

November 28<sup>th</sup>, 2014

Al Hoffman,  
Chief Inspector of Mines  
Ministry of Energy and Mines

**Re: 2014 Dam Safety Inspection Report for Teck Quintette Coal Operations**

Under cover of this letter, please find the 2014 Dam Safety Inspection (DSI) reports for the two dormant tailings facilities at Quintette Coal Operations and the results of the third-party review. The DSI reports were prepared by Klohn Crippen Berger. The DSI reports were subsequently provided third-party review by Mr. Andy Small, P.Eng. of Amec Foster Wheeler.

Quintette is committed to ensuring the safe operation of its tailings facilities and accompanying dam structures. Our tailings facilities are inspected by qualified technical staff. DSIs are conducted on an annual basis and detailed Dam Safety Reviews are conducted by a third-party engineer every seven years.

As outlined in the DSI report and confirmed by the third-party engineer review, no immediate safety or stability concerns were noted for either of Quintette's tailings storage facilities and accompanying dam structures. Further, these documents confirm that our monitoring and surveillance practices meet industry standards. The independent review has also confirmed the current assigned Consequence Classifications for the dams.

The Plantsite tailings dam (Consequence Classification of High) has been evaluated for dam break and inundation, and has an emergency preparedness and response plan (EPRP) in place. The EPRP for the Plantsite Tailings Dam was subjected to a table-top test on November 25<sup>th</sup>, 2014. The updated dam break and inundation study, EPRP and a summary of the EPRP test have also been submitted to the Chief Inspector of Mines.

No Priority 1 (immediate safety or stability concerns) items were identified by the DSIs. Items marked as Priority 2 were identified as non-urgent, but pertaining to long term dam safety. Priority 3 recommendations were identified as non-urgent and not expected to result in a dam safety issue. Recommendations marked as Priority 4 were identified as opportunities to further meet industry best practices, but timeline for completion is more than one year.

Several recommendations pertaining to maintenance and/or opportunities to further develop leading industry practices were identified in the DSI reports. We have carefully reviewed and are taking steps to address each recommendation as required, according to the priorities established in the DSIs, as detailed in Table 2 below.

There were no recommendations resulting from the independent review of the DSIs.

At Quintette, we are focused on meeting the highest standards of safety for communities, employees and the environment. Annual Dam Safety Inspection reports are one component of the comprehensive systems and procedures we have in place for the safe operation and monitoring of our tailing facilities. These systems follow industry best practices, including guidance provided by the Canadian Dam Association and the Mining Association of Canada. Please do not hesitate to contact me if you have any further questions regarding the operation, maintenance and monitoring of our tailings facilities.

Sincerely,



Rob Muise  
Acting General Manager, Quintette Coal Operations

cc: Diane Howe, Ministry of Energy and Mines  
George Warnock, Ministry of Energy and Mines  
Heather Narynski, Ministry of Energy and Mines  
Chris Anderson, Teck  
Jeff Hanman, Teck

## Recommendations and Action Items

**Table 1: General Description of Priority Rankings**

Priority	Description
1	A high probability or actual dam safety issue considered immediately dangerous to life, health or the environment, or a significant regulatory concern.
2	If not corrected, could likely result in dam safety issues leading to injury, environmental impact or significant regulatory action; or, a repetitive deficiency that demonstrates a systematic breakdown of procedures.
3	Single occurrences of deficiencies or non-conformances that alone would not be expected to result in dam safety issues.
4	Best Management Practice as a suggestion for continuous improvement towards industry best practices that could further reduce potential risks. This typically includes ongoing construction items within the appropriate construction cycle.

**Table 2: Recommendations and Planned Action**

Structure	Recommendation	Priority	Planned Action	Timeline for action
Plantsite Dam	Prepare an OMS manual and EPRP for the facility based on the MAC (2011) guidelines.	2	Complete both documents.	December 2014
	Define monitoring and instrument reading frequency and include in OMS, establish survey monuments along crest. Consult EoR with monitoring requirements.	3	Include frequencies in OMS. Survey monument installation complete.	December 2014 (survey monument installation complete)
	Establish rill monitoring into OMS. Photographs of downstream slope from recommended rill monitoring points; and walk crest to confirm rills are not extending through crest	3	Establish rill monitoring program in OMS, photograph slope, and walk crest to confirm rills are not extending through	December 2014
	Perform additional survey monitoring.	3	Complete 3 minimum survey monument readings in 2015 once appropriate survey method has been established.	(1) Before May 30, 2015 (2) 1 month after first 2015 survey (3) Between August and October 2015
	Label piezometers.	3	Add ID tags to piezometers.	Before July 2015

	Establish piezometer threshold values and include in the OMS.	3	Establish piezometer threshold values that trigger action or design review, and include these in the OMS.	December 2015
	Piezometer monitoring.	3	Complete minimum 3 piezometer readings in 2015 at stations 0+300 and 0+475.	(1) Before May 30 2015 (2) July/August 2015 (3) Sept/Nov 2015
	Closure spillway IDF.	3	Complete a design assessment with summary report to confirm that the closure spillway is suitable for the IDF.	December 2015
Shikano North Dam	Revise OMS manual.	2	Update OMS manual for existing dam condition.	December 2014
	Improve monitoring documentation.	4	Create a form or system to document visual inspections of dam during each water sampling collection at S3 pond.	May 2015
	Monitor additional piezometers.	3	Include piezometers at P95KC-2A/2B in annual monitoring.	Complete during next instrument readings in 2015
	Perform additional survey monitoring.	3	Complete 3 minimum survey monument readings in 2015. Confirm whether current survey method can provide suitable accuracy for this purpose.	(1) Before May 30 2015 (2) July/August 2015 (3) Sept/Nov 2015