Project Title: Investigation on Methane Emission for Categorization of Degree of Gassiness of Coal Seam R-VI of Pure Searsole Colliery, Satgram Area, ECL and Advice on Associated Hazards

Project No: SSP/441/2019-20

EXECUTIVE SUMMARY

1. Investigation on methane emission for categorisation of degree of gassiness of R-VI coal seam, Pure Searsole Colliery, Satgram Area, ECL was undertaken on the request of the Chief Manager (Mining) and the work was sponsored by him.
2. Qualitative and quantitative assessment of the mine air at out-bye end of the district return and the main return indicated insignificant rate of methane emission per tonne of coal produced from R-VI coal seam, Pure Searsole Colliery, Satgram Area, ECL.
3. No local accumulation of methane content and blower of methane were observed during the investigation period in the general body air of R-VI Seam.
4. Air samples collected from behind 1.50m deep boreholes drilled in the adjacent pillar of working faces at R-VI Coal seam, showed negligible percentage of methane and no significant changes in methane percentage with time was observed in any of the boreholes after keeping them plugged for several days as per the DGMS statutes. A maximum of 0.02% methane was observed in a borehole drilled at 35 East Level off 2 Dip after keeping the borehole plugged for 7 days. It confirms that R-VI coal seam, Pure Searsole colliery is of low gassiness.
5. Insignificant rates of methane emission per tonne of coal produced and negligible percentage of methane in general body air samples indicate that gas hazard from methane emission at R-VI coal seam can be safely tackled by the ventilation system as per the statutes of DGMS. However, it is recommended that a regular check on general body air samples and air velocity at the out-bye end of the return airways may be measured to detect any presence of methane as a preventive measure against any possible gas hazards.