

Ramskop Abattoir Calvinia

Waste Management Protocol: Treatment of Condemned Material / Products and Blood / Wastewater

○ **Disapproval of Animals & Condemned Carcasses**

- Dig trenches of 1.5m deep.
- Condemned carcasses / material gets disposed in the 1.5m deep trench.
- Condemned carcasses / material gets neutralised with lime and covered with soil.
- The trench gets closed immediately after the lime was added.

○ **Blood**

- Blood gets separated when head is removed.
- Blood flows into a 2500L storage tank.
- In storage tank blood and water gets mixed to prevent coagulation.
- Gets treated with chemicals to stabilise blood and break down remaining solids.
- Gets pumped into a tanker that is leak-proof and then later disposed in the trenches.
- Gets neutralised with lime and covered with soil.
- The trench gets closed immediately after the lime was added.

○ **Animal Manure / Droppings**

- Gets separated. Separation will occur at the slaughter line to eliminate contamination of general condemned waste.
- Gets disposed in the burial trenches.
- Gets neutralised with lime and covered with soil.
- The trench gets closed immediately after the lime was added

• **Wastewater Management**

- Blood gets separated at the slaughter room and mixed with water and stored in a 2500L tank.
- In storage tank blood and water gets mixed to prevent coagulation.
- Screener installed in April 2016 to reduce the amount of solids in the wastewater / effluent entering the municipal waste water treatment works.
- Wastewater / effluent than gets discharged at the municipal oxidation dams / Waste Water Treatment Works (WWTW).
- The abattoir installed a flowmeter at the inlet of the municipality's waste water treatment works (where the abattoir's pipeline terminates), and monthly water quality samples gets taken at the WWTWs inlet and provided to the municipality and Gert Meiring at BVI Consulting Engineers.
- Ramskop Abattoir's employees as well as the municipality's employees will take the water quality samples at the same place (WWTW's inlet) for analysis.

• **Safety and Security**

- The area where the where condemned carcasses / material and solid blood gets buried (in trenches) is properly fenced off and has an access control gate for safety and security purposes and to prevent easy access to pickers or scavengers, putrid odour and vermin nuisance conditions.
- The burial site (trenches) is clearly marked and locked for safety and security reasons.

• **Groundwater Monitoring Boreholes**

- Two groundwater monitoring boreholes were drilled on both sides of the burial site (trenches), each approximately 40m deep.
- The one borehole is located at the south-western corner of the burial site and has the following co-ordinates: **31°28'19.08"S ; 19°45'36.50"E** and other borehole is located to the west of the burial site with the following co-ordinates: **31°28'15.68"S ; 19°45'40.54"E**.
- There are no water present in both the groundwater monitoring boreholes. Both boreholes had no water at the time of drilling.

- Groundwater monitoring on the two boreholes will be done twice a year, during the winter months and during the summer months.
- The results of the groundwater monitoring analysis will be produced the municipality.