



# Tailings Storage Facility Inventory

as of May 6, 2024

1	2	2a	2b	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Tailing Storage Facility Name	Site Name (Location)	TSF Centroid Latitude	TSF Centroid Longitude	Ownership	TSF Status	TSF Start-up	Design Intent Compliance <sup>(a)</sup>	Raise Methodology <sup>(b)</sup>	Current Maximum Height	Current Tailings Volume	Planned Tailings Volume May 2029	Most recent Independent Review <sup>(c)</sup>	Engineering Records Complete	Hazard Classification <sup>(d)</sup>	Classification Guideline <sup>(e)</sup>	Stability ever Questioned <sup>(f)</sup>	Internal Oversight and/or External Support	Most Recent Dam Breach Study	Closure Plan in Place / Long Term Monitoring Included <sup>(g)</sup>	Climate Change Effects Considered <sup>(h)</sup>	Notes <sup>(i)</sup>
						(year)			(m)	(Mm <sup>3</sup> )	(Mm <sup>3</sup> )	(Month Year)	(Yes / No)			(Yes / No)	(Yes / No)	(Month Year)	(Yes / No)	(Yes / No)	
Fekola TSF 1 <sup>1</sup>	Fekola (Mali)	12°33'06" N	11°21'48" W	B2Gold (Mali) <sup>5</sup>	Operating	2017	Yes	DS	58.7	33.1	41.4 <sup>(12)</sup>	Oct-2023	Yes	High A	ANCOLD	No	Yes and Yes	Sep-2023	Yes and Yes	Yes	
Otijkoto TSF <sup>2</sup>	Otijkoto (Namibia)	20°00'15" S	17°04'50" W	B2Gold (EVI) <sup>6</sup>	Operating	2014	Yes	US <sup>10</sup>	27	20.4	31.4	Dec-2020	Yes	Very High	GISTM	Yes <sup>14</sup>	Yes and Yes	Jan-2023	Yes and Yes	Yes	
Masbate TSF <sup>3</sup>	Masbate (The Philippines)	12°26'45" N	123°23'47" E	Filminera (Zoom), PGPRC <sup>7</sup>	Operating	2009	Yes	DS, CL <sup>11</sup>	67.0	67.7	97.9	Jun-2020	Yes	Extreme	ANCOLD	Yes <sup>15</sup>	Yes and Yes	Nov-2023	Yes and Yes	Yes	
Atlas TSF <sup>4</sup>	Masbate (The Philippines)	12°28'38" N	123°23'03" E	Filminera (Zoom), PGPRC <sup>7</sup>	Inactive <sup>8</sup>	1980	Unknown <sup>9</sup>	DS	37.5	22.8	22.8	Jun-2020	Yes <sup>13</sup>	Extreme	ANCOLD	Yes <sup>16</sup>	Yes and Yes	Jul-2021	Yes and Yes	Yes	

## Column questions and applicable footnotes

**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.**

- <sup>1.</sup> Fekola facility currently consists of three dam segments joined at approximately right angles to contain tailings within a natural basin.
- <sup>2.</sup> Otijkoto facility consists of seven dam segments (walls) that form a ring.
- <sup>3.</sup> Masbate facility consists of multiple saddle dams. Currently dams in place include, Main Dam, Saddle Dam 1&2, Saddle Dam 4, Saddle Dam 7, and Saddle Dam 8. Other segments of saddles have been eliminated as the facility reservoir level increased as they combined into one of the aforementioned dams.
- <sup>4.</sup> The Atlas facility originally consisted of three separate cells. The supernatant pond was removed, and the surface of the facility was fully capped in early 2023; hence, it now consists of a single cell

**2. Location.**

2a, 2b, Latitude and Longitude in decimal degrees of the approximate TSF centroid, as obtained from Google Earth Pro.

**3. Ownership Please specify: Owned and Operated, Subsidiary, JV, NOJV, as of November 2021**

- <sup>5.</sup> B2Gold owns an 80% interest in Fekola S.A. the Company's Malian exploitation company, the State of Mali holds the remaining 20% interest.
- <sup>6.</sup> B2Gold Namibia, the holder of Mining License 169 and operator of the Otijkoto Mine is 90% owned, indirectly, by B2Gold and 10% by EVI Mining (Proprietary) Ltd., a Namibian empowerment company.
- <sup>7.</sup> B2Gold holds its project interest through indirectly-owned subsidiaries. B2Gold has a 40% interest in Filminera and a 100% interest in PGPRC. The remaining 60% interest in Filminera is held by a Philippines-registered company, Zoom Mineral Holdings Inc. ("Zoom") that is owned by a Philippine shareholder.

**4. Status: Active, Inactive/Care and Maintenance, Closed etc. 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.**

- <sup>8.</sup> Legacy facility inherited during property acquisition.

**5. Date of initial operation.**

**6. Is the Dam currently operated or closed as per currently approved design?**

- (a) Unknown is indicated for legacy TSF that was acquired by B2Gold for which Engineering Records are not complete and the original design, operation and closure intent is not fully known.
- <sup>9.</sup> Additional field investigation and design work were completed in 2020 and 2021 to allow for Design Intent Compliance review [refer to note 15 (16) below for more information on the current status of the Atlas TSF].

**7. Raising method: Upstream, Centerline, Modified Centreline, Downstream, Landform, Other.**

- (b) Upstream (US), centreline (CL), modified centreline (MCL), and/or downstream (DS) methodologies may have been used at any given facility.
- <sup>10.</sup> Otijkoto facility implements an upstream raise methodology, initial raise slurry deposition was performed by paddocking, in January 2017 the deposition methodology was changed to cycloning.
- <sup>11.</sup> The Masbate facility predominantly implements a downstream raise methodology, with the exception of stages 10 and 11 of the Main Dam and stage 11 of Saddle Dams 7 and 8 which were constructed as centreline raises.

**8. Current Maximum Height**

**9. Current Tailings Storage Impoundment Volume: (m<sup>3</sup> as of May 2024)**

**10. Planned Tailings Storage Impoundment Volume in 5 years time. (m<sup>3</sup> as planned for May 2029)**

- <sup>12.</sup> TSF1 is expected to reach its capacity in Q3 2025. Meanwhile, the construction of a new tailings storage facility (TSF2) is currently underway and is anticipated to be commissioned in Q2 2025

**11. Date of most recent Independent Expert Review. 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.**

**12. Do you have full and complete relevant engineering records including design, construction, operation, maintenance, and/or closure? 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.**

- <sup>13.</sup> Not all engineering records were provided during acquisition of this legacy TSF. However, the data gathered from the geotechnical field investigation in 2020 and 2021 along with the additional slope stability assessment had allowed the completion of the engineering records of the Atlas TSF.

**13. What is your hazard categorisation of this facility, based on the consequence of failure?**

- (d) It is imperative to note that hazard classification is determined based on the consequential impact if a facility were to experience a failure. The listed hazard classifications do not in any way represent a probability of failure, or risk of failure, of a facility.

**14. What guideline do you follow for the classification system?**

- (e) ANCOLD = Australian National Committee on Large Dams, GISTM = Global Industry Standard on Tailings Management

**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). 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.**

- (f) Not being certified/confirmed as stable is assumed to be where a noted deficiency is deemed sufficiently significant to trigger a catastrophic failure –the term deficiency is used in that context herein; for operating facilities, this refers to any identified deficiency for the current life/stage and for a previous life/stage, any deficiency that was not addressed as vetted by independent review; for closed/legacy facilities, this refers to any deficiency identified that reflects the current state of the facility.

<sup>14.</sup> Otijkoto TSF was initially designed based on drained shear strength parameters for tailings deposits, following industry standards at the time. In 2022, a cone penetration testing (CPT) program verified the in-situ behavior of the tailings. The undrained shear strength parameters estimated from the CPT data were used to evaluate the slope stability of the TSF dam walls under static, earthquake, and post-liquefaction conditions. The 2023 stability update revealed that most of the TSF walls meet the minimum required factor of safety (FoS) for static and earthquake loading, with one cross section slightly below the threshold. B2Gold has taken immediate corrective action to flatten the steep downstream slopes of the non-compliant cross section to design profile to increase FoS and improve the overall stability. A buttress design study is underway to satisfy the static liquefaction criteria per the updated industry tailings standards. A field investigation was completed earlier this year to support this buttress design work.

<sup>15.</sup> The Masbate facility has been extensively reviewed by various independent consultants over the last three years; areas of investigation included 1) Historic use of lithic-tuff material in embankment construction, a detailed geotechnical drilling investigation was completed which showed that a narrow section in Main Dam stage 9 included lithic tuff, the stability modelling of the material resulted in Factor of Safety values larger than 1.5 which meets closure criteria. 2) Foundation preparation was investigated via geotechnical drilling and confirmed that all unsuitable material was removed. 3) A high phreatic surface was returned in a single piezometer within a saddle dam was investigated and determined that the piezometer was incorrectly drilled through natural ground level and into the groundwater table which was providing a false reading of a high phreatic surface. 4) A peer review of stage 11 pseudo-static stability conditions was questioned due to different assumed values of the tailings stability characteristics. In-situ samples of tailings were retrieved from the beach at various locations and depth to confirm material parameters and eliminate this concern. The stability analyses were updated using the recent field and laboratory data and the findings indicated that the TSF meet the minimum required FoS at the current constructed stages under static and earthquake loading conditions as recommended by ANCOLD. Geotechnical field investigations and advanced numerical modeling are planned for the next two years to further support the design for future dam raises.

<sup>16.</sup> The mine was abandoned in 1994, and a new owner purchased the property in 1995. In 1997, a tailings management study conducted as part of a feasibility study highlighted stability concerns under seismic conditions and recommended a stabilization buttress. B2Gold has not found any records supporting the implementation of these historic recommendations. In 2020, B2Gold performed an independent third-party risk assessment and geotechnical investigation, yielding critical information for our mitigation plan and closure criteria. The largest cell, Pond ABCD (approximately 85% of the facility by volume), was identified as free draining and not susceptible to flow failure during seismic events. Extensive ground investigation work took place in 2020 and 2021, confirming that tailings within Pond ABCD and Pond F are unlikely to liquefy. Although updated slope stability analyses indicated insufficient embankment stability under recommended earthquake loads, numerical modeling suggests limited deformation in the tailings storage facility (TSF). B2Gold promptly removed surface water from ponds and installed a closure cover over the entire TSF surface area to prevent supernatant accumulation and reduce flow failure risk. Additionally, erosion protection was completed earlier this year to safeguard the toe of the TSF against flooding from the Guinobatan River. The site currently monitors piezometric data (phreatic surface) in the TSF and will explore implementing a more robust cap if needed. Furthermore, a field investigation is planned this year to verify in situ tailings conditions after capping and removal of the supernatant pond. It is important to note that the facility has lay dormant for 30 years (1994) and the monitoring data returned over this time has not indicated stability concerns.

**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? Please answer 'yes' or 'no', and if 'yes', provide a date.**

**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)**

- (g) Closure plans are generated from start of design of a facility and are regularly updated throughout the life of the facility. Closure plans begin at a conceptual state and are progressively updated over the life of mine.

**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?**

- (h) Climate change effects are considered through regular review of extreme weather events records (e.g., event return period and precipitation magnitude). In addition, B2Gold plans to further incorporate climate change risks into our enterprise and site assessment and planning processes, to better adapt to the physical impacts of climate change and to increase the resilience of our operations and business.

**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.**

- (i) Information is current as of the date 06 May 2024.