



Indigenous and
Northern Affairs Canada

Affaires autochtones
et du Nord Canada



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Jericho Diamond Mine

Site Stabilization Plan

Teleconference with NWB
January 11, 2017

Canada



1. Project Location



Note: Jericho Mine is located ~260 km Southeast of Kugluktuk



2. Site Overview



Note: Yellow shaded area is Inuit Owned Land



2. Site Overview – North End – Hazardous Material Storage Area





2. Site Overview – Open Pit Area



Note: Yellow shaded area is Inuit Owned Land



2. Site Overview – Process Plant & Camp





2. Site Overview – Processed Kimberlite Containment Area (PKCA)





3. Current Site Conditions

1) Open Pit

- Rain and snow are filling the pit with water (~44+ years)
- Uranium (naturally occurring – from rock) levels above CCME* 0.015 mg/L (~8x)
 - Trending downwards



2) Processed Kimberlite Containment Area (PKCA)

- PKCA fine tailings dispersion via wind
 - Encapsulated in ice
- Cell B/C water levels need to be managed
 - Pumping over West Dam



*Canadian Council of Ministers of the Environment



3. Current Site Conditions (continued)

3) Airstrip & Roads

- Airstrip condition deteriorating
 - Soft spots (packed as part of Care & Maintenance activity)
- Roads are deteriorating but mostly usable

4) Buildings & Debris

- Truck Shop & Process Plant
 - Deteriorating slowly
- Camp
 - Water leaks, mould, etc.
- Debris throughout site
 - Vehicles, equipment, etc.





3. Current Site Conditions (continued)

5) Fuel Tanks & Berm

- All tanks are essentially empty but do contain residual fuel and/or sludge
 - Tank farm berms retain water and require management as part of Care & Maintenance activities





3. Current Site Conditions (continued)

6) Contaminated Soils

- Metal contaminated soils
~64 m³
- Fuel contaminated soils
~3,315 m³
- Some fuels on-site (risk of additional contamination)

7) Hazardous Materials

- ~1,816 m³ of hazardous materials (lead paint on Above Ground Storage Tanks, organics in drums/tanks)
- ~2,855 hazardous items (fluorescent lights, cylinders, fire extinguishers, batteries)





4. Site Stabilization Plan (SSP) Considerations

- Environmental Hazards at the Site
 - Assessment (address the highest risk items)
- Input from Stakeholders
 - Regulators (INAC, NIRB, NWB, NPC)
 - Land Owners
 - Kitikmeot Inuit Association
 - INAC - Jericho Working Group
 - Local Communities
 - Industry
 - Commercial Viability Assessment
- Budget
 - Security and 2016 Federal Infrastructure Initiative
- Timeframe
 - Must be Finished Work by March 2018





4. Site Stabilization Plan

1) Open Pit

- Create a Pit Lake
 - Increase the amount of water entering the pit by re-establishing the natural drainage path (remove the C1 Diversion)
 - The Pit should fill with water in ~11-15 years
 - Estimate flow is 328,000 m³/year (Tahera)
 - Construct a channel for future water flow out of the pit
 - Monitor the Uranium levels in the water
 - Treat if required





4. Site Stabilization Plan (continued)

2) Processed Kimberlite Containment Area (PKCA)

- Prevent fine tailings dispersion via wind
 - Cover the fine tailings in Cell A with coarse tailings
- Prevent the build-up of water
 - Breach Divider Dyke A
 - Breach the West Dam (estimated 210,000 m³)





4. Site Stabilization Plan (continued)

3) Airstrip & Roads

- No work planned other than minor maintenance during use

4) Buildings & Debris

- No work planned as part of this proposed project





4. Site Stabilization Plan (continued)

5) Fuel Tanks & Berms

- All tanks to be cleaned, dismantled and landfilled
- Fuel berms
 - Fuel contaminated soil will be removed and consolidated in a bermed area





4. Site Stabilization Plan (continued)

6) Contaminated Soils

- Metal contaminated soils
 - Ship off-site for disposal
- Fuel contaminated soils
 - Consolidated on-site

7) Hazardous Materials

- Organic liquids: oil & fuel
 - Incinerate and/or ship off-site for disposal
- Other hazmat: batteries, cylinders, florescent lights
 - Sorted, packaged and shipped off-site for disposal





5. Site Stabilization Plan Schedule



September 2016

- All permit applications submitted through NPC Portal

September 30, 2016

- NPC Conformity Determination

December 23, 2016

- NIRB approval

Feb-April 2017

- Tender Project, Award Contract

May 2017

- Mobilize to Site

May-October 2017

- Complete Site Work

October 2018

- Demobilize from Site



**Thank you
Matna
Qujaniamiik
Koana
Merci
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