

SAFENWORK

Rietvly TSF – Zone of Influence and Emergency Response Plan

Rietvly - Emergency Response Plan

Emergency Response Plan

Evacuate dam operating personnel from below potential breach area and control movement of people and vehicles on the Mine access road below the TSF.

The Dam Operator Site Manager shall determine and manage implementation of measures to make safe if possible. Such measures could include:

- Importing broken rock and placing against toe across potential breach area.
- Decanting as much water, as possible from the basin, to reduce the water level in the TSF as much as possible - note it is the flow of water that will erode the wall and mobilize the tailings into a slurry.

The Emergency control room official to take charge of Emergency Response Plan execution. This must entail:

- The Plant Manager (or senior manager on the scene) to prepare a brief statement of situation (with time) for communication. (Only one clear succinct version of events is to be communicated - the statement should begin with - "This is Rietvly Emergency Control Room - we have an Emergency Level 1/2 situation on our TSF. Please initiate your Emergency Response Plan immediately". Followed by the statement of the situation and what is being done. The Affected Parties should be pre-briefed as to the meaning of Emergency Level 1 or 2.

Rietvly - Emergency Response Plan

- Placing access control on access road below TSF.
- Notifying contact personnel on the Affected Parties list (Section 8.4)- communicating the prepared statement of the situation- be factual and realistic - do not incite panic.
- Placing a suitably qualified person or persons on the Rietvly mountain with a radio (and spot lights if at night) to standby to observe and report the water level situation should the TSF fail.
- Should the situation being monitored on the TSF be stable, i.e. no deterioration, Affected parties should be briefed of the situation with an updated statement at least every 30minutes. Communication is the most important aspect- keep people informed, allay panic.
- Should the situation on the TSF be deteriorating and catastrophic failure appears inevitable, a new Emergency Level 1 notification of the situation should be communicated to the Affected Parties.
- If the crest of the Rietvly dam wall starts eroding due to the overtopping and this erosion reaches the normal water level, total failure of the wall will be inevitable. The Emergency Level 2 evacuation notice must be re-iterated starting with those closest to the TSF.
- Once this situation has been attained, or if no failure has occurred and by notification of the APP is unlikely to occur, the Emergency Level 1 state can be cancelled, notifying the Affected Parties that they can stand down as the risk has passed. (See affected party contact list)

Rietvly - Emergency Response Plan

Should a failure have occurred, then the relevant environmental authorities should be formally notified, as required by the National Environmental Management Act, Act 107 of 1998 (Section 30) and where applicable reporting of spillage impacting on water is also required by the National Environmental Management: Water Act, Act 36 of 1998.

Should a failure have occurred, a task team is to be constituted to take charge of the disaster management? This team must be properly populated, structured and mandated to avoid crisis management. The team may include or at least coordinate with teams from affected parties, particularly the Mines. Team members may also incorporate relevant environmental authorities. An assessment of the downstream damage is to be made and assistance provided where required.

- A clean-up and rehabilitation plan is to be developed according to the situation and must be approved by the relevant environmental authorities.
- An assessment of the cause of the TSF failure shall be made by a formerly mandated qualified task team and, if possible, remedial measures designed and implemented to re-commission the TSF.

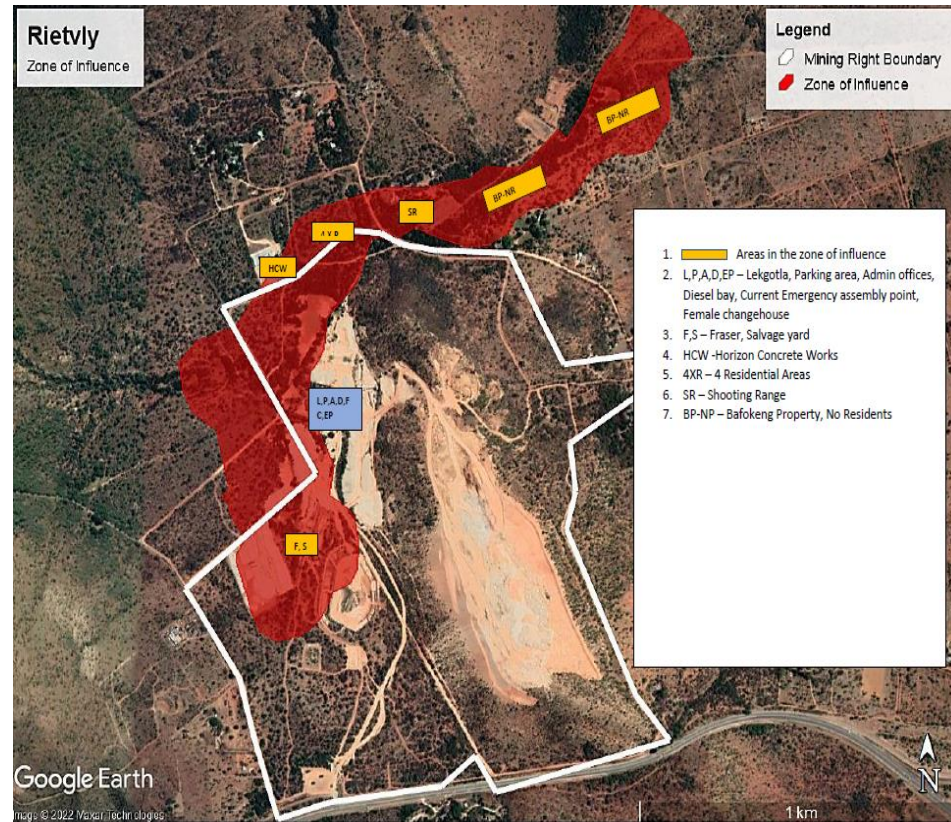
Rietvly TSF Failure

Zone Of Influence

Sunny day event

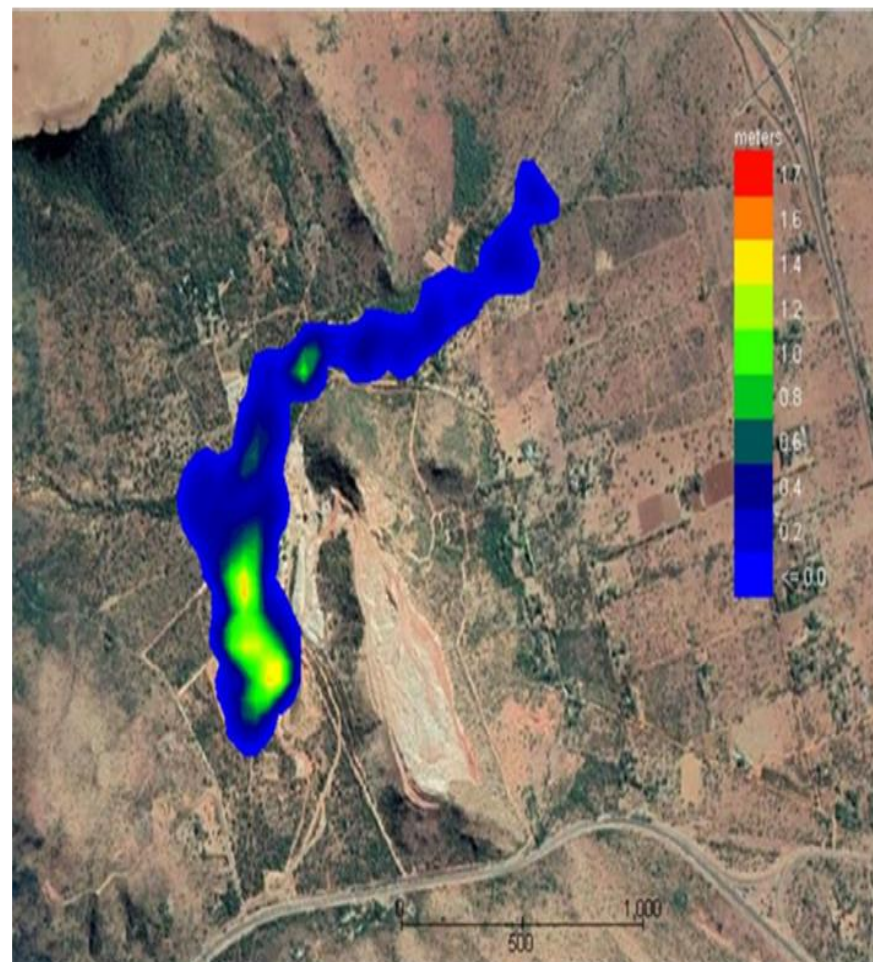
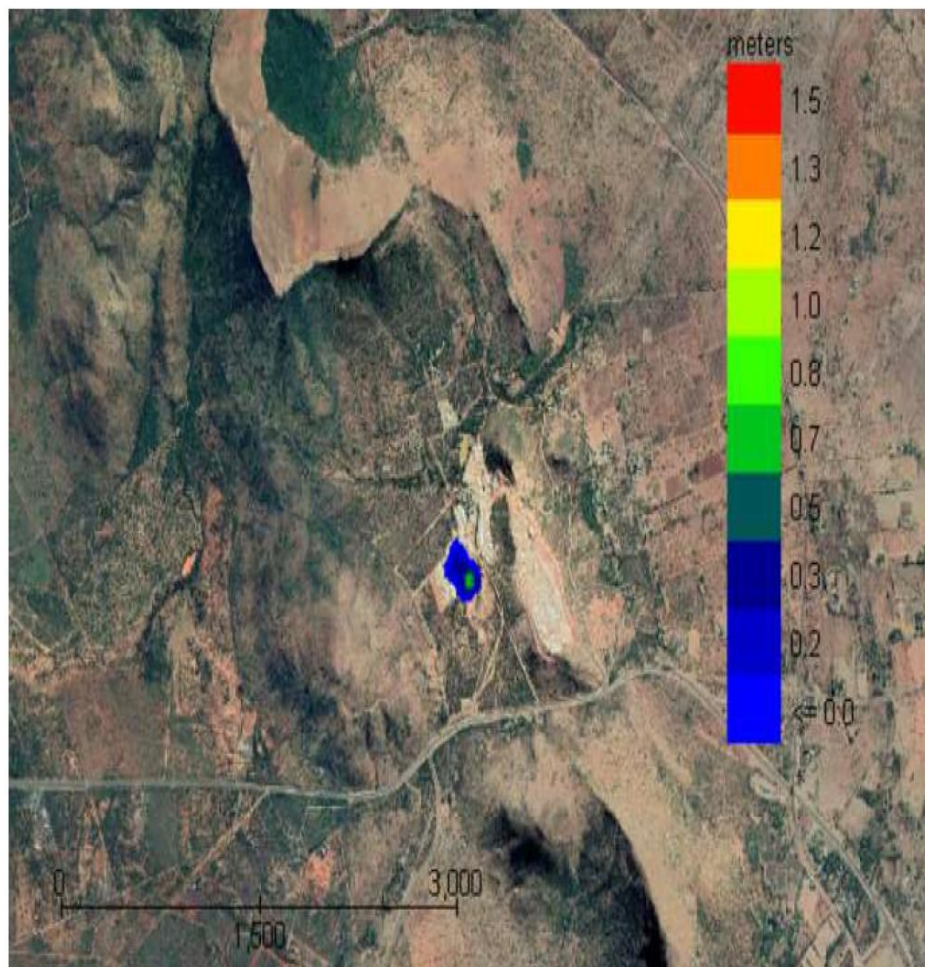


Rainy day event



Flow depths

(Highlighted areas showing infrastructure)



Areas In The Zone Of Influence

Velocity Of Material and Inundation In Event Of Failure

AREA	DISTANCE FROM TSF	TIME AREA WILL BE AFFECTED BY FAILURE (min)		DEPTH OF INUNDATION	
		SUNNY DAY (v=1m/s)	RAINY DAY (v = 4.2m/s)	SUNNY DAY (metres)	RAINY DAY (metres)
Fraser Alexander Offices	100	1.7	0.4	0.3	1.2
Salvage Yard	100	1.7	0.4	0.3	1.2
Admin Offices	500	Not affected	Not affected	Not affected	Not affected
Lekgotla Hall	500	Not affected	Not affected	Not affected	Not affected
Parking Area	500	Not affected	2.0	Not affected	0.4
Diesel Bay	500	Not affected	Not affected	Not affected	0.2
Female Change House	500	Not affected	Not affected	Not affected	Not affected
Current Emergency Assembly Point	500	Not affected	Not affected	Not affected	Not affected
Workshop	580	Not affected	Not affected	Not affected	Not affected
Horizon Concrete Works	1200	Not affected	4.8	Not affected	0.0
4 x Residential Areas	1500	Not affected	6.0	Not affected	0.0 - 0.2
Shooting Range	1700	Not affected	6.7	Not affected	0.0 - 0.2

Thank You.