MEETING REPORT

Main Issue: Fish Stranding due to Scheduled and Unscheduled Ramping Events

Meeting Date: October 06, 2009.

Attendees:

1. Bruce Hanna, DFO (person)
2. Nicola Johnson, DFO (phone)
3. Rick Gervais, DFO (phone)
4. Barry Chilibeck, DFO consultant, (phone)
5. Linda Zurkirchen, Deze consultant (person)
6. Jason Cote, Deze consultant (phone)

Summary of Discussion:

Mitigation measures that will be implemented to prevent fish from being stranded in Trudel Creek and the South Gorge Spillway as a result of scheduled and unscheduled ramping events (Tech Session commitment)

Confirm that effective monitoring and adaptive management plans will be developed for addressing fish being stranded during ramping events.

The Expansion Project design incorporates a multiple power plant generating facility as opposed to a single plant design. Having two power-generating facilities that can feed two different transmission lines (existing line to communities and proposed line to mines) decreases the potential for un-controlled plant shutdowns from accidental generator and line outages, thereby decreasing the potential for ramping events in Trudel Creek.

To mitigate the potential effects during a scheduled and/or unscheduled shut down, and all start-ups, flow would be managed as presented in DAR Chapter 17, which describes the proposed step up and down procedures for the turbines for scheduled outages and start-ups, to minimize the increases or decreases of flows in Trudel Creek and Taltson River downstream of the plant. This will provide a more gradual change to the flow as compared to a full on/off scenario.

In addition, the Expansion Project would incorporate a bypass spillway (referred to as the South Gorge Spillway) with a 30 m^3/s capacity and staged gate control. The spillway would assist in reducing the increases/decreases of flow in Taltson River, and reduce ramping flow to Trudel Creek, thereby lessening the potential for fish displacement and/or stranding during an unscheduled shutdown and subsequent ramping event.

Fish stranding associated with ramping events could occur in three areas; the South Gorge Spillway channel, Taltson River downstream of the tailrace, and Trudel Creek.

As a result of diverting flows through the South Gorge Spillway, fish could migrate into the spillway channel. Velocities in the channel would be high, obstructing fish from upstream migration. Fish may be able to hold in a natural pool located immediately

upstream of the channel confluence with the existing Twin Gorges tailrace. Fish that moved into the spillway channel and do not move downstream of this pool into the habitats above Elsie Falls could become isolated when the spillway gates are closed and flows stopped.

To better understand the likelihood of fish isolation within the South Gorge Spillway channel, a trial opening and closing of the spillway gate will be initiated. The trial would involve the diversion of 30 m^3/s of flow (the maximum diversion flows) through the South Gorge Spillway and into the Taltson River via Elsie Falls. During the diversion of flows, the intake will be monitored to assess the changes in nearby fish behaviour at the spillway intake. Upon closure of the spillway gate, a survey of fish will be conducted within the spillway channel to determine the likelihood of fish becoming displaced and or stranded. Based on the outcomes of the trial, the potential for stranding would be assessed, and if required, additional mitigation measures to reduce the potential for fish stranding in the spillway channel, would be investigated. Mitigation options would be dependent on the location of isolation/stranding, and could include slower closing of the gate to reduce flows more gradually, fish screens, additional monitoring, routine salvages, etc.

To assist in monitoring the effects of ramping in Trudel Creek and the Taltson River downstream of the power plant, sites with high potential for stranding will be identified prior to power production. During the initial scheduled shutdown events, the high potential sites will be monitored and an assessment of fish stranding will be conducted. Should the outcome of the assessment indicate that the effects of fish stranding as a result of ramping is unacceptable, adaptive management plans will be developed in consultation with DFO.

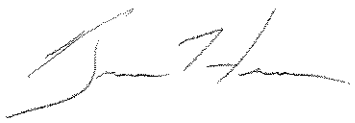
Developer Commitments

- Mitigation as presented in the DAR
- Identify sites of high potential for stranding in Trudel Creek and Taltson River downstream of tailrace
- During an initial outage event, monitor selected sites in Trudel Creek and Taltson River, and monitor South Gorge Bypass Spillway for stranding/isolation
- Discuss monitoring program outcome with DFO to decide if stranding/isolation risk level is acceptable, and/or identify additional monitoring, operational changes and/or mitigation (adaptive management) that could be applied, depending on the issues identified.

Outstanding Issues:

None

Signature of Party Representative:



Signature of Developer Representative: _____

Date: October 28, 2009