

Technical advisor to opencast mine

Prevention Of Groundwater Infiltration



Location

India



Client

Neyvell Lignite Corporation (NLC)



Expertise

Groundwater Modelling,
Cost Estimation,
Mine Geologies, Aquifers

Our Services



- Groundwater remediation study
- Planning of well drilling
- Supervision of well drilling
- Groundwater modelling
- Field tests on groundwater infiltration
- Groundwater re-infiltration system design
- Cost estimation

Project description

Neyveli Lignite Corporation (NLC) operates several large opencast lignite mines near the Indian coast. This requires draw-down of groundwater table which potentially risks sea water encroachment into aquifers. In accordance to the restricted ground water withdrawal of the Ministry of Environment and Forest in India, NLC appointed RWE as independent environmental expert to provide solutions on how to mitigate the effects of groundwater draw-down in mines.

Our task was to confirm that environmental impacts relating to groundwater withdrawal could be mitigated through a bespoke environmental programme. In addition we advised NLC on how this programme should be implemented and managed efficiently in accordance to the Indian Ministry of Environment and Forest demands.

Our work included calculation of available surface water for infiltration purpose. By drilling of test wells we investigated and demonstrated possible infiltration and inflow amounts. Estimating costs was the focus of the next phase - we designed the groundwater re-infiltration system including piping and monitoring.

Our structured approach to this project was crucial for NLC in confirming that continued mining operations can be carried out in compliance with the environmental requirements regarding groundwater draw-down.

RWE has a huge experience in designing and operating large-scale groundwater infiltration systems, as we applied such systems for several decades on our own opencast lignite mines in Germany.

