

Bonneville Oil/Water Separators

This proposed project is intended to reconfigure the turbine pit and upgrade the oil-water separator to reduce hydrocarbon discharges into the tailrace waters at the dam. The existing oil-water separator is original construction. The existing pumps emulsify the oil making it difficult to separate once it reaches the separator. The oil-water separator is too small and the flow rate too great to perform adequate separation. The location of the separator is under the tailrace deck making it difficult to determine when cleaning is required. The location also makes it expensive to clean and often an emergency contract is required for cleaning, greatly increasing the cost and sometimes requiring unexpected unit outages. It is also difficult to thoroughly clean the sump as there is no way to reroute the supply to the separator.

This project will install two new separator units in the abandoned ice and trash chute, each capable of handling the discharge from the turbine pits and leaving the existing separator to handle the discharge of the transformer drains. The project will also replace the existing fish unit turbine pit pumps with new low-speed, positive displacement pumps to minimize emulsification of oil, grease and water. The main unit and fish turbine pit pump controls will be replaced to prevent pump-out of oil/grease in the turbine pits and prevent peaking flows to the separator.