KING

Mixing Strength With Satisfaction

SUDBURY NEUTRINO OBSERVATORY (SNOLAB)

PC-35 MINING CONCRETE

PROJECT:	Sudbury Neutrino Observatory (SNOLAB)
SPECIFIER:	Hatch Engineering
CONTRACTOR:	J.S. Redpath Limited
PRODUCT:	PC-35 Mining Concrete
QUANTITY:	540 m^3 (198000 ft^3)
COMPLETION:	2007

The SNOLAB is an expansion of the Sudbury Neutrino Observatory located on the 6800 ft. level of Vale-INCO's Creighton Mine in Lively ON. SNOLAB is an underground scientific research facility that has been utilized by leading scientists from around the world. It is considered Canada's leading edge facility for the study of astroparticle physics. The lab, excavated to provide a vast area for research, has added an additional 53,000 sq. ft. to the existing underground facility. Funding has been provided through various levels of the Canadian Government.

The construction products chosen to build this facility had to meet strict engineering standards. Hatch Engineering of Sudbury, ON, in consultation with J.S. Redpath Limited, specified King Packaged Materials PC-35 Mining Concrete to pour the 32,000 sq. ft of concrete floors. PC-35 Mining Concrete was supplied in bulk tote bags, with all components pre-blended so that only water needed to be added at the work site. The material was mixed using a Minequip CCM 200E continuous mixer and elevated from the mixer exit to the pump hopper with a Minequip WME 100E Wet Mix Elevator. The continuous mixer and the elevator were developed to convert pre-blended dry shotcrete/concrete materials to pumpable, plastic shotcrete/concrete and supplied by King's Minequip Division. The material has then placed using an Allentown Powercreter 20 concrete pump, also supplied by Minequip. Utilizing this system the J.S. Redpath crews were able to consistently feed, mix and place 120 bags of 1000kg. bulk bags in a ten hour shift. The maximum output in one shift was 175 bulk bags.

King/Minequip technical staff were present through much of the concrete placement to assist with the equipment operation and provide technical support. JS Redpath crews were pleased with the support and Hatch engineers were pleased with the consistent test results obtained through the project's QC program.

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1 800 461-0566 • constructionproducts@kpmindustries.com • **www.kpmindustries.com**