

DECEMBER 2023

## ORYX (BTX4) TAILINGS STORAGE FACILITY (TSF)

### DETAILS OF TAILINGS STORAGE FACILITY

<b>Tailings Storage Facility (TSF) Name</b>	Oryx TSF (BTX4)
<b>Operation</b>	Beatrix
<b>Operational Status</b>	Dormant since mid-2019
<b>Operating Segment</b>	RSA - Gold
<b>Location</b>	Approximately 32 km south-west of the town of Virginia in the Free State Province – please refer to Figure 1
<b>Latitude, Longitude (decimals)</b>	-28.188975, 26.7037361
<b>Ore Source</b>	Underground
<b>Type of Storage Facility</b>	Impoundment (upstream development)
<b>Deposition Methodology</b>	Day-Wall Paddock
<b>Year of Commissioning</b>	1981
<b>Consequence Classification (GISTM, 2020)</b>	Significant
<b>Operating Contractor</b>	Stefanutti Stocks Inland (SSI)
<b>Engineer of Record (EoR)</b>	Knight Piesold (Pty) Ltd (KP)
<b>Current Maximum Height (m)</b>	20
<b>Final Maximum Height (m)</b>	20
<b>Total Volume Already Deposited (Mm<sup>3</sup>)</b>	14,5
<b>Life of TSF (year)</b>	N/A



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## TECHNICAL ASPECTS:

### Design Criteria

GISTM and best practice guidelines including Australian National Committee on Large Dams (ANCOLD) (Guidelines on Tailings Dams, July 2019). Site specific design criteria were specified by the EoR. Details are included in the Design Basis Report (DBR).

### Stability Assessment and Mitigation Measures

A detailed stability assessment based on piezocone probing and some laboratory test work was conducted in 2023 (KP Reference: PR301-00726/36-A Rev A, 3 July 2023).

All the FoS are above the recommended limits and thus no mitigation measures were required.

Construction of a buttress in the west flank due to a localised slip was completed in 2001.

### Dam Breach Assessment

Assessment completed in 2023  
(KP Reference: PR301-00726/36-A-PR23-00154 Rev 0, 28 July 2023)

### Area of Inundation

Has been identified by EoRs – please refer to Figure 2

### Summary of Human Exposure

Consequence classification has been based on Population at Risk (PAR). Farmers have been identified and are being engaged through various means.

## DOCUMENTATION:

### Site Specific OMS Manual

Version 2023 available  
Mandatory Code of Practice (MCOP) document No: 2.3.A-COP is in place (dated June 2019)

### Design Basis Report (DBR)

Version 2023 available  
(KP Reference: RI301-00726/36 Rev A, 27 July 2023)

### Environmental Management System

The Environmental Management System is ISO accredited (ISO 14001:2015)

The initial Environmental Management Programme (EMPr) is dated 2004. Numerous addendums have been submitted with the latest being in 2013.



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## **Surveillance:**

### **Surveillance Frequency**

Daily by the Operator and quarterly reports of critical controls submitted to and reviewed by the EoR

### **Surveillance Technology/System**

K2Fly Decipher

### **Deformation Monitoring**

Interferometric Synthetic Aperture Radar (InSAR)

### **Phreatic Surface Levels & Pore Pressure Measurements**

Standpipe piezometers

## **RISK MANAGEMENT / EMERGENCY PREPAREDNESS:**

### **Risk Assessment**

Annual Risk Assessment (FMEA) completed with no untoward risk identified

### **Risk Management**

Site specific OMS Manual  
Site specific Trigger Action Response Plans (TARPs) in place  
Critical controls established and implemented

### **Site Specific Emergency Preparedness & Response Plans (EPRP)**

Version 2023 available

Annual emergency mock drill for a catastrophic TSF failure – undertaken on 30 June 2023 with SSW employees and contractors.

Environmental emergency preparedness is managed on site according to ISO14001: 2015.

## **CLOSURE & POST CLOSURE**

### **Closure Planning**

In place - report prepared by Golder Associates  
(Golder Reference: 20353619-341344-2, April 2021)

### **Closure Costing**

Adequate financial capacity in place  
Financials prepared by Golder Associates  
(Golder Reference: 20447293-349381-4, December 2021)

### **Asset Insurance Cover**

In place – July 2023 to June 2024



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## Independent Reviews:

<b>Independent Tailings Review Board (ITRB)</b>	4 July 2023 with no material concerns identified
<b>Future ITRB Review</b>	2024
<b>Performance Reviews</b>	Annual and quarterly reports with inspections completed by EoR (KP Reference: RI301-00726/38 Rev 0, 3 May 2023)
<b>Dam Safety Review (DSR)</b>	Carried out by an independent third party in 2019/2020 with no material findings (KP Reference: 301-00840/02-010 Rev 1, February 2020)  Next review scheduled for 2024



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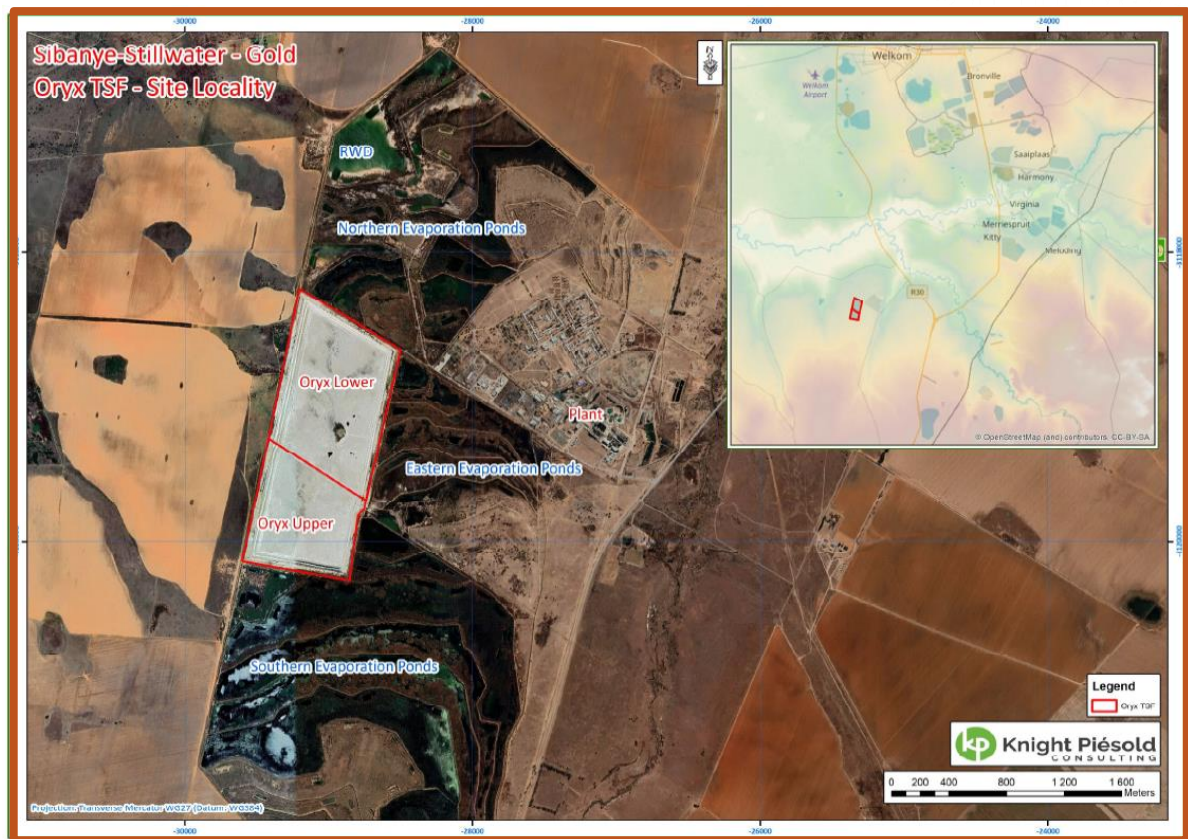


Figure 1: Layout of Oryx TSF

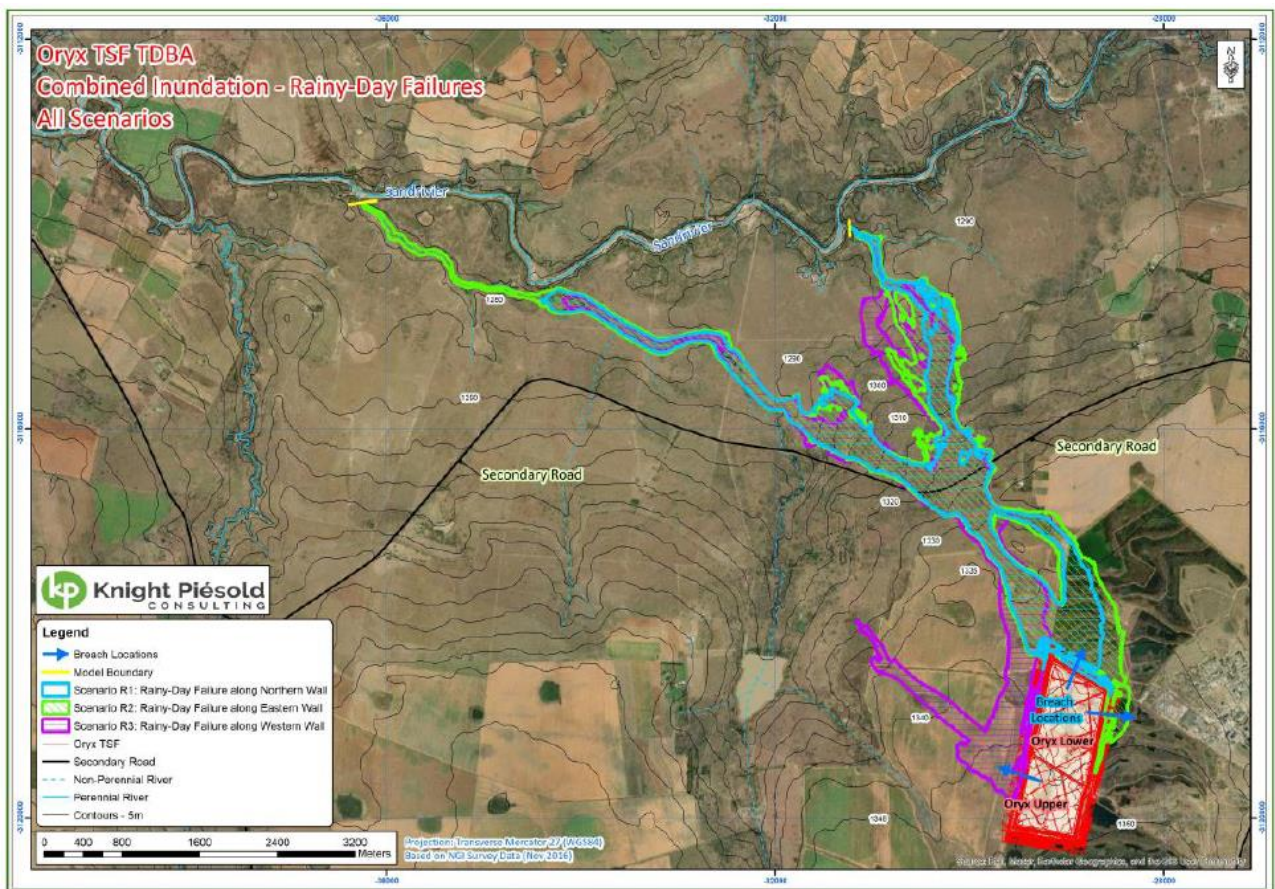


Figure 2: Consolidated View of Rainy-Day Scenarios Area of Inundations