

WHALE TAIL PIT

WHALE TAIL ወደ ፖርታንድ ስፔሻል



AGNICO EAGLE

THE FUTURE OF THE MEADOWBANK DIVISION

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PART iv – ATMOSPHERIC ENVIRONMENT

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TECHNICAL MEETINGS – DAY 1 – APRIL 28, 2017

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DOCUMENT MAP

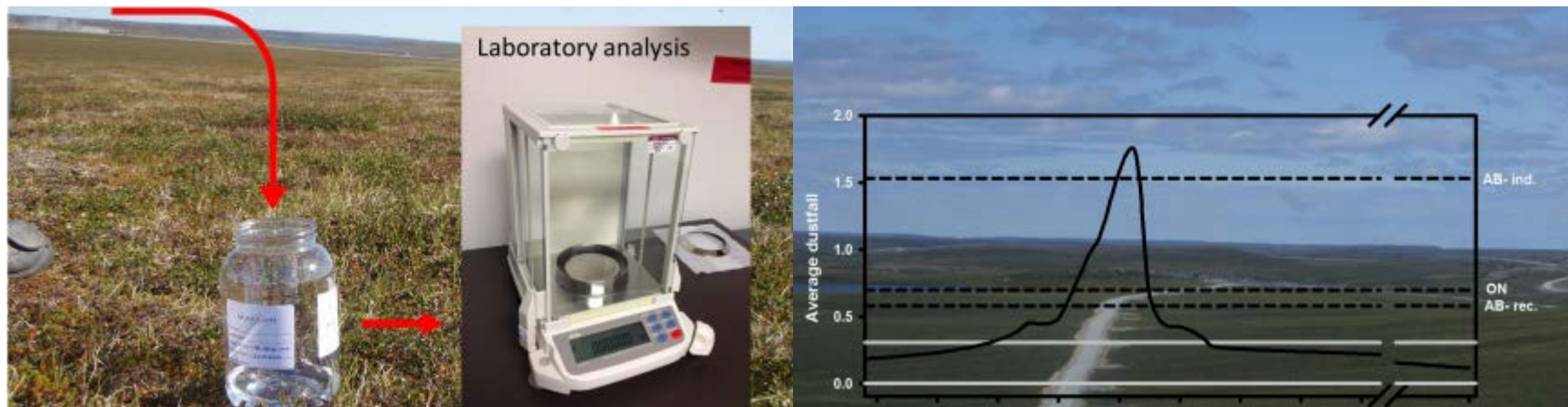
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Whale Tail – NIRB Project Certificate and NWB Type A Water Licence Amendments

ATMOSPHERIC ENVIRONMENT

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➤ Valued Components and Other components assessed:

- Weather and Climate;
- Air Quality;
- Noise and Vibration

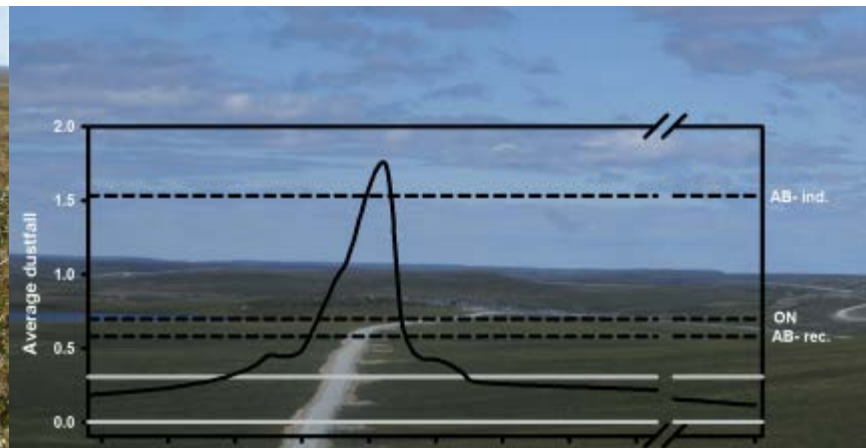
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ATMOSPHERIC ENVIRONMENT

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➤ Inuit concerns:

- Climate change is a concern with Elders and community members
- Climate change on vegetation, wildlife, fish, and other traditional resources
- Dust and Air Quality
- Noise effects on wildlife

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- Emissions from combustion sources (e.g., haul trucks, generators) are all predicted to be below the relevant Nunavut or Canadian ambient air quality standards
- There will be an increase in dust emissions due to in-pit activities and haul road traffic
- Dust concentrations in air and deposition of dust along the haul road are predicted to be below relevant standards within ~300 m of the haul road
- Recent dust monitoring programs at Meadowbank Mine are consistent with the AQ model predictions

[illegible][illegible][illegible][illegible]

- Both IQ and scientific analysis suggest that dust suppression may be required
- One new air quality monitoring station at Whale Tail Pit, and 3 dustfall transects along the haul road is being proposed
- Future monitoring and data analysis will inform the adaptive management plan related to dust
- A key finding from Agnico Eagle (2017) includes the following: “Cumulative results to date indicate that without dust suppressant application, average rates of dustfall decline below Alberta Environment’s guideline for recreational areas within 100 m of the AWAR and meet the range of background rates within 200 m.”

[illegible]

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ATMOSPHERIC ENVIRONMENT

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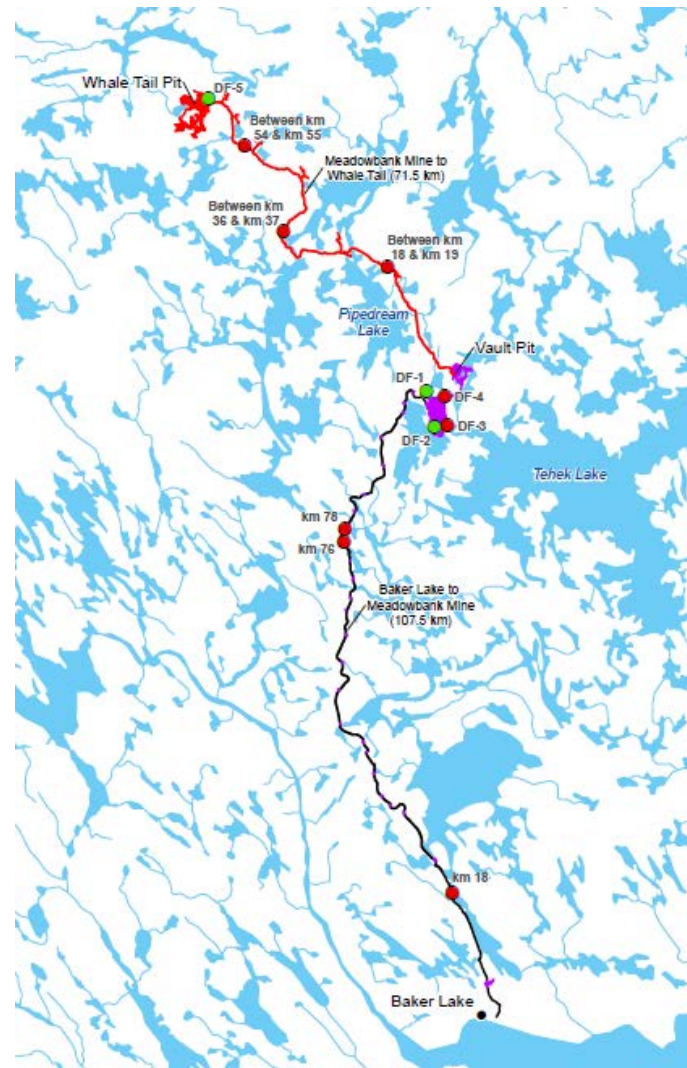
Monitoring and Adaptive Management

- Active monitoring at Whale Tail Pit and Meadowbank
- Passive Dustfall monitoring on the Whale Tail Pit haul
 - At km 18, 36, and 54 - dustfall monitoring location transects on haul road
 - At each transect - five dustfall monitoring locations at the following distances perpendicular to the haul road: 30 m (upwind); 30 m (downwind); 100 m (downwind); 300 m (downwind); and 1000 m (downwind).

➤ Continued Dustfall monitoring on AWAR

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- Low silt esker material is the preferred road top-dressing material used in construction.
- After construction, problem areas will be identified and reported by Agnico Eagle staff (e.g., haul truck drivers), and top dressed with low silt esker material.
- Initially, road watering will be applied to control problem areas.
- Where dust problems persist, a chemical suppressant (e.g., TETRA Flake [CaCl_2]) will be used.

[illegible]

- No specific traditional land and resource or cultural sites that are currently used were identified in the area during traditional knowledge workshops or consultation meetings with the local community
- At the local study area boundary, airborne noise levels from Project operations, including blasting and haul road traffic, are predicted to be below threshold limits

[illegible][illegible]

- Follow-up noise monitoring will be conducted twice each year using the same procedure currently used at Meadowbank Mine
- Blast monitoring will be conducted to protect fish habitat using the same procedure currently used at Meadowbank Mine
- DFO guidelines related to blasting near fish habitat will be followed

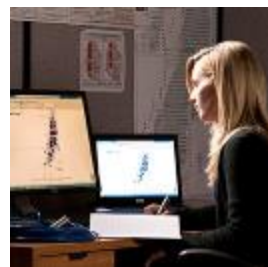
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[illegible]

➡ $\Delta^{\circ} \text{f}_{\text{HCl}} = -92.3 \text{ kJ/mol}$
 $\Delta^{\circ} \text{f}_{\text{H}_2\text{O}} = -285.8 \text{ kJ/mol}$
 $\Delta^{\circ} \text{f}_{\text{CO}_2} = -393.5 \text{ kJ/mol}$



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