

CHAPTER – VII

ADDITIONAL STUDIES

71 Public Consultation

To ascertain the concern of local affected persons and others who have a plausible stake in environmental impacts of the project / activity, public consultation has been done at village Karh in Anuppur Distt. On 21/07/2018 and in village Ranpur in Shahdol Distt on 29/10/2018. This involves the following activities

- a) In the hearing process, the responses/opinions of the public, affected directly or indirectly have been received by way of written correspondence & through different modes of communications
- b) Upper: Collector, (ADM) Shahdol and Upper: Collector, Anuppur presided over the Public Hearing process to get public concerns, have been incorporated in the EIA report
- c) Videography of proceedings also has been done and enclosed with the application for Expert Committee
- d) The proceedings have been signed by Addl. Collector, Shahdol and Addl. Collector, Anuppur respectively for two districts
- e) The proceedings has been displayed in web site and other Govt Offices, also attached in section III of this EIA/EMP report

72 Risk Assessment

Assessment of risk and its management is essential to guard against and mitigate the consequences of major accidents. The term "major accident" means an unexpected and sudden occurrence of event from abnormal developments in course of one's industrial activity leading to a serious danger to public or environment, whether immediate or delayed, inside or outside the installation involving one or more hazardous substances

Keeping in view the three basic principles i.e. prevention, preparedness (both proactive and reactive) and mitigation of effect through rescue, recovery, relief and rehabilitation, a comprehensive blueprint of risk assessment and management plan will be prepared for Batura OCP incorporating the following

- * Identification and assessment of risks
- * Recommendation of measures to prevent damage to life and property against such risks

7.21 Slope failure in Mine Pit

The exposures of the coal seams and OB will be left with a safe slope to avoid slope failure and collapse of benches. Similarly, at the end of mining operations a final pit slope will be provided to avoid failure.

All the working benches will be under the direct supervision of project level officials and all the necessary precautions will be taken to make the workings safe.

- (i) Height & width of the benches in coal and OB will depend upon the size of the leased equipment. However, in coal bench for surface mine, the width of bench may be kept as 30m. In OB, the width of working and non-working benches has been kept as 30m and 20m respectively. The maximum height of the bench is kept below 15m. The provision of Coal Mine Regulation and related circulars shall be strictly followed for designing bench parameters in coal and OB.
- (ii) Dump bench height - 30m
- (iii) Bench Slope - Coal / OB - 70°
- Spoil - 37°
- (iv) Bench Slope (working) - Coal / OB - 65°-70°
- Dump bench - 37°
- (v) Overall pit slope (for 6858m depth) - 27°

7.22 Slope failure in OB Dump

Major part of the overburden will be dumped in internal dumps and the rest will go to external dump. It is suggested to level the dump and grade it properly to avoid water accumulation. The following design criteria have been considered for waste dumps.

- (i) OB in external dumps will be stacked in 15m high benches.
- (ii) OB in internal dumps will also be stacked in 30m high benches.
- (iii) A berm width of 40m has been provided for transport etc.
- (iv) Dump slope for each deck to be at natural repose (37°).
- (v) Track dozers to be deployed for shaping the dumps overall slope is 27°.
- (vi) Height of the external dump will be 30m above the original profile of the ground level.

7.23 Blasting

For proper blasting and minimising the adverse side effects due to blasting viz noise

ground vibration back breaks, air blast, fly rocks etc. the following precautions have been suggested to avoid dangerous situation:

- * The optimal blast design parameters will be implemented
- * A safety zone of 100m beyond the quarry limit is envisaged and controlled blasting will be done keeping this aspect in mind
- * The blasting will be done at a fixed time as far as possible
- * All necessary precautions will be taken while blasting
- * Regular monitoring of vibration will be carried out and necessary precautions will be taken while blasting
- * Before blasting is done, warning siren will be activated so that people can move over to safe places
- * An arrangement will be made to alert the people working for sudden inrush of water by accidental development of fracture connecting the working place to the water bodies/aquifer:

724 Explosive Handling

Adhere to relevant statutory safety provisions as stipulated by DGMS, Chief Controller of Explosives and others will be made

725 Mine inundation

The mine pit will receive water from three sources namely, direct precipitation over excavated area, surface runoff from the surrounding area and seepage from the strata. During heavy rain storms, there may be a situation when the mine may get flooded due to ingress of water from the higher ground through natural damage. This may cause loss of human life, equipment etc. To guard against this eventuality, the following steps will be taken

- * Provision of galari/drain around the mine to prevent ingress of precipitation, runoff & keeping them same
- * Provision of sufficient number of pumps to pump out mine water during the critical rainfall period
- * Precaution against danger from local stream

726 Fire

Accidental fires are causes of large scale loss of property and life. Keeping this in view there would be adequate fire fighting arrangement. Adequate number of fire

extinguishers would be provided in store and other service buildings. While calculating total water demand for the project, provision for fire fighting has also been made.

727 Road Accidents

Sufficient arrangements for illumination of road including haul roads would be undertaken. Properly planned and designed road crossing would be implemented to prevent vehicular accidents. Further, haul roads have been planned in such a way that the HEMM traffic will be away from the passenger traffic. These are likely to prevent road accidents. All the dumps would be fitted with audio visual alarm and arrangement of such warning alarm while reversing for preventing accident.

728 Medical Preparedness

For guarding against accidental hazards the following measures will be taken:

- 1. Emergency Ambulance Service will be kept ready on a 24-hour basis.**
- 2. Doctor and para-medical staff will be made ready during emergency.**
- 3. First Aid Medical facilities will be provided at workplace.**

The nearby existing mine has already been provided with a dispensary with qualified doctors in addition to a first aid centre. These will meet the medical emergencies arising out of accident.

729 Other Miscellaneous Measures

- * Proper illumination in the quarry, OB dump area, workshop and other workplaces besides roads will be undertaken as mentioned above.**
- * Efficient communication system to allow communication link amongst various work centres to help in avoiding accidents and handling of emergencies.**
- * Fire alarm and fire fighting system will be provided at project site.**

The adoption of preventive measures as enumerated above will ensure that the operation of this project will be safe as well as environment friendly.

73 Social Impact Assessment

The project involves total 967.43 Ha of land for quarry, industrial and residential complex, safety zone and external dumps etc. The 825 number of project affected persons has been estimated and the number of project affected families from three villages namely Belia, Kharch and Rampur falling within the quarry area as 180. The PAF's and PAP's will be rehabilitated and paid economic compensation / employment as per MP State Govt. R&R package. The details R&R package has already been indicated in Table 4.11.