ONSITE TECHNICAL ASSISTANCE FOR CONSTRUCTION OF PORTAL DEVELOPMENT WORKS FOR TUNNELS BETWEEN BANIHAL AND ARPINCHALA STATION YARD INCLUDING DESIGN OF SUITABLE PROTECTION WORK AT ROB KM125+288 NEAR BR-121 AND SLOPE PROTECTION NEAR RPF BARRACK AT ARPINACHALA YARD ON DHARMAQUAZIGUND OF USBRL PROJECT (J&k)

BANIHAL AND ARPINCHALA, J & K

Figure 1: Banihal Tunnel

BRIEF: The development works for Tunnel between Banihal and Arpinchala, located in the 1790m elevation from sea level in the mountain range of lower Himalayas, presents unique challenges for construction due to its steep slopes and various Joint orientation in Rock. This case study aims to providing onsite monitoring, supervision and technical assistance during implementation of portal protection measures. (For the portal protection of Tunnel 78-P1, 78-P2, 77A-P1, 77D-P2, 74R-P1, 74R-P2 and 74R-Adit)

SALIENT FEATURES OF THE PROJECT:

LOCATION: Banihal and Arpinchala, J & K, India

ELEVATION: The site 1790 meters above from sea level

PROJECT YEAR: 2021 to 2023

OWNER: IRCON International Ltd.

SCOPE OF WORK: Project quality assurance and consultancy work.

ROLE OF GENSTRU: Geotechnical Consultant and Onsite technical support, supervision, and monitoring of all field activities, including the review of drawings, field and laboratory testing. Delivering site-specific quality assurance through tasks such as preparing and implementing a QA Plan.

MAIN DELIVERABLES:

a) Providing on - site technical assistance to the client and contractor.

b) Supervision and monitoring all field activities on day-to-day basis in line with the approved design and drawings and informing the client about the observations from time to time to get the work executed as per approved design and drawings.

c) Reviewing the drawings with the help of software's and communicating discrepancies (deviation in design parameters) if any to the Client.

d) Reviewing the changes made to the design and drawings during the execution of work as per site conditions.

e) Review of results of field/ laboratory tests conducted on construction materials for quality assurance.

f) Providing technical assistance from our head office to the project as and when required.

g) Periodic interaction and meetings with the client.

h) Providing site specific concise QA plan, QA record sheets based on extent of site and availability of resources, equipment's etc.

i) Quality monitoring including preparation of quality assurance plan, recommending necessary corrective measures, if any.

j) Testing (on site and laboratory), results and interpretations etc. as per national and international codal provisions.

k) Verification and reporting of design mix dosage as per QA plan and technical specification.

Figure 2: Inspection of Hydroseeding at T78-P2

Figure 3: Marking at T78-P1

Figure 4: Erection of Gabion walls at T74R-P1

Figure 5: Marking at T78-P2

Figure 6: Drapery System at T74R-P12

Figure 7: T78-P2 after commissioning

Figure 8: Inspection of HEA Panel at T74R-P2

Figure 9: HEA Panel Installed at T74R-P2

Figure 10: Pier Protection Work at Bridge -138