

**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

8.0 PROGRESSIVE MINE CLOSURE PLAN UNDER RULE MMMR-1996

8.1 Environment Base Line Information:

Note on the status of baseline information with regard to the following.

1. **Present land use pattern is as follows:** Presently no land degradation in the lease hold

Table No.-8.1

| S. No. | Description | Area put to use at start of plan (in hect.) |
|--------|-------------------------|---|
| 1. | Mining | 0.0000 |
| 2. | O.B. and waste dump | 0.0000 |
| 3. | Infrastructure | 0.0000 |
| 4. | Road | 0.0000 |
| 5. | Green belt | 0.0000 |
| 6. | Mineral stack | 0.0000 |
| 7. | Afforestation | 0.0000 |
| 8. | Water reservoir* | 0.0000 |
| 9. | Used area | 0.0000 |
| 10. | Unused area | 4.0000 |
| 11. | Total lease area | 4.0000 |

2. Water regime:

There is no prominent Nallah or stream in the area. There are number of wells and tube wells located in the nearby area, most of them are having electric motor pumps installed. The depth of water in the wells varies from 40-45 m. below the surface level i.e. 477mRL. During five years period, mining will reach up to 482.5mRL (max.) Hence, there is no make of water due to mining in the

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**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

3. Quality of Water, Air & Ambient Noise Level:

a) Quality of water

There is no perennial water source in close vicinity. However a water samples has been collected from the well in the area and analysis report is enclosed as Annexure No. IV.

b) Quality of Air

The quality of present ambient air is clean and does not require any test. We are maintaining SPM well below the 500 ug/m³ in the mining area.

c) Ambient Noise Level

The noise level in and around the lease area is too low and within the desirable limit. Noise level is being kept below 75 dBA (leg) during day time & 50 dBA (leg) during day night time.

4. Flora and fauna

No flora and fauna are available in the area. Nearby the area having scattered vegetation of tree scattered thorny bushes of "Thoor" area also seen in the nearby the area. No wild animals are seen in the region, presence of Dogs, Cattle and Goat are seen in every village.

5. Climatic condition

The area is characterized by tropical Climate with an average rainfall of about 657 mm, which is received during monsoon from June to September. The highest temperature in summer is recorded as 46°C, in the month of May-June, and minimum temperature is recorded in the winter as 2°C, in

मध्यप्रदेश गौण खनिज नियम 1996
के नियम 42 के अन्तर्गत अनुमोदित

AMIT SAXENA
RQP/DGMMP/32/2013

**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

December-January. Relative humidity varies from 20% to 90% Predominant wind direction is NW-SE.

7. Human settlements

There is no human settlement within the lease area. A number of huts/house are available in the nearby the area. Local habitats either work in nearby mines or in agriculture fields.

a) Public buildings, places of worship and monuments

No National Park, forest sanctuary, and national monuments etc. existing within distance of 5 km. from lease area see refer key plan plate no.1.

b) Indicate if any sanctuary is located in the vicinity of leasehold

The lease area doesn't falling under notified area, under water Act 1974. (Source: State Pollution Control Board office, Mandasaur (M.P.).

8.2 Impact Assessment:

Attach an Environmental Impact Assessment Statement describing the impact of mining and beneficiation on environment on the following:

मध्यप्रदेश गौण खनिज नियम 1996
के नियम 42 के अन्तर्गत अनुमोदित

AMIT SAXENA
RQP/DGMM/32/2013

**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

i) Land area

Table No.8.2

| S. No | Description | Area put to use at start of plan (in hect.) | Area after 5 years (in hect.) | Area considered as end of life (in hect.) |
|-------|-------------------------|---|-------------------------------|---|
| 1. | Mining | 0.0000 | 1.5957 | 3.3103 |
| 2. | O.B. and waste dump | 0.0000 | 0.3341 | 0.0000 |
| 3. | Infrastructure | 0.0000 | 0.0145 | 0.0145 |
| 4. | Road | 0.0000 | 0.0618 | 0.0000 |
| 5. | Green belt | 0.0000 | 0.3150 | 0.6752 |
| 6. | Mineral stack | 0.0000 | 0.0500 | - |
| 7. | Water reservoir* | 0.0000 | - | - |
| 8. | Used area | 0.0000 | 2.3711 | 4.0000 |
| 9. | Unused area | 4.0000 | 1.6285 | 0.0000 |
| 10. | Total lease area | 4.0000 | 4.0000 | 4.0000 |

ii) Air quality

Air pollution is caused when dust gets air borne after it is formed during loadings and unloading of waste material as well as due to movement of trucks on the proposed mine roads for transportation. The proposed mine workings is open cast semi-mechanized mining method. Water will be sprayed on the mine haul roads, loading and dumping points regularly for dust suppression. Green belt will also be developed in and surrounding the

**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

mines. to absorb dust. Vehicle exhaust should direct upwards to avoid creating excess turbulence at road surface. It is also advised that the mineworkers in dusty area should use cloth masks as far as possible.

iii) Water quality

There are no Nallahs/ Surface water bodies in and around the area. Therefore question of adverse impact on surface water bodies does not arise. Ground water table is at 432mRL, in the open well situated in the Ag. field. During five years period, mining will reach up to 482.5mRL. There is no perennial water source in close vicinity. Mine water pumped during rainy season will carry some silt with it. This water will be discharged into nearby sump, to assist in settling down of silt, and remaining clear water will be coursed in the nearby ag. fields. The discharge mine water will not carry any toxic or poisonous matter dissolved in the water, so no treatment of water is required & proposed. There is no proposal of beneficiation plant for processing of mineral, so no effluents will be generated.

iv) Noise levels

Noise is produced while loading/digging and occasional plying of dumper/truck etc. Noise can be reduced at the source by propose selection, installation & proper maintenance of equipments. Rector type silencers & noise reduction devices like mufflers can be used on noisy exhaust systems. Green belt is also developed in and surrounding the mines etc. to absorb noise. Therefore proposed mining method will not produce any significant noise and hence will not cause any damage to present calm and quiet environment of the area. मध्यप्रदेश गौण स्वकिसन निराम 1996

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RQP/DGMMP/32/2013

**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

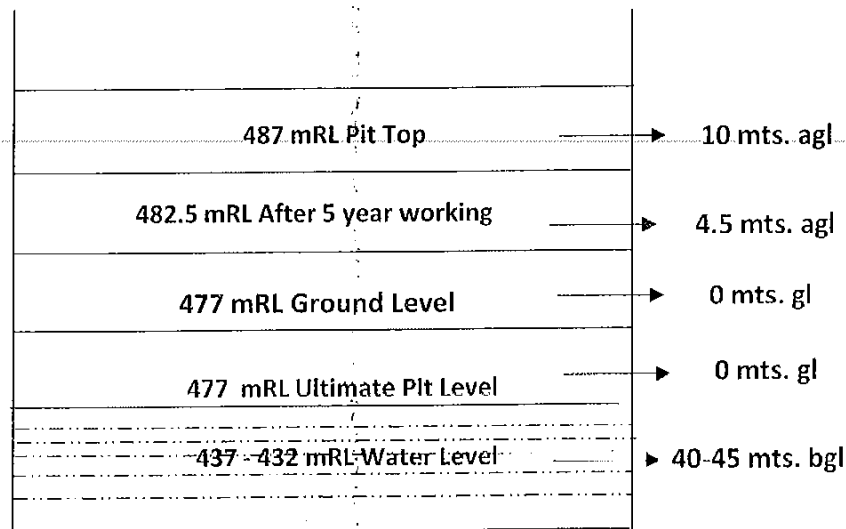
v) Vibration levels (due to blasting)

Very limited ground vibration produce during mining hence will not cause any damage to present calm and quiet environment of the area.

vi) Water regime

No perennial water source exists in the area. The proposed mining is not likely to have any adverse impact on ground water table, which is much below the proposed mining Level. There is no water channel (Nallah, river) or any other surface bodies (pond, lake etc), which can be adversely effected by the proposed mining.

WATER TABLE



Not to Scale

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के नियम 42 के अन्तर्गत

AMIT SAXENA
RQP/DGMMP/32/2013

**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

vii) Acid mine drainage

Nil

viii) Surface subsidence

NA

ix) Socio-economics

The populations in nearby villages are mostly Rajput, Rebari, who are mostly engaged in farming, small scale cattle breeding and working in nearby mines. For mining, local laborers will be drawn from the nearby villages. The proposed mining envisages an employment opportunity to about 9-10 local villagers. Workmen employed in sorting of mineral and mining operations will be affected by dust generated and will be provided with cloth dust masks. There is no village and hut existing within the lease area. Huts of village Soniyana are located away from the area. The mining will not involve any displacement of local population. There is no recreational facility in existence in the area and hence there is no impact. The future mining will not have any adverse impact on socio economic environment of the area.

x) Historical monuments etc.

No historical monuments, temple, building etc. are existing within the mine area and hence there will be no impact.

8.3 Progressive reclamation Plan:

To mitigate the impacts and ameliorate the condition, year wise steps proposed for phased restoration, reclamation of lands already/to be degraded in respect of following items separately for 5 years period.

Enclosed see plan refer plate no. 8.

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**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

Environment Monitoring:

To evaluate the effectiveness of environmental management programme, regular monitoring of the important environment parameters will be taken up. The schedule, duration and parameters to be monitored are shown in table.

Cost of Environmental Protection Measures Table No.-8.3

| S. No. | Particulars | Annual(Rs.) |
|------------------------|--|-----------------|
| 1. | Preparation & Maintenance of Catch drains & Garland Drains | 20,000 |
| 2. | Expenditure on dust suppression | |
| | Water Tanker & its maintenance | 50,000 |
| 3. | Plantation | |
| | Greenbelt and Afforestation | 30,000 |
| | Gardner | 20,000 |
| 4. (a) | First aid room | 10,000 |
| (b) | Nurse(part time) | 10,000 |
| (d) | Staff and peon | 5,000 |
| (e) | Medical examination (initial and periodical) of employees. | 5,000 |
| Total Cost | | 1,50,000 |
| Monitoring cost | | 50,000 |

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क नियम 4.2 के अन्तर्गत 1996-
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AMIT SAXENA
RQP/DGMMP/32/2013

**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

8.3.1 Mined-Out Land:

Present land use pattern is as follows (refer plate no.3): Table No-8.4

| S.No | Description | Area put to use at start of plan (in hect.) |
|------|-------------------------|---|
| 1. | Mining | 0.0000 |
| 2. | O.B. and waste dump | 0.0000 |
| 3. | Infrastructure | 0.0000 |
| 4. | Road | 0.0000 |
| 5. | Green belt | 0.0000 |
| 6. | Mineral stack | 0.0000 |
| 7. | Afforestation | 0.0000 |
| 8. | Water reservoir* | 0.0000 |
| 9. | Used area | 0.0000 |
| 10. | Unused area | 4.0000 |
| 11. | Total lease area | 4.0000 |

Proposed land use pattern after five years shall be as follows. Table No8.5

| S.No | Description | Area put to use at start of plan (in hect.) | Area after 5 years (in hect.) |
|------|-------------------------|---|-------------------------------|
| 1. | Mining | 0.0000 | 1.5957 |
| 2. | O.B. and waste dump | 0.0000 | 0.3341 |
| 3. | Infrastructure | 0.0000 | 0.0145 |
| 4. | Road | 0.0000 | 0.0618 |
| 5. | Green belt | 0.0000 | 0.3150 |
| 6. | Mineral stack | 0.0000 | 0.0500 |
| 7. | Afforestation | 0.0000 | 0.0000 |
| 8. | Water reservoir* | 0.0000 | - |
| 9. | Used area | 0.0000 | 2.3711 |
| 10. | Unused area | 4.0000 | 1.6289 |
| 11. | Total lease area | 4.0000 | 4.0000 |

मध्यप्रदेश गौण खनिज नियम 1996

के नियम 4

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**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

Year wise programme for fencing, construction of retaining wall, and plantation given as under & showing (refer Plate No. 7).

Table No. -8.6

| Activity | Yearwise (2018-2019 to 2022-2023) | | | | | | Rate | Amount (in Rs.) |
|------------------------------------|-----------------------------------|---------|---------|---------|---------|-------|------------------------|--------------------|
| | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | Total | | |
| Tree guards | 100 | 100 | 100 | 100 | 100 | 500 | Rs. 120 per tree guard | 60,000/- |
| Plantation (in number of saplings) | 100 | 100 | 100 | 100 | 100 | 500 | Rs. 50 per sapling | 25000/- |
| Haulage road (in m) | 0.0m. | 0.0m. | 0.0m. | 0.0m. | 0.0m. | 0.0m. | Rs. 100 per m. | - |
| Wire fencing (in mm) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | Rs. 90 per m. | - |
| Retaining wall (in m.) | 0.0m. | 0.0m. | 0.0m. | 0.0m. | 0.0m. | 0.0m. | Rs. 45 per m. | - |

Water quality management:

There are no Nallahs/Surface water bodies in and around the area. Therefore question of adverse impact on surface water bodies does not arise. Ground water table is at 432mRL, in the open well situated in the Ag. field. During five years period, mining will reach up to 482.5mRL. There is no perennial water source in close vicinity. Mine water pumped during rainy season will carry some silt with it. This water will be discharged into nearby sump, to assist in

**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

settling down of silt, and remaining clear water will be coursed in the nearby ag. fields. The discharge mine water will not carry any toxic or poisonous matter dissolved in the water, so no treatment of water is required & proposed. There is no proposal of beneficiation plant for processing of mineral, so no effluents will be generated.

Air quality survey:

Air pollution is caused when dust gets air borne after it is formed during loading and unloading of waste material as well as due to movement of trucks on the proposed mine roads for transportation. The proposed mine working is open cast semi-mechanized mining method. The water will be sprayed on the mine haul roads, loading and dumping points regularly for dust suppression. Green belt is also developed in and surrounding the mines etc. to absorb dust. Vehicle exhaust should direct upwards to avoid creating excess turbulence at road surface. It is also advised that the mine workers in dusty area should use cloth masks as far as possible.

Waste management:

During the plan period a total of 22962 cum. Waste will be generated. This waste will be dumped on 7.5m boundary barriers and develop greenbelt on the dump.

The year wise area to be covered under plantation in green belt:

| Year | Area in hect. | No. of sapling | Survival rate |
|----------------------|---------------|----------------|---------------|
| 1 st Year | 0.13794 | 100 | 60 to 80% |
| 2 nd Year | 0.13794 | 100 | 60 to 80% |
| 3 rd Year | 0.13794 | 100 | 60 to 80% |
| 4 th Year | 0.13794 | 100 | 60 to 80% |
| 5 th Year | 0.13794 | 100 | 60 to 80% |

मध्यप्रदेश गण संविधान नियम 1996
के नियम 42 के अन्तर्गत अनुमोदित

**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

8.3.2 Topsoil Management:

All material from the surface (decomposed soil laterite mixed) is directly supplied to cement industry so that no management is required.

8.3.3 Tailing Dam Management:

There is no proposal of beneficiation plant for processing of mineral, so no effluents will be generated.

8.3.4 Acid mine drainage, if any and its mitigate measures.

NA

8.4 Disaster Management and Risk Assessment:

The proposed workings are by opencast mining method. Underground mining is not proposed. No tailing dam is proposed. Thus high – risk accidents like landslide, subsidence, flood, inundation, fire seismic activities etc. would not come across. In case of accident, a well-equipped first aid station is available at nearby same lessee mine site for giving first aid to injured persons. A vehicle will always remain at site. The lessee is capable to meet any type of risk. The PHC is located nearby the lease area i.e. at semli-shankar (1.95 km.). The referral hospital at Shamgarh 2.00 km. away from the mine site. All safety measures viz helmet, iron toe shoes, dust mask etc. shall be implemented Shri Ritesh Purohit is responsible person.

8.5 Care and maintenance during temporary discontinuance:

The following steps will be taken during temporary discontinuance of the mining in the area due to any reason.

1. If mine closes temporarily, than the mining working will be in the watch of a watchman.
2. Before reopening of mine the maintenance will be provided to all the machineries deployed at mine.

राजस्थान गौण खनिज नियम 1993
के नियम 42 के अन्तर्गत अनुमोदित

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**Mining Plan & Progressive Mine Closure Plan of
Semli-Shanker Laterite Mine [Area 4.00 Hect.]
(Lessee: ShriRiteshPurohit)**

3. The area will be protected by displaying board at the entry with a caption like "entry in the premise without permission is strictly prohibited" and also in local language.
4. Before entry of the labours into the mine working/faces the working and faces are proposed to be inspected by manager for safety purpose as per Mines Act.
5. The open pit will be protected by erecting fencing as per norms and all around the open pits with caution boards displaying that "Danger Zone".

8.6 Financial Assurance:

The amount of financial assurance as required under Rule 23 (F) of MCDR, 1988 has been submitted @ 15,000 per ha. for 4.00 ha. Rs. 60,000 financial assurance will be submitted to Regional office.

मध्यप्रदेश गौण खनिज नियम 1996
के नियम 42 के अन्तर्गत अनुमोदित


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RQP/DGMMP/32/2013