

# Tailings Facilities Disclosure: Response to the Church of England Pensions Board and the Council on Ethics Swedish National Pension Funds

7 June 2019

In April 2019, the Church of England Pensions Board and the Council on Ethics Swedish National Pension Funds wrote to approximately 700 mining firms to request specific disclosures of their tailings facilities.

This document contains the response of BHP and that of our Non-operated joint ventures to this request.

This disclosure has been certified by BHP's Chief Executive Officer, in line with this request.



#### **DISCLAIMER**

#### Forward-looking statements

This document contains forward-looking statements, which may include statements regarding: trends in commodity prices and currency exchange rates; demand for commodities; plans, strategies and objectives of management; closure or divestment of certain operations or facilities (including associated costs); anticipated production or construction commencement dates; capital costs and scheduling; operating costs and shortages of materials and skilled employees; anticipated productive lives of projects, mines and facilities; provisions and contingent liabilities; tax and regulatory developments.

Forward-looking statements can be identified by the use of terminology including, but not limited to, 'intend', 'aim', 'project', 'anticipate', 'estimate', 'plan', 'believe', 'expect', 'may', 'should', 'will', 'continue', 'annualised' or similar words. These statements discuss future expectations concerning the results of operations or financial condition, or provide other forward-looking statements.

These forward-looking statements are not guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this presentation. Readers are cautioned not to put undue reliance on forward-looking statements

Other factors that may affect the actual construction or production commencement dates, costs or production output and anticipated lives of operations, mines or facilities include our ability to profitably produce and transport the minerals, petroleum and/or metals extracted to applicable markets; the impact of foreign currency exchange rates on the market prices of the minerals, petroleum or metals we produce; activities of government authorities in some of the countries where we are exploring or developing these projects, facilities or mines, including increases in taxes, changes in environmental and other regulations and political uncertainty; labour unrest; and other factors identified in the risk factors discussed in BHP's

Except as required by applicable regulations or by law, the Group does not undertake any obligation to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Past performance cannot be relied on as a guide to future performance.

#### Presentation of data

This document contains data, which may include figures, numbers, classifications, regulatory status, modelling, and other information regarding tailings dams and BHP processes. Unless specified otherwise, the data contained herein are based on the information available at the date of this document. This document contains views regarding the status of BHP tailings dams and tailings facilities as expressed by various internal or external reviews, including the BHP Dam Risk Review. Those views are based on the information available at the time of those statements, which may predate this document. The data and views contained herein may change or may have changed based on additional or changes in information, circumstances, or other events and should not be relied upon a recommendation or forecast by BHP.

#### No offer of securities

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#### Reliance on third party information

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#### BHP and its subsidiaries

In this document, the terms 'BHP', 'Group', 'BHP Group', 'we', 'us', 'our' and 'ourselves' are used to refer to BHP Group Limited, BHP Group Plc and, except where the context otherwise requires, their respective subsidiaries set out in note 13 'Related undertaking of the Group' in section 5.2 of BHP's Annual Report on Form 20-F. Notwithstanding that this document may include production, financial and other information from non-operated assets, non-operated assets are not included in the BHP Group. Statements regarding our operations, assets and values apply only to our operated assets unless otherwise stated. Non-operated joint ventures have their own management and operating standards. Joint venture partners of other companies managing those non-operated joint ventures may take action contrary to our standards or fail to adopt standards equivalent to BHP's standards, and commercial counterparties may not comply with our standards.

### Response to overview questions<sup>1</sup>

# Q: Provide an overview of your tailings management system, and how you manage risk

Tailings dams are dynamic structures and maintaining dam integrity requires consideration of a range of factors, including appropriate engineering design, quality construction, ongoing operating discipline and effective governance processes. As a result, BHP's approach to dam risk management at our operated dams is integrated into our standard approach to risk management, assurance and continuous improvement, with particular focus on four key areas:

- 1. Maintenance of dam integrity;
- 2. Governance of dam facilities;
- 3. Monitoring, surveillance and review; and
- 4. Emergency preparedness and response.

Supporting this approach to dam risk management at our operations are Group-level, company-wide processes of technical support and oversight.

#### Maintenance of dam integrity

Central to our approach is the recognition that maintaining dam integrity is an ongoing process of continuous assessment that needs to be maintained for the life (including into closure) of a tailings facility. As a result, we have identified five key dimensions to maintaining dam integrity:

- Design: the basis of dam design is guided by design criteria specified through Australian National Committee on Large Dams (ANCOLD), Canadian Dam Association (CDA) and local regulation, taking account of dam classification;
- Construction: quality assurance and quality control across all construction phases (from initial construction to dam lifts / expansions during operation);
- Operations and maintenance: operating and maintaining the dam in accordance with its design requirements;
- Change management: identifying, assessing and mitigating the impacts of any changes on dam design and integrity; and
- Monitoring, surveillance and review: ensuring the dam is functioning as intended.

#### **Governance of dam facilities**

Effective governance encompasses a range of aspects from change management to document management to appropriately qualified personnel with clear accountabilities.

We have three key roles that we mandate across our operated assets:

- Dam Owner: the single point of accountability for maintaining effective governance and integrity of the Tailing Storage Facility throughout its life-cycle;
- Responsible Dam Engineer: a suitably qualified BHP individual accountable for maintaining overall engineering stewardship of the facility including planning, operation, surveillance and maintenance; and
- Engineer of Record: an independent, suitably
  qualified professional engineer retained by the Dam
  Owner for the purpose of maintaining dam design,
  certifying dam integrity and supporting the Dam
  Owner and the Responsible Dam Engineer on any
  other matters of a technical nature.

#### Monitoring, surveillance and review

Given tailings dams are dynamic structures, effective monitoring, surveillance and review is central to ongoing dam integrity and governance. These processes span six dimensions with the specific details commensurate with the significance of the facility:

- 1. **Monitoring systems:** operating in real time or periodically;
- 2. Routine surveillance: undertaken by operators;
- 3. **Dam inspections**: more detailed inspections undertaken periodically by the Responsible Dam Engineer;
- 4. **Dam Safety inspections:** annual inspections undertaken by the external Engineer of Record reviewing aspects across both dam integrity and governance;
- Dam Safety Reviews: conducted by an external third party as set out below; and
- 6. Tailings Review or Stewardship Boards<sup>2</sup>: a panel of qualified independent individuals established, commensurate with dam significance, under specific terms of reference to review aspects such as the current status of the dam, any proposed design changes and outcomes of any inspections or dam safety reviews.

<sup>&</sup>lt;sup>1</sup>Information provided in response to the overview questions reflects tailings management standards at BHP-operated tailings facilities. Non-operated joint ventures have their own operating and management standards, and do not apply BHP tailings management standards.

<sup>&</sup>lt;sup>2</sup>BHP assesses the dam classification, risk, and operational circumstances in determining whether to empanel a Tailings Review or Stewardship Board. Not all facilities will have Tailings Review or Stewardship Boards. Tailings Review or Stewardship Boards are either in place or in the process of being established for BHP-operated Assets with Very High and Extreme classified tailings facilities.

#### Response to overview questions (continued)

# Q: Provide an overview of your tailings management system, and how you manage risk (continued)

#### Dam safety reviews

Dam Safety Reviews are central to our approach to dam integrity and continuous improvement. We undertake Dam Safety Reviews consistent with the guidance provided by the Canadian Dam Association in their 2016 Technical Bulletin Dam Safety Reviews. As per this guidance, review frequency is informed by the dam classification.

Dam Safety Reviews are detailed processes that include a thorough review of dam integrity and dam governance. They include a review of the dam break assessment and dam consequence classification. The review is led by an external Qualified Professional Engineer, who has the appropriate level of education, training and experience, with support and input from other technical specialists from fields that may include, for example, hydrology, geochemistry, seismicity, geotechnical or mechanical. At the conclusion of the review, the Qualified Professional Engineer provides a signed assurance statement which includes a comment as to the integrity of the facility as a result of the review.

#### **Emergency preparedness and response**

The final key element in our approach to dam risk management is emergency preparedness and response. Our approach to emergency response planning for our tailings facilities is designed to be commensurate with risk and includes:

- Identifying and monitoring for conditions and thresholds that prompt preventive or remedial action;
- Assessing and mapping the potential impacts from a hypothetical, significant failure including infrastructure, communities and environment, both on and offsite, regardless of probability;
- Establishing procedures to assist operations personnel in responding to emergency conditions at the dam; and
- Testing and training in emergency preparedness, ranging from desktop exercises to full-scale simulations.
   Desk top and field drills are scheduled at a frequency commensurate with the level of risk of the facility.

#### Response to overview questions (continued)

Q: Confirm whether your approach to tailings management has changed or will change in light of the recent tailings disasters at Brumadinho, Mariana, Mt Polley and others. Have you, for example, reviewed all tailings storage facilities with upstream dam construction, and taken steps necessary to protect local communities and the environment e.g. buttressing, evacuation?

Immediately following the tragic failure of the Fundão dam at Samarco in 2015, BHP initiated a Dam Risk Review to assess the management of significant<sup>3</sup> tailings storage facilities both active and inactive. This Review was in addition to existing review processes already being undertaken by our operations. The Review assessed dam design, construction, operations, emergency response and governance to determine the current level of risk and the adequacy and effectiveness of controls.

The scope of the review included:

- Significant tailings facilities across all operated sites and non-operated joint ventures;
- 2. Any proposed significant tailings or water dams as part of major capital projects; and
- 3. Consideration of health, safety, environment, community and financial impacts associated with failure, including the physical impacts of climate change.

The reviews were undertaken by multi-disciplinary expert teams, combining leading tailings engineering firms and BHP personnel. Actions were assigned at the asset-level to address facility specific findings, and followed up by our internal audit and assurance teams to assess quality and completeness. Some of these actions at the asset-level resulted in enhancements such as buttressing for some facilities. Subsequently we have undertaken Dam Safety Reviews which provide assurance statements on dam integrity.

Actions were also identified at the Group-level to address common findings and lessons learned so that our approach to dam risk management, as outlined in response to the previous question, could be further improved. As part of this, a central technical team was set up to enhance oversight and assurance. In addition, we also enhanced our focus on technology to reduce and eliminate tailings storage risks while also actively contributing to the International Council on Mining and Metals (ICMM) Tailings Advisory Group to contribute to improvements across the sector.

Following the Brumadinho event, BHP has established a Tailings Taskforce. The Taskforce will be accountable for the continued improvement and assurance for BHP's operated tailings storage facilities, progressing our technology efforts and will lead ongoing participation in the setting of new international tailings management standards. BHP will also review our approach to tailings management as information on the causes of the Brumadinho failure come to light.

BHP welcomes a common, international and independent body to oversee integrity of construction and operation of all tailings storage facilities across the industry. In addition, BHP supports calls for greater transparency in tailings management disclosure and will work with the industry to make sure the disclosure is consistently applied and informs better tailings dam stewardship.

<sup>&</sup>lt;sup>3</sup> Significance was determined as part of the review process taking account of the dam classification under CDA and/or ANCOLD for both active and inactive facilities.

# Footnotes supporting tailings facilities disclosures

The below footnotes should be read in conjunction with the tailings facilities disclosure tables on the following pages.

These footnotes explain how the questions have been interpreted for the purposes of BHP's operated tailings facilities. Non-operated joint ventures (NOJVs) have their own operating and management standards, and do not apply BHP tailings management standards. Where information has been requested regarding a facility at an NOJV (questions 1-2, 4-11, 15, and 17-18), BHP has relied upon information provided to BHP by the operator. That information has not been independently verified by BHP. For more information regarding BHP's NOJVs, please visit bhp.com.

Chu	rch of England Question	Interpretation
1.	Tailings Dam Name/identifier	In providing the information enclosed, BHP has followed interpretation guidance from the International Council on Mining & Metals (ICMM).
		The Church of England (CoE) declaration of tailings storage facilities (TSF) is based on a definition agreed by ICMM Tailings Advisory Group. This definition defines a TSF as an operationally integrated facility of dams/walls. We keep this definition under review. BHP's February 2019 disclosure of TSFs was based on a combination of TSFs and individual dams as agreed with BHP's Responsible Dam Engineers at BHP's operated assets.
		The reduction in the number of TSFs in this disclosure compared to the February disclosure is primarily due to the aggregation of individual dams into (integrated) TSFs. The majority of these changes are associated with the North American Closed Sites.
2.	Location	Latitude, longitude.
3.	Ownership	General:
		Facilities listed as "owned and operated" are owned and operated by the BHP Group as that term is used in BHP's 2018 Annual Report.
		The term "joint venture" is used for convenience and is not intended to describe the legal relationship between interest-holding entities.
		NOJVs:
		Facilities listed as "NOJV" are facilities that are not wholly owned by BHP and for which BHP is not the operator.
		Other joint ventures:
		BHP Mitsubishi Alliance (BMA) is operated by BM Alliance Coal Operations Pty Ltd. BHP provides key services to BMA including labour services, logistics and supply services and administrative support services. BMA also applies BHP risk management, safety and environment policies and standards across its operations
		BHP Mitsui Coal (BMC) is an incorporated joint venture that is held 80% by BHP and 20% by Mitsui, although it is classified as a subsidiary under financial reporting rules and is therefore classified as "owned and operated" for the purposes of this database.
4.	Status	N/A
5.	Date of initial operation	N/A
6.	Is the Dam currently operated or closed as per currently approved design?	Where a facility is in transition from operation to closure BHP has applied the interpretation that this meets the design when it is following a defined rehabilitation plan.

# Footnotes supporting tailings facilities disclosures (continued)

7.	Raising method	Hybrid is used to describe a raising method where the wall comprises a combination of construction methods within the context of the ICMM guidance.
8.	Current Maximum Height (metres)	N/A
9.	Current Tailings Storage Impoundment Volume (million cubic metres)	These are estimated through various techniques of differing precision and therefore are approximate values only.
10.	Planned Tailings Storage Impoundment Volume in 5 years' time (million cubic metres)	These are based on expected production rates and may differ dependent on future operational decisions.
11.	Most recent Independent Expert Review	N/A
12.	Do you have full and complete relevant engineering records including design, construction, operation, maintenance and/or closure?	BHP-operated facilities:  In responding to question 12, BHP has applied interpretation guidance provided by CoE to define "relevant" engineering records for BHP-operated facilities as sufficient information to make a statement on the current stability of the facility.  NOJVs:  The operator, not BHP, is responsible for maintaining engineering records.
13.	What is your hazard categorisation of this facility, based on consequence of failure?	The consequence category or classification of the tailings facilities is based on the most recent classification of the facilities by the Engineer of Record. This is subject to change as ongoing reviews are conducted.
14.	What guideline do you follow for the classification system?	BHP primarily adopts industry recognised classification systems, such as CDA or ANCOLD, for dam hazard categorisation.
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)?	<ul> <li>This refers to where an independent engineer has concluded that there is:</li> <li>For active facilities, a deficiency sufficiently significant to trigger an imminent, catastrophic failure for the current life/stage. For a previous life/stage, a deficiency sufficiently significant to trigger an imminent, catastrophic failure that was not addressed (as vetted by an independent review).</li> <li>For inactive/closed facilities, a deficiency sufficiently significant to trigger an imminent, catastrophic failure that reflects the current state of the facility (versus a previous issue that has been addressed through confirmed changed conditions via the closure process).</li> </ul>

# Footnotes supporting tailings facilities disclosures (continued)

16.	Do you have internal/in	BHP-operated facilities:
	house engineering specialist oversight of this facility?	The response has been provided in relation to the operator being BHP.
	Or do you have external	NOJVs:
	engineering support for this purpose?	The operator, not BHP, is responsible for engineering oversight of the facility in accordance with the operator's management standards. BHP has engineering expertise that, at the operator's request, can be made available as an external resource through the corresponding NOJV governance protocols.
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?	N/A
18.	Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?	BHP's mandatory company-wide standard stipulates that all BHP-operated facilities must have a closure management plan. The closure management plan outlines the technical and study work needed to inform, optimise and implement closure, which for tailings storage facilities includes development of a long-term monitoring program.
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	BHP's mandatory company-wide standard stipulates that BHP-operated facilities use climate science forecasts to identify and assess climate related issues / risks to the business. For additional information, please visit our Sustainability Report available at bhp.com. For tailings storage facilities, BHP is conducting climate change assessments across our operated facilities on a schedule commensurate with risk. At a minimum every asset has a plan in place to conduct this assessment.
	two years?	NOJVs:
		The operator, not BHP, determines severe weather/climate change assessment requirements.
20.	Any other relevant information and supporting documentation.	N/A

# **BHP-operated tailings facilities**

The table below should be read in conjunction with the tailings facility disclosure footnotes.

Assot	Operation	Country	1. Tailings Dam Name/identifier	2. Location	3. Ownership	4. Status	5. Date of initial operation	6. Is the Dam currently operated or closed as per currently approved design?	7. Raising method	8. Current Maximum Height (meters)	9. Current Tailings Storage Impoundment Volume (million m3)	10. Planned Tailings Storage Impoundment Volume in 5 years time (million m3)	11.Most recent Independent Expert Review	<ol> <li>Do you have full and complete relevant engineering records including design, construction, operation, maintenance and/or closure.</li> </ol>	13. What is your hazard categorisation of this facility, based on consequence of failure?	14. What guideline do you follow for the classification system?	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).	16. Do you have internal/in house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?	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?	18. Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?	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?	20. Any other relevant information and supporting documentation. Hease state if you have omitted any other exposure to tailings facilities through any joint ventures you may have.
Escondida	Escondida	Chile	Hamburgo	-24.295, -69.053	JV and Operated	Inactive	1991	Yes	N/A - in-pit or natural depression	N/A	302.0	302.0	2017	Yes	N/A	N/A	No	Yes to Both	Yes, in 2019	a) Yes b) Yes	Yes	13. TSF includes no embankments.
Escondida	Escondida	Chile	Laguna Seca TSF	-24.408, -69.123	JV and Operated	Active	2002	Yes	Downstream	42.5	497.7	676.1	2018	Yes	Very High	Canadian Dam Association	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
New South Wales Energy Coal	Mt Arthur Mine	Australia	Mt Arthur Tailings Storage Facility - Stage 1	-32.36142, 150.8969	Owned and Operated	Active	2013	Yes	Downstream	15	8.9	20.4	2019	Yes	Significant	NSW Dam Safety Committee	No	Yes to Both	Yes, in 2016	a) Yes b) Yes	Yes	
Nickel West	Kambalda	Australia	Kambalda TSF	-31.170604, 121.688347	Owned and Operated	Inactive	1973	Yes	Upstream	30	25.9	30.4	2018	Yes	Significant	ANCOLD	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	10. This facility is currently inactive but is planned for further deposition within the Five Year Plan.
Nickel West	Kwinana	Australia	Baldivis TSF	-32.289041, 115.806297	Owned and Operated	Inactive	1970	Yes	N/A - in-pit or natural depression	N/A	0.8	0.8	2019	Yes	Category 2	Government of Western Australia, Department of Mines, Industry regulation and Safety: Code of Practice for Tailings dams (2013)	No	Yes to Both	No	a) Yes b) Yes	Yes	17. Facility includes no embankments and is below surface grade.
Nickel West	Leinster	Australia	Leinster TSF 1	-27.80918, 120.696149	Owned and Operated	Inactive	1978	Yes	Upstream	10	2.0	2.0	2018	Yes	Low	ANCOLD	No	Yes to Both	No	a) Yes b) Yes	Yes	17. No downstream communities, ecosystems or critical infrastructure identified.
Nickel West	Leinster	Australia	Leinster TSF 2/3	-27.78905, 120.70633	Owned and Operated	Active	1992	Yes	Upstream	39	40.1	47.7	2018	Yes	High B	ANCOLD	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
Nickel West	Mt Keith	Australia	CDTSF	-27.255301, 120.596133	Owned and Operated	Active	1996	Yes	Upstream	17	169.0	205.0	2018	Yes	Significant	ANCOLD	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Ambrosia Lake	USA	Cells 1 and 2	35.399516, -107.830734	Owned and Operated	Closed	1958	Yes	Upstream	27	18.0	18.0	2019	Yes	High	Canadian Dam Association / New Mexico Office of the State Engineer	No	Yes to Both	Yes, in 2019	a) Yes b) Yes	Yes	
North American Closed Sites	Copper Cities	USA	No. 10 Tailings	33.444556, -110.894123	Owned and Operated	Inactive	1966	Yes	Upstream	24	2.6	2.6	2018	Yes	Significant	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Copper Cities	USA	No. 2 Tailings	33.444885, -110.849794	Owned and Operated	Inactive	1950	Yes	Upstream	107	34.4	34.4	2018	Yes	Very High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Copper Cities	USA	No. 8 Tailings	33.451026, -110.847079	Owned and Operated	Inactive	1965	Yes	Upstream	91	7.3	7.3	2018	Yes	Very High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Copper Cities	USA	No. 9 Tailings	33.442478, -110.887516	Owned and Operated	Inactive	1966	Yes	Upstream	24	2.0	2.0	2018	Yes	Significant	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	East Kemptville	Canada	East Kemptville Tailings Management Area	44.111, -65.702	Owned and Operated	Closed	1985	Yes	Centerline	9	12.8	12.8	2016	Yes	High	Canadian Dam Association	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Elliot Lake	Canada	Lacnor Tailings Management Area	46.392515, -82.585363	Owned and Operated	Closed	1957	Yes	Upstream	15.2	1.5	1.5	2016	Yes	Low	Canadian Dam Association / MNR Ontario Dam Safety Guidelines	No	Yes to Both	Yes, in 2004	a) Yes b) Yes	Yes	
North American Closed Sites	Elliot Lake	Canada	Milliken Tailings Management Area	46.399908, -82.646575	Owned and Operated	Closed	1958	Yes	Centerline	4	0.1	0.1	2016	Yes	High	Canadian Dam Association / MNR Ontario Dam Safety Guidelines	No	Yes to Both	Yes, in 2004	a) Yes b) Yes	Yes	

Asset	Operation	Country	1. Tailings Dam Name/identifier	2. Location	3. Ownership	4. Status	5. Date of initial operation	6. Is the Dam currently operated or closed as per currently approved design?	7. Raising method	8. Current Maximum Height (meters)	9. Current Tailings Storage Impoundment Volume (million m3)	10. Planned Tailings Storage Impoundment Volume in 5 years time (million m3)	11.Most recent Independent Expert Review	12. Do you have full and complete relevant engineering records including design, construction, operation, maintenance and/or closure.	13. What is your hazard categorisation of this facility, based on consequence of failure?	14. What guideline do you follow for the classification system?	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).	16. Do you have internal/in house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?	17. Has a formal analysis of the downstream impact on communities, ecosystems and critical infrastructure in the event of carastrophic failure been undertaken and to reflect final conditions? If so, when did this assessment take place?	18. Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?	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?	20. 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.
North American Closed Sites	Elliot Lake	Canada	Nordic Tailings Management Area	46.38231, -82.607482	Owned and Operated	Closed	1957	Yes	Upstream	12.2	6.9	6.9	2016	Yes	Significant	Canadian Dam Association / MNR Ontario Dam Safety Guidelines	No	Yes to Both	Yes, in 2004	a) Yes b) Yes	Yes	
North American Closed Sites	Elliot Lake	Canada	Panel Tailings Management Area	46.52408, -82.551727	Owned and Operated	Closed	1958	Yes	Centerline	23	8.8	8.8	2016	Yes	High	Canadian Dam Association / MNR Ontario Dam Safety Guidelines	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Elliot Lake	Canada	Pronto Tailings Management Area	46.206818, -82.704707	Owned and Operated	Closed	1955	Yes	Centerline	13	2.5	2.5	2016	Yes	Very High	Canadian Dam Association / MNR Ontario Dam Safety Guidelines	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Elliot Lake	Canada	Quirke Tailings Management Area	46.50859, -82.657137	Owned and Operated	Closed	1956	Yes	Centerline	26	32.6	32.6	2016	Yes	Very High	Canadian Dam Association / MNR Ontario Dam Safety Guidelines	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Elliot Lake	Canada	Spanish American Tailings Management Area	46.472266, -82.601569	Owned and Operated	Closed	1958	Yes	Centerline	1.8	0.3	0.3	2016	Yes	Low	Canadian Dam Association / MNR Ontario Dam Safety Guidelines	No	Yes to Both	Yes, in 2004	a) Yes b) Yes	Yes	
North American Closed Sites	Elliot Lake	Canada	Stanleigh Tailings Management Area	46.44754, -82.59924	Owned and Operated	Closed	1958	Yes	Centerline	22.9	11.5	11.5	2016	Yes	Very High	Canadian Dam Association / MNR Ontario Dam Safety Guidelines	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Island Copper	Canada	Island Copper Tailings	50.59055, -127.467926	Owned and Operated	Closed	1971	Yes	N/A - in-pit or natural depression	N/A	308.0	308.0	2018	Yes	N/A	N/A	No	Yes to Both	No	a) Yes b) Yes	Yes	7. Tailings were deposited in the ocean under an approved license and environmental impact assessment. This historic practice ceased in the 1990s and the facility is inactive. BHP has committed to not dispose of mine waste rock or tailings in river or marine environments.  13. Tailings were deposited in the ocean. As such there are no dams associated with this deposition.  17. Tailings were deposited in the ocean under an approved licenses and Environmental Impact Assessment. We continue to conduct environmental effects monitoring.
North American Closed Sites	Lisbon	USA	Lower Tailings Impoundment	38.266665, -109.283435	Owned and Operated	Closed	1971	Yes	Downstream	18	1.3	1.3	2019	Yes	High	Canadian Dam Association / Utah Dam Safety	No	Yes to Both	Yes, in 2019	a) Yes b) Yes	Yes	
North American Closed Sites	Lisbon	USA	Upper Tailings Impoundment	38.266746, -109.289064	Owned and Operated	Closed	1971	Yes	Downstream	25	1.3	1.3	2019	Yes	High	Canadian Dam Association / Utah Dam Safety	No	Yes to Both	Yes, in 2019	a) Yes b) Yes	Yes	16. Internal engineering support provided but no on-site oversight since this is a closed facility.
North American Closed Sites	Miami	USA	Canyon Tailings	33.405426, -110.869838	Owned and Operated	Inactive	1911	Yes	Upstream	15	2.9	2.9	2018	Yes	Very High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Miami	USA	Miami Avenue Tailings	33.404667, -110.873353	Owned and Operated	Inactive	1920	Yes	Upstream	33.5	0.3	0.3	2018	Yes	Extreme	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Miami	USA	No. 2 Tailings Storage Facility	33.408419, -110.866957	Owned and Operated	Closed	1909	Yes	N/A - in-pit or natural depression	N/A	0.4	0.4	2006	Yes	Low	Internal	No	Yes to Both	No	a) Yes b) Yes	Yes	Assumed low due to deemed negligible consequence of loss of containment. A planned geotechnical program will verify hazard classification.      Formal assessment will follow Arizona Department of Environmental Quality guidelines.      Cone penetration testing will be conducted to assess the liquefaction potential of the remaining tailings. Tailings runout analysis will be completed by March 2020.

Asset	Operation	Country	1. Tailings Dam Name/identifier	2. Location	3. Ownership	4. Status	5. Date of initial operation	6. Is the Dam currently operated or closed as per currently approved design?	7. Raising method	8. Current Maximum Height (meters)	9. Current Tailings Storage Impoundment Volume (million m3)	10. Planned Tailings Storage Impoundment Volume in 5 years time (million m3)	11.Most recent Independent Expert Review	12. Do you have full and complete relevant engineering records including design, construction, operation, maintenance and/or closure.	13. What is your hazard categorisation of this facility, based on consequence of failure?	14. What guideline do you follow for the classification system?	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).	16. Do you have internal/in house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?	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?	18. Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?	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?	20. 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.
North American Closed Sites	Old Dominion	USA	Old Dominion Tailings No 1 (ODT1)	33.415831, -110.79549	Owned and Operated	Closed	1918	Yes	Upstream	37	0.9	0.9	2018	Yes	Very High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Old Dominion	USA	Old Dominion Tailings No 2 (ODT2)	33.413253, -110.794813	Owned and Operated	Closed	1918	Yes	Upstream	12.2	0.3	0.3	2018	Yes	High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Old Dominion	USA	Old Dominion Tailings No 3 (ODT3)	33.421585, -110.799598	Owned and Operated	Closed	1927	Yes	Upstream	18.3	3.1	3.1	2018	Yes	High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	Poirier	Canada	Poirier Tailings Disposal Area	49.445809, -78.392419	Owned and Operated	Closed	1965	Yes	Upstream	10	2.5	2.5	2018	Yes	Low	Canadian Dam Association / Quebec Dam Safety Regulations	No	Yes to Both	Yes, in 1998 and 2011	a) Yes b) Yes	Yes	
North American Closed Sites	San Manuel	USA	No. 1/2 Tailings Storage Facility	32.626395, -110.601369	Owned and Operated	Closed	1955	Yes	Upstream	70	59.4	59.4	2018	Yes	Very High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	San Manuel	USA	No. 10 Tailings Storage Facility	32.644168, -110.612761	Owned and Operated	Closed	1970	Yes	Upstream	91	91.9	91.9	2018	Yes	Very High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	San Manuel	USA	No. 3/4 Tailings Storage Facility	32.61504, -110.588221	Owned and Operated	Closed	1957	Yes	Upstream	67	87.7	87.7	2018	Yes	Very High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	San Manuel	USA	No. 5 Tailings Storage Facility	32.606259, -110.574557	Owned and Operated	Closed	1964	Yes	Upstream	76	45.5	45.5	2018	Yes	Very High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	San Manuel	USA	No. 6 Tailings Storage Facility	32.608736, -110.560017	Owned and Operated	Closed	1970	Yes	Upstream	76	43.6	43.6	2018	Yes	Very High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
North American Closed Sites	San Manuel	USA	Tiger Tailings	32.706177, -110.67929	Owned and Operated	Closed	1881	Yes	Upstream	6	0.5	0.5		Yes	Low	Internal	No	Yes to Both	Yes, in 2006	a) Yes b) Yes	Yes	11. Small historic tailings deposition area previously considered a landform. An independent review is planned to be conducted in 2019.  13. Assumed low due to deemed negligible consequence of loss of containment. A planned geotechnical program will verify hazard classification.  14. Formal assessment will follow Arizona Department of Environmental Quality guidelines.
North American Closed Sites	Selbaie	Canada	Selbaie Tailings Facility	49.799028, -78.957185	Owned and Operated	Closed	1981	Yes	Centerline	24	32.5	32.5	2016	Yes	High	Canadian Dam Association / Quebec Dam Safety Regulations	No	Yes to Both	Yes, in 2015	a) Yes b) Yes	Yes	
North American Closed Sites	Solitude	USA	Solitude Tailings Storage Facility	33.392315, -110.830696	Owned and Operated	Inactive	1928	Yes	Upstream	70	58.7	58.7	2018	Yes	Very High	Canadian Dam Association / Arizona Department of Environmental Quality	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	
Olympic Dam	Olympic Dam	Australia	TSF 1-3	-30.439, 136.84	Owned and Operated	Inactive	1988	Yes	Upstream	30	50.0	50.0	2017	Yes	Extreme	ANCOLD	No	Yes to Both	Yes, in 2019	a) Yes b) Yes	Yes	
Olympic Dam	Olympic Dam	Australia	TSF4	-30.444, 136.828	Owned and Operated	Active	1999	Yes	Upstream	32	55.0	65.0	2017	Yes	Extreme	ANCOLD	No	Yes to Both	Yes, in 2019	a) Yes b) Yes	Yes	

Asset	Operation	Country	1. Tailings Dam Name/identifier	2. Location	3. Ownership	4. Status	5. Date of initial operation	6. Is the Dam currently operated or closed as per currently approved design?	7. Raising method	8. Current Maximum Height (meters)	9. Current Tailings Storage Impoundment Volume (million m3)	10. Planned Tailings Storage Impoundment Volume in 5 years time (million m3)	11.Most recent Independent Expert Review	12. Do you have full and complete relevant engineering records including design, construction, operation, maintenance and/or closure.	13. What is your hazard categorisation of this facility, based on consequence of failure?	14. What guideline do you follow for the classification system?	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).	16. Do you have internal/in house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?	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?	18. Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?	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?	20. Any other relevant information and supporting documentation. Please state if you have omitted any other exposure to tallings facilities through any joint ventures you may have.
Olympic Dam	Olympic Dam	Australia	TSF5	-30.412, 136.832	Owned and Operated	Active	2011	Yes	Upstream	16	37.0	53.0	2017	Yes	Extreme	ANCOLD	No	Yes to Both	Yes, in 2019	a) Yes b) Yes	Yes	
Queensland Coal - BMA	Blackwater	Australia	Laleham TSF	-23.943, 148.823	JV and Operated	Closed	1991	Yes	Downstream	7.7	3.0	3.0	2018	Yes	Low	Internal	No	Yes to Both	No	a) Yes b) Yes	Yes	3. Refer to footnotes.  13. Assumed low due to deemed negligible consequence of loss of containment. A planned dam safety review will review the hazard category assessment, and will assess geotechnical risks given the current state of the facility.  14. Formal assessment will follow Queensland Department of Environment and Heritage Protection and/or ANCOLD guidelines.  17. An informal assessment has been completed which has indicated limited risk of loss of containment and low risk to downstream areas.
Queensland Coal - BMA	Blackwater	Australia	NCPP Tailings Dam	-23.739, 148.787	JV and Operated	Active	1969	Yes	Hybrid	24	35.0	38.3	2018	Yes	High C	Queensland Department of Environment and Heritage Protection / ANCOLD	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Blackwater	Australia	Ramp 72	-23.924, 148.809	JV and Operated	Inactive	2001	Yes	Downstream	13	3.0	3.0	2018	Yes	Significant	Queensland Department of Environment and Heritage Protection / ANCOLD	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Blackwater	Australia	Ramp 74	-23.945, 148.834	JV and Operated	Inactive	2001	Yes	N/A - in-pit or natural depression	N/A	5.0	5.0	2018	Yes	Low	Queensland Department of Environment and Heritage Protection	No	Yes to Both	Yes, in 2018	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Goonyella Riverside Mine	Australia	GS1	-21.804, 147.949	JV and Operated	Active	1970	Yes	Hybrid	24	40.0	43.4	2019	Yes	High C	Queensland Department of Environment and Heritage Protection / ANCOLD	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Goonyella Riverside Mine	Australia	RS1	-21.743, 147.946	JV and Operated	Active	1982	Yes	Hybrid	20	25.0	27.8	2019	Yes	High B	Queensland Department of Environment and Heritage Protection / ANCOLD	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Norwich Park	Australia	Old Tailings Dam	-22.768, 148.471	JV and Operated	Inactive	1977	Yes	Hybrid	15.4	10.0	10.0	2018	Yes	Low	Queensland Department of Environment and Heritage Protection	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Norwich Park	Australia	Ramp 5	-22.765, 148.487	JV and Operated	Inactive	2000	Yes	N/A - in-pit or natural depression	N/A	10.0	10.0	2018	Yes	Significant	Queensland Department of Environment and Heritage Protection	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Peak Downs	Australia	Airfield Tailings Dam	-22.255, 148.169	JV and Operated	Inactive	1999	Yes	Downstream	13.8	4.5	4.5	2018	Yes	Low	Queensland Department of Environment and Heritage Protection / ANCOLD	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Peak Downs	Australia	Old Tailings Dam	-22.264, 148.172	JV and Operated	Inactive	1973	Yes	Hybrid	23	25.0	25.0	2018	Yes	Significant	Queensland Department of Environment and Heritage Protection / ANCOLD	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Peak Downs	Australia	Ramp 2N TSF	-22.245, 148.181	JV and Operated	Inactive	2002	Yes	Downstream	7	1.5	1.5	2017	Yes	Low	Queensland Department of Environment and Heritage Protection	No	Yes to Both	Yes, in 2010, 2012, and 2013	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Peak Downs	Australia	Ramp 6S TSF	-22.305, 148.209	JV and Operated	Inactive	2007	Yes	Downstream	6.3	0.8	0.8	2017	Yes	Low	Queensland Department of Environment and Heritage Protection	No	Yes to Both	Yes, in 2010 and 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Peak Downs	Australia	Ramp 7S TSF	-22.303, 148.219	JV and Operated	Active	2008	Yes	Downstream	10	8.5	14.0	2018	Yes	Significant	Queensland Department of Environment and Heritage Protection / ANCOLD	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.

Asset	Operation	Country	1. Tailings Dam Name/identifier	2. Location	3. Ownership	4. Status	5. Date of initial operation	6. Is the Dam currently operated or closed as per currently approved design?	7. Raising method	8. Current Maximum Height (meters)	9. Current Tailings Storage Impoundment Volume (million m3)	10. Planned Tailings Storage Impoundment Volume in 5 years time (million m3)	11.Most recent Independent Expert Review	12. Do you have full and complete relevant engineering records including design, construction, operation, maintenance and/or closure.	13. What is your hazard categorisation of this facility, based on consequence of failure?	14. What guideline do you follow for the classification system?	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).	16. Do you have internal/in house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?	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?	18. Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?	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?	20. 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.
Queensland Coal - BMA	Saraji	Australia	Ramp 2/3 TSF	-22.376, 148.276	JV and Operated	Active	2002	Yes	Hybrid	11.8	20.0	25.5	2018	Yes	Significant	Queensland Department of Environment and Heritage Protection	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Saraji	Australia	Ramp 6 TSF	-22.402, 148.292	JV and Operated	Inactive	1998	Yes	N/A - in-pit or natural depression	N/A	1.0	1.0	2017	Yes	Low	Queensland Department of Environment and Heritage Protection	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Saraji	Australia	TSF No. 2	-22.406, 148.284	JV and Operated	Inactive	1979	Yes	Downstream	15	3.0	3.0	2017	Yes	Low	Queensland Department of Environment and Heritage Protection	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMA	Saraji	Australia	TSF No. 3	-22.4, 148.275	JV and Operated	Closed	1981	Yes	Downstream	15	5.0	5.0	2017	Yes	Low	Internal	No	Yes to Both	No	a) Yes b) Yes	Yes	3. Refer to footnotes.  13. Assumed low due to deemed negligible consequence of loss of containment. A planned dam safety review will review the hazard category assessment, and will assess geotechnical risks given the current state of the facility.  14. Formal assessment will follow Queensland Department of Environment and Heritage Protection and/or ANCOLD guidelines.  17. An informal assessment has been completed which has indicated limited risk of loss of containment and low risk to downstream areas.
Queensland Coal - BMA	Saraji	Australia	TSF No. 4	-22.399, 148.282	JV and Operated	Closed	1984	Yes	Downstream	16	10.0	10.0	2017	Yes	Low	Internal	No	Yes to Both	No	a) Yes b) Yes	Yes	3. Refer to footnotes.  13. Assumed low due to deemed negligible consequence of loss of containment. A planned dam safety review will review the hazard category assessment, and will assess geotechnical risks given the current state of the facility.  14. Formal assessment will follow Queensland Department of Environment and Heritage Protection and/or ANCOLD guidelines.  17. An informal assessment has been completed which has indicated limited risk of loss of containment and low risk to downstream areas.
Queensland Coal - BMC	South Walker Creek	Australia	Bidgerley Tailings Dam	-21.791405, 148.499321	Owned and Operated	Active	2002	Yes	Downstream	10	8.1	10.7	2017	Yes	Significant	Queensland Department of Environment and Heritage Protection	No	Yes to Both	Yes, in 2017	a) Yes b) Yes	Yes	3. Refer to footnotes.
Queensland Coal - BMC	South Walker Creek	Australia	Old Tailings Dam	-21.781, 148.483	Owned and Operated	Inactive	1996	Yes	Downstream	11.2	1.4	1.4	2017	Yes	Low	Queensland Department of Environment and Heritage Protection	No	Yes to Both	No	a) Yes b) Yes	Yes	Refer to footnotes.     A formal impacts analysis will be completed upon conclusion of a planned geotechnical program.
Titanium Minerals	Beenup	Australia	MDSA	-34.225166, 115.262928	Owned and Operated	Closed	1997	Yes	Hybrid	12	0.1	0.1	2016	Yes	Low	ANCOLD	No	Yes to Both	Yes, in 2016	a) Yes b) Yes	Yes	
Western Australia Iron Ore	NPI	Australia	Boodarie TSF	-20.3806, 118.5239	JV and Operated	Inactive	1997	Yes	Upstream	9	0.6	0.6	2019	Yes	Low	Internal	No	Yes to Both	Yes, in 2019	a) Yes b) Yes	Yes	Assumed low due to tailings removed and deemed negligible consequence of loss of containment. A hazard classification will be determined as a result of the closure review process.      Formal assessment will follow ANCOLD guidelines.
Western Australia Iron Ore	Port Hedland	Australia	Finucane Island TSF	-20.30084, 118.5588	JV and Operated	Inactive	1987	Yes	Downstream	12	2.4	2.4	2016	Yes	Significant	ANCOLD	No	Yes to Both	No	a) Yes b) Yes	Yes	17. Formal assessment will be completed in FY20.
Western Australia Iron Ore	Whaleback	Australia	Whaleback TSF	-23.38653, 119.6759	JV and Operated	Active	1985	Yes	Upstream	25	23.0	28.0	2019	Yes	Extreme	ANCOLD	No	Yes to Both	Yes, in 2019	a) Yes b) Yes	Yes	

# Non-operated joint venture tailings facilities

The table below should be read in conjunction with the tailings facility disclosure footnotes.

Asset	Country	1. Tailings Dam Name/identifier	2. Location	3. Ownership	4. Status	5. Date of initial operation	6. Is the Dam currently operated or closed as per currently approved design?	7. Raising method	8. Current Maximum Height (meters)	9. Current Tailings Storage Impoundment Volume (million m3)	10. Planned Tailings Storage Impoundment Volume in 5 years time (million m3)	11.MostrecentIndependentExpert Review	12. Do you have full and complete relevant engineering records including design, construction, operation, maintenance and/or closure.	13. What is your hazard categorisation of this facility, based on consequence of failure?	14. What guideline do you follow for the classification system?	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).	16. Do you have internal/in house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?	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?	18. Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?	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?	20. 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.
Antamina	Peru	Antamina Tailings Dam	9° 32´22.16 S, 77°1´58.36 W	Non Operated Joint Venture	Active	2001	Yes	Downstream Centreline	240	374.0	600.0	2019	Operator: Yes BHP: No	Extreme	Canadian Dam Association	No	Operator: Yes to Both BHP: No to both	Yes, in 2018	a) Yes b) Yes	Operator: Yes BHP: No	12. Refer to footnotes. 16. Refer to footnotes. 19. Refer to footnotes.
Bullmoose	Canada	Bullmoose Tailings	55.136278, -121.476274	Non Operated Joint Venture	Inactive	1983	Yes	Downstream	38	4.6	4.6	2018	Operator: Yes BHP: No	High	Canadian Dam Association	No	Operator: Yes to both BHP: No to both	Yes, in 2014	a) Yes b) Yes	Operator: Yes BHP: No	12. Refer to footnotes. 16. Refer to footnotes. 19. Refer to footnotes.
Cerrejón	Colombia	Cantor TSF	11° 06' 20 N, 72° 38' 37 W	Non Operated Joint Venture	Active	2005	Yes	Downstream	5	2.5	2.6	2019	Operator: Yes BHP: No	Significant	Canadian Dam Association	No	Operator: Yes to Both BHP: No to both	Yes, in 2019	a) Yes b) Yes	Operator: Yes BHP: No	12. Refer to footnotes. 16. Refer to footnotes. 19. Refer to footnotes.
Resolution Copper	USA	No. 1 and 2 TSF Impoundment	33.298117, -111.106052	Non Operated Joint Venture	Closed	1900	Yes	Upstream	9	1.8	1.8	2018	Operator: Yes BHP: No	Class I	Other	No	Operator: Yes to Both BHP: No to both	No	a) Yes b) Yes	Operator: Yes BHP: No	12. Refer to footnotes. 14. Operator's internal classification guidelines. 16. Refer to footnotes. 17. As instructed by Operator. 19. Refer to footnotes.
Resolution Copper	USA	No. 3 and 4 TSF Impoundment	33.2963881, -111.10488501	Non Operated Joint Venture	Closed	1940	Yes	Upstream	18	2.4	2.4	2018	Operator: Yes BHP: No	Class III	Other	No	Operator: Yes to Both BHP: No to both	No	a) Yes b) Yes	Operator: Yes BHP: No	12. Refer to footnotes. 14. Operator's internal classification guidelines. 16. Refer to footnotes. 17. As instructed by Operator. 19. Refer to footnotes.
Resolution Copper	USA	No. 5 TSF Impoundment	33.301751, -111.107863	Non Operated Joint Venture	Closed	1957	Yes	Upstream	18	1.9	1.9	2018	Operator: Yes BHP: No	Class I	Other	No	Operator: Yes to Both BHP: No to both	No	a) Yes b) Yes	Operator: Yes BHP: No	12. Refer to footnotes. 14. Operator's internal classification guidelines. 16. Refer to footnotes. 17. As instructed by Operator. 19. Refer to footnotes.
Resolution Copper	USA	No. 6 and 7 TSF Impoundment	33.301415, -111.113384	Non Operated Joint Venture	Closed	1970	Yes	Modified Centreline	22.8	3.0	3.0	2018	Operator: Yes BHP: No	Class III	Other	No	Operator: Yes to Both BHP: No to both	Yes, in 2018	a) Yes b) Yes	Operator: Yes BHP: No	Refer to footnotes.     A. Operator's internal classification guidelines.     Refer to footnotes.     Refer to footnotes.
Samarco	Brazil	Germano Main Dam	-20.21811, -43.465195	Non Operated Joint Venture	Inactive	1977	No	Upstream	163	129.6	129.6	2019	Operator: Yes BHP: No	High	Brazilian Regulation	No	Operator: Yes to Both BHP: No to both	Yes, in 2017/2018	a) No b) No	Operator: Yes BHP: No	6. Operations are suspended, and per regulator direction, TSF will be decommissioned. Final closure plan and long-term monitoring will be defined as part of the decommissioning process.  12. Refer to footnotes.  15. Remedial works were conducted as a result of the dam failure in 2015.  16. Refer to footnotes.  18. Operations are suspended, and per regulator direction, TSF will be decommissioned. Final closure plan and long-term monitoring will be defined as part of the decommissioning process.  19. Refer to footnotes.
Samarco	Brazil	Germano Pit Dam	-20.193637, -43.491281	Non Operated Joint Venture	Inactive	2001	No	Upstream	60	16.6	16.6	2019	Operator: Yes BHP: No	High	Brazilian Regulation	No	Operator: Yes to Both BHP: No to both	Yes, in 2017/2018	a) No b) No	Operator: Yes BHP: No	6. Operations are suspended, and per regulator direction, TSF will be decommissioned. Final closure plan and long-term monitoring will be defined as part of the decommissioning process.  12. Refer to footnotes.  16. Refer to footnotes.  18. Operations are suspended, and per regulator direction, TSF will be decommissioned. Final closure plan and long-term monitoring will be defined as part of the decommissioning process.  19. Refer to footnotes.

