



#### Impala Platinum Holdings Managed Tailings Dams

FEBRUARY 2021

# Tailings Facilities







# IMPALA

Disclosure Requirements	Impala Rustenburg
Tailings Facility Name and Identifier	Tailings Dam 3 & 4 (
Location	25°31'9.06"S; 27°1

ailings Dam 3 & 4 (Combined Tailings Facility) Phase 1

25°31'9.06"S; 27°14'16.53"E

1 Company name	Impala Platinum	<b>11</b> How are the tailings stored?	
2 Company's membership with ICMM or other international	No	(conventional, thickened, paste, dry stack, other)	Conventional
industry body. 3 Does the company have an		<b>12</b> Do the contents of the TMF include toxic materials?	No
internal monitoring set-up specific	Yes	For a decommissioned facility	
to Tailings Management Facilities		13 Year construction was started.	N/A
a. Are audit reports (external and/ or internal) shared with the	Yes (Bi-annual by SRK and	<b>14</b> Last year that material was added to the facility.	N/A
board?	Annual by Knight Plesold)	<b>15</b> Year of decommissioning.	N/A
4 Number of TMFs owned by the company	Tailings Dam 3 & 4 (Combined Tailings Facility)	a. Was it capped, crowned and/or was another method used	N/A
a. In construction?	Yes	to reduce water infiltration?	
b. In operation?	Yes	b. Frequency of internal/	
c. Closed/decommissioned?	No	TMF after decommissioning	N/A
d. In operation/closed but not decommissioned/	In operation	for monitoring safety and environmental impacts.	
decommissioned?		For an operational and closed facilitie	es
For Each TMF		16 Year construction was started.	1978
5 Mine name	Impala Platinum	17 Current tailings production (ktpy).	11 million tons per year
6 Location (Country/State/ Municipality)	South Africa / North West / Phokeng	<b>18</b> Current density/water content of the tailings being deposited.	1.48 t/m³
7 TMF name or designation	Rustenburg Impala Platinum Mine Tailings Dam 3 & 4 (Combined Tailings Facility)	<b>19</b> Expected remaining years of operations.	30 years
8 Location of Eacility (lat/long or	(combined family)	TMF Monitoring	
position relative to the main mine facilities)	Latitude 25°31'9.06"S / Longitude 27°14'16.53"E	<b>20</b> Frequency of internal inspections (if any)	Daily inspections by the tailings dam operator. Weekly combined inspections by the Mine and
9 The types of commodities being mined	Iwo economic orebodies are currently mined, namely the		tailings dam operator.
	Merensky economic horizon and the UG2 Chromitite seam. From this mining activity, refined	a. Date of last internal inspection including outcome.	15.01.2021 - No items of concern noted.
	platinum, plus other Platinum Group Metals (PGMs) are	<b>21</b> Is there a requirement for external inspections?	Yes
10 What are the main methods	Ore consists of Merensky and	a. Frequency of external inspections.	Monthly, quarterly and annually
ore prior to deposition.	UG2. Ore processing entails crushing, milling, flotation and tailings handling facilities. Flotation consists of various stages producing a PGMs concentrate which is then	b. Name of external firm that performs the inspection.	SRK and Knight Piesold
		c. Date of last external inspection including outcome.	Annual audit Decemeber 2020 - No major concerns ; Monthly Jan 2021
	The tailings stream comprises materials from five main sources,	<b>22</b> If there is an external rating system (i.e. local regulator),	SANS 10286:1998
	namely the Merensky Plant, the UG2 Plant, the Mill Float 2 (MF2) Plant, the Slag Plant and the Tailings Recovery Plant (TRP). Once these tailings streams have gone through the Tailings Scavenger Plant (TSP) and the Impala Chrome Plant, the remaining tailings is disposed of onto Tailings Dam No.4 in a slurry by a spigot system around the	a. What is the risk rating for the TMF?	HIGH hazard facility (SANS 10286:1998)
			Member of the Implats Group





Disclosure Requirements	Impala Rustenburg
Tailings Facility Name and Identifier	Tailings Dam 3 & 4 (Combined Tailings Facility) Phase 1
Location	25°31'9.06"S; 27°14'16.53"E

For TMF with embankment retaining structures		<b>32.</b> Do current neighboring mining	nly internal properties,
Design		operations include blasting?	and 10 #)
23 Type of construction a. Upstream, downstream, centerline, other;	Upstream	a. If yes, distance of the TMF to the mining operations.	TSF to 11#: 2.4km center to center & 450m from side wall /TSF to 11C #: 2.27km center to center & 1km from side wall / TSF to 10#: 2.07km center to center & 420m from side wall
b. Is it constructed on flat ground or on a slope?	Gently sloping land		
c. Does it include a spillway or other structure to mitigate overtopping?	Yes, penstock tower	<b>33.</b> Identification of habitation(s)/ settlements(s) and/or flora/ fauna critical babitat(s) or high	Done as per Biodiversity Management procedure (IMP - ES33)
d. Does it include an overdrain and/or underdrain system?	Underdrain	biodiversity area(s) located downstream of the facility, with	
24. What standards/guidelines were applied to the dam design and construction, i.e. Canadian (MAC/ CDA), ANCOLD, ICOLD or others?	SANS 10286:1998	indication of areas or number of populations at risk, and the mitigative measures that have been undertaken or remain to be implemented	
<b>25.</b> What is the "Factor of Safety" (under current conditions and "worst case/undrained conditions")?	Section P4 = 1.599 (minimum) and Section P19 = 1.883 (maximum), (Effective Stress Analysis). Undrained analysis to be undertaken in 2021.	<b>34.</b> Nearest critical infrastructure downstream from the facility, including nearby TMFs.	Site offices 200m, 10# 250m,TSF to 11#: 2.4km center to center & 450m from side wall /TSF to 11C #: 2.27km center to center & 1km from side wall / TSF to 10#:
<b>26.</b> Current dimensions of main structure, including height, upstream slope and downstream	Maximum height 85.5m. Overall outer slope 1:3, interbench slope		2.07km center to center & 420m from side wall
slope.	1:1.5, natural ground slope 1:61	Additional comments incl. mitigants	
<b>27.</b> Planned final dimensions of main structure.	Planned final height 144.6m.	Daily inspections by the tailings dam op inspections by the Mine and tailings dar inspections by the Mine. consultant. tail	erator. Weekly combined n operator. Monthly combined ings dam operator and the private
<b>28.</b> Current volume of tailings facility (m <sup>3</sup> , tonnes, etc.).	327,645,481.3 m <sup>3</sup>	<ul> <li>Inspections by the while, consultant, taimings dain operator and the privi- consultant. Annual 3rd party audits. Annual drone inspections. Annual aerial inspections. Annual dam movement monitoring surveys. Annual drains inspection. Annual camera inspections of both penstock outfall pipelines. Annual inspection of the trough unit systems. Camera inspec of problematic drains as and when required. Five yearly dam safety inspections. Fraser Alexander is the daily tailings dam operator together</li> </ul>	
<b>29.</b> Planned final volume of tailings facility.	361,019,481.3 m <sup>3</sup> Forecast Impoundment volume at January 2024		
Surrounding environment analysis		with the mine management. SRK is the	geotechnical engineering consultant
<b>30.</b> Is the TMF located in a climatic zone where evaporation levels are exceeded by precipitation?	No	who provide technical advice to the operation of the facility. Knight Pieze act as 3rd party/private consultant.	
<b>31.</b> Seismicity rating of the TMF's location.	V (Modified Mercalli Scale) = Richter scale magnitude of 4 to 5.		







#### IMPALA

Disclosure Requirements	Impala Rustenburg
Tailings Facility Name and Identifier	Tailings Dam 1 & 2 (Combined Tailings Facility) Phase 1
Location	25°31'12.32"S / 27°11'56.73"E

· ·	Company name	Impala Platinum	<b>10</b> What are the main methods	Ore consists of Merensky and
2	Company's membership with ICMM or other international industry body.	No	used in the processing of the ore prior to deposition.	UG2. Ore processing entails crushing, milling, flotation and tailings handling facilities.
3	Does the company have an internal monitoring set-up specific to Tailings Management Facilities (TMFs)?	Yes		stages producing a PGMs concentrate which is then further processed at the Smelter. The tailings stream comprises
	a. Are audit reports (external and/ or internal) shared with the board?	Yes (Bi-annual by SRK and Annual by Knight Piesold)		materials from five main sources, namely the Merensky Plant, the UG2 Plant, the Mill Float 2 (MF2)
4	Number of TMFs owned by the company	Tailings Dam 1 & 2(Combined Tailings Facility)		Tailings Recovery Plant (TRP). Once these tailings streams
	a. In construction?	Reprocessing		have gone through the Tailings
	b. In operation?	Reprocessing		Scavenger Plant (TSP) and the Impala Chrome Plant, the
	c. Closed/decommissioned?	Reprocessing		remaining tailings is disposed of
	d. In operation/closed but not decommissioned/ decommissioned?	Reprocessing		onto Tailings Dam No.4 in a slurry by a spigot system around the deposition area.
Fo	or Each TMF		<b>11</b> How are the tailings stored?	O annual in a l
5	Mine name	Impala Platinum	dry stack, other)	Conventional
6	Logation (Country/State/			
	Municipality)	South Africa / North West / Phokeng	<b>12</b> Do the contents of the TMF include toxic materials?	No
7	Municipality) TMF name or designation	South Africa / North West / Phokeng Rustenburg Impala Platinum Mine	12 Do the contents of the TMF include toxic materials? For a decommissioned facility	No
7	Municipality) TMF name or designation	South Africa / North West / Phokeng Rustenburg Impala Platinum Mine Tailings Dam 1 & 2	<ul> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> <li>13 Year construction was started.</li> </ul>	No 1968
7	Municipality) TMF name or designation Location of Facility (lat/long or position relative to the main mine facilities)	South Africa / North West / Phokeng Rustenburg Impala Platinum Mine Tailings Dam 1 & 2 Latitude 25°31'12.32"S / Longitude 27°11'56.73"E	<ul> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> <li>13 Year construction was started.</li> <li>14 Last year that material was added to the facility.</li> </ul>	No 1968 1981
7 8 9	Location (Country/State/ Municipality)         TMF name or designation         Location of Facility (lat/long or position relative to the main mine facilities)         The types of commodities	South Africa / North West / Phokeng Rustenburg Impala Platinum Mine Tailings Dam 1 & 2 Latitude 25°31'12.32"S / Longitude 27°11'56.73"E Two economic orebodies are	<ul> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> <li>13 Year construction was started.</li> <li>14 Last year that material was added to the facility.</li> <li>15 Year of decommissioning.</li> </ul>	No 1968 1981 1981
7 8 9	Location (Country/State/ Municipality)         TMF name or designation         Location of Facility (lat/long or position relative to the main mine facilities)         The types of commodities being mined	South Africa / North West / Phokeng Rustenburg Impala Platinum Mine Tailings Dam 1 & 2 Latitude 25°31'12.32"S / Longitude 27°11'56.73"E Two economic orebodies are currently mined, namely the Merensky economic horizon and the UG2 Chromitite seam.	<ul> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> <li>13 Year construction was started.</li> <li>14 Last year that material was added to the facility.</li> <li>15 Year of decommissioning.</li> <li>a. Was it capped, crowned and/or was another method used to reduce water infiltration?</li> </ul>	No 1968 1981 1981 Vegetated
7 8 9	Municipality) TMF name or designation Location of Facility (lat/long or position relative to the main mine facilities) The types of commodities being mined	South Africa / North West / Phokeng Rustenburg Impala Platinum Mine Tailings Dam 1 & 2 Latitude 25°31'12.32"S / Longitude 27°11'56.73"E Two economic orebodies are currently mined, namely the Merensky economic horizon and the UG2 Chromitite seam. From this mining activity, refined platinum, plus other Platinum Group Metals (PGMs) are produced	<ul> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> <li>13 Year construction was started.</li> <li>14 Last year that material was added to the facility.</li> <li>15 Year of decommissioning.</li> <li>a. Was it capped, crowned and/ or was another method used to reduce water infiltration?</li> <li>b. Frequency of internal/ external inspections of an TMF after decommissioning for monitoring safety and environmental impacts.</li> </ul>	No 1968 1981 1981 Vegetated Monthly
7 8 9	Location (Country/State/ Municipality)         TMF name or designation         Location of Facility (lat/long or position relative to the main mine facilities)         The types of commodities being mined	South Africa / North West / Phokeng Rustenburg Impala Platinum Mine Tailings Dam 1 & 2 Latitude 25°31'12.32"S / Longitude 27°11'56.73"E Two economic orebodies are currently mined, namely the Merensky economic horizon and the UG2 Chromitite seam. From this mining activity, refined platinum, plus other Platinum Group Metals (PGMs) are produced	<ul> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> <li>13 Year construction was started.</li> <li>14 Last year that material was added to the facility.</li> <li>15 Year of decommissioning.</li> <li>a. Was it capped, crowned and/or was another method used to reduce water infiltration?</li> <li>b. Frequency of internal/external inspections of an TMF after decommissioning for monitoring safety and environmental impacts.</li> <li>For an operational and closed facilitie</li> </ul>	No 1968 1981 1981 Vegetated Monthly



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# IMPALA

Disclosure Requirements	Impala Rustenburg
Tailings Facility Name and Identifier	Tailings Dam 1 & 2 (Combined Tailings Facility) Phase 1
Location	25°31'12.32"S / 27°11'56.73"E

TMF Monitoring		<b>26.</b> Current dimensions of main	
<b>20</b> Frequency of internal inspections (if any)	Daily inspections by the tailings dam operator. Weekly combined inspections by the Mine and	structure, including height, upstream slope and downstream slope.	Maximum height 26m. Overall outer slope 1:3 to 1:3.5
a Data of last internal increation	tailings dam operator.	<b>27.</b> Planned final dimensions of main structure.	NA
including outcome.	15.01.2021 - No items of concern noted.	<b>28.</b> Current volume of tailings facility (m <sup>3</sup> , tonnes, etc.).	28,470,519.9 m³
21 Is there a requirement for external inspections?	Yes	<b>29.</b> Planned final volume of tailings facility.	Planned to reprocess entire TMF
<ul> <li>a. Frequency of external inspections.</li> </ul>	Monthly, quarterly and annually	Surrounding environment analysis	
b. Name of external firm that performs the inspection.	SRK and Knight Piesold	<b>30.</b> Is the TMF located in a climatic zone where evaporation levels are exceeded by precipitation?	No
c. Date of last external inspection including outcome.	Annual audit Decemeber 2020 - No major concerns ; Monthly Jan 2021	<b>31.</b> Seismicity rating of the TMF's location.	V (Modified Mercalli Scale) = Richter scale magnitude of 4 to 5.
22 If there is an external rating system (i.e. local regulator)	SANS 10286:1998	<b>32.</b> Do current neighboring mining operations include blasting?	Only internal properties, Operational Shafts (11# and 11C#)
a. What is the risk rating for the TMF?	MEDIUM Hazard facility (SANS 10286:1998)	a. If yes, distance of the TMF to the mining operations.	TSF to 11#: 2.5km center to center & 1.5km from side wall / TSF to 11C #: 4.27km center to center & 3.38km from side wall
For TMF with embankment retaining	structures	<b>33</b> Identification of habitation(s)/	
Design         23 Type of construction         a. Upstream, downstream, centerline, other;         b. Is it constructed on flat ground or on a slope?         c. Does it include a spillway or	Reprocessing. Original construction was upstream. Gently sloping land	settlements(s) and/or flora/ fauna critical habitat(s) or high biodiversity area(s) located downstream of the facility, with indication of areas or number of populations at risk, and the mitigative measures that have been undertaken or remain to be	Done as per Biodiversity Management procedure (IMP - ES33)
other structure to mitigate overtopping?	Yes, large diameter pipes	Implemented.           34. Nearest critical infrastructure	Community, 100m from TMETSE
d. Does it include an overdrain and/or underdrain system?	No	downstream from the facility, including nearby TMFs.	to 11#: 2.5km center to center & 1.5km from side wall /TSF to 11C #: 4.27km center to center &
24. What standards/guidelines were applied to the dam design and	Mine tailings disposal was largely unregulated in 1967. Rudimentary		3.38km from side wall
construction, i.e. Canadian (MAC/	guidance was available on	Additional comments incl. mitigants	
25. What is the "Eactor of Safety"	tailings storage construction in South Africa which was based on research carried out under the direction of J.E. Jennings and issued as an internal document by the Chamber of Mines in 1959	COP requirment is the following (a) Professional Engineer monitoring (b) Professional Engineer to audit the tailings of Remining activities being monitored as follows: Daily insp the tailings dam operator. Weekly combined inspections b and tailings dam operator. Monthly combined inspections consultant, tailings dam operator and the private consultant	
(under current conditions and "worst case/undrained conditions")?	No recent assessments		







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Disclosure Requirements
Tailings Facility Name and Identifier
Location

Tailings Dam 1 & 2 TD1 24°30'40.99"S, 30° 6'29.96"E TD2 24°31'0.94"S, 30° 6'16.00"E

Marula

1 Company name	Marula Platinum	b. Frequency of internal/	
2 Company's membership with ICMM or other international industry body.	No	external inspections of an TMF after decommissioning for monitoring safety and environmental impacts	N/A
3 Does the company have an		For an operational and closed facilitie	29
to Tailings Management Facilities	Yes	<b>16</b> Year construction was started.	First deposition - 2004
(TMFs)?		<b>17</b> Current tailings production (ktpy).	20 Tailings Dam 2 (TD2) 1850
<ul> <li>Are audit reports (external and/ or internal) shared with the board?</li> </ul>	Yes	<b>18</b> Current density/water content of the tailings being deposited.	1,5
4 Number of TMFs owned by the company	2	<b>19</b> Expected remaining years of operations.	<1 year
a. In construction?	1	TMF Monitoring	
b. In operation?	1	20 Frequency of internal inspections	Weekly
c. Closed/decommissioned?	0	(if any)	
d. In operation/closed but not decommissioned/	0	a. Date of last internal inspection including outcome.	Stable Operation
For Each TMF		21 Is there a requirement for external inspections?	Yes
5 Mine name	Marula Platinum Mine	a. Frequency of external inspections.	Monthly
Municipality)	/ Fetakgomo Greater Tubatse Municipality	b. Name of external firm that performs the inspection.	SRK Consulting
7 TMF name or designation	a. Tailings Dam 1 (TD1) - in operation,	c. Date of last external inspection including outcome.	Dec-21
	b. Tailings Dam 2 (TD2) - under construction	<b>22</b> If there is an external rating system (i.e. local regulator),	Yes (SANS10286)
8 Location of Facility (lat/long or position relative to the main mine facilities)	a. Tailings Dam 1 (TD1) – 24°30'40.99""S, 30° 6'29.96""E b. Tailings Dam 2 (TD2) -	a. What is the risk rating for the TMF?	High Risk
	24°31'0.94""S, 30° 6'16.00""E	For TMF with embankment retaining	structures
9 The types of commodities	Platinum Group Metals and	Design	-
being mined	Chrome	23 Type of construction	
10 What are the main methods used in the processing of the ore prior to deposition.	Milling, Flotation	a. Upstream, downstream, centerline, other;	Upstream
11 How are the tailings stored? (conventional, thickened, paste,	Ring Dyke Spigotted	b. Is it constructed on flat ground or on a slope?	Gentle Slope, Considered Flat
dry stack, other)		c. Does it include a spillway or	2 x Ponstocks
<b>12</b> Do the contents of the TMF include toxic materials?	No	overtopping?	
For a decommissioned facility		and/or underdrain system?	Underdrain System Included
<b>13</b> Year construction was started.	N/A		
<b>14</b> Last year that material was added to the facility.	N/A		
15 Year of decommissioning.	N/A		2 (
<ul> <li>a. Was it capped, crowned and/ or was another method used to reduce water infiltration?</li> </ul>	N/A		





Disclosure Requirements	Marula
Tailings Facility Name and Identifier	Tailings Dam 1 & 2
Location	TD1 24°30'40.99"S, 30° 6'29.96"E TD2 24°31'0.94"S, 30° 6'16.00"E

24. What standards/guidelines were applied to the dam design and		<b>32.</b> Do current neighboring mining operations include blasting?	Yes
construction, i.e. Canadian (MAC/ CDA), ANCOLD, ICOLD or others?		a. If yes, distance of the TMF to the mining operations.	±2km
<b>25.</b> What is the "Factor of Safety" (under current conditions and "worst case/undrained conditions")?	>1.5	<b>33.</b> Identification of habitation(s)/ settlements(s) and/or flora/ fauna critical habitat(s) or high biodiversity area(s) located downstream of the facility, with indication of areas or number of populations at risk, and the mitigative measures that have been undertaken or remain to be implemented.	<ul> <li>a. Madikane community (±500 PAR in the Zone of influence)</li> <li>b. Moopetsi River (±500m downstream)</li> <li>c. Increased frequency of monitoring, against what is required.</li> <li>d. Trigger Action Response Plan (TARP) implemented.</li> <li>e. Dam Break Analysis planned for 2021</li> </ul>
<b>26.</b> Current dimensions of main structure, including height, upstream slope and downstream slope.	40.1m Height, 1:3 Side slopes		
<b>27.</b> Planned final dimensions of main structure.	42m Final Height, 1:3 Sideslopes		
<b>28.</b> Current volume of tailings facility (m <sup>3</sup> , tonnes, etc.).	13.7 million m <sup>3</sup>	<b>34.</b> Nearest critical infrastructure downstream from the facility,	a. TD2 Abuts TD1 for improved
<b>29.</b> Planned final volume of tailings facility.	14.2 million m <sup>3</sup>	including nearby TMFs.	stability b. Driekop Shaft c. Clapham Shaft
Surrounding environment analysis			
<b>30.</b> Is the TMF located in a climatic zone where evaporation levels are exceeded by precipitation?	Yes	Additional comments incl. mitigants	
<b>31.</b> Seismicity rating of the TMF's location.	a. Seismicity: Falls naturally in a zone of peak horizontal acceleration of less than 50 cm/s2 – mining at Marula and surrounds are not affecting this (mainly due to shallower mining of UG2) (The probability of such ground movement (s) being exceeded at least once in fifty yrs is 10%)		







Disclosure Requirements	Zir
Tailings Facility Name and Identifier	Se
Location	18

mplats ellous Metallurgical Complex

° 0' 36", 30° 4' 34"

1 Company name	Zimplats	For an operational and closed facilities	
2 Company's membership with		16 Year construction was started.	1995
ICMM or other international	No	17 Current tailings production (ktpy).	2 200ktpy
<ul><li>3 Does the company have an internal monitoring set-up specific</li></ul>	Vec	<b>18</b> Current density/water content of the tailings being deposited.	1.5-1.6Kg/L
to Tailings Management Facilities (TMFs)?	res	<b>19</b> Expected remaining years of operations.	5 years
a. Are audit reports (external and/	Vez	TMF Monitoring	
or internal) shared with the board?	res	<b>20</b> Frequency of internal inspections (if any)	Daily
the company		a Date of last internal inspection	
a. In construction?	Nil	including outcome.	threatening issues.
b. In operation?	2	21 Is there a requirement for external	
c. Closed/decommissioned?	Nil	inspections?	Yes
d. In operation/closed but not decommissioned/ decommissioned?	Nil	a. Frequency of external inspections.	Every 4 months by TSF designers and every two years by independent third party
For Each TMF		b. Name of external firm that	SRK and appointed third parties.
5 Mine name	Selous Metallurgical Complex (SMC)	performs the inspection.	Last third party was conducted by John Wates in October 2019
6 Location (Country/State/ Municipality)	Zimbabwe/Mashonaland West Province/Selous	c. Date of last external inspection including outcome.	27 November 2020 by SRK TSF designers
7 TMF name or designation	SMC	22 If there is an external rating system	No external rating but internal
8 Location of Facility (lat/long or position relative to the main mine facilities)	18º 0' 36", 30º 4' 34"	a. What is the risk rating for the TMF?	Not applicable
9 The types of commodities		For TMF with embankment retaining	structures
being mined	Platinum Group Metals	Design	
10 What are the main methods		23 Type of construction	
used in the processing of the ore prior to deposition.	Milling and Flotation	a. Upstream, downstream, centerline, other;	Upstream
(conventional, thickened, paste, dry stack, other)	Conventional	b. Is it constructed on flat ground or on a slope?	Slightly sloppy ground
12 Do the contents of the TMF include toxic materials?	No	c. Does it include a spillway or other structure to mitigate	Berms on the outer paddocks to mitigate overtopping
For a decommissioned facility		d Does it include an overdrain	
<b>13</b> Year construction was started.	N/A	and/or underdrain system?	Underdrains included
<b>14</b> Last year that material was added to the facility.	N/A	24. What standards/guidelines were applied to the dam design and	SANG 10286
15 Year of decommissioning.	N/A	construction, i.e. Canadian (MAC/	54113 10200
a. Was it capped, crowned and/ or was another method used to reduce water infiltration?	N/A	CDA), ANCOLD, ICOLD OF OTHERS?	
<ul> <li>b. Frequency of internal/ external inspections of an TMF after decommissioning for monitoring safety and environmental impacts.</li> </ul>	N/A		ZIMPLATS







Disclosure Requirements	Zimplats
Tailings Facility Name and Identifier	Sellous Metallurgical Complex
Location	18° 0' 36", 30° 4' 34"

<b>25.</b> What is the "Factor of Safety" (under current conditions and "worst case/undrained conditions")?	Drained FoS 1.86 (target $\ge$ 1.5) and undrained FoS 1.54 (target $\ge$ 1.3)	<b>33.</b> Identification of habitation(s)/ settlements(s) and/or flora/ fauna critical habitat(s) or high biodiversity area(s) located downstream of the facility, with	
<b>26.</b> Current dimensions of main structure, including height, upstream slope and downstream slope.	35m from lowest natural ground level	oownstream of the facility, with indication of areas or number of populations at risk, and the mitigative measures that have been undertaken or remain to be	of influence
27. Planned final dimensions of main	110ha (existing) and 203ha	implemented.	
structure.	TSFs	<b>34.</b> Nearest critical infrastructure downstream from the facility,	Community homesteads and
<b>28.</b> Current volume of tailings facility	39 million tonnes and 24.4m <sup>3</sup>	including nearby TMFs.	
		Additional comments incl. mitigants	
<b>29.</b> Planned final volume of failings facility.	factoring in proposal to increase TSF height to 1298mamsl)	The existing TSF extension zone of influ has been engaging the relevant governm community to safer places. In the short	ence resides community. Zimplats nent officials to relocate the term Zimplats engages the settlers
Surrounding environment analysis		through quarterly liaison meetings and n	nock drills of TSF failure to sensitise
<b>30.</b> Is the TMF located in a climatic zone where evaporation levels are exceeded by precipitation?	No	them on the actions to be taken in the e	vent of TSF failure early warnings.
<b>31.</b> Seismicity rating of the TMF's location.	Low seismic region with peak ground acceleration of 0.2m/s <sup>2</sup>		
<b>32.</b> Do current neighboring mining operations include blasting?	No mines close by are decommissioned		
a. If yes, distance of the TMF to the mining operations.			







Disclosure Requirements
Tailings Facility Name and Identifier
Location

Sellous Metallurgical ComplexTSF Extension

18° 0' 36", 30° 4' 34"

Zimplats

and the second sec	Zimpiais	i or an operational and olosed labilitie	
2 Company's membership with	No	16 Year construction was started.	-
industry body.	110	<b>17</b> Current tailings production (ktpy).	Not applicable. SMC TSF
3 Does the company have an internal monitoring set-up specific	Ves	<b>18</b> Current density/water content of the tailings being deposited.	Extension not yet constructed. Motivation for construction under review pending approvals
to Tailings Management Facilities (TMFs)?		<b>19</b> Expected remaining years of operations.	
a. Are audit reports (external and/	No.	TMF Monitoring	
or internal) shared with the board?	res	<b>20</b> Frequency of internal inspections (if any)	Not applicable. TSF not yet constructed
the company		a. Date of last internal inspection	
a. In construction?	SMC TSF extension construction motivation under review for	including outcome.	
	approvals	21 Is there a requirement for external inspections?	Yes
b. In operation?	2	a Frequency of external	Even 4 months by TSE
c. Closed/decommissioned? d. In operation/closed but	Nil	inspections.	designers and every two years by independent third party
not decommissioned/	Nil	b. Name of external firm that	SRK designed the SMC TSF
For Each TMF		performs the inspection.	extension and SLR performed the
5 Mine name	18° 0' 36" 30° 4' 34"	a Data of last external inspection	Not applicable. Not yet
6 Location (Country/State/	Zimbabwe/Mashonaland West	including outcome.	constructed.
Municipality)	Province/Selous	<b>22</b> If there is an external rating system	No external rating.
7 IMF name or designation	SMC	a What is the risk rating for the	
8 Location of Facility (lat/long or			Not applicable
position relative to the main	18º 0' 36", 30º 4' 34"	IMF?	
position relative to the main mine facilities)	18° 0' 36", 30° 4' 34"	TMF? For TMF with embankment retaining a	structures
<ul><li>position relative to the main mine facilities)</li><li>9 The types of commodities being mined</li></ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals	TMF? For TMF with embankment retaining a Design	structures
<ul> <li>position relative to the main mine facilities)</li> <li>9 The types of commodities being mined</li> <li>10 What are the main methods</li> </ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals	TMF? For TMF with embankment retaining s Design 23 Type of construction	structures
<ul> <li>position relative to the main mine facilities)</li> <li>9 The types of commodities being mined</li> <li>10 What are the main methods used in the processing of the ore prior to deposition.</li> </ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals Milling and Flotation	TMF? For TMF with embankment retaining s Design 23 Type of construction a. Upstream, downstream, centerline, other;	structures Proposed design of upstream
<ul> <li>position relative to the main mine facilities)</li> <li>9 The types of commodities being mined</li> <li>10 What are the main methods used in the processing of the ore prior to deposition.</li> <li>11 How are the tailings stored? (conventional, thickened, paste,</li> </ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals Milling and Flotation	IMF?         For TMF with embankment retaining a         Design         23 Type of construction         a. Upstream, downstream, centerline, other;         b. Is it constructed on flat ground or on a slope?	Proposed design of upstream Proposed footprint on slightly sloppy ground with a kopje on
<ul> <li>position relative to the main mine facilities)</li> <li>9 The types of commodities being mined</li> <li>10 What are the main methods used in the processing of the ore prior to deposition.</li> <li>11 How are the tailings stored? (conventional, thickened, paste, dry stack, other)</li> </ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals Milling and Flotation Conventional	IMF?         For TMF with embankment retaining s         Design         23 Type of construction         a. Upstream, downstream, centerline, other;         b. Is it constructed on flat ground or on a slope?	structures Proposed design of upstream Proposed footprint on slightly sloppy ground with a kopje on northern tip of footprint
<ul> <li>position relative to the main mine facilities)</li> <li>9 The types of commodities being mined</li> <li>10 What are the main methods used in the processing of the ore prior to deposition.</li> <li>11 How are the tailings stored? (conventional, thickened, paste, dry stack, other)</li> <li>12 Do the contents of the TMF include toxic materials?</li> </ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals Milling and Flotation Conventional No	<ul> <li>IMF?</li> <li>For TMF with embankment retaining s</li> <li>Design</li> <li>23 Type of construction <ul> <li>a. Upstream, downstream, centerline, other;</li> <li>b. Is it constructed on flat ground or on a slope?</li> </ul> </li> <li>c. Does it include a spillway or other structure to mitigate overtopping?</li> </ul>	structures Proposed design of upstream Proposed footprint on slightly sloppy ground with a kopje on northern tip of footprint Designed with berms on the outer paddocks to mitigate overtopping
<ul> <li>position relative to the main mine facilities)</li> <li>9 The types of commodities being mined</li> <li>10 What are the main methods used in the processing of the ore prior to deposition.</li> <li>11 How are the tailings stored? (conventional, thickened, paste, dry stack, other)</li> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> </ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals Milling and Flotation Conventional No	<ul> <li>IMF?</li> <li>For TMF with embankment retaining s</li> <li>Design</li> <li>23 Type of construction <ul> <li>a. Upstream, downstream, centerline, other;</li> <li>b. Is it constructed on flat ground or on a slope?</li> </ul> </li> <li>c. Does it include a spillway or other structure to mitigate overtopping?</li> <li>d. Does it include an evertrein</li> </ul>	structures Proposed design of upstream Proposed footprint on slightly sloppy ground with a kopje on northern tip of footprint Designed with berms on the outer paddocks to mitigate overtopping Underdrains included in the
<ul> <li>position relative to the main mine facilities)</li> <li>9 The types of commodities being mined</li> <li>10 What are the main methods used in the processing of the ore prior to deposition.</li> <li>11 How are the tailings stored? (conventional, thickened, paste, dry stack, other)</li> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> <li>13 Year construction was started.</li> </ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals Milling and Flotation Conventional No	IMF?         For TMF with embankment retaining 3         Design         23 Type of construction         a. Upstream, downstream, centerline, other;         b. Is it constructed on flat ground or on a slope?         c. Does it include a spillway or other structure to mitigate overtopping?         d. Does it include an overdrain and/or underdrain system?	structures         Proposed design of upstream         Proposed footprint on slightly         sloppy ground with a kopje on         northern tip of footprint         Designed with berms on the outer         paddocks to mitigate overtopping         Underdrains included in the         design
<ul> <li>position relative to the main mine facilities)</li> <li>9 The types of commodities being mined</li> <li>10 What are the main methods used in the processing of the ore prior to deposition.</li> <li>11 How are the tailings stored? (conventional, thickened, paste, dry stack, other)</li> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> <li>13 Year construction was started.</li> <li>14 Last year that material was added to the facility.</li> </ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals Milling and Flotation Conventional No N/A N/A	<ul> <li>IMF?</li> <li>For TMF with embankment retaining s</li> <li>Design</li> <li>23 Type of construction <ul> <li>a. Upstream, downstream, centerline, other;</li> <li>b. Is it constructed on flat ground or on a slope?</li> </ul> </li> <li>c. Does it include a spillway or other structure to mitigate overtopping?</li> <li>d. Does it include an overdrain and/or underdrain system?</li> <li>24. What standards/guidelines were applied to the dam design and</li> </ul>	structures         Proposed design of upstream         Proposed footprint on slightly         sloppy ground with a kopje on         northern tip of footprint         Designed with berms on the outer         paddocks to mitigate overtopping         Underdrains included in the         design
<ul> <li>position relative to the main mine facilities)</li> <li>9 The types of commodities being mined</li> <li>10 What are the main methods used in the processing of the ore prior to deposition.</li> <li>11 How are the tailings stored? (conventional, thickened, paste, dry stack, other)</li> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> <li>13 Year construction was started.</li> <li>14 Last year that material was added to the facility.</li> <li>15 Year of decommissioning.</li> </ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals Milling and Flotation Conventional No N/A N/A N/A	<ul> <li>IMF?</li> <li>For TMF with embankment retaining s</li> <li>Design</li> <li>23 Type of construction <ul> <li>a. Upstream, downstream, centerline, other;</li> <li>b. Is it constructed on flat ground or on a slope?</li> </ul> </li> <li>c. Does it include a spillway or other structure to mitigate overtopping?</li> <li>d. Does it include an overdrain and/or underdrain system?</li> <li>24. What standards/guidelines were applied to the dam design and construction, i.e. Canadian (MAC/CDP, ICOL P, ICOL P, are others?)</li> </ul>	structures Proposed design of upstream Proposed footprint on slightly sloppy ground with a kopje on northern tip of footprint Designed with berms on the outer paddocks to mitigate overtopping Underdrains included in the design SANS 10286 and ANCOLD
<ul> <li>position relative to the main mine facilities)</li> <li>9 The types of commodities being mined</li> <li>10 What are the main methods used in the processing of the ore prior to deposition.</li> <li>11 How are the tailings stored? (conventional, thickened, paste, dry stack, other)</li> <li>12 Do the contents of the TMF include toxic materials?</li> <li>For a decommissioned facility</li> <li>13 Year construction was started.</li> <li>14 Last year that material was added to the facility.</li> <li>15 Year of decommissioning.</li> <li>a. Was it capped, crowned and/ or was another method used to reduce water infiltration?</li> </ul>	18° 0' 36", 30° 4' 34" Platinum Group Metals Milling and Flotation Conventional No N/A N/A N/A N/A N/A	<ul> <li>IMF?</li> <li>For TMF with embankment retaining s</li> <li>Design</li> <li>23 Type of construction <ul> <li>a. Upstream, downstream, centerline, other;</li> <li>b. Is it constructed on flat ground or on a slope?</li> </ul> </li> <li>c. Does it include a spillway or other structure to mitigate overtopping?</li> <li>d. Does it include an overdrain and/or underdrain system?</li> <li>24. What standards/guidelines were applied to the dam design and construction, i.e. Canadian (MAC/CDA), ANCOLD, ICOLD or others?</li> </ul>	structures         Proposed design of upstream         Proposed footprint on slightly         sloppy ground with a kopje on         northern tip of footprint         Designed with berms on the outer         paddocks to mitigate overtopping         Underdrains included in the         design         SANS 10286 and ANCOLD





Disclosure Requirements	Zimplats
Tailings Facility Name and Identifier	Sellous Metallurgical ComplexTSF Extension
Location	18° 0' 36", 30° 4' 34"

<b>25.</b> What is the "Factor of Safety" (under current conditions and "worst case/undrained conditions")?	Designed for stability of drained FoS 1.85 (target $\geq$ 1.5) and undrained FoS 1.52 (target $\geq$ 1.3)
<b>26.</b> Current dimensions of main structure, including height, upstream slope and downstream slope.	Designed to abut to existing facility and to reach maximum elevation of 1298meters above mean sea level (mamsl). Downstream the combined TSFs maximum height shall be 56m high.
<b>27.</b> Planned final dimensions of main structure.	93.3ha (extension) and 203ha combined abutting TSFs. Maximum elevation of 1298mamsl.
<b>28.</b> Current volume of tailings facility (m <sup>3</sup> , tonnes, etc.).	Not yet constructed but designed to contain 49.7 million tonnes (portion to extension facility)
<b>29.</b> Planned final volume of tailings facility.	31.1m <sup>3</sup> (portion to extension facility)
Surrounding environment analysis	
<b>30.</b> Is the TMF located in a climatic zone where evaporation levels are	No
exceeded by precipitation?	
exceeded by precipitation? 31. Seismicity rating of the TMF's location.	Low seismic region with peak ground acceleration of 0.2m/s
<ul><li>exceeded by precipitation?</li><li>31. Seismicity rating of the TMF's location.</li><li>32. Do current neighboring mining operations include blasting?</li></ul>	Low seismic region with peak ground acceleration of 0.2m/s No. Mines close by are decommissioned
exceeded by precipitation?         31. Seismicity rating of the TMF's location.         32. Do current neighboring mining operations include blasting?         a. If yes, distance of the TMF to the mining operations.	Low seismic region with peak ground acceleration of 0.2m/s No. Mines close by are decommissioned
<ul> <li>exceeded by precipitation?</li> <li>31. Seismicity rating of the TMF's location.</li> <li>32. Do current neighboring mining operations include blasting?</li> <li>a. If yes, distance of the TMF to the mining operations.</li> <li>33. Identification of habitation(s)/ settlements(s) and/or flora/ fauna critical habitat(s) or high biodiversity area(s) located downstream of the facility, with indication of areas or number of populations at risk, and the mitigative measures that have been undertaken or remain to be implemented.</li> </ul>	Low seismic region with peak ground acceleration of 0.2m/s No. Mines close by are decommissioned 9 illegal settlers (families) residing in the SMC extension footprint

#### Additional comments incl. mitigants

The SMC TSF extension footprint resides illegal settlers who are in court wrangle with the rightful farm owner. Preliminary court verdict was in favour of the rightful farm owner to evict the illegal settlers. Case is pending finalisation at the courts.









Disclosure Requirements	Zimplats
Tailings Facility Name and Identifier	Mhondoro Ngezi TSF
Location	18°20'33.0"S 30°12'06.1"E

1 Company name	Zimplats	a. Was it capped, crowned and/	
2 Company's membership with ICMM or other international	No	or was another method used to reduce water infiltration?	N/A
<ul> <li>industry body.</li> <li>3 Does the company have an internal monitoring set-up specific to Tailings Management Facilities (TMFs)?</li> </ul>	Yes, Continuous daily monitoring by a contracting company (Fraser Alexander) employees, triannual inspections by Geotechnical	<ul> <li>b. Frequency of internal/ external inspections of an TMF after decommissioning for monitoring safety and environmental impacts.</li> </ul>	N/A
	engineers (SRK), bi-enniel	For an operational and closed facilitie	95
	consultant	16 Year construction was started.	2009
a. Are audit reports (external and/		<b>17</b> Current tailings production (ktpy).	4270
or internal) shared with the board?	Yes	<b>18</b> Current density/water content of the tailings being deposited.	Slurry sg of 1.55
4 Number of TMFs owned by the company		<b>19</b> Expected remaining years of operations.	84 years
a. In construction?	Nil	TMF Monitoring	
b. In operation?	1	20 Frequency of internal inspections	Weekly and monthly inspection
c. Closed/decommissioned?	Nil	(if any)	by operator's management and
d. In operation/closed but not decommissioned/ decommissioned?	1		by designers (Geotechnical Engineers) SRK
For Each TMF		a. Date of last internal inspection	Monthly inspection of December
5 Mine name	Zimbabwe Platinum Mines	including outcome.	November 2020
6 Location (Country/State/ Municipality)	Zimbabwe, Mhondoro Ngezi	21 Is there a requirement for external inspections?	Yes
7 TMF name or designation	Zimplats - Ngezi Concentrator TSF	a. Frequency of external inspections.	Biannual
8 Location of Facility (lat/long or position relative to the main mine facilities)	Latitude 18º 34' 25" Longitude 30º 20' 17"	b. Name of external firm that performs the inspection.	Changes regularly (Used Ken Lyell Consulting (2018), have engaged LRS Consulting for the next
9 The types of commodities being mined	Platinum Group Metals, Nickel and Copper	c. Date of last external inspection	(Scheduled inspection in
<b>10</b> What are the main methods used in the processing of the ore prior to deposition.	Crushing and grinding of are followed by bulk sulphide flotation	including outcome.	November 2018 by Ken Lyell followed by a one inspection in December 2019 by John Wates). Both inspections found the facility
<b>11</b> How are the tailings stored? (conventional, thickened, paste, dry stack, other)	Thickened before upstream conventional deposition using a hybrid of paddock and open spigot deposition method		complying to design requirements and being operated according to best practice.
12 Do the contents of the TMF	No	<b>22</b> If there is an external rating system (i.e. local regulator),	No
For a decommissioned facility		a. What is the risk rating for the	Not applicable
13 Year construction was started	Ν/Δ		
14 Least year that material was stafted.			
to the facility.	N/A		
<b>15</b> Year of decommissioning.			(





# ZIMPLATS

Disclosure Requirements	Zimplats
Tailings Facility Name and Identifier	Mhondoro Ngezi TSF
Location	18°20'33.0"S 30°12'06.1"E

For TMF with embankment retaining structures		<b>33.</b> Identification of habitation(s)/	
Design		fauna critical habitat(s) or high	
23 Type of construction		biodiversity area(s) located downstream of the facility, with indication of areas or number of populations at risk, and the	Current Population At Risk
a. Upstream, downstream, centerline, other;	Upstream		is limited to people working on the dam only.
b. Is it constructed on flat ground or on a slope?	Relatively inclined	mitigative measures that have been undertaken or remain to be	
<ul> <li>Does it include a spillway or other structure to mitigate overtopping?</li> </ul>	No	<ul> <li>34. Nearest critical infrastructure downstream from the facility, inclusion pacety. TMFn</li> </ul>	Currently the Return water dam and associated pump station.
<ul> <li>d. Does it include an overdrain and/or underdrain system?</li> </ul>	Underdrain system	Additional comments incl. mitigants	· · ·
24. What standards/guidelines were applied to the dam design and construction, i.e. Canadian (MAC/ CDA), ANCOLD, ICOLD or others?	SANS 10286:1998	The SMC TSF extension footprint reside wrangle with the rightful farm owner. Pr of the rightful farm owner to evict the ille finalisation at the courts.	es illegal settlers who are in court eliminary court verdict was in favour egal settlers. Case is pending
25. What is the "Factor of Safety" (under current conditions and "worst case/undrained conditions")?	Drained overall FoS is 1.71 minimum (design 1.50), Undrained FoS is 1.40 minimum (Design 1.2)		
<b>26.</b> Current dimensions of main structure, including height, upstream slope and downstream slope.	12m high with a 1V:3H overall slope		
27. Planned final dimensions of main structure.	96m high with top area of 291Ha		and the second second
<b>28.</b> Current volume of tailings facility (m <sup>3</sup> , tonnes, etc.).	23.6million m <sup>3</sup>	The Part of the	The second
<b>29.</b> Planned final volume of tailings facility.	296 million m <sup>3</sup>		
Surrounding environment analysis		いち いい かい きましん あま	「「「「「「「「「」」」」
<b>30.</b> Is the TMF located in a climatic zone where evaporation levels are exceeded by precipitation?	No		
<b>31.</b> Seismicity rating of the TMF's location.	Low 0 – 0.2 m/s <sup>2</sup>		
<b>32.</b> Do current neighboring mining operations include blasting?	Yes. Underground blasting		
a. If yes, distance of the TMF to the mining operations.	5km		







Disclosure Requirements	Impala Ca
Tailings Facility Name and Identifier	Impala Ca
Location	89°39'01.0

Impala Canada - Lac des Iles Impala Canada – Lac des Iles 89°39'01.06"W / 49°09'07.68" N

1 Com	pany name	Impala Canada – Lac des lles	For a decommissioned facility	
<b>2</b> Com	pany's membership with		13 Year construction was started.	N/A
ICMN indus	A or other international stry body.	No	<b>14</b> Last year that material was added to the facility.	N/A
3 Does	the company have an		15 Year of decommissioning.	N/A
to Tai (TMF	ilings Management Facilities (s)?	Yes	a. Was it capped, crowned and/ or was another method used to reduce water infiltration?	N/A
a. A oi bo	re audit reports (external and/ r internal) shared with the oard?	Not usually, but are upon request	b. Frequency of internal/ external inspections of an	
4 Num the c	ber of TMFs owned by ompany		TMF after decommissioning for monitoring safety and onvironmental impacts	N/A
a. In	construction?	0	For an apprectional and algoed facilitie	
b. In	operation?	2	For an operational and closed facilitie	2010
c. C	losed/decommissioned?	1	16 Year construction was started.	2010
d. In	operation/closed but		<b>17</b> Current tailings production (ktpy).	12,500 tonnes per day
de	ot decommissioned/ ecommissioned?	0	<b>18</b> Current density/water content of the tailings being deposited.	50% solids content
For Eac	h TMF		<b>19</b> Expected remaining years of	Four (4)
5 Mine	name	Lac des lles Mine	operations.	
6 Loca	tion (Country/State/	Thunder Bay, Ontario, Canada	TMF Monitoring	
7 TMF	name or designation	South Tailings Management	(if any)	
8 Loca	tion of Facility (lat/long or	Facility (STMF) STMF =	a. Date of last internal inspection including outcome.	Performed Daily. No problems detected.
mine	facilities)	89°39'01.06"W/49°09'07.68" N	21 Is there a requirement for external	
9 The t being	ypes of commodities mined	Mostly palladium, with some platinum and traces of gold, copper and nickel.	a. Frequency of external inspections.	Dam Safety Inspection (DSI) on a yearly basis. Dam Safety Review
10 What used	are the main methods in the processing of the	Drilling, Blasting, hauling, crushing, grinding, flotation		(DSR) every 5 years or upon significant change.
11 How (conv dry s	are the tailings stored? /entional, thickened, paste, tack, other)	Thickened	<ul> <li>D. Name of external firm that performs the inspection.</li> </ul>	USIS carried out by Hatch Ltd (Engineer of Record). Last DSR carried out by Knight-Piesold, but may vary in future.
12 Do th inclue	ne contents of the TMF de toxic materials?	No	c. Date of last external inspection including outcome.	Last DSI carried out in October 2020. Last DSR also carried out in October 2020.







Disclosure Requirements	Impala Canada - Lac des Iles
Tailings Facility Name and Identifier	Impala Canada – Lac des Iles
Location	89°39'01.06"W / 49°09'07.68" N

<b>22</b> If there is an external rating system	Technical Bulletin - Classification	Surrounding environment analysis	rrounding environment analysis		
(i.e. local regulator),	and Inflow Design Flood Criteria" of the Lakes and River Improvement Act (LRIA) (Ontario Ministry of Natural Resources.	<b>30.</b> Is the TMF located in a climatic zone where evaporation levels are exceeded by precipitation?	No		
	2011a)	<b>31.</b> Seismicity rating of the TMF's	The LDI Mine site is in a stable		
a. What is the risk rating for the TMF?	High, for incremental environmental losses.	location.	seismic zone, with a peak maximum credible (2,500 yr return period) seismic ground acceleration of 0.040 g		
Design		<b>32.</b> Do current neighboring mining			
23 Type of construction		operations include blasting?	No neighboring mining operations.		
a. Upstream, downstream, centerline, other;	Hybrid upstream and downstream	a. If yes, distance of the TMF to the mining operations.			
b. Is it constructed on flat ground or on a slope?	Mainly flat ground.	<ul> <li>33. Identification of habitation(s)/ settlements(s) and/or flora/ fauna critical habitat(s) or high biodiversity area(s) located downstream of the facility, with indication of areas or number of populations at risk, and the mitigative measures that have been undertaken or remain to be implemented.</li> </ul>	The inundation area is typically undeveloped or it is managed so that the land usage is for transient activities such as with day-use facilities. Appreciable loss of fish and/or wildlife habitat or significant deterioration of critical fish and/ or wildlife habitat with reasonable likelihood of being		
c. Does it include a spillway or other structure to mitigate overtopping?	Yes, spillway included				
d. Does it include an overdrain and/or underdrain system?	Yes, underdrain in foundation of upstream raise embankments.				
24. What standards/guidelines were applied to the dam design and construction, i.e. Canadian (MAC/ CDA), ANCOLD, ICOLD or others?	Technical Bulletin - Classification and Inflow Design Flood Criteria" of the Lakes and River Improvement Act (LRIA) (Ontario		able to apply natural or assisted recovery activities to promote species recovery to viable population levels.		
	Ministry of Natural Resources, 2011a), MAC, CDA	34. Nearest critical infrastructure	Water Management Facility 1,		
25. What is the "Factor of Safety" (under current conditions	Current conditions FoS = 1.5,	downstream from the facility, including nearby TMFs.	collecting contact water from entire mine site, including TMFs.		
and "worst case/undrained conditions")?	conditions) FoS = 1.3	Additional comments incl. mitigants			
<b>26.</b> Current dimensions of main structure, including height, upstream slope and downstream slope.	22.5 m in height, downstream slope (rockfill) 1.5H:1V, upstream slope of 2.5H:1V				
27. Planned final dimensions of main structure.	26 m in final height.				
<b>28.</b> Current volume of tailings facility (m <sup>3</sup> , tonnes, etc.).	13,496,000 m <sup>3</sup>				
<b>29.</b> Planned final volume of tailings facility.	19,739,000 m <sup>3</sup>				







## LAC DES ILES

Disclosure Requirements	Impala Canada - Lac des lles
Tailings Facility Name and Identifier	East Tailings Management Fa
Location	89°37'07.65"W / 49°09'06.53"

t Tailings Management Facility (ETMF)

37'07.65"W / 49°09'06.53" N

1	Company name	Impala Canada – Lac des lles	For a decommissioned facility	
2	Company's membership with	NI-	<b>13</b> Year construction was started.	N/A
	industry body.	NO	<b>14</b> Last year that material was added to the facility.	N/A
3	Does the company have an internal monitoring set-up specific		15 Year of decommissioning.	N/A
	to Tailings Management Facilities (TMFs)?		a. Was it capped, crowned and/ or was another method used to reduce water infiltration?	N/A
	<ul> <li>a. Are audit reports (external and/ or internal) shared with the board?</li> </ul>		b. Frequency of internal/ external inspections of an	
4	Number of TMFs owned by the company		TMF after decommissioning for monitoring safety and environmental impacts.	N/A
	a. In construction?		For an operational and closed facilitie	35
	b. In operation?		16 Year construction was started	1992
	c. Closed/decommissioned?		17 Current tailings production (ktp)	12 500 toppes per day
	d. In operation/closed but not decommissioned/ decommissioned?		<ul><li>18 Current density/water content of the tailings being deposited.</li></ul>	50% solids content
Fo	r Each TMF		19 Expected remaining years of	five (5)
5	Mine name	Lac des lles Mine	operations.	
6	Location (Country/State/	Thunder Bay Ontario, Canada	TMF Monitoring	
	Municipality)	manaci Bay, omano, oanada	20 Frequency of internal inspections	
7	TMF name or designation	East Tailings Management Facility	(ii any)	
8	Location of Facility (lat/long or position relative to the main	ETMF =	a. Date of last internal inspection including outcome.	Performed Daily. No problems detected.
	mine facilities)	09 37 07.03 W/49 09 00.33 N	<b>21</b> Is there a requirement for external	
9	The types of commodities being mined	Mostly palladium, with some platinum and traces of gold, copper and nickel.	a. Frequency of external inspections.	Dam Safety Inspection (DSI) on a yearly basis. Dam Safety Review
10	What are the main methods used in the processing of the	Drilling, Blasting, hauling, crushing, grinding, flotation		(DSR) every 5 years or upon significant change
11	How are the tailings stored? (conventional, thickened, paste, dry stack, other)	Thickened	<ul> <li>b. Name of external firm that performs the inspection.</li> </ul>	DSIs carried out by Hatch Ltd (Engineer of Record). Last DSR carried out by Knight-Piesold, but may vary in future.
12	Do the contents of the TMF include toxic materials?	No	c. Date of last external inspection including outcome.	Last DSI carried out in October 2020. Last DSR also carried out in October 2020.





**29.** Planned final volume of tailings facility.



Disclosure Requirements	Impala Canada - Lac des lles	
Tailings Facility Name and Identifier	East Tailings Management Facility (ETMF)	
Location	89°37'07.65"W / 49°09'06.53" N	

19,096,000 m<sup>3</sup>

22 If there is an external rating system	re is an external rating system Technical Bulletin - Classification		Surrounding environment analysis		
(i.e. local regulator),	and Inflow Design Flood Criteria" of the Lakes and River Improvement Act (LRIA) (Ontario Ministry of Natural Resources	<b>30.</b> Is the TMF located in a climatic zone where evaporation levels are exceeded by precipitation?	No		
	2011a)	<b>31.</b> Seismicity rating of the TMF's	The LDI Mine site is in a stable		
a. What is the risk rating for the TMF?	High, for incremental environmental losses.	location.	maximum credible (2,500 yr return period) seismic ground		
For TMF with embankment retaining	structures		acceleration of 0.040 g.		
Design		<b>32.</b> Do current neighboring mining	No neighboring mining operations.		
23 Type of construction		operations include blasting?			
a. Upstream, downstream, centerline, other;	Hybrid upstream and downstream.	the mining operations.			
b. Is it constructed on flat ground or on a slope?	Mainly flat ground.	<b>33.</b> Identification of habitation(s)/ settlements(s) and/or flora/ fauna critical habitat(s) or high	The inundation area is typically undeveloped or it is managed so that the land usage is for transient activities such as with day-use facilities. Appreciable loss of fish and/or wildlife habitat or significant deterioration of critical fish and/ or wildlife habitat with reasonable likelihood of being		
c. Does it include a spillway or other structure to mitigate overtopping?	Yes, spillway included	biodiversity area(s) located downstream of the facility, with indication of areas or number of populations at risk, and the mitigative measures that have been undertaken or remain to be implemented.			
<ul> <li>d. Does it include an overdrain and/or underdrain system?</li> </ul>	Yes, underdrain in foundation of upstream raise embankments.				
24. What standards/guidelines were applied to the dam design and construction, i.e. Canadian (MAC/ CDA), ANCOLD, ICOLD or others?	Technical Bulletin - Classification and Inflow Design Flood Criteria" of the Lakes and River Improvement Act (LRIA) (Ontario		able to apply natural or assisted recovery activities to promote species recovery to viable population levels.		
	Ministry of Natural Resources, 2011a), MAC, CDA	<b>34.</b> Nearest critical infrastructure downstream from the facility,	Water Management Facility 1, which is the central facility for		
<b>25.</b> What is the "Factor of Safety" (under current conditions	Current conditions FoS = 1.5,	including nearby TMFs.	collecting contact water from entire mine site, including TMFs.		
and "worst case/undrained conditions")?	conditions) FoS = 1.3	Additional comments incl. mitigants			
<b>26.</b> Current dimensions of main structure, including height, upstream slope and downstream slope.	23.0 m in height, downstream slope (rockfill) 1.5H:1V, upstream slope of 2.5H:1V.				
27. Planned final dimensions of main structure.	26.5 m in final height.				
<b>28.</b> Current volume of tailings facility (m <sup>3</sup> , tonnes, etc.).	9,226,000 m <sup>3</sup>				







## LAC DES ILES

Disclosure Requirements	Im
Tailings Facility Name and Identifier	W
Location	89

mpala Canada - Lac des lles Vest Tailings Management Facility (WTMF)

89°38'00.92"W / 49°09'21.39" N

1	Company name	Impala Canada – Lac des lles	For a decommissioned facility
2	Company's membership with		<b>13</b> Year construction was started. 2001
	ICMM or other international industry body.	No	14 Last year that material was added to the facility.2011
3	Does the company have an internal monitoring set-up specific		15 Year of decommissioning. 2012 and 2015
	to Tailings Management Facilities (TMFs)?		a. Was it capped, crowned and/ or was another method used to reduce water infiltration?
	<ul> <li>Are audit reports (external and/ or internal) shared with the board?</li> </ul>		b. Frequency of internal/ external inspections of an         Daily by site personnel. Dam Safety Inspection (DSI) on a yearly
4	Number of TMFs owned by the company		TMF after decommissioning for monitoring safety and environmental impacts. TMF after decommissioning basis. Dam Safety Review (DSR) every 5 years or upon significant change.
<u> </u>	a. In construction?		For an operational and closed facilities
	b. In operation?		16 Year construction was started. 2001
	d In operation/closed but		17 Current tailings production (ktpy). Closed, not applicable
	not decommissioned/ decommissioned?		18 Current density/water content of the tailings being deposited.         Closed, not applicable
Fo	or Each TMF		19 Expected remaining years of
5	Mine name	Lac des Iles Mine	operations.
6	Location (Country/State/	Thunder Bay, Ontario, Canada	TMF Monitoring
7	TMF name or designation	West Tailings Management Facility	20 Frequency of internal inspections (if any) Daily
8	Location of Facility (lat/long or position relative to the main	WTMF =	a. Date of last internal inspection including outcome. Performed Daily. No problems detected.
	mine facilities)	09 30 00.92 W/49 09 21.39 N	21 Is there a requirement for external
9	The types of commodities being mined	Mostly palladium, with some platinum and traces of gold, copper and nickel.	a. Frequency of external inspections.         Dam Safety Inspection (DSI) on a yearly basis. Dam Safety Review
10	What are the main methods used in the processing of the	Drilling, Blasting, hauling, crushing, grinding, flotation	(DSR) every 5 years or upon significant change.
11	How are the tailings stored? (conventional, thickened, paste, dry stack, other)	Thickened	DSIS carried out by Hatch Ltd (Engineer of Record). Last DSR carried out by Knight-Piesold, but may vary in future.
12	Do the contents of the TMF include toxic materials?	No	c. Date of last external inspection including outcome. Last DSI carried out in October 2020. Last DSR also carried out ir October 2020.





**29.** Planned final volume of tailings facility.



Disclosure Requirements	Impala Canada - Lac des lles	
Tailings Facility Name and Identifier	East Tailings Management Facility (ETMF)	
Location	89°37'07.65"W / 49°09'06.53" N	

20,070,000 m<sup>3</sup>

<b>22</b> If there is an external rating system Technical Bulletin - Classification		Surrounding environment analysis		
(i.e. local regulator),	and Inflow Design Flood Criteria" of the Lakes and River Improvement Act (LRIA) (Ontario Ministry of Natural Recourses	<b>30.</b> Is the TMF located in a climatic zone where evaporation levels are exceeded by precipitation?	No	
	2011a)	<b>31.</b> Seismicity rating of the TMF's	The LDI Mine site is in a stable	
a. What is the risk rating for the TMF?	Moderate, for incremental environmental losses.	location.	maximum credible (2,500 yr return period) seismic ground	
For TMF with embankment retaining	structures		acceleration of 0.040 g.	
Design		<b>32.</b> Do current neighboring mining	No neighboring mining operations.	
23 Type of construction		operations include blasting?		
a. Upstream, downstream, centerline, other;	Downstream only	a. If yes, distance of the TMF to the mining operations.		
b. Is it constructed on flat ground or on a slope?	Mainly flat ground.	<ul> <li>33. Identification of habitation(s)/ settlements(s) and/or flora/ fauna critical habitat(s) or high biodiversity area(s) located downstream of the facility, with indication of areas or number of populations at risk, and the mitigative measures that have been undertaken or remain to be implemented.</li> </ul>	The inundation area is typically undeveloped or it is managed so that the land usage is for transient activities such as with day-use facilities. Appreciable loss of fish and/or wildlife habitat or significant deterioration of critical fish and/ or wildlife habitat with reasonable likelihood of being	
c. Does it include a spillway or other structure to mitigate overtopping?	No spillway			
d. Does it include an overdrain and/or underdrain system?	No			
24. What standards/guidelines were applied to the dam design and construction, i.e. Canadian (MAC/ CDA), ANCOLD, ICOLD or others?	Technical Bulletin - Classification and Inflow Design Flood Criteria" of the Lakes and River Improvement Act (LRIA) (Ontario		able to apply natural or assisted recovery activities to promote species recovery to viable population levels.	
	Ministry of Natural Resources, 2011a), MAC, CDA	<b>34.</b> Nearest critical infrastructure	Water Management Facility 1,	
25. What is the "Factor of Safety" (under current conditions	Current conditions FoS = 1.5,	including nearby TMFs.	collecting contact water from entire mine site, including TMFs.	
and "worst case/undrained conditions")?	conditions) $FoS = 1.3$	Additional comments incl. mitigants		
<b>26.</b> Current dimensions of main structure, including height, upstream slope and downstream slope.	30.0 m in height, downstream slope (rockfill) 1.5H:1V, upstream slope of 3H:1V.			
27. Planned final dimensions of main structure.	30.0 m in final height.			
<b>28.</b> Current volume of tailings facility (m <sup>3</sup> , tonnes, etc.)	20,070,000 m <sup>3</sup>			

