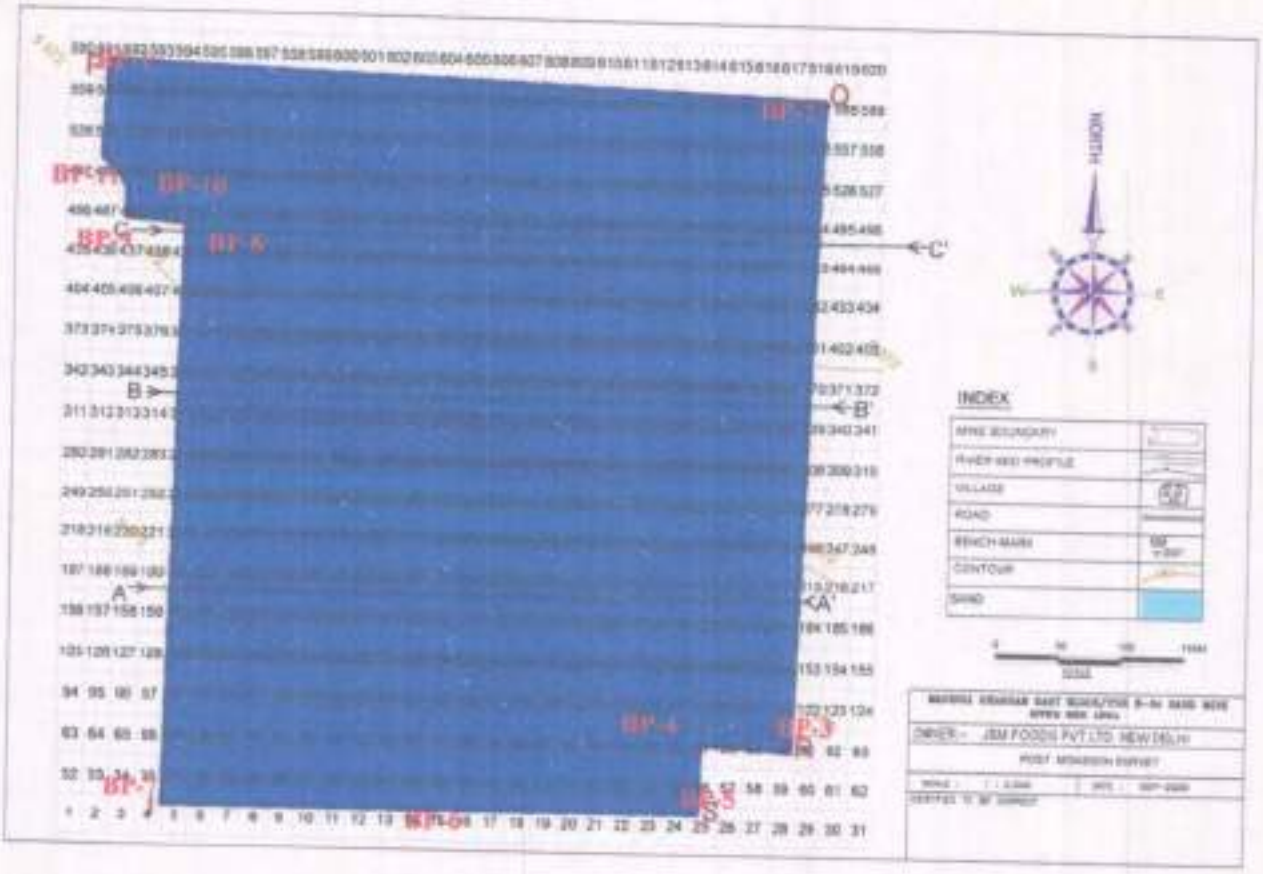
- **GPS**
- **Drone**
- **Drone Mapper (Software)**
- **Arc-Gis 10.8 (Software)**
- **Autocad 2011 (Software)**



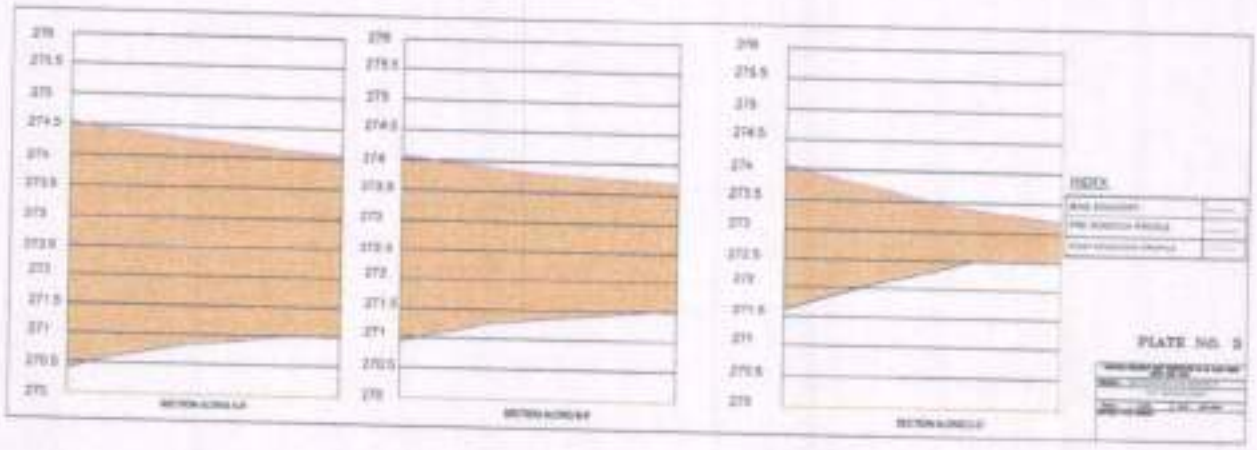
a) Pre-monsoonContour Map (Grid Pattern 30m x 20m or part thereof)



b) Post-monsoon Contour map (Grid Pattern : 30m x 20m or part thereof)



c) Composite section of Pre & Post Monsoon Contour Map



d) Tonnage Calculation of Sand Replenished

Grid	Grid Area	Pre Monsoon Elevation	Post Monsoon Elevation	Difference of Elevation (Pre And Post Monsoon) in m	Tonnage	Mineable Reserve for 3 mtr Depth of Sand	Mineable Reserve Tonnage
37	600	270.5	274.5	4	4800	3	3600
38	600	270.5	274.5	4	4800	3	3600
39	600	270.5	274.5	4	4800	3	3600
40	600	270.5	274.5	4	4800	3	3600
41	600	270.5	274.5	4	4800	3	3600
42	600	270.5	274.5	4	4800	3	3600
43	600	270.5	274.5	4	4800	3	3600
44	600	270.5	274.5	4	4800	3	3600
45	600	270.5	274.5	4	4800	3	3600
46	600	270.5	274.5	4	4800	3	3600
47	600	270.5	274.5	4	4800	3	3600
48	600	270.5	274.5	4	4800	3	3600
49	600	270.5	274.5	4	4800	3	3600
50	600	270.5	274.5	4	4800	3	3600
51	600	270.5	274.5	4	4800	3	3600
52	600	270.5	274.5	4	4800	3	3600
53	600	270.5	274.5	4	4800	3	3600
54	600	270.5	274.5	4	4800	3	3600
55	600	270.5	274.5	4	4800	3	3600
99	600	270.5	274.5	4	4800	3	3600
100	600	270.5	274.5	4	4800	3	3600
101	600	270.5	274.5	4	4800	3	3600
102	600	270.5	274.5	4	4800	3	3600
103	600	270.5	274.5	4	4800	3	3600
104	600	270.5	274.5	4	4800	3	3600
105	600	270.5	274.5	4	4800	3	3600
106	600	270.5	274.5	4	4800	3	3600
107	600	270.5	274.5	4	4800	3	3600
108	600	270.5	274.5	4	4800	3	3600
109	600	270.5	274.5	4	4800	3	3600
110	600	270.5	274.5	4	4800	3	3600
111	600	271	274.5	3.5	4200	3	3600
112	600	271	274.5	3.5	4200	3	3600
113	600	271	274.5	3.5	4200	3	3600
114	600	271	274.5	3.5	4200	3	3600

115	600	271	274.5	3.5	4200	3	3600
116	600	271	274.5	3.5	4200	3	3600
117	600	271	274.5	3.5	4200	3	3600
161	600	270.5	274.5	4	4800	3	3600
162	600	270.5	274.5	4	4800	3	3600
163	600	270.5	274.5	4	4800	3	3600
164	600	270.5	274.5	4	4800	3	3600
165	600	270.5	274.5	4	4800	3	3600
166	600	270.5	274.5	4	4800	3	3600
167	600	270.5	274	3.5	4200	3	3600
168	600	270.5	274.5	4	4800	3	3600
169	600	270.5	274.5	4	4800	3	3600
170	600	270.5	274.5	4	4800	3	3600
171	600	271	274.5	3.5	4200	3	3600
172	600	271	274.5	3.5	4200	3	3600
173	600	271	274.5	3.5	4200	3	3600
174	600	271	274.5	3.5	4200	3	3600
175	600	271	274.5	3.5	4200	3	3600
176	600	271	274.5	3.5	4200	3	3600
177	600	271	274.5	3.5	4200	3	3600
178	600	271	274.5	3.5	4200	3	3600
179	600	271	274.5	3.5	4200	3	3600
180	600	271	274.5	3.5	4200	3	3600
181	600	271	274.5	3.5	4200	3	3600
182	600	271	274.5	3.5	4200	3	3600
223	600	270.5	274.5	4	4800	3	3600
224	600	270.5	274.5	4	4800	3	3600
225	600	270.5	274.5	4	4800	3	3600
226	600	270.5	274.5	4	4800	3	3600
227	600	270.5	274.5	4	4800	3	3600
228	600	270.5	274.5	4	4800	3	3600
229	600	270.5	274.5	4	4800	3	3600
230	600	271	274.5	3.5	4200	3	3600
231	600	271	274.5	3.5	4200	3	3600
232	600	271	274.5	3.5	4200	3	3600
233	600	271	274.5	3.5	4200	3	3600
234	600	271	274.5	3.5	4200	3	3600
235	600	271	274.5	3.5	4200	3	3600
236	600	271	274.5	3.5	4200	3	3600
237	600	271	274.5	3.5	4200	3	3600
238	600	271	274.5	3.5	4200	3	3600
239	600	271	274.5	3.5	4200	3	3600

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240	600	271	274.5	3.5	4200	3	3600
241	600	271.5	274.5	3	3600	3	3600
242	600	271.5	274.5	3	3600	3	3600
243	600	271.5	274	2.5	3000	2.5	3000
244	600	271.5	274	2.5	3000	2.5	3000
285	600	270.5	274.5	4	4800	3	3600
286	600	270.5	274.5	4	4800	3	3600
287	600	270.5	274.5	4	4800	3	3600
288	600	270.5	274.5	4	4800	3	3600
289	600	271	274.5	3.5	4200	3	3600
290	600	271	274.5	3.5	4200	3	3600
291	600	271	274.5	3.5	4200	3	3600
292	600	271	274.5	3.5	4200	3	3600
293	600	271	274.5	3.5	4200	3	3600
294	600	271	274.5	3.5	4200	3	3600
295	600	271	274.5	3.5	4200	3	3600
296	600	271	274.5	3.5	4200	3	3600
297	600	271	274.5	3.5	4200	3	3600
298	600	271	274.5	3.5	4200	3	3600
299	600	271.5	274.5	3	3600	3	3600
300	600	271.5	274.5	3	3600	3	3600
301	600	271.5	274	2.5	3000	2.5	3000
302	600	271.5	274	2.5	3000	2.5	3000
303	600	271.5	274	2.5	3000	2.5	3000
304	600	271.5	274	2.5	3000	2.5	3000
305	600	271.5	274	2.5	3000	2.5	3000
306	600	271.5	274	2.5	3000	2.5	3000
347	600	271	274.5	3.5	4200	3	3600
348	600	271	274.5	3.5	4200	3	3600
349	600	271	274.5	3.5	4200	3	3600
350	600	271	274.5	3.5	4200	3	3600
351	600	271	274.5	3.5	4200	3	3600
352	600	271	274.5	3.5	4200	3	3600
353	600	271	274.5	3.5	4200	3	3600
354	600	271	274.5	3.5	4200	3	3600
355	600	271	274.5	3.5	4200	3	3600
356	600	271	274.5	3.5	4200	3	3600
357	600	271.5	274.5	3	3600	3	3600
358	600	271.5	274	2.5	3000	2.5	3000
359	600	271.5	274	2.5	3000	2.5	3000
360	600	271.5	274	2.5	3000	2.5	3000
361	600	271.5	274	2.5	3000	2.5	3000

362	600	271.5	274	2.5	3000	2.5	3000
363	600	271.5	274	2.5	3000	2.5	3000
364	600	271.5	274	2.5	3000	2.5	3000
365	600	271.5	274	2.5	3000	2.5	3000
366	600	271.5	274	2.5	3000	2.5	3000
367	600	271.5	274	2.5	3000	2.5	3000
368	600	271.5	274	2.5	3000	2.5	3000
409	600	271	274.5	3.5	4200	3	3600
410	600	271	274.5	3.5	4200	3	3600
411	600	271	274.5	3.5	4200	3	3600
412	600	271	274.5	3.5	4200	3	3600
413	600	271	274.5	3.5	4200	3	3600
414	600	271	274.5	3.5	4200	3	3600
415	600	271	274.5	3.5	4200	3	3600
416	600	271	274.5	3.5	4200	3	3600
417	600	271.5	274	2.5	3000	2.5	3000
418	600	271.5	274	2.5	3000	2.5	3000
419	600	271.5	274	2.5	3000	2.5	3000
420	600	271.5	274	2.5	3000	2.5	3000
421	600	271.5	274	2.5	3000	2.5	3000
422	600	271.5	274	2.5	3000	2.5	3000
423	600	271.5	274	2.5	3000	2.5	3000
424	600	271.5	274	2.5	3000	2.5	3000
425	600	271.5	274	2.5	3000	2.5	3000
426	600	271.5	274	2.5	3000	2.5	3000
427	600	271.5	274	2.5	3000	2.5	3000
428	600	271.5	274	2.5	3000	2.5	3000
429	600	271.5	274	2.5	3000	2.5	3000
430	600	271.5	274	2.5	3000	2.5	3000
471	600	271	274	3	3600	3	3600
472	600	271	274	3	3600	3	3600
473	600	271	274	3	3600	3	3600
474	600	271	274	3	3600	3	3600
475	600	271.5	274	2.5	3000	2.5	3000
476	600	271.5	274	2.5	3000	2.5	3000
477	600	271.5	274	2.5	3000	2.5	3000
478	600	271.5	274	2.5	3000	2.5	3000
479	600	271.5	274	2.5	3000	2.5	3000
480	600	271.5	274	2.5	3000	2.5	3000
481	600	271.5	274	2.5	3000	2.5	3000
482	600	271.5	274	2.5	3000	2.5	3000
483	600	271.5	274	2.5	3000	2.5	3000

484	600	271.5	274	2.5	3000	2.5	3000
485	600	271.5	274	2.5	3000	2.5	3000
486	600	271.5	274	2.5	3000	2.5	3000
487	600	271.5	274	2.5	3000	2.5	3000
488	600	271.5	274	2.5	3000	2.5	3000
489	600	272	274	2	2400	2	2400
490	600	271.5	274	2.5	3000	2.5	3000
491	600	271.5	274	2.5	3000	2.5	3000
492	600	271.5	274	2.5	3000	2.5	3000
533	600	271.5	274	2.5	3000	2.5	3000
534	600	271.5	274	2.5	3000	2.5	3000
535	600	271.5	274	2.5	3000	2.5	3000
536	600	271.5	274	2.5	3000	2.5	3000
537	600	271.5	274	2.5	3000	2.5	3000
538	600	271.5	274	2.5	3000	2.5	3000
539	600	271.5	274	2.5	3000	2.5	3000
540	600	271.5	274	2.5	3000	2.5	3000
541	600	271.5	274	2.5	3000	2.5	3000
542	600	271.5	274	2.5	3000	2.5	3000
543	600	271.5	274	2.5	3000	2.5	3000
544	600	271.5	274	2.5	3000	2.5	3000
545	600	271.5	274	2.5	3000	2.5	3000
546	600	271.5	274	2.5	3000	2.5	3000
547	600	271.5	274	2.5	3000	2.5	3000
548	600	271.5	274	2.5	3000	2.5	3000
549	600	271.5	274	2.5	3000	2.5	3000
550	600	271.5	274	2.5	3000	2.5	3000
551	600	271.5	273.5	2	2400	2	2400
552	600	272	273.5	1.5	1800	1.5	1800
553	600	272	273.5	1.5	1800	1.5	1800
554	600	272	273.5	1.5	1800	1.5	1800
595	600	271.5	274	2.5	3000	2.5	3000
596	600	271.5	274	2.5	3000	2.5	3000
597	600	271.5	274	2.5	3000	2.5	3000
598	600	271.5	274	2.5	3000	2.5	3000
599	600	271.5	274	2.5	3000	2.5	3000
600	600	271.5	274	2.5	3000	2.5	3000
601	600	271.5	274	2.5	3000	2.5	3000
602	600	271.5	274	2.5	3000	2.5	3000
603	600	271.5	274	2.5	3000	2.5	3000
604	600	271.5	274	2.5	3000	2.5	3000
605	600	271.5	274	2.5	3000	2.5	3000

606	600	271.5	274	2.5	3000	2.5	3000
607	600	271.5	274	2.5	3000	2.5	3000
608	600	271.5	274	2.5	3000	2.5	3000
609	600	271.5	274	2.5	3000	2.5	3000
610	600	272	274	2	2400	2	2400
611	600	272	274	2	2400	2	2400
612	600	272	273.5	1.5	1800	1.5	1800
613	600	272	273.5	1.5	1800	1.5	1800
614	600	272	273.5	1.5	1800	1.5	1800
615	600	272	273.5	1.5	1800	1.5	1800
616	600	272	273.5	1.5	1800	1.5	1800
617	600	272	273.5	1.5	1800	1.5	1800
657	600	271.5	274	2.5	3000	2.5	3000
658	600	271.5	274	2.5	3000	2.5	3000
659	600	271.5	274	2.5	3000	2.5	3000
660	600	271.5	274	2.5	3000	2.5	3000
661	600	271.5	274	2.5	3000	2.5	3000
662	600	271.5	274	2.5	3000	2.5	3000
663	600	271.5	274	2.5	3000	2.5	3000
664	600	271.5	274	2.5	3000	2.5	3000
665	600	271.5	274	2.5	3000	2.5	3000
666	600	271.5	274	2.5	3000	2.5	3000
667	600	271.5	274	2.5	3000	2.5	3000
668	600	271.5	274	2.5	3000	2.5	3000
669	600	271.5	274	2.5	3000	2.5	3000
670	600	271.5	273.5	2	2400	2	2400
671	600	272	273.5	1.5	1800	1.5	1800
672	600	272	273.5	1.5	1800	1.5	1800
673	600	272	273.5	1.5	1800	1.5	1800
674	600	272	273.5	1.5	1800	1.5	1800
675	600	272	273.5	1.5	1800	1.5	1800
676	600	272	273.5	1.5	1800	1.5	1800
677	600	272	273.5	1.5	1800	1.5	1800
678	600	272	273.5	1.5	1800	1.5	1800
679	600	272	273.5	1.5	1800	1.5	1800
719	600	271.5	274	2.5	3000	2.5	3000
720	600	271.5	274	2.5	3000	2.5	3000
721	600	271.5	274	2.5	3000	2.5	3000
722	600	271.5	274	2.5	3000	2.5	3000
723	600	271.5	274	2.5	3000	2.5	3000
724	600	271.5	274	2.5	3000	2.5	3000
725	600	271.5	274	2.5	3000	2.5	3000

726	600	271.5	274	2.5	3000	2.5	3000
727	600	271.5	274	2.5	3000	2.5	3000
728	600	271.5	274	2.5	3000	2.5	3000
729	600	272	274	2	2400	2	2400
730	600	272	274	2	2400	2	2400
731	600	272	274	2	2400	2	2400
732	600	272	273.5	1.5	1800	1.5	1800
733	600	272	273.5	1.5	1800	1.5	1800
734	600	272	273.5	1.5	1800	1.5	1800
735	600	272	273.5	1.5	1800	1.5	1800
736	600	272	273.5	1.5	1800	1.5	1800
737	600	272	273.5	1.5	1800	1.5	1800
738	600	272	273.5	1.5	1800	1.5	1800
739	600	272	273.5	1.5	1800	1.5	1800
740	600	272	273.5	1.5	1800	1.5	1800
741	600	272	273.5	1.5	1800	1.5	1800
781	600	271.5	274	2.5	3000	2.5	3000
782	600	271.5	274	2.5	3000	2.5	3000
783	600	271.5	274	2.5	3000	2.5	3000
784	600	271.5	274	2.5	3000	2.5	3000
785	600	271.5	274	2.5	3000	2.5	3000
786	600	271.5	274	2.5	3000	2.5	3000
787	600	271.5	274	2.5	3000	2.5	3000
788	600	271.5	274	2.5	3000	2.5	3000
789	600	271.5	274	2.5	3000	2.5	3000
790	600	271.5	273.5	2	2400	2	2400
791	600	272	273.5	1.5	1800	1.5	1800
792	600	272	273.5	1.5	1800	1.5	1800
793	600	272	273.5	1.5	1800	1.5	1800
794	600	272	273.5	1.5	1800	1.5	1800
795	600	272	273.5	1.5	1800	1.5	1800
796	600	272	273.5	1.5	1800	1.5	1800
797	600	272	273.5	1.5	1800	1.5	1800
798	600	272	273.5	1.5	1800	1.5	1800
799	600	272	273.5	1.5	1800	1.5	1800
800	600	272	273.5	1.5	1800	1.5	1800
801	600	272	273.5	1.5	1800	1.5	1800
802	600	272	273.5	1.5	1800	1.5	1800
803	600	272	273.5	1.5	1800	1.5	1800
843	600	271.5	274	2.5	3000	2.5	3000
844	600	271.5	274	2.5	3000	2.5	3000
845	600	271.5	274	2.5	3000	2.5	3000

846	600	271.5	274	2.5	3000	2.5	3000
847	600	271.5	274	2.5	3000	2.5	3000
848	600	271.5	274	2.5	3000	2.5	3000
849	600	271.5	274	2.5	3000	2.5	3000
850	600	271.5	274	2.5	3000	2.5	3000
851	600	271.5	274	2.5	3000	2.5	3000
852	600	272	273.5	1.5	1800	1.5	1800
853	600	272	273.5	1.5	1800	1.5	1800
854	600	272	273.5	1.5	1800	1.5	1800
855	600	272	273.5	1.5	1800	1.5	1800
856	600	272	273.5	1.5	1800	1.5	1800
857	600	272	273.5	1.5	1800	1.5	1800
858	600	272	273.5	1.5	1800	1.5	1800
859	600	272	273.5	1.5	1800	1.5	1800
860	600	272	273.5	1.5	1800	1.5	1800
861	600	272	273.5	1.5	1800	1.5	1800
862	600	272	273.5	1.5	1800	1.5	1800
863	600	272	273.5	1.5	1800	1.5	1800
864	600	272	273.5	1.5	1800	1.5	1800
865	600	272	273.5	1.5	1800	1.5	1800
905	600	271.5	274	2.5	3000	2.5	3000
906	600	271.5	274	2.5	3000	2.5	3000
907	600	271.5	274	2.5	3000	2.5	3000
908	600	271.5	274	2.5	3000	2.5	3000
909	600	272	274	2	2400	2	2400
910	600	272	274	2	2400	2	2400
911	600	272	274	2	2400	2	2400
912	600	272	274	2	2400	2	2400
913	600	272	274	2	2400	2	2400
914	600	272	273.5	1.5	1800	1.5	1800
915	600	272	273.5	1.5	1800	1.5	1800
916	600	272	273.5	1.5	1800	1.5	1800
917	600	272	273.5	1.5	1800	1.5	1800
918	600	272	273.5	1.5	1800	1.5	1800
919	600	272	273.5	1.5	1800	1.5	1800
920	600	272	273.5	1.5	1800	1.5	1800
921	600	272	273.5	1.5	1800	1.5	1800
922	600	272	273.5	1.5	1800	1.5	1800
923	600	272	273.5	1.5	1800	1.5	1800
924	600	272	273.5	1.5	1800	1.5	1800
925	600	272	273.5	1.5	1800	1.5	1800
926	600	272	273.5	1.5	1800	1.5	1800

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927	600	272	273.5	1.5	1800	1.5	1800
965	600	271.5	273.5	2	2400	2	2400
966	600	271.5	273.5	2	2400	2	2400
967	600	271.5	273.5	2	2400	2	2400
968	600	271.5	273.5	2	2400	2	2400
969	600	271.5	273.5	2	2400	2	2400
970	600	272	273.5	1.5	1800	1.5	1800
971	600	272	273.5	1.5	1800	1.5	1800
972	600	272	273.5	1.5	1800	1.5	1800
973	600	272	273.5	1.5	1800	1.5	1800
974	600	272	273.5	1.5	1800	1.5	1800
975	600	272	273.5	1.5	1800	1.5	1800
976	600	272	273.5	1.5	1800	1.5	1800
977	600	272	273.5	1.5	1800	1.5	1800
978	600	272	273.5	1.5	1800	1.5	1800
979	600	272	273.5	1.5	1800	1.5	1800
980	600	272	273.5	1.5	1800	1.5	1800
981	600	272	273.5	1.5	1800	1.5	1800
982	600	272	273.5	1.5	1800	1.5	1800
983	600	272	273.5	1.5	1800	1.5	1800
984	600	272	273.5	1.5	1800	1.5	1800
985	600	272	273.5	1.5	1800	1.5	1800
986	600	272	273.5	1.5	1800	1.5	1800
987	600	272	273.5	1.5	1800	1.5	1800
988	600	272	273.5	1.5	1800	1.5	1800
989	600	272	273.5	1.5	1800	1.5	1800
1026	600	271.5	273.5	2	2400	2	2400
1027	600	271.5	273.5	2	2400	2	2400
1028	600	271.5	273.5	2	2400	2	2400
1029	600	271.5	273.5	2	2400	2	2400
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1031	600	271.5	273.5	2	2400	2	2400
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1039	600	272	273.5	1.5	1800	1.5	1800
1040	600	272	273.5	1.5	1800	1.5	1800
1041	600	272	273.5	1.5	1800	1.5	1800

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1042	600	272	273.5	1.5	1800	1.5	1800
1043	600	272	273.5	1.5	1800	1.5	1800
1044	600	272	273.5	1.5	1800	1.5	1800
1045	600	272	273.5	1.5	1800	1.5	1800
1046	600	272	273.5	1.5	1800	1.5	1800
1047	600	272	273.5	1.5	1800	1.5	1800
1048	600	272	273.5	1.5	1800	1.5	1800
1049	600	272	273.5	1.5	1800	1.5	1800
1050	600	272	273.5	1.5	1800	1.5	1800
1051	600	272	273.5	1.5	1800	1.5	1800
1088	600	271.5	273.5	2	2400	2	2400
1089	600	271.5	273.5	2	2400	2	2400
1090	600	271.5	273.5	2	2400	2	2400
1091	600	271.5	273.5	2	2400	2	2400
1092	580	271.5	273.5	2	2320	2	2320
1093	580	271.5	273.5	2	2320	2	2320
431	550	271.5	274	2.5	2750	2.5	2750
493	550	271.5	274	2.5	2750	2.5	2750
555	550	272	273.5	1.5	1650	1.5	1650
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1099	550	272	273.5	1.5	1650	1.5	1650
1100	550	272	273.5	1.5	1650	1.5	1650
1101	550	272	273.5	1.5	1650	1.5	1650
1102	550	272	273.5	1.5	1650	1.5	1650
307	500	271.5	274	2.5	2500	2.5	2500
369	500	271.5	274	2.5	2500	2.5	2500
1103	500	272	273.5	1.5	1500	1.5	1500
1104	500	272	273.5	1.5	1500	1.5	1500
1105	500	272	273.5	1.5	1500	1.5	1500
1106	500	272	273.5	1.5	1500	1.5	1500
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842	50	271.5	274	2.5	250	2.5	250
902	50	271.5	274	2.5	250	2.5	250
1025	50	271.5	273.5	2	200	2	200
1087	50	271.5	273.5	2	200	2	200
1107	450	272	273.5	1.5	1350	1.5	1350
1108	450	272	273.5	1.5	1350	1.5	1350
1109	450	272	273.5	1.5	1350	1.5	1350

1110	450	272	273.5	1.5	1350	1.5	1350
903	400	271.5	274	2.5	2000	2.5	2000
904	400	271.5	274	2.5	2000	2.5	2000
964	400	271.5	273.5	2	1600	2	1600
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183	300	271	274.5	3.5	2100	3	1800
222	300	270.5	274.5	4	2400	3	1800
245	300	271.5	274	2.5	1500	2.5	1500
1111	300	272	273.5	1.5	900	1.5	900
1112	300	272	273.5	1.5	900	1.5	900
1113	300	272	273.5	1.5	900	1.5	900
284	200	270.5	274.5	4	1600	3	1200
346	200	271	274.5	3.5	1400	3	1200
408	200	271	274.5	3.5	1400	3	1200
742	20	272	273.5	1.5	60	1.5	60
804	20	272	273.5	1.5	60	1.5	60
866	20	272	273.5	1.5	60	1.5	60
963	20	271.5	273.5	2	80	2	80
470	150	271	274	3	900	3	900
532	150	271	274	3	900	3	900
594	150	271.5	274	2.5	750	2.5	750
118	100	271	274.5	3.5	700	3	600
119	100	271	274.5	3.5	700	3	600
120	100	271.5	274.5	3	600	3	600
121	100	271.5	274.5	3	600	3	600
656	100	271.5	274	2.5	500	2.5	500
718	100	271.5	274	2.5	500	2.5	500
928	100	272	273.5	1.5	300	1.5	300
990	100	272	273.5	1.5	300	1.5	300
1052	100	272	273.5	1.5	300	1.5	300
1114	100	272	273.5	1.5	300	1.5	300
					1252500		1152200

APPROVED
R. S. Thakran

Conclusion

Replenishment Study for the year 2020 reveals that there is replenishment (Natural Reclamation Rainfed Water Containing Sand) of approximately, 11,52,200 MT of Boulder, Gravel and Sand.

Vardan Environet
(A NABET Accredited Consultant)
82A,Sector-5, IMT Manesar ,Gurgaon
Phone /Fax.:0124-4291036,9929108691
email: info@vardanenvironet.com



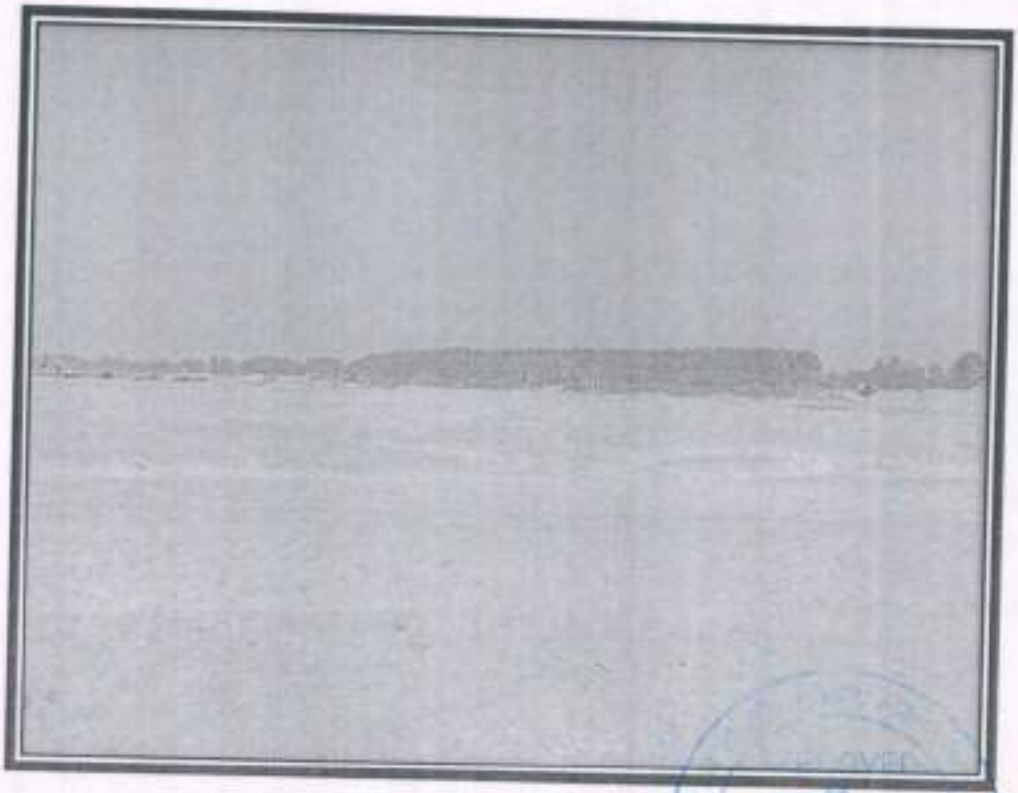
G) Site Photographs





APPROVED
R. K. Thakran
MD





R. S. Thakran
MS

HARYANA STATE POLLUTION CONTROL BOARD
SCO-131 Sector-17, HUDA Jagadhari Ph.01732-200137
Website - www.hspcb.gov.in E-Mail - hspcb.pkl@sify.mail.com
Telephone No. - 0172-2577870-73

No. HSPCB/Consent/ : 313100417YAMCTE3814605 **Dated:30/03/2017**

To

M/s : JSM FOODS PRIVATE LIMITED
VILL MANDOLI GHAGGAR WEST BLOCK 4
YAMUNANAGAR
135003

Sub. : Grant of consent to Establish to M/s JSM FOODS PRIVATE LIMITED

Please refer to your application received on dated 2017-01-30 in regional office Yamuna Nagar.

With reference to your above application for consent to establish,M/s JSM FOODS PRIVATE LIMITED is here by granted

consent as per following specification/Terms and conditions.

Consent Under	AIR/WATER/HWM
Period of consent	30/03/2017 - 29/03/2022
Industry Type	Mining and ore beneficiation
Category	RED
Investment	
1. Land (Rs.in LAKHS)	12
2. Building(Rs.in LAKHS)	8
Quantity of effluent	
1. Trade	1.0 KL/Day
2. Domestic	0.0 KL/Day
Number of outlets	1.0
Mode of discharge	
1. Domestic	Septic Tank
2. Trade	00
Domestic Effluent Parameters	
Trade Effluent Parameters	
Number of stacks	1
Height of stack	
1. 00	00 meter
Emission parameters	
1. SPM	00 Lts./Day
Capacity of boiler	
1. 00	00 Ton/hr

Type of Furnace	
1. 00	00
Type of Fuel	
1. Diesel	00 KL/Day

Terms and conditions

1. The industry has declared that the quantity of effluent shall be 14 KL/Day i.e 0KL/Day for Trade Effluent, 13 KL/Day for Cooling, 1 KL/Day for Domestic and the same should not exceed .

2. The above "Consent to Establish" is valid for 60 months from the date of its issue to be extended for another one year at the discretion of the Board or till the time the unit starts its trial production whichever is earlier. The unit will have to set up the plant and obtain consent during this period.

3. The officer/official of the Board shall have the right to access and inspection of the industry in connection with the various processes and the treatment facilities being provided simultaneously with the construction of building/machinery. The effluent should conform the effluent standards as applicable

4. That necessary arrangement shall be made by the industry for the control of Air Pollution before commissioning the plant. The emitted pollutants will meet the emission and other standards as laid/will be prescribed by the Board from time to time.

5. The applicant will obtain consent under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21/22 of the Air (Prevention & Control of Pollution) Act,1981 as amended to-date-even before starting trial production

6. The above Consent to Establish is further subject to the conditions that the unit complies with all the laws/rules/decisions and competent directions of the Board/Government and its functionaries in all respects before commissioning of the operation and during its actual working strictly.

7. No in-process or post-process objectionable emission or the effluent will be allowed, if the scheme furnished by the unit turns out to be defective in any actual experience

8. The Electricity Department will give only temporary connection and permanent connection to the unit will be given after verifying the consent granted by the Board, both under Water Act and Air Act.

9. Unit will raise the stack height of DG Set/Boiler as per Board's norms.

10. Unit will maintain proper logbook of Water meter/sub meter before/after commissioning.

11. That in the case of an industry or any other process the activity is located in an area approved and that in case the activity is sited in an residential or institutional or commercial or agricultural area, the necessary permission for siting such industry and process in an residential or institutional or commercial or agricultural area or controlled area under Town and Country Planning laws CLU or Municipal laws has to be obtained from the competent Authority in law permitting this deviation and be submitted in original with the request for consent to operate.

12. That there is no discharge directly or indirectly from the unit or the process into any interstate rivet or Yamuna River or River Ghaggar.

13. That the industry or the unit concerned is not sited within any prohibited distances according to the Environmental Laws and Rules, Notification, Orders and Policies of Central Pollution control Board and Haryana State Pollution Control Board.

14. That of the unit is discharging its sewage or trade effluent into the public sewer meant to receive trade effluent from industries etc. then the permission of the Competent Authority owing and operating such public sewer giving permission letter to his unit shall be submitted at time of consent to operate.

15. That if at any time, there is adverse report from any adjoining neighbor or any other aggrieved party or Municipal Committee or Zila Parishad or any other public body against the unit's pollution; the Consent to Establish so granted shall be revoked.

16. That all the financial dues required under the rules and policies of the Board have been deposited in full by the unit for this Consent to Establish.

17. In case of change of name from previous Consent to Establish granted, fresh Consent to Establish fee shall be levied.

18. Industry should adopt water conservation measures to ensure minimum consumption of water in their Process. Ground water based proposals of new industries should get clearance from Central Ground Water Authority for scientific development of previous resource.

19. That the unit will take all other clearances from concerned agencies, whenever required.

20. That the unit will not change its process without the prior permission of the Board.

21. That the Consent to Establish so granted will be invalid, if the unit falls in Aravali Area or non conforming area.

22. That the unit will comply with the Hazardous Waste Management Rules and will also make the non-leachate pit for storage of Hazardous waste and will undertake not to dispose off the same except for pit in their own premises or with the authorized disposal authority.

23. That the unit will submit an undertaking that it will comply with all the specific and general conditions as imposed in the above Consent to Establish within 30 days failing which Consent to Establish will be revoked.

24. That unit will obtain EIA from MoEF, if required at any stage.

25. In case of unit does not comply with the above conditions within the stipulated period, Consent to Establish will be revoked.

26. That unit will obtain consent to operate from the board before the start of product activity.

APPROVED

Specific Conditions

Other Conditions :

1. That unit will abide with all the condition mentioned in the Environmental clearance. 2. That unit will abide by the directions of CPCB/HSPCB/any other competent authority time to time 3. That unit will abide the directions/ orders of Honble Supreme court /High Court/NGT/any other court. 4. That the Project Proponent will abide by the recommendations of the HIGH POWER COMMITTEE CONSTITUTED by the Hon'ble NGT in the OA NO 184 OF 2013 in the case of GURPREET SINGH BAGGA vs MoEF & CC and subjected to final outcome/decision of the case. 5. That the unit will submit the Land Agreement between Farmers and the unit at the time of CTO application. 6. That the unit will obtained the CTO application before starting the Production Activity.

Regional Officer, Yamuna Nagar
For and on be'half of chairman
Haryana State Pollution Control Board

HARYANA STATE POLLUTION CONTROL BOARD
SCO-131 Sector-17, HUDA Jagadhari Ph.01732-200137 Email:- hspcbroyr@gmail.com
E-mail: hspcb@hry.nic.in

No. HSPCB/Consent/ : 313100420YAMCTO7770822 Dated:22/07/2020

To.

M/s :JSM FOODS PRIVATE LIMITED
VILL MANDOLI GHAGGAR WEST BLOCK 4

Subject: Grant of consent to operate to M/s JSM FOODS PRIVATE LIMITED.

Please refer to your application no. 7770822 received on dated 2020-06-23 in regional office Yamuna Nagar.With reference to your above application for consent to operate,M/s JSM FOODS PRIVATE LIMITED is here by granted consent as per following specification/Terms and conditions.

Consent Under	BOTH
Period of consent	01/10/2020 - 30/09/2021
Industry Type	Mining and ore beneficiation
Category	RED
Investment(In Lakh)	150.0
Total Land Area(Sq. meter)	0.0
Total Builtup Area(Sq. meter)	0.0
Quantity of effluent	
1. Trade	0.0 KL/Day
2. Domestic	0.5 KL/Day
Number of outlets	1.0
Mode of discharge	
1. Domestic	septic tank
2. Trade	
Domestic Effluent Parameters	
1. NA	
Trade Effluent Parameters	
1. NA	
Number of stacks	1
Height of stack	
1. NA	
Emission parameters	
1. SPM	100 mg/m3
Product Details	
1. SAND GRAVEL	800 Metric Tonnes/day
Capacity of boiler	

1. NA	Ton/hr
Type of Furnace	
1. NA	
Type of Fuel	
1. NA	
Raw Material Details	
Sand Gravel mining	800 Metric Tonnes/Day

Nirmal Kumar

Digitally signed by Nirmal Kumar
Date: 2020.07.22 13:11:42 +05'30'

Regional Officer, Yamuna Nagar

Haryana State Pollution Control Board.

Terms and conditions

1. The applicants shall maintain good house keeping both within factory and in the premises. All hose pipelines values, storage tanks etc. shall be leak proof. In plant allowable pollutants levels, if specified by State Board should be met strictly.
2. The applicant/company shall comply with and carry out directive/orders issued by the Board in this consent order at all subsequent times without negligence of his /its part. The applicant/company shall be liable for such legal action against him as per provision of the law/act in case of violation of any order/directives, issued at any time and or non compliance of the terms and conditions of his consent order.
3. The applicant shall make an application for grant of consent at least 90 days before the date of expiry of this consent.
4. Necessary fee as prescribed for obtaining renewal consent shall be paid by the applicant alongwith the consent application.
5. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above required variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity of being heard vary all or such condition and there upon the applicant shall be bound to comply with the conditions so varied.
6. The industry shall provide adequate arrangement for fighting the accidental leakages, discharge of any pollutants gas/liquids from the vessels, mechanical equipment etc. which are likely to cause environment pollution.
7. The industry shall comply noise pollution (Regulation and control) Rules, 2000.
8. The industry shall comply all the direction/Rules/Instructions as may be issued by the MOEF/CPCB/HSPCB from time to time.
9. The industry shall ensure that various characteristics of the effluents remain within the tolerance limits as specified in EPA Standard and as amended from time to time and at no time the concentration of any characteristics should exceed these limits for discharge.
10. The industry would immediately submit the revised application to the Board in the event of any change in the raw material in process, mode of treatment/discharge of effluent. In case of change of process at any stage during the consent period, the industry shall submit fresh consent application alongwith the consent to operate fee, if found due, which may be on any account and that shall be paid by the industry and the industry would immediately submit the consent application to the Board in the event of any change during the year in the raw material, quantity, quality of the effluent, mode of discharge, treatment facilities etc.

11. The officer/official of the Board shall reserve the right to access for the inspection of the industry in connection with the various process and the treatment facilities. The consent to operate is subject to review by the Board at any time.
12. Permissible limits for any pollutants mentioned in the consent to operate order should not exceed the concentration permitted in the effluent by the Board.
13. The industry shall pay the balance fee, in case it is found due from the industry at any time later on.
14. If the industry fails to adhere to any of the conditions of this consent to operate order, the consent to operate so granted shall automatically lapse.
15. If the industry is closed temporarily at its own, they shall inform the Board and obtain permission before restart of the unit.
16. The industry shall comply all the Directions/ Rules/Instructions issued from time to time by the Board.

Specific Conditions :

1 Unit will comply the Order of NGT, New Delhi vide Dated 01.06.2016 & 06.06.2016 in the case of the OA NO 184/2013, 176/2016 & 272/2016 in the case of GURPREET SINGH BAGGA vs MoEF & CC and subjected to final outcome/decision of the court.
2 Unit if found involved in illegal mining CTO so granted will be revoked .
3 Unit will abide the directions/ orders of Hon'ble Supreme court /High Court/NGT/any other court.
4 Unit will run and maintain the APCM & green belt.
5 The CTO is granted under Water Act 1974/ Air Act 1981 and if any violation reported against the unit at any stage, the closure action as per provisions of section 33 A of Water Act 1974 or 31 A of Air Act 1981 or under other relevant sections will be taken against the unit apart from prosecution against the unit and its partners/ proprietor/ stake holders /responsible person and unit will also be liable to pay the Environmental Compensation for the damage caused to the Environment because the act of omission and commission by the unit.
6 The project proponent will carry out the mining by open cast mechanized method. Light weight excavator will be used for digging and loading of minerals and tippers.
7 Unit will implement the Environment Management plan and will submit the recurring cost involved as per EC Condition and will also submit the detail of 5 persons engaged for implementation of Environment Management Plan.
8 Unit will submit the details of permission from CGWA if withdrawing ground water.
9 The mining operation shall be restricted to above ground water table and it should not intersect with ground water table.
10 The excavation will be carried out upto maximum depth of 3 meter from the surface of mineral deposit and not less than 1 meter from the water level of the River channel which ever reached earlier.
11 CSR activities by companies including the mining establishments has become mandatory upto 2% of their financial Turn-over, Socio Economic Development of the neighbourhood Habitats could be planned and executed by the Project Proponent more systematically based on the "Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment & Forest and its Regional Office located at Chandigarh on six monthly basis.
12 To maintain safety and stability of Riverbanks i.e. 3 meter or 10% of the width of the River

whichever is more will be left intact as no mining zone.

13 No stream should be diverted for the purpose of sand mining. No natural water course and/ or water resources are obstructed due to mining operations. 14 Restricted working hours. Sand mining operation has to be carried out between 6 am to 7 pm.

15 The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Wheel washing facility should be installed and used.

16 Unit will comply with the traffic management plan.

17 Unit will do the sufficient no. of plantation as per commitment in EC.

18 Unit will provide the sufficient no. of sprinklers system and will maintain the same to for dust suppression and unit will also provide dedicated vehicles/tankers for water sprinkling.

19 Unit will comply the various conditions of Environment Clearance.

Nirmal Kumar Digitally signed by Nirmal Kumar Date: 2020.07.22 13:12:07 +05'30'

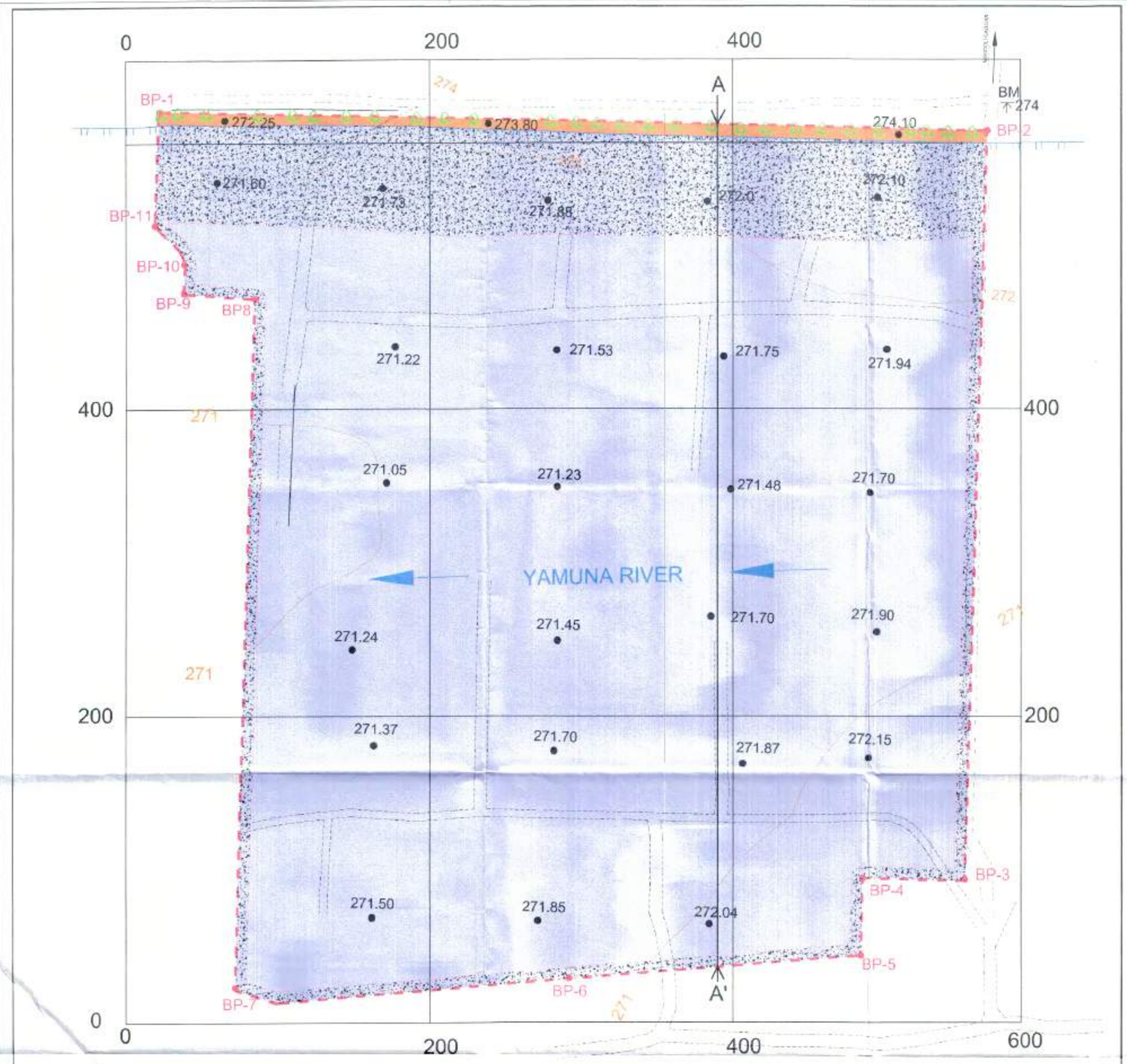
Regional Officer, Yamuna Nagar

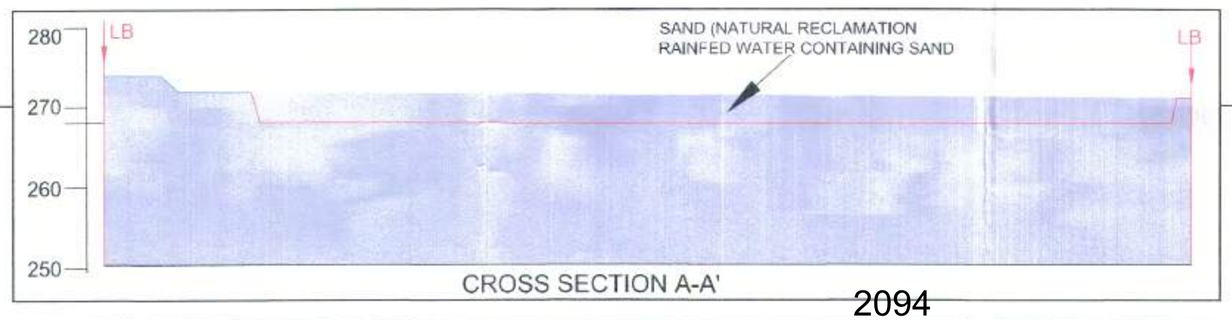
Haryana State Pollution Control Board.

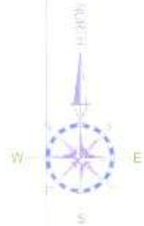
GPS COORDINATES OF EACH TURNING POINT

Pillar number	Latitudes	Longitudes
BP-1	N30° 08' 26.69"	E77° 24' 42.04"
BP-2	N30° 08' 26.69"	E77° 25' 01.64"
BP-3	N30° 08' 10.85"	E77° 25' 01.47"
BP-4	N30° 08' 10.85"	E77° 24' 59.02"
BP-5	N30° 08' 9.25"	E77° 24' 59.00"
BP-6	N30° 08' 8.32"	E77° 24' 51.62"
BP-7	N30° 08' 8.21"	E77° 24' 44.27"
BP-8	N30° 08' 22.73"	E77° 24' 44.44"
BP-9	N30° 08' 22.73"	E77° 24' 42.97"
BP-10	N30° 08' 23.33"	E77° 24' 42.97"
BP-11	N30° 08' 24.27"	E77° 24' 42.02"









INDEX

MINE BOUNDARY	A B C D
RIVER BED PROFILE	
ROAD	
BENCH MARK	BM 273
CONTOUR	272
RESTRICTED AREA FOR MINING	
SOIL / ALLUVIUM	
BOULDER ,GRAVEL & SAND	
PLANTATION	
SAND (NATURAL RECLAMATION RAINFED WATER CONTAINING SAND	



PLATE NO. 6

MANDOLI GAGGAR WEST BLOCK/YNR B-4 SAND MINE
(RIVER BED)

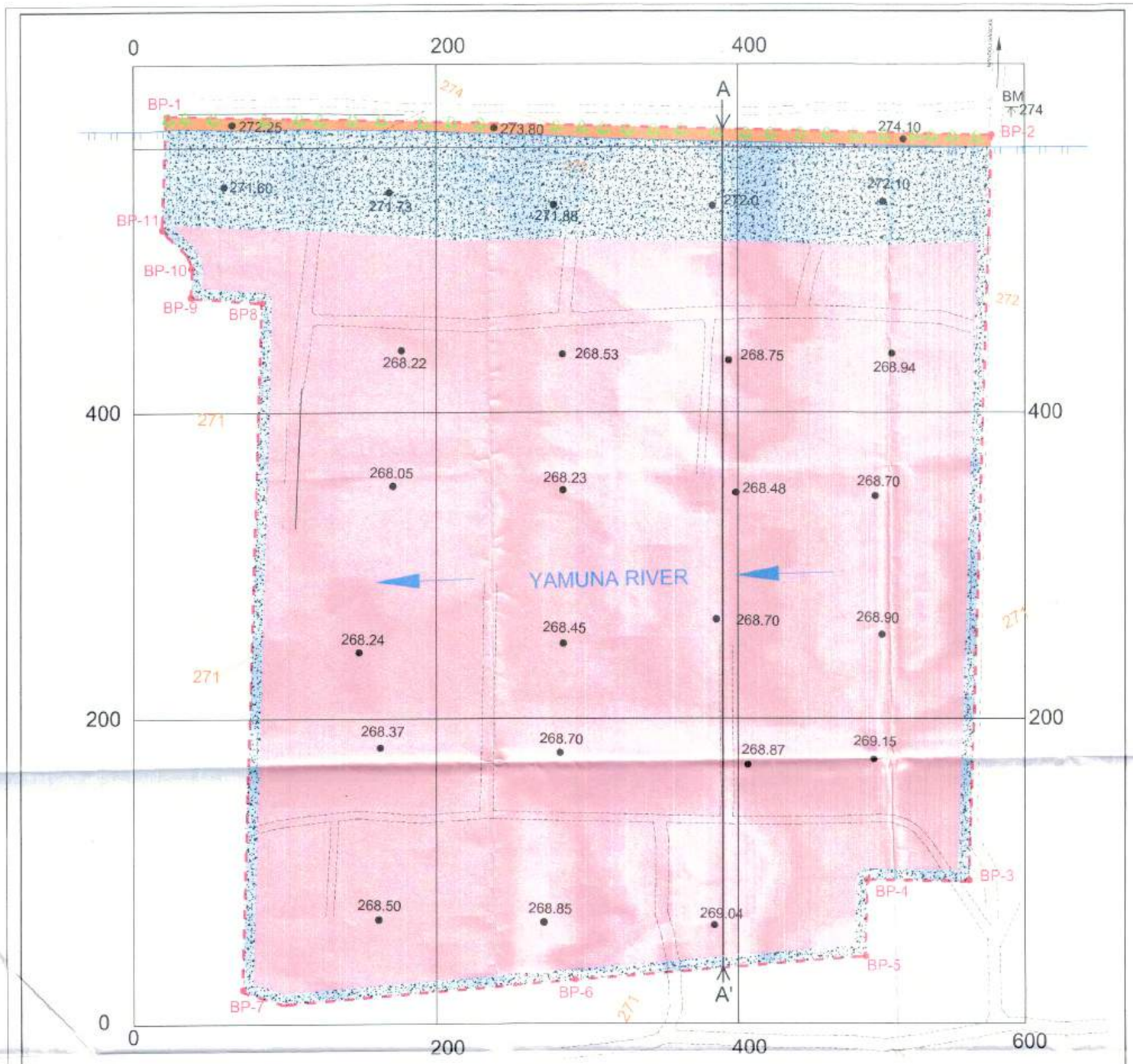
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

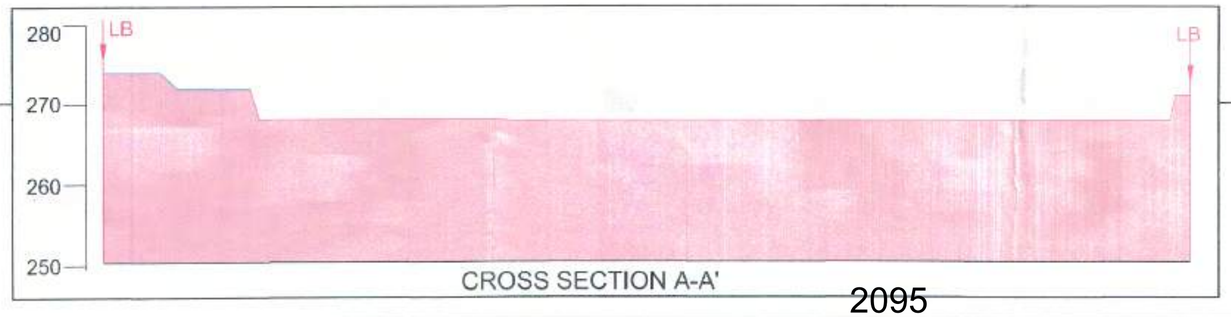
PROGRESSIVE MINE CLOSURE PLAN

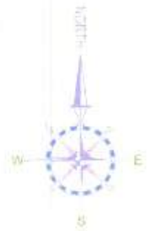
SCALE : 1 : 2,000 | DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A/2003







INDEX

MINE BOUNDARY	
RIVER BED PROFILE	
ROAD	
BENCH MARK	BM ↑273
CONTOUR	272
RESTRICTED AREA FOR MINING	
SOIL / ALLUVIUM	
BOULDER ,GRAVEL & SAND	
BED BAR 50M WIDTH	
PLANTATION	
MINE WORKING AT THE END OF EACH YEAR	



PLATE NO.5B

MANDOLI GAGGAR WEST BLOCK/YNR B-4 SAND MINE
(RIVER BED)

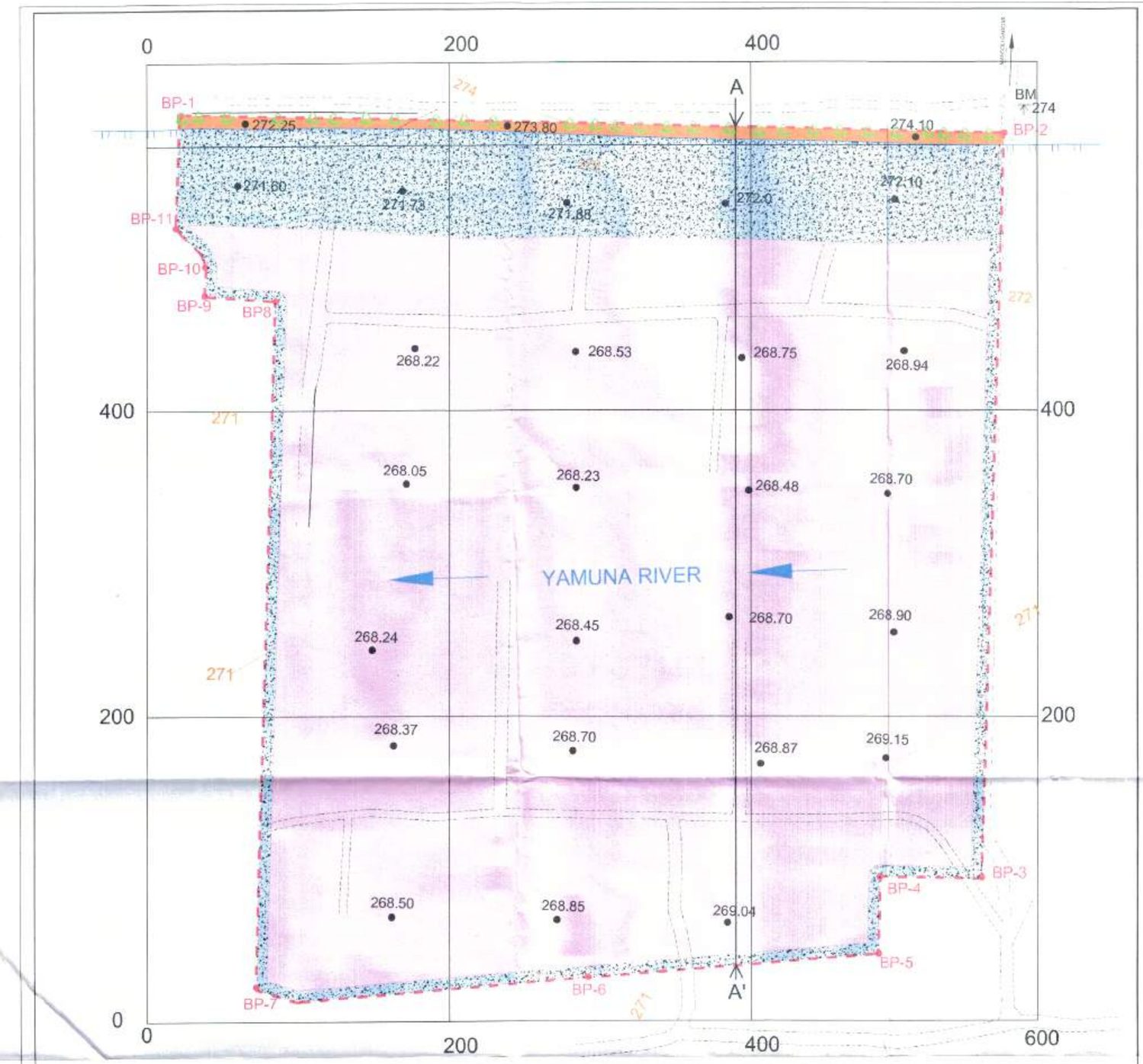
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

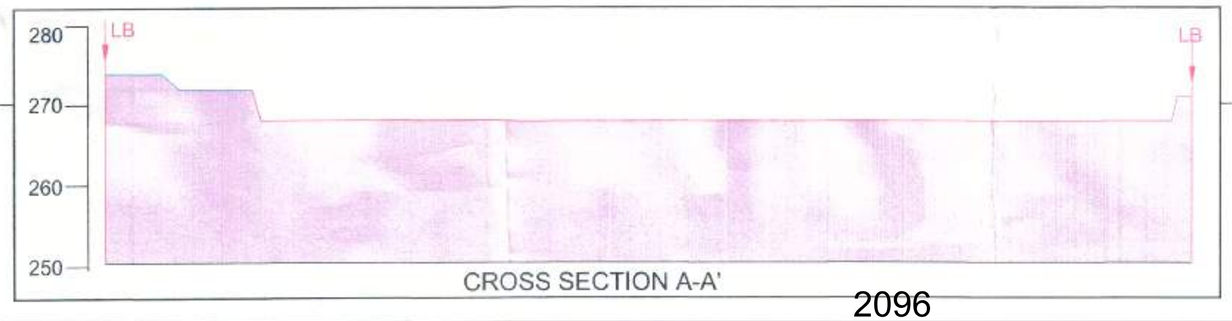
PLAN SHOWING THE MINE WORKINGS AT THE END OF 2022-23

SCALE : 1 : 2,000 DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A/2003





INDEX

MINE BOUNDARY	
RIVER BED PROFILE	
ROAD	
BENCH MARK	BM 273
CONTOUR	272
RESTRICTED AREA FOR MINING	
SOIL / ALLUVIUM	
BOULDER ,GRAVEL & SAND	
BED BAR 50M WIDTH	
PLANTATION	
MINE WORKING AT THE END OF EACH YEAR	

0 50 100 150M
SCALE

PLATE NO.5A

MANDOLI GAGGAR WEST BLOCK/YNR B-4 SAND MINE
(RIVER BED)

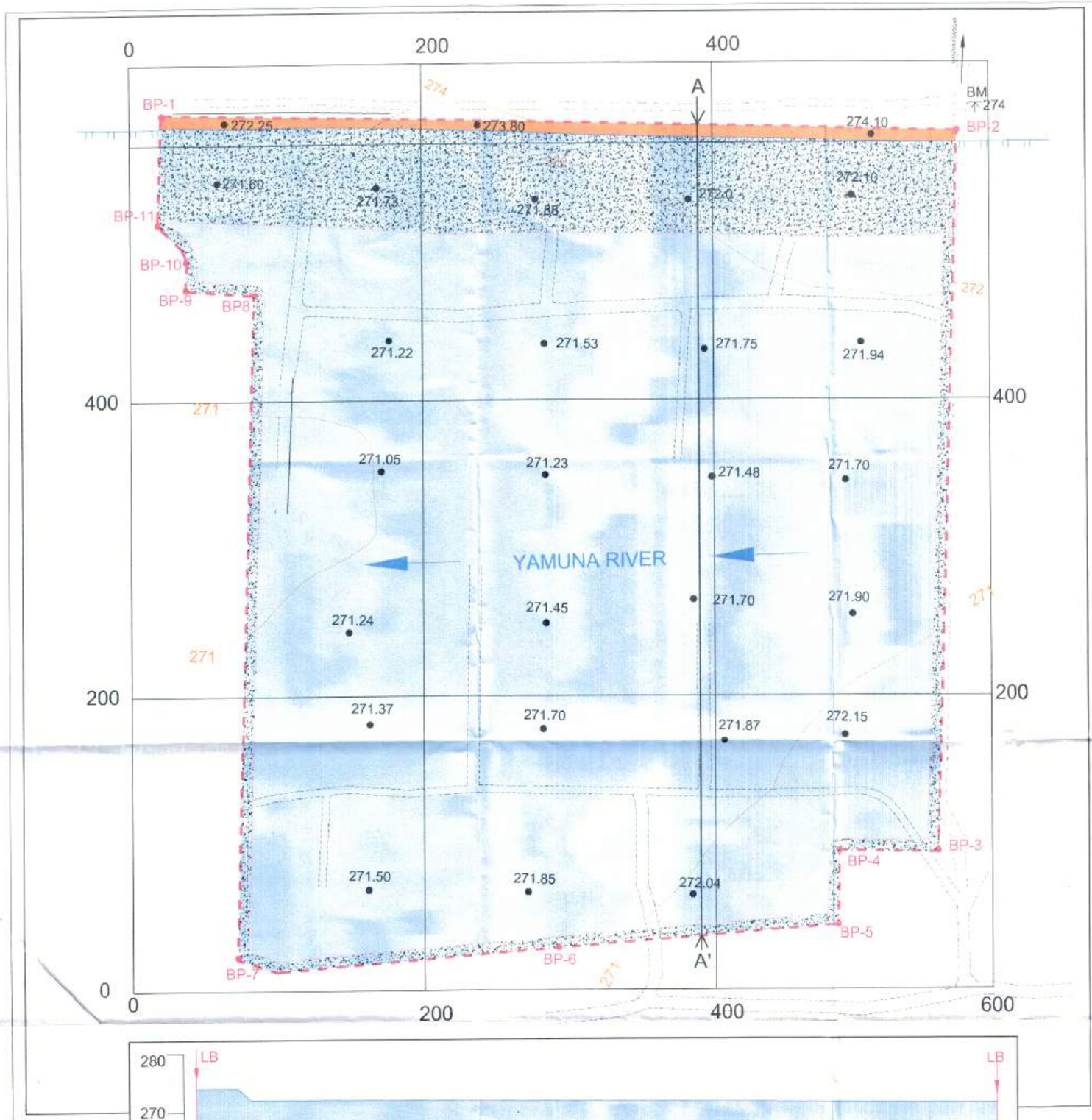
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

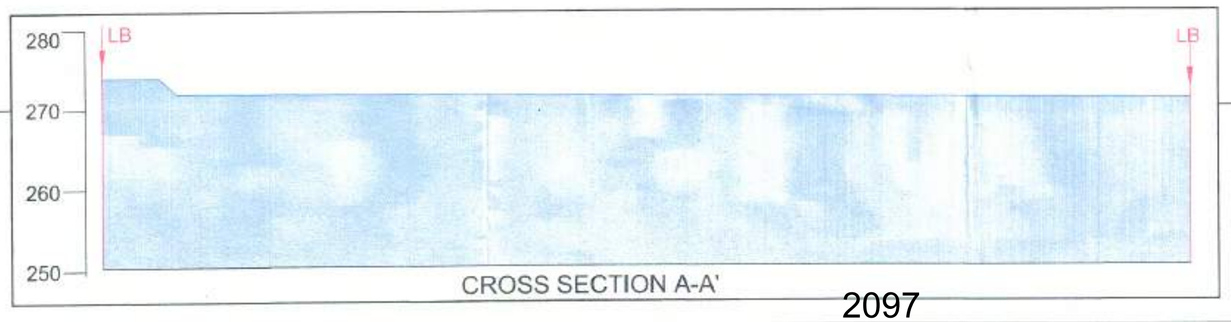
PLAN SHOWING THE MINE WORKINGS AT THE END OF 2021-22

SCALE : 1 : 2,000 | DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A/2003





CROSS SECTION A-A'

INDEX

MINE BOUNDARY	
RIVER BED PROFILE	
ROAD	
BENCH MARK	BM 274
CONTOUR	272
RESTRICTED AREA FOR MINING	
SOIL / ALLUVIUM	
BOULDER ,GRAVEL & SAND	

0 50 100 150M
SCALE

PLATE NO. 4

MANDOLI GAGGAR WEST BLOCK/YNR B-4 SAND MINE
(RIVER BED)

OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

GEOLOGICAL PLAN AND SECTION

SCALE : 1 : 2,000 DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
ROP/AJM/230A/2003



INDEX

MINE BOUNDARY	A B C D
RIVER BED PROFILE	
ROAD	
BENCH MARK	BM 274
CONTOUR	272
RESTRICTED AREA FOR MINING	
SOIL / ALLUVIUM	
BOULDER ,GRAVEL & SAND	

0 50 100 150M
SCALE

PLATE NO. 3

MANDOLI GAGGAR WEST BLOCK/YNR B-4 SAND MINE
(RIVER BED)

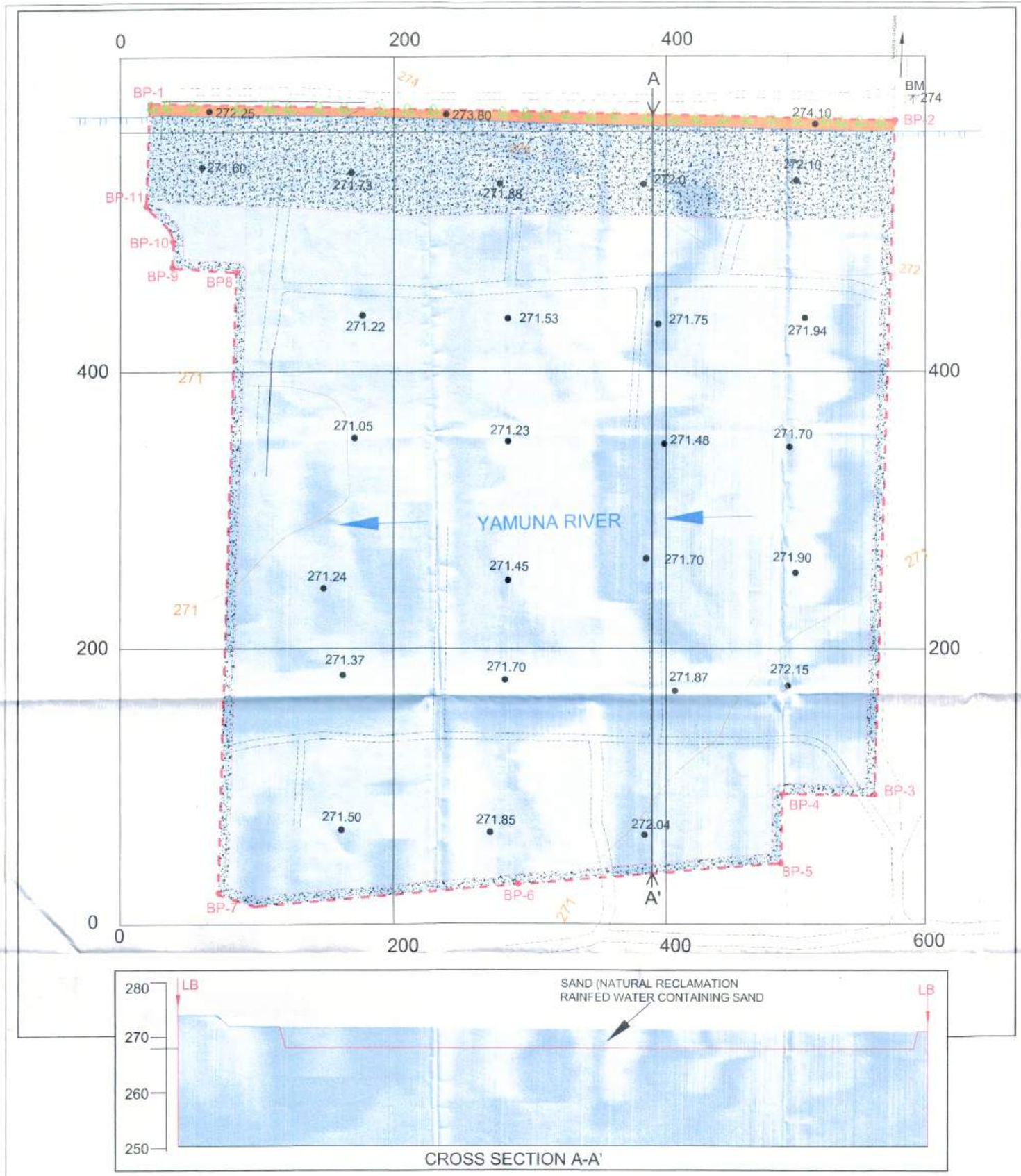
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

SURFACE PLAN

SCALE : 1 : 2,000 | DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A/2003



CROSS SECTION A-A'

INDEX

MINE BOUNDARY	A B
RIVER BED PROFILE	
ROAD	
BENCH MARK	BM 273
CONTOUR	272
RESTRICTED AREA FOR MINING	
SOIL / ALLUVIUM	
BOULDER ,GRAVEL & SAND	
PLANTATION	
SAND (NATURAL RECLAMATION RAINFED WATER CONTAINING SAND	

0 50 100 150M

SCALE

PLATE NO. 7

MANDOLI GAGGAR WEST BLOCK/YNR B-4 SAND MINE
(RIVER BED)

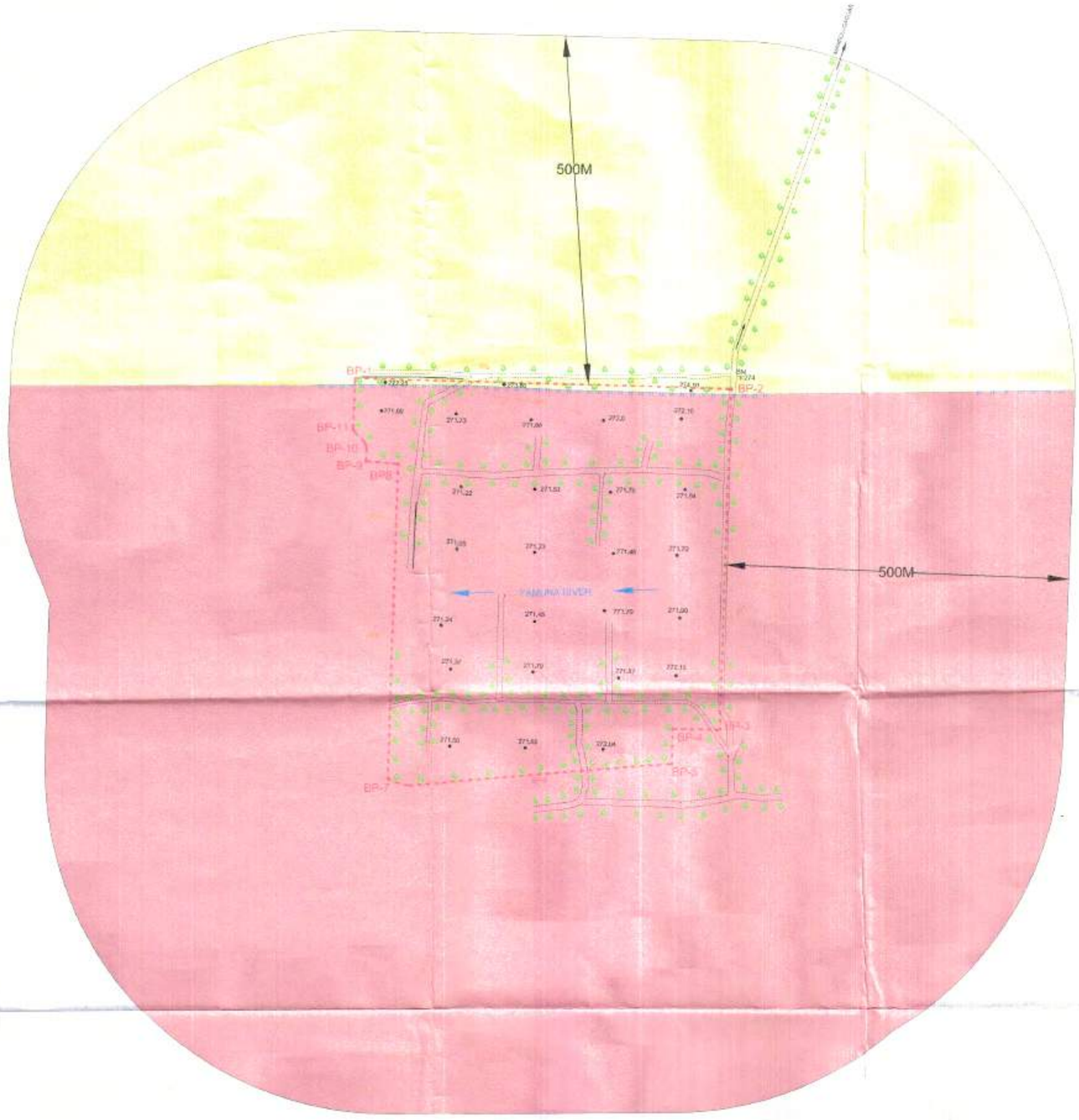
OWNER:– JSM FOODS PRIVATE LIMITED, NEW DELHI

CONCEPTUAL PLAN

SCALE : 1 : 2,000 | DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A/2003



INDEX

MINE BOUNDARY	A — D B — C
RIVER BED PROFILE	
ROAD	
BENCH MARK	BM 273
CONTOUR	272
WASTE LAND	
AGRICLTURE LAND	

0 100 200 300m
SCALE

APPROVED

PLATE NO. 8

MANDOLI GAGGAR WEST BLOCK/YNR B-4 SAND MINE
(RIVER BED)

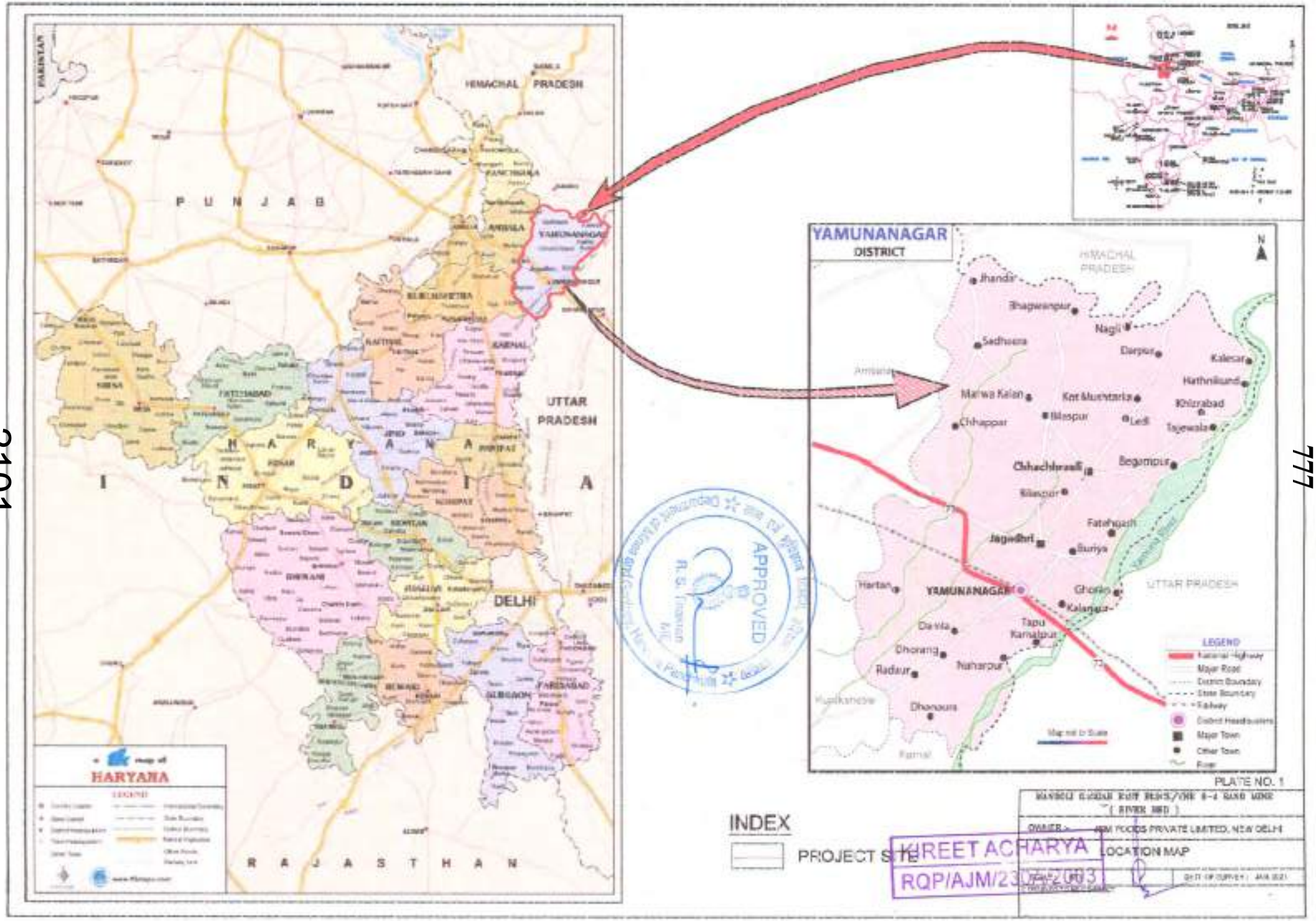
OWNER:- JSM FOODS PRIVATE LIMITED, NEW DELHI

ENVIRONMENTAL PLAN

SCALE : 1 : 5,000 | DATE : JANUARY, 2021

CERTIFIED TO BE CORRECT

KIREET ACHARYA
RQP/AJM/230A/2003


HIMACHAL PRADESH
PUNJAB
UTTAR PRADESH
HARYANA
DELHI
RAJASTHAN
YAMUNANAGAR
DISTRICT
Jhandi
Bhagwanpur
Nagli
Sadhaura
Darpur
Kalesar
Hathnikund
Khizrabad
Tajewala
Mariwa Kalan
Kot Mustarka
Chhappar
Bilaspur
Ledi
Chhachhrauli
Begampur
Fatehgarh
Jagadhri
Suriya
Harbans
Ghoria
Kalanaur
Tapu
Karnalpur
Dayla
Dhorana
Radaur
Naharpur
Dhanaura
LEGEND
Major Road
District Boundary
State Boundary
Railway
Major Town
Other Town
INDEX
PROJECT SITE
PLATE NO. 1
OWNER :- HDM FOODS PRIVATE LIMITED, NEW DELHI
LOCATION MAP
APPROVED
KIREET ACHARYA
RQP/AJM/2303/2003

2101

777

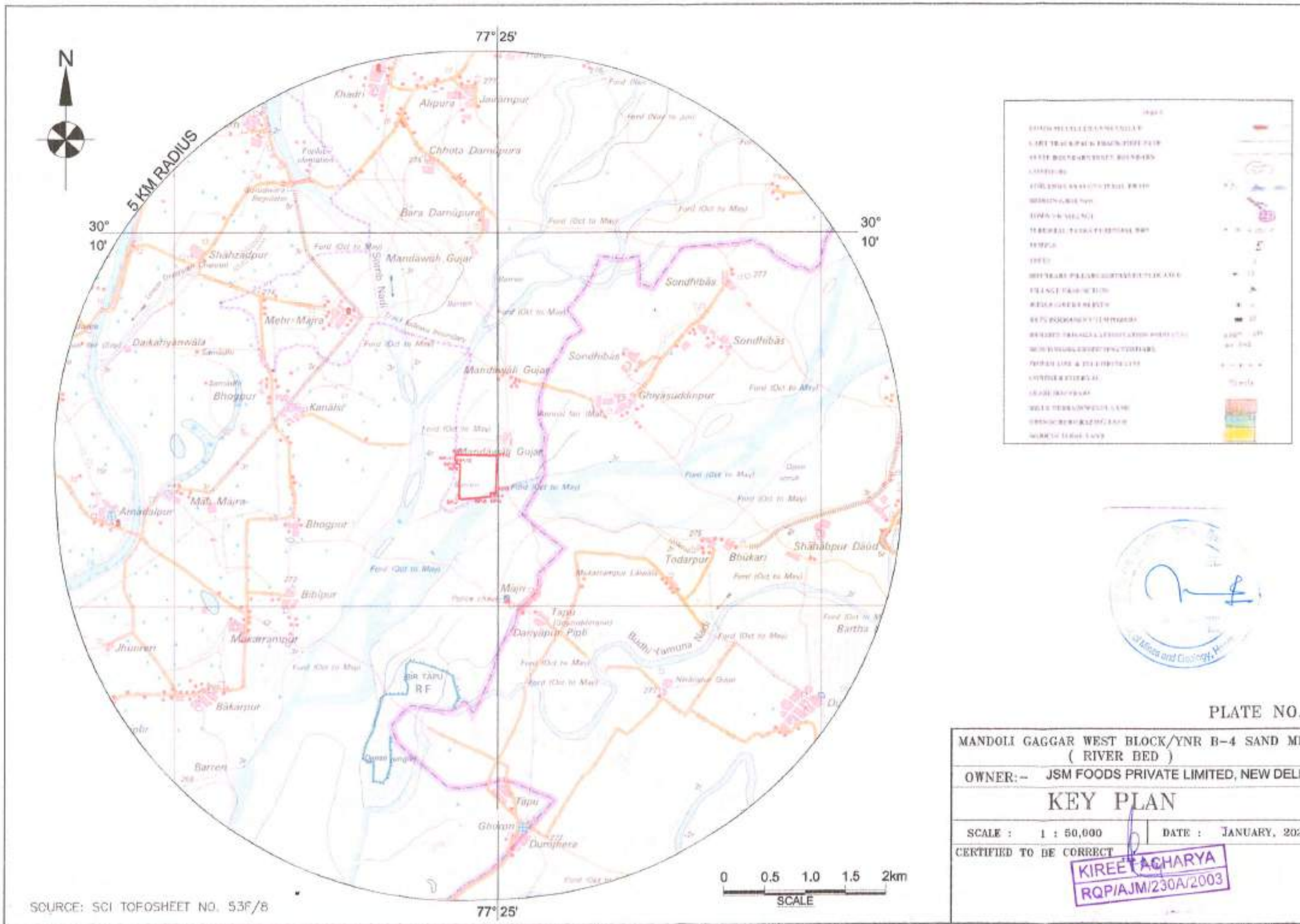


PLATE NO. 2

MANDOLI GAGGAR WEST BLOCK/YNR B-4 SAND MINE (RIVER BED)	
OWNER:-	JSM FOODS PRIVATE LIMITED, NEW DELHI
KEY PLAN	
SCALE : 1 : 50,000	DATE : JANUARY, 2021
CERTIFIED TO BE CORRECT	

KIREET ACHARYA
RQP/AJM/230A/2003

ANNEXURE R 16/15A

HARYANA STATE POLLUTION CONTROL BOARD
SCO-131 Sector-17, HUDA Jagadhari Ph.01732-200137
Website – www.hspcb.gov.in E-Mail - hspcb.pkl@sifymail.com
Telephone No. – 0172-2577870-73

No. HSPCB/Consent/ : 313100417YAMCTE3814605 Dated:30/03/2017

To

M/s : JSM FOODS PRIVATE LIMITED
VILL MANDOLI GHAGGAR WEST BLOCK 4
YAMUNANAGAR
135003

Sub. : Grant of consent to Establish to M/s JSM FOODS PRIVATE LIMITED

Please refer to your application received on dated 2017-01-30 in regional office Yamuna Nagar.

With reference to your above application for consent to establish,M/s JSM FOODS PRIVATE LIMITED is here by granted

consent as per following specification/Terms and conditions.

Consent Under	AIR/WATER/HWM
Period of consent	30/03/2017 - 29/03/2022
Industry Type	Mining and ore beneficiation
Category	RED
Investment	
1. Land (Rs.in LAKHS)	12
2.Building(Rs.in LAKHS)	8
Quantity of effluent	
1. Trade	1.0 KL/Day
2. Domestic	0.0 KL/Day
Number of outlets	1.0
Mode of discharge	
1. Domestic	Septic Tank
2. Trade	00
Domestic Effluent Parameters	
Trade Effluent Parameters	
Number of stacks	1
Height of stack	
1. 00	00 meter
Emission parameters	
1. SPM	00 Lts./Day
Capacity of boiler	
1. 00	00 Ton/hr

Type of Furnace	
1. 00	00
Type of Fuel	
1. Diesel	00 KL/Day

Terms and conditions

1. The industry has declared that the quantity of effluent shall be 14 KL/Day i.e 0KL/Day for Trade Effluent, 13 KL/Day for Cooling, 1 KL/Day for Domestic and the same should not exceed .

2. The above "Consent to Establish" is valid for 60 months from the date of its issue to be extended for another one year at the discretion of the Board or till the time the unit starts its trial production whichever is earlier. The unit will have to set up the plant and obtain consent during this period.

3. The officer/official of the Board shall have the right to access and inspection of the industry in connection with the various processes and the treatment facilities being provided simultaneously with the construction of building/machinery. The effluent should conform the effluent standards as applicable

4. That necessary arrangement shall be made by the industry for the control of Air Pollution before commissioning the plant. The emitted pollutants will meet the emission and other standards as laid/will be prescribed by the Board from time to time.

5. The applicant will obtain consent under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21/22 of the Air (Prevention & Control of Pollution) Act,1981 as amended to-date-even before starting trial production

6. The above Consent to Establish is further subject to the conditions that the unit complies with all the laws/rules/decisions and competent directions of the Board/Government and its functionaries in all respects before commissioning of the operation and during its actual working strictly.

7. No in-process or post-process objectionable emission or the effluent will be allowed, if the scheme furnished by the unit turns out to be defective in any actual experience

8. The Electricity Department will give only temporary connection and permanent connection to the unit will be given after verifying the consent granted by the Board, both under Water Act and Air Act.

9. Unit will raise the stack height of DG Set/Boiler as per Board's norms.

10. Unit will maintain proper logbook of Water meter/sub meter before/after commissioning.

11. That in the case of an industry or any other process the activity is located in an area approved and that in case the activity is sited in an residential or institutional or commercial or agricultural area, the necessary permission for siting such industry and process in an residential or institutional or commercial or agricultural area or controlled area under Town and Country Planning laws CLU or Municipal laws has to be obtained from the competent Authority in law permitting this deviation and be submitted in original with the request for consent to operate.

12. That there is no discharge directly or indirectly from the unit or the process into any interstate river or Yamuna River or River Ghaggar.

13. That the industry or the unit concerned is not sited within any prohibited distances according to the Environmental Laws and Rules, Notification, Orders and Policies of Central Pollution control Board and Haryana State Pollution Control Board.

14. That of the unit is discharging its sewage or trade effluent into the public sewer meant to receive trade effluent from industries etc. then the permission of the Competent Authority owing and operating such public sewer giving permission letter to his unit shall be submitted at time of consent to operate.

15. That if at any time, there is adverse report from any adjoining neighbor or any other aggrieved party or Municipal Committee or Zila Parishad or any other public body against the unit's pollution; the Consent to Establish so granted shall be revoked.

16. That all the financial dues required under the rules and policies of the Board have been deposited in full by the unit for this Consent to Establish.

17. In case of change of name from previous Consent to Establish granted, fresh Consent to Establish fee shall be levied.

18. Industry should adopt water conservation measures to ensure minimum consumption of water in their Process. Ground water based proposals of new industries should get clearance from Central Ground Water Authority for scientific development of previous resource.

19. That the unit will take all other clearances from concerned agencies, whenever required.

20. That the unit will not change its process without the prior permission of the Board.

21. That the Consent to Establish so granted will be invalid, if the unit falls in Aravali Area or non conforming area.

22. That the unit will comply with the Hazardous Waste Management Rules and will also make the non-leachate pit for storage of Hazardous waste and will undertake not to dispose off the same except for pit in their own premises or with the authorized disposal authority.

23. That the unit will submit an undertaking that it will comply with all the specific and general conditions as imposed in the above Consent to Establish within 30 days failing which Consent to Establish will be revoked.

24. That unit will obtain EIA from MoEF, if required at any stage.

25. In case of unit does not comply with the above conditions within the stipulated period, Consent to Establish will be revoked.

26. That unit will obtain consent to operate from the board before the start of product activity.

Specific Conditions

Other Conditions :

1. That unit will abide with all the condition mentioned in the Environmental clearance. 2. That unit will abide by the directions of CPCB/HSPCB/any other competent authority time to time 3. That unit will abide the directions/ orders of Honble Supreme court /High Court/NGT/any other court. 4. That the Project Proponent will abide by the recommendations of the HIGH POWER COMMITTEE CONSTITUTED by the Hon`ble NGT in the OA NO 184 OF 2013 in the case of GURPREET SINGH BAGGA vs MoEF & CC and subjected to final outcome/decision of the case. 5. That the unit will submit the Land Agreement between Farmers and the unit at the time of CTO application. 6. That the unit will obtained the CTO application before starting the Production Activity.

Regional Officer, Yamuna Nagar
For and on be'half of chairman
Haryana State Pollution Control Board

ANNEXURE R 16/15B

HARYANA STATE POLLUTION CONTROL BOARD

SCO-131 Sector-17, HUDA Jagadhari Ph.01732-200137 Email:- hspcbroyr@gmail.com
E-mail: hspcb@hry.nic.in

No. HSPCB/Consent/ : 313100422YAMCTO25355227 **Dated:28/11/2022**

To.

M/s :JSM FOODS PRIVATE LIMITED
VILL MANDOLI GHAGGAR WEST BLOCK 4

Subject: Grant of consent to operate to M/s JSM FOODS PRIVATE LIMITED.

Please refer to your application no. 25355227 received on dated 2022-10-29 in regional office Yamuna Nagar.With reference to your above application for consent to operate,M/s JSM FOODS PRIVATE LIMITED is here by granted consent as per following specification/Terms and conditions.

Consent Under	BOTH
Period of consent	21/12/2022 - 30/09/2023
Industry Type	Mining and ore beneficiation
Category	RED
Investment(In Lakh)	150.0
Total Land Area(Sq. meter)	25.56
Total Builtup Area(Sq. meter)	0.0
Quantity of effluent	
1. Trade	0.0 KL/Day
2. Domestic	1.0 KL/Day
Number of outlets	1.0
Mode of discharge	
1. Domestic	septic tank
2. Trade	0
Domestic Effluent Parameters	
1. NA	
Trade Effluent Parameters	
1. NA	
Number of stacks	1
Height of stack	
1. NA	
Emission parameters	
1. SPM	100 mg/m3
Product Details	
1. Boulder, Gravel and Sand	3970 Metric Tonnes/day

Capacity of boiler	
1. NA	Ton/hr
Type of Furnace	
1. NA	
Type of Fuel	
1. NA	
Raw Material Details	
Boulder, Gravel and Sand	3970 Metric Tonnes/Day

Regional Officer, Yamuna Nagar
Haryana State Pollution Control Board.

Terms and conditions

1. The applicants shall maintain good house keeping both within factory and in the premises. All hose pipelines values, storage tanks etc. shall be leak proof. In plant allowable pollutants levels, if specified by State Board should be met strictly.
2. The applicant/company shall comply with and carry out directive/orders issued by the Board in this consent order at all subsequent times without negligence of his /its part. The applicant/company shall be liable for such legal action against him as per provision of the law/act in case of violation of any order/directives. Issued at any time and or non compliance of the terms and conditions of his consent order.
3. The applicant shall make an application for grant of consent at least 90 days before the date of expiry of this consent.
4. Necessary fee as prescribed for obtaining renewal consent shall be paid by the applicant alongwith the consent application.
5. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above required variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity of being heard vary all or such condition and there upon the applicant shall be bound to comply with the conditions so varied.
6. The industry shall provide adequate arrangement for fighting the accidental leakages, discharge of any pollutants gas/liquids from the vessels, mechanical equipment etc. which are likely to cause environment pollution.
7. The industry shall comply noise pollution (Regulation and control) Rules, 2000.
8. The industry shall comply all the direction/Rules/Instructions as may be issued by the MOEF/CPCB/HSPCB from time to time.
9. The industry shall ensure that various characteristics of the effluents remain within the tolerance limits as specified in EPA Standard and as amended from time to time and at no time the concentration of any characteristics should exceed these limits for discharge.
10. The industry would immediately submit the revised application to the Board in the event of any change in the raw material in process, mode of treatment/discharge of effluent. In case of change of process at any stage during the consent period, the industry shall submit fresh consent application alongwith the consent to operate fee, if found due, which may be on any account and that shall be paid by the industry and the industry would immediately submit the

consent application to the Board in the event of any change during the year in the raw material, quantity, quality of the effluent, mode of discharge, treatment facilities etc.
11. The officer/official of the Board shall reserve the right to access for the inspection of the industry in connection with the various process and the treatment facilities. The consent to operate is subject to review by the Board at any time.
12. Permissible limits for any pollutants mentioned in the consent to operate order should not exceed the concentration permitted in the effluent by the Board.
13. The industry shall pay the balance fee, in case it is found due from the industry at any time later on.
14. If the industry fails to adhere to any of the conditions of this consent to operate order, the consent to operate so granted shall automatically lapse.
15. If the industry is closed temporarily at its own, they shall inform the Board and obtain permission before restart of the unit.
16. The industry shall comply all the Directions/ Rules/Instructions issued from time to time by the Board.

Specific Conditions :

1. Unit will comply the Order of NGT, New Delhi vide Dated 01.06.2016 & 06.06.2016 in the case of the OA NO 184/2013, 176/2016 & 272/2016 in the case of GURPREET SINGH BAGGA vs MoEF & CC and subjected to final outcome/decision of the court. 2. Unit if found involved in illegal mining CTO so granted will be revoked. 3. Unit will abide the directions/ orders of Hon'ble Supreme court /High Court/NGT/any other court. 4. Unit will run and maintain the APCM & green belt. 5. The CTO is granted under Water Act 1974/ Air Act 1981 and if any violation reported against the unit at any stage, the closure action as per provisions of section 33 A of Water Act 1974 or 31 A of Air Act 1981 or under other relevant sections will be taken against the unit apart from prosecution against the unit and its partners/ proprietor/ stake holders /responsible person and unit will also be liable to pay the Environmental Compensation for the damage caused to the Environment because the act of omission and commission by the unit. 6. The project proponent will carry out the mining by open cast mechanized method. Light weight excavator will be used for digging and loading of minerals and tippers. 7. Unit will implement the Environment Management plan and will submit the recurring cost involved as per EC Condition and will also submit the detail of 5 persons engaged for implementation of Environment Management Plan. 8. Unit will submit the details of permission from CGWA if withdrawing ground water. 9. The mining operation shall be restricted to above ground water table and it should not intersect with ground water table.
10. The excavation will be carried out upto maximum depth of 3 meter from the surface of mineral deposit and not less than 1 meter from the water level of the River channel which ever reached earlier. 11. CSR activities by companies including the mining establishments has become mandatory upto 2% of their financial Turn-over, Socio Economic Development of the neighbourhood Habitats could be planned and executed by the Project Proponent more systematically based on the "Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment & Forest and its Regional Office located at Chandigarh on six monthly basis. 12. To maintain safety and stability of Riverbanks i.e. 3 meter or 10% of the width of the River whichever is more will be left intact as no mining zone. 13. No stream should be diverted for the purpose of sand mining. No natural water course and/ or water resources are obstructed due to mining operations. 14.

Restricted working hours. Sand mining operation has to be carried out between 6 am to 7 pm. 15. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Wheel washing facility should be installed and used. 16. Unit will comply with the traffic management plan. 17. Unit will do the sufficient no. of plantation as per commitment in EC. 18. Unit will provide the sufficient no. of sprinklers system and will maintain the same to for dust suppression and unit will also provide dedicated vehicles/tankers for water sprinkling. 19. Unit will comply the various conditions of Environment Clearance. 20 Unit will submit fresh analysis report within 03 months.

VIRENDER SINGH PUNIA
Digitally signed by VIRENDER SINGH PUNIA
Date: 2022.11.28 13:38:42 +05'30'

Regional Officer, Yamuna Nagar

Haryana State Pollution Control Board.

HARYANA STATE