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Life at end of tunnel: India moves mountain to rescue 41 on Day 17

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DEHRADUN/ SILKYARA: The multi-agency operation to rescue 41 workers trapped inside the Silkyara tunnel in Uttarkashi finally succeeded after days of ups and downs, waves of hope and despair on Tuesday evening when all of them were safely brought out. The massive effort, unprecedented in its magnitude and ambition, ended an ordeal that lasted 17 days and had the entire government machinery, including the PMO, putting its might behind the evacuation exercise.

At 7.28pm, when the first trapped worker, Vijay Horo, was wheeled out on a stretcher by NDRF personnel, emotions ran high and cheers broke out amongst the rescue personnel, who had quite

literally moved mountains to get the men out.

Earlier, at 7.12pm, a team of doctors and NDRF men had first entered the tunnel as part of a pre-decided SOP. After the final leg of the mission, which lasted just over an hour, saw the harried but stoic workers walking out, they were welcomed with garlands by CM Pushkar Singh Dhami and Union minister of state for road transport and highways Gen VK Singh (retd).

Anurag Jain, secretary, MoRTH, said, "It was an unprecedented operation. Key factors working in our favor

included access to electricity, water, and ample space for the trapped workers. Subsequently, when we established the supply line, the situation became more manageable."

KNIGHTS IN MINING ARMOUR

Nov 12, Day 1 | Portion of tunnel collapses around 6am, trapping 41 workers
Rescue operation starts, involving shotcreting of loose structures and excavation of debris

Day 2 | **Shotcreting is stopped** due to falling debris, which injures 2 workers

Day 3 | Drilling begins with locally sourced auger machine to create escape passage. Next day, **advanced American machine airlifted**

Day 6 | **Drilling suspended** as cracking sounds trigger fears of further collapse

Day 7 | PMO team reviews op. **Decision taken to pursue multiple options**, including vertical drilling

Day 11 | **Auger machine hits iron girder**. Resumes boring next day, but can only drill 1.8m before stalling again

Day 13 | Workers begin removing debris manually to make way for auger machine, but next day, **machine blades get entangled in rubble**



Loud cheers erupted outside the tunnel as the workers emerged

Day 16 | **'Rat-hole' miners brought in** to manually dig through debris

Day 17 | At **1.10pm**, miners **achieve crucial breakthrough**
7.12pm: NDRF team and doctors enter 800mm pipe to reach trapped workers

7.28pm: First trapped worker, Vijay Horo, wheeled out on stretcher through pipe. All the trapped workers pulled out safely soon after

“ The success of the rescue operation is making everyone emotional. I want to say to them (the rescued men) your courage and patience are inspiring everyone. I wish you all the best...I also salute the spirit of all associated with this operation... Everyone involved in this mission has set an amazing example of humanity & teamwork — **PM Modi**



Talking about the challenges, he mentioned that a minor earthquake on November 16 caused the debris to shift 3 inches inside the tunnel. Furthermore, "a loud cracking sound the following day panicked the workers, leading us to halt the work for three days".

Jain told TOI that experts believed "there was a possibility of the tunnel face collapsing, which could pose a significant setback to the entire operation. Consequently, we opted to formulate multiple strategies (five-pronged, as reported by this newspaper earlier) in case such an eventuality occurred".

A rapid physical test was conducted on Tuesday evening for the workers inside the main tunnel itself where a team of 28 medical staff consisting of 15 doctors, pharmacists and ward boys was deployed. "All of the workers were found to be fit. Most of them recorded high BP which was attributed to anxiety, having been in such a situation for so long. They were given anti-anxiety pills," said one of the doctors who conducted the examination.

Later, Dhami announced financial assistance of Rs 1 lakh to each of the workers. He added that the state government would bear all the expenses of their treatment and that he would request authorities of NHIDCL, the executing agency of the tunnel project, to provide 15 to 20 days leave to help them go back to their respective states.

The penultimate part of the rescue, which lasted over 40 hours, had turned out to be a test of determination and endurance for individuals on both ends of the 57 meters of rubble (behind which the workers were stuck).

The biggest setback was the breakdown of the auger machine used in drilling an escape passage through the debris. The machine's blades had on Friday got lodged in the passage, leading to rescue efforts through the main tunnel route coming to a grinding halt for over 60 hours. Expressing the despair that the situation had created all around, Haridwar Sharma, whose brother Sushil Sharma was among those trapped inside, had said, "We are sensing that it is our misfortune, and now only a miracle from God can bring about a change."

The "miracle" that everyone was hoping for was brought to fruition by a group of diminutive workers referred to

as 'rat-hole' miners. They were brought in to manually dig through the last stretch of debris –around 12 meters after the auger machine parts were cleared from the escape passage.

Getting down to work on Monday evening, the 'rat-hole' miners, armed with shovels and spades, had dug through the final stretch of debris by Tuesday morning, achieving in less than 24 hours what drilling machines deployed for the past several days could not.

Once that was done, rescue personnel were able to push inside 800mm pipes, welded together, which served as an escape tunnel through which the stranded workers eventually came out.

(With inputs by Shivani Azad & Kautilya Singh)

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