# Tailings storage facility audit Site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Date conducted:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- |
| 1 Hazard rating |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 1.1 | A hazard rating has been assigned to the Tailings Storage Facility (TSF). |  |  | | 1.2 | The hazard rating has been derived by considering the potential environmental impact in the event of either a controlled or uncontrolled escape of material, seepage and/or abrupt failure of the storage embankment at any stage in its life. |  |  | | 1.3 | The hazard rating has been derived by considering the potential impact in terms of safety on any nearby community infrastructure and/or mining developments (including the tailings storage operator) in the event of either controlled or uncontrolled escape of material, seepage and/or abrupt failure of the storage embankment at any stage in its life. |  |  | | 1.4 | The hazard rating has been derived by considering the potential impact in terms of economics on any nearby community infrastructure and/or mining developments (including the tailings storage operator) in the event of either a controlled or uncontrolled escape of material, seepage and/or abrupt failure of the storage embankment at any stage in its life. |  |  | | 1.5 | Changes in the operation of the TSF or the surrounding infrastructure have resulted in a re-evaluation of the TSF hazard rating. |  |  | |
| 2 Design and construction |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 2.1 | The TSF has been designed in accordance with the DMIRS publication Code of Practice Tailings Storage Facilities in Western Australia. |  |  | | 2.2 | The TSF has been constructed in accordance with the design. |  |  | | 2.3 | Periodic operating audits are submitted as required by the DMIRS publication Code of Practice Tailings Storage Facilities in Western Australia. |  |  | | 2.4 | Changes from the original design were documented during construction. |  |  | | 2.5 | Records of construction quality control checks are available. |  |  | | 2.6 | The specified monitoring equipment is installed. |  |  | |
| 3 Dam Break assessment |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 3.1 | Category 1 TSFs have a documented 'Dam Break Risk Assessment'. |  |  | |
| 4 Operation |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 4.1 | There is a TSF Operating Plan. |  |  | | 4.2 | The Operating Plan describes the deposition methodology. |  |  | | 4.3 | The Operating Plan describes the measures for pond control and water management. |  |  | | 4.4 | The Operating Plan specifies the method of seepage control. |  |  | | 4.5 | The Operating Plan specifies the pipeline management system. |  |  | | 4.6 | The Operating Plan describes the TSF geometry at all stages of its life. |  |  | | 4.7 | The Operating Plan includes provision for dust control. |  |  | | 4.8 | Modifications to the Operating Plan are documented when they occur. |  |  | | 4.9 | The actual operating characteristics of the TSF have been assessed against the original design assumptions. |  |  | | 4.10 | Periodic geotechnical and engineering reports are submitted as outlined in the DMIRS publication Guide to Departmental requirements for the management and closure of TSFs. |  |  | | 4.11 | The recommendations included in the annual geotechnical and engineering reports have been acted upon. |  |  | | 4.12 | The TSF site is secured against access by unauthorised personnel. |  |  | | 4.13 | Roads on and around the TSF are designed for the equipment using them. |  |  | | 4.14 | The TSF roads are demarcated by windrows, railings or other such indicators of safe travel limits. |  |  | | 4.15 | The TSF roads are controlled by suitable signage indicating speed limits, direction etc. |  |  | | 4.16 | Traffic control measures on the TSF are effective at night. |  |  | | 4.17 | Where there is deep water in a TSF, rescue equipment is provided. |  |  | |
| 5 Management |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 5.1 | A responsible person has been appointed in writing to manage the TSF. |  |  | | 5.2 | Individual roles and responsibilities have been documented for operators working on the TSF. |  |  | | 5.3 | The TSF Operating Plan is available to the operators. |  |  | | 5.4 | There is a training program in place for TSF operators. |  |  | | 5.5 | There is an incident reporting procedure for the TSF. |  |  | |
| 6 Monitoring and auditing |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 6.1 | Routine inspections of the TSF are carried out on each shift. |  |  | | 6.2 | The findings of the routine inspections are recorded. |  |  | | 6.3 | Operating audits are conducted every year for Category 1 TSFs and every 2 years for Category 2 TSFs. |  |  | | 6.4 | Groundwater monitoring is carried out as per the DER licence for the TSF. |  |  | | 6.5 | The monitoring equipment is kept in calibration. |  |  | | 6.6 | The monitoring frequency complies with licence conditions. |  |  | | 6.7 | The monitoring results are documented, interpreted and assessed. |  |  | | 6.8 | The actions to be taken are specified when monitoring results fall outside tolerance limits. |  |  | | 6.9 | A permanent survey monitoring grid is in place for the TSF. |  |  | | 6.10 | There is a TSF stability monitoring program in place. |  |  | | 6.11 | The results of the TSF stability monitoring program are documented, interpreted and assessed. |  |  | | 6.12 | The actions to be taken are specified should the TSF stability monitoring results fall outside the tolerance limits. |  |  | |
| 7 Emergency plan |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 7.1 | There is a specific Emergency Plan for incidents that may occur at the TSF. |  |  | | 7.2 | The TSF Emergency Plan contains details of any evacuation procedure that may be required in the event of failure, or impending failure of the TSF. |  |  | | 7.3 | The TSF Emergency Plan contains a diagram indicating the whereabouts of a muster point. |  |  | | 7.4 | The TSF Emergency Plan contains a list of names and residential addresses of all nominated emergency response personnel and their home/emergency contact telephone numbers. |  |  | | 7.5 | The TSF Emergency Plan contains a list of the telephone numbers of the local/regional emergency services (fire, ambulance, police etc.) |  |  | | 7.6 | The TSF Emergency Plan contains a list of all personnel that are associated with operation of the TSF and evidence that they have attended and understood all relevant induction/safety procedures. |  |  | |
| 8 Closure |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 8.1 | A Closure Plan has been drawn up for the TSF. |  |  | | 8.2 | Roles and responsibilities have been documented for key personnel involved in the closure process. |  |  | | 8.3 | A hazard analysis has been conducted for the long term stability of the TSF structure post closure. |  |  | | 8.4 | A risk assessment has been conducted for the long term stability of the TSF structure post closure. |  |  | | 8.5 | The Closure Plan includes decommissioning and rehabilitation aspects for the decommissioned TSF structure. |  |  | | 8.6 | Where operational changes have occurred the Closure Plan has been revised to take the changes into account. |  |  | |