SRK Consulting
Level 2
44 Market Street, Sydney NSW 2000, Australia

Email: sydney@srk.com.au
www.srk.com.au

Tel: 61 2 8079 1200
Fax: 61 2 8079 1222

Memo

To:	Sinosteel Midwest Corporation	**Date:**	17 May 2010
Attention:	Michael Wood	**From:**	Andrew Garvie
cc:	Simon Hanrahan, SRK Consulting	**Project No:**	SMM001
SUBJECT:	**PER, AMD AND METAL LEACHING**		

Re: Acid and Metalliferous Drainage (AMD) at Weld Range

Static test results reported in October 2009 indicated that the majority of waste (88 to 90%) is expected to be non acid forming (NAF). About 8 to 10% of the waste could be potentially acid forming (PAF). The acid generating properties of up to 3% of the waste material is expected to be uncertain. In recognition of the small portion of the waste being classified as PAF several options for managing the PAF have been considered. These include:

i. Isolating the PAF material with NAF material to reduce the quantity of water contacting the PAF waste.
ii. Co-mingling or blending the PAF waste with NAF waste that has excess neutralising capacity to generate a blend that continuous to have an excess of neutralising capacity.
iii. Segregating and placing the PAF waste where acid generation can easily be controlled or prevented (e.g. backfilling to the open pit below the long term water level).

The currently proposed strategy will be to isolate the PAF waste within the NAF waste rock dump. This consistent with standard practices adopted elsewhere.

Kinetic tests were conducted on samples representing various waste or low grade mineralised materials with sulphur contents less than 0.1% during 2009. All showed low and decreasing rates of sulfide oxidation. Material with higher levels of sulphide content could have the largest influence on effluent quality and it was recommended that kinetic testing of samples with higher sulphide contents be undertaken. Such tests began in December 2009.

Results of kinetic columns will be used to estimate potential release rates of oxidation products and metals from the waste. This data would be used to determine the required efficiency of a proposed management strategy to predict the effluent quality from the managed wastes.

While the results of these tests are required for completing water quality predictions, we anticipate that the outcomes will be unlikely to result in changes to the waste management strategy that is proposed. However, should water quality predictions show that there are concerns with respect to the proposed strategy, then and alternate strategy would be proposed. This may include additional longer term field investigations on materials that have been mined. Clearly this cannot be undertaken at present.

Thus, data from the columns would assist in the developing the final design of the management strategy to be implemented. For example, the data might be used in deciding on the thickness of a NAF cover placed over PAF waste rather than on deciding whether to cover PAF waste or to place it back in the pit below the ultimate groundwater level.