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## **OptiFlox® System Exclusive Manufacturing and Customer Arrangement**

Intec Ltd (Intec or the Company) is pleased to announce that Science Developments Pty Ltd (SciDev) has agreed an exclusive manufacturing and customer arrangement with Burkert Fluid Control Systems (Burkert) in relation to SciDev's OptiFlox® System. Intec owns a 50% interest in SciDev and holds an option to increase its ownership to 100% based on an agreed formula related to the profitability of SciDev.

Burkert, headquartered in Germany, but with operations worldwide, is one of the world's leading manufacturers of measurement and control systems for liquids and gases. SciDev and Burkert Australia have worked closely together over the past 18 months to develop the OptiFlox® System to a commercial ready stage.

The prototype OptiFlox® System has been successfully trialled at Peabody Energy's Wilpinjong coal preparation plant over the past year. Based on the experience gained during the Wilpinjong trial, a Mark 2 OptiFlox® System was designed in collaboration between SciDev and Burkert Australia personnel. The Mark 2 OptiFlox® System materially reduces the size of the system but enhances its capability and its potential application in other industries. The first order for a Mark 2 OptiFlox® System has now been placed with Burkert Australia.

Yours faithfully

Intec Ltd

**Kieran Rodgers**Managing Director

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## The OptiFlox® System

Thickeners in Coal Handling and Preparation Plants (CHPP) continually experience in-flows of coal tailings that do not remain homogeneous. The types and concentrations of the particles in such slurries can vary significantly as coal extraction moves from one pit to another within the mine site. This variation in the loading and composition of the material can cause ineffective chemical usage and inadequate control/clarification that cannot be solved by the conventional optical sensing devices commonly installed in thickeners.

Highly turbid or 'blackwater' events can therefore occur resulting in the CHPP shutting down and production either slowing or ceasing. Substantial losses in productivity and revenue can therefore result. The value of lost revenue due to productivity loses from inadequate wastewater clarification in CHPP's is estimated to range from \$1.6M to almost \$10M per annum.

Developed by Science Developments Pty Ltd, the OptiFlox® System continuously measures in real time the appropriate particle characteristics of coal tailings. As a result, the system automatically determines and maintains the optimal coagulant dose rate required even when the characteristics of the slurry feed to the thickener continually change. Optimal flocculation conditions are thereby maintained to enable consistent and reliable clarified water to be produced for re-use in the CHPP.

The OptiFlox® System enables coal productivity to be maximised through minimising the number of shutdowns caused by the return of excessively turbid water to the CHPP. Further benefits in the form of increased yields, reduced magnetite consumption, improved underflow dewatering and chemical cost savings may also be realised through optimal thickener performance.

