

Highland Valley Copper

ORIGINATING DEPT Tailings & Water Mgmt.	STANDARD POLICY/PROCEDURE	SECTION X NUMBER X.XX
DATE ISSUED May 2014 DATE REVIEWED	TITLE 24 MILE LAKE WATER LEVEL MANAGEMENT PROCEDURE	REVISIONS

Background:

The 24 Mile Lake water management facility is located at the toe of the H-H Dam and is operated as a water containment and sediment control facility, receiving episodic tailings slurry discharges from the H-H Pumphouse during tailings line maintenance or emergencies. The 24 Mile Lake facility is located upgradient of the active Valley Pit and has the potential to overtop in the event of a breach of the H-H Dam if the free water volume within the facility is not managed appropriately. This procedure provides target maximum operating water levels to govern pump barge operation for the protection of personnel working in and around the Valley Pit.

Application:

1. Areas
 - 24 Mile Lake, H-H Dam and H-H Pumphouse
2. Posting
 - Copies of this procedure are posted on the info center and shall be included in the Highland TSF OMS Manual.
3. Training and Compliance
 - Employees and contractors associated with the operation of 24 Mile Lake and the H-H Pumphouse shall be trained in, and comply with, this procedure.
4. Responsibilities:
 - The Superintendent Tailings and Water Management, or their designate, is responsible for keeping this procedure current on the info center and its inclusion in the Highland TSF OMS Manual.
 - The Mill Shops Maintenance General Foreman (GF) is responsible for H-H Pumphouse operation and 24 Mile Lake barge operation. The GF shall be responsible for performing annual updates to this procedure (or as required based on

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CONTROLLED VERSIONS ARE LOCATED ON THE HVC WEBSITE.

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H-H Pumphouse operations and tailings solids input to 24 Mile Lake). The GF shall coordinate with Tailings and Water Management personnel to identify operational changes to 24 Mile Lake and acquire the requisite survey information to facilitate timely revision of this procedure.

Procedure:

The free water volume within the 24 Mile Lake facility shall be maintained using the pump barge at the south end of the facility as required to reduce the potential for loss of water to the Valley Pit in the event of a dam break of the H-H Dam or the Raw Water Reservoir. The barge is currently operated manually on a campaign basis and pumps water directly into the Highland TSF, bypassing the H-H Pumphouse. Current hydrologic inputs to 24 Mile Lake include:

- Direct precipitation and catchment runoff (including Winslow Creek Diversion Runoff and Fred Brook sump overflows),
- H-H Pumphouse emergency dump of tailings and water during tailings line maintenance.
- H-H Dam seepage, and
- Valley Pit dewatering emergencies (normal operation is to Witches Brook Pumphouse to the Mill thickeners).

Annual bathymetric surveys should be performed to account for changes in the facility configuration due to tailings inputs from H-H Pumphouse operations. The target water level shall be revised based on the annual surveys.

The current operating water level targets are as follows:

Bathymetric Survey Date:	July 2013
Total Water Storage Volume Available below El. 1220 m:	13.5 million m ³
Current H-H Dam Crest El.:	1264.4 m
Target Maximum Annual Water Level (1.0 million m ³):	1196.5 m or lower
Maximum Short Term Water Level During Freshet (2.0 million m ³):	1199.0 m or lower

The water level should be drawn down to the maximum extent possible throughout the fall/winter of each year to provide additional storage for freshet inflows in the following spring.