

Response to The Church of England Pensions Board's Request for Information re: Tailings Dam Management

#	Question	Notes	Response
1	"Tailings Facility" Name/identifier	Please identify every tailings storage facility and identify if there are multiple dams (saddle or secondary dams) within that facility. Please provide details of these within question 20	Palmarejo Kensington Golden Cross *There are no multiple dams within tailings facilities.
2	Location	Please provide Long/Lat coordinates	Palmarejo – 27° 22' 15" N; 108° 24' 46" W Kensington – 58° 48' 26" N; 135° 02' 18" W Golden Cross – 37° 19' 57" S; 175° 47' 24" E
3	Ownership	Please specify: Owned and Operated, Subsidiary, JV, NOJV, as of March 2019	Coeur Mexicana, S.A. de C.V. – Owner and operator of the Palmarejo complex (wholly-owned subsidiary of Coeur Mining, Inc.) Coeur Alaska, Inc. – Owner and operator of the Kensington mine (wholly-owned subsidiary of Coeur Mining, Inc.). Coeur Gold New Zealand Limited & Coeur Gold New Zealand II, LLC (each a wholly-owned subsidiary of Coeur Mining, Inc.) – Joint Venture Owners of the Golden Cross Mine.
4	Status	Please specify: Active, Inactive/Care and Maintenance, Closed etc. --- We take closed to mean: a closure plan was developed and approved by the relevant local government agency, and key stakeholders were involved in its development; a closed facility means the noted approved closure plan was fully implemented or the closure plan is in the process of being implemented. A facility that is inactive or under C&M is not considered closed until such time a closure plan has been implemented.	Palmarejo - Active Kensington - Active Golden Cross - Closed
5	Date of initial operation	(date)	Palmarejo – December 2010 Kensington – July 2010 Golden Cross – February 1992

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6	Is the Dam currently operated or closed as per currently approved design?	Yes/No. If 'No', more information can be provided in the answer to Q20	Palmarejo - Yes Kensington - Yes Golden Cross - Yes
7	Raising method	Note: Upstream, Centerline, Modified Centreline, Downstream, Landform, Other.	Palmarejo - Downstream Kensington - Downstream Golden Cross - Downstream
8	Current Maximum Height	Note: Please disclose in metres	Palmarejo – 96 m Kensington – 27 m Golden Cross – 40 m
9	Current Tailings Storage Impoundment Volume	Note: (m3 as of March 2019)	Palmarejo – 13.7M m3 Kensington – 1.5M m3 Golden Cross – 3.7M m3
10	Planned Tailings Storage Impoundment Volume in 5 years time.	(m3 as planned for January 2024)	Palmarejo – 16.5M m3 Kensington – 2.7M m3 Golden Cross – 3.7M m3
11	Most recent Independent Expert Review	(date) For this question we take ‘Independent’ to mean a suitably qualified individual or team, external to the Operation, that does not direct the design or construction work for that facility.	Palmarejo – May 2019 Kensington – July 2019 Golden Cross – August 2018
12	Do you have full and complete relevant engineering records including design, construction, operation, maintenance, and/or closure?	(Yes or No) We take the word “relevant” here to mean that you have all necessary documents to make an informed and substantiated decision on the safety of the dam, be it an old facility, or an acquisition, or legacy site. More information can be provided in your answer to Q20.	Palmarejo - Yes Kensington - Yes Golden Cross - Yes
13	What is your hazard categorisation of this facility, based on the consequence of failure?		Palmarejo - High, additional details in Q.20 Kensington - Moderate Golden Cross - Low to Moderate
14	What guideline do you follow for the classification system?		Palmarejo - Canadian Dam Association Dam Safety Guidelines. Kensington - Class II AK Dam Safety Regulations. Coeur has adopted the dam design criteria for a Class I (high) hazard potential dam classification as a special condition to any application submitted for a Certificate of Approval to Modify a Dam.)

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			Golden Cross - New Zealand Building Act, Resource Management Act, Health and Safety at Work Act.
15	Has this facility, at any point in its history, failed to be confirmed or certified as stable, or experienced notable stability concerns, as identified by an independent engineer (even if later certified as stable by the same or a different firm).	(Yes or No) We note that this will depend on factors including local legislation that are not necessarily tied to best practice. As such, and because remedial action may have been taken, a “Yes” answer may not indicate heightened risk. --- Stability concerns might include toe seepage, dam movement, overtopping, spillway failure, piping etc. If yes, have appropriately designed and reviewed mitigation actions been implemented? ---- We also note that this question does not bear upon the appropriateness of the criteria, but rather the stewardship levels of the facility or the dam. Additional comments/information may be supplied in your answer to Q20.	Palmarejo - No Kensington - No Golden Cross – Yes, additional details in Q.20
16	Do you have internal/in house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?	Note: Answers may be "Both".	Palmarejo - Both Kensington - Both Golden Cross - Both
17	Has a formal analysis of the downstream impact on communities, ecosystems and critical infrastructure in the event of catastrophic failure been undertaken and to reflect final conditions? If so, when did this assessment take place?	Note: Please answer 'yes' or 'no', and if 'yes', provide a date.	Palmarejo – Yes, May 2017 Kensington – Yes, (dam breach analysis in 2006 and updated in April 2019; failure modes analysis in 2015) Golden Cross - Yes, 2003 (updated in 2016)
18	Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?	Please answer both parts of this question (e.g. Yes and Yes)	Palmarejo - Yes and Yes Kensington - Yes and Yes Golden Cross - Yes and Yes
19	Have you, or do you plan to assess your tailings facilities against the impact of more regular extreme weather events as a result of climate change, e.g. over the next two years?	(Yes or No)	Palmarejo - Yes Kensington - Yes Golden Cross – Yes *Additional details in Q.20

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<p>20</p>	<p>Any other relevant information and supporting documentation. --- - Please state if you have omitted any other exposure to tailings facilities through any joint ventures you may have.</p>	<p>Note: this may include links to annual report disclosures, further information in the public domain, guidelines or reports etc.</p>	<p>Additional Information Additional tailings disclosure information available at: https://www.coeur.com/responsibility/our-environment/#tailings-dam-management</p> <p>2Q 2019 Earnings Deck: https://www.coeur.com/resources/presentations/2019-08-08-2QEarnings.pdf</p> <p>Silvertip Coeur’s Silvertip mine produces dry stack tailings. The tailings are in the form of a pyrite concentrate or as non-acid generating (NAG), or desulfurized, tailings. They are either placed in a lined facility or permanently disposed of in the underground mine workings depending on the type of tailings produced. The pyrite concentrate form is mixed with an alkaline cement that neutralizes the sulfides and is placed underground as a cemented paste backfill. The NAG tailings go through a regulated process to remove the moisture content and increase the density of the material, and then are dry stacked in a permitted tailings rock storage facility.</p> <p>Silvertip relies on several sources to define controls and the design of tailings rock storage facility features and ancillary facilities: British Columbia (“BC”) regulations (such as Health, Safety, and Reclamation Code for Mines in British Columbia); Canadian Dam Association Guidelines; Interim Guidelines of the BC Mine Waste Rock Pile Research Committee; and Towards Sustainable Mining: Tailings Management (Mining Association of Canada).</p> <p>Palmarejo Palmarejo’s tailings storage system was designed, constructed, and is operated according to Mexican NOM-141 SEMARNAT 2003 and Canadian Dam Association (CDA 2007) Dam Safety Guidelines.</p>
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			<p>Kensington Kensington’s tailings facility is designed and operated pursuant to the Alaska Department of Natural Resources (ADNR) Dam Safety Program and regulations.</p> <p>Golden Cross The Golden Cross tailings impoundment was designed and constructed pursuant to the New Zealand Building Act, Resource Management Act, Health and Safety at Work Act.</p> <p>In 1997, a deep-seated landslip occurred beneath the tailings impoundment. As a result, the tailings facility was closed as a precaution before completion of active mining in accordance with the then-existing mine plan. Final remediation and mine closure soon followed. Ongoing monitoring has shown that the landslide has stabilized to the point where it is no longer of concern. The facility has not received any citations of movement or failures and continues to be monitored. Coeur reports on an 18-month impoundment monitoring frequency (reduced from annual in 2017) with periodic peer reviews and third-party risk assessments in collaboration with regulators. Monthly, quarterly, and annual inspections and annual aerial surveys are conducted. Tonkin & Taylor continues to be the Engineer of Record with vast institutional knowledge and involvement with dam design, closure, and landslip remediation.</p> <p>Q.13 Additional information The “High” consequence classification is not related to the physical structure itself but is based on the presence of two existing downgradient buildings that are within an identified potential inundation area if a breach were to occur, based on a third-party dam breach analysis conducted in 2016. Permanent residents were previously</p>
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			<p>located immediately downstream of the tailings dam and have since been relocated.</p> <p>Q.19 Additional information Closure plans for all sites are periodically updated and factor in updated meteorological information. Designs also incorporate probable maximum flood events based on storm return events up to 1 in 1,000 years.</p>
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