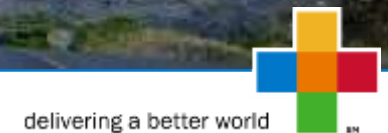


Contract Opportunities

Giant Mine Remediation Project

PARSONS

Louie Azzolini, Economic Development Officer
867-688-0655



Agenda

- Socio-Economic Strategy
- Front End Work Packages
- Future+ Project Works
- PSAB & AOC
- Results

Socio-Economic **Strategy**

- **Main Construction Management**
 - Goals
 - Actions
 - Strategy = Goals+Actions

Contracts (Work Packages) Over 2 Terms



TERM 1

Site Care and Maintenance Contracts 2018-2020

- Surface C&M
- Under Ground C&M
- Effluent Treatment Plant
- Effluent Treatment Plant Pilot
- Water Quality Lab Analysis
- Medical Laboratory Analytical Testing
- Site Security
- Emergency Medical



TERM 2

~2020-~2028 Closure and Reclamation Contracts (Partial List)

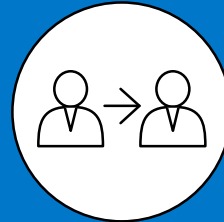
- Landfill Development
- Townsite Demolition
- Mill Building Demolition
- Tailings Treatment Plant Demolition
- Hazardous Waste Removal
- Pit Backfilling
- Borrow Excavation & production

Socio-Economic Goals



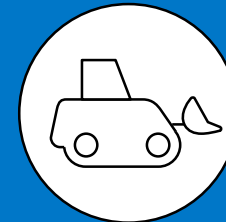
ACHIEVE COMMITMENTS

Achieve Parsons' & subcontractor Aboriginal Labour, Training and Procurement Commitments



EMPLOYMENT

Maximize MCM & Subcontractor Employment of Aboriginal & Local People



SUBCONTRACTS

Deliver Aboriginal & Local Economic Opportunities to Increase Local Employment and Skills

Socio-Economic Actions

MCM COMMITMENTS

- Establish a MCM Yellowknife office.
- Inform Aboriginal businesses of contract opportunities well in advance of posting them.
- Develop a Yellowknife-area businesses database.
- Explore the feasibility of pre-qualifying businesses.
- Potentially engaging directly with Aboriginal businesses to assist with the training and local market studies.

MCM HR STRATEGY

MCM Human Resource Staffing strategy for recruiting Aboriginal staff, succession planning and staff management

MCM SKILLS STRATEGY

Deliver a Skills Development strategy that actualizes training and skill development outcomes for Aboriginal staff.

INCENTIVES

- Incenting local contractors to implement lasting social and economic capacity building through Aboriginal & Northern training, direct hires, and subcontracting.
- Apply PSAB and AOC
- Apply procurement best practices that support local contracting and employment.

Socio-Economic Actions

TRAINING BEST PRACTICES

- Apply the knowledge of outside organizations that have experience in training Aboriginal & Northern residents in the procurement process.

PROCUREMENT BEST PRACTICES

- Apply the knowledge of outside organizations that have experience in contracting Aboriginal & Northern businesses in the procurement process.

LABOUR FORCE STUDIES

- Complete Labour Capacity Studies while developing the PIP and at key times (a minimum of 2 times) during the Implementation of the reclamation to determine the skills and availability of the Aboriginal and local workforce.

PROCUREMENT PLAN

- Develop a detailed Procurement Plan based on the PIP that aligns Aboriginal & Northern contracting opportunities based on labour capacity information.
- Packaging work to align with Aboriginal & Northern Business and Labour capacity.

Socio-Economic Strategy = Goals + Actions



Facilitate the delivery of the Giant Mine Remediation Project (GMRP)



Front End Work Packages

- Common Site Services
- Remediation of Remaining Underground Works
- Non-Hazardous Waste Landfill
- Demolition & Placement
- Start Freeze Program Construction
- Start Contaminated Surface Material Remediation

Front End Work Packages



Common Site Services

- Materials such as U/G Vehicles
- Mechanical Works – Vehicle Maintenance Garage
- Civil Works Including, New Maintenance Roads
- Fencing, Berms and Lay Down Areas
- Electrical – Site Power

Work Packages



Borrow Sources

- Drill & Assay Borrow Sources
- Locate New Outside Borrow Sources
- Borrow Development & Crushing
- Quarry Course Aggregate
- Quarry Fine Aggregate
- Quarry Rehabilitation

Work Packages



Non-Hazardous Waste Landfill

- Materials Procurement
- Landfill Construction
- Landfill Operation

Work Packages



Image of miner courtesy of Adrian Wyld/Canadian Press as found in <https://www.cbc.ca/news/canada/north/giant-mine-underground-stabilization-work-delayed-1.1405852>
Image of Giant Mine courtesy of the Narwal as found on <https://snbcqwbvtb-flywheel.netdna-ssl.com/wp-content/uploads/2018/06/Giant-Mine-Yellowknife-3684-1920x1281.jpg>

Front End Work Packages



Demolition & Placement

- Town Site Demolition
- Tailings Retreatment Plant Demo
- Remaining Mine Buildings

Work Packages



Start Freeze Program Construction

- Procurement of Materials
- Site prep. For the drill rig and passive freeze pipe installation
- AR1-2 Site prep.
- AR2 - Drilling & Pipe Install

Work Packages



Start Contaminated Surface Material Remediation

- Contaminated Soil Clean Up Urgent Work Packages
- Roaster Mill Area
- 30 KM Long Road Network

Work Packages



Future+ Project Works

Future+ Project Works



Work Packages Associated with the Following Works

- Backfilling
- Openings to Surface
- Freeze Program
- Filing Open Pits
- Contaminated Soil Removal/Remediation
- Baker Creek & Surface Drainage



Work Packages Associated with the Following Works

- Tailings Containment Areas
- Borrow Material
- New Water Treatment Plant
- Demolition of Site Infrastructure
- Site Services
- Landfill Closure

Future+ Project Works

U/G Stabilization

- backfilling of voids under pits B1, C1, and A2
- prepare Chamber 15 to accept arsenic-impacted waste
- dispose of arsenic-impacted waste in Chamber 15



Pit picture courtesy of thenarwhal.ca

Openings to Surface

- Establish new underground access
- progressive closure of openings at surface



Freeze Program

- AR3 drilling and passive freeze pipe installation, AR4 site prep.
- AR4 drilling and passive freeze pipe installation, AR1 site prep. Cont.
- AR1 drilling and passive freeze pipe installation



Thermosyphon Picture source: niche-canada.org

Filing Open Pits

- B1 Pit infilling
- A1 Pit infilling
- C1 Pit infilling
- A2, B2, B3, and B4 pits infilling



NWT Archives/Giant Mine Yellowknife Mines /N-2001-014-005s

Future+ Project Works

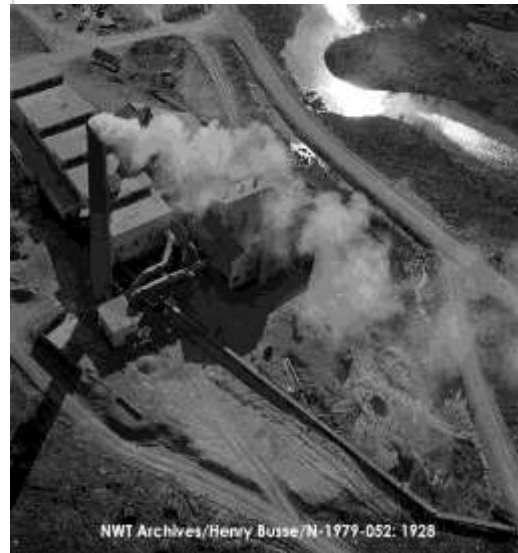
Contaminated Soil Removal/Remediation

- Townsite, and Shoreline Lands
- Areas and Dam 3
- excavation and covering of Jo Jo Lake tailings and Baker Pond tailings/se
- remediation of Disturbed and Undisturbed Areas



Baker Creek & Surface Drainage

- new channel construction



Tailings Containment Areas

- relocate South Pond tailings into Central and North ponds and dewater the Central/North Ponds
- dewater the Northwest Pond
- Place cover on Central, North Tailings Ponds, Foreshore Tailings Area, & Settling and Polishing ponds, stabilize dams
- place cover on the Northwest Pond and on the Central, North, and Settling and Polishing ponds; dam stabilization spillway construction
- cover on the Northwest Pond



Borrow Material

- borrow excavation and production, progressive rehabilitation
- final quarry reclamation



Future+ Project Works

New Water Treatment Plant

- construction of WTP, including mine water intake and outfall and WTP
- operation of WTP (with existing ETP available)
- operation of WTP



City of YK Water Treatment Plant. Source: myyellowknifelow.com

Demolition of Site Infrastructure

- mill building demolition
- C-Dry and machine equip. garage demolition
- ETP demolition
- hazardous waste removal in support of demolition, and progressive road and utility decommissioning.



NWT Archives/Giant Mine Yellowknife Mines /N-2001-014-0080

Site Services

- site roadway system upgrades
- fencing at core industrial area and open pits
- construction of new bridge at Baker Creek Reach 0



Landfill

- landfill closure



Contractor Staffing

Future+ Employment

U/G Stabilization

Category	Position
Entry Level	General Labourer Flag Person
Semi-Skilled	Articulated dump truck 5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor) Skid Steer / Telehandler / Mini Excavator/Manlifts Excavator 966 Loader Dozer operator U/G man carriers Driller's helper
Skilled	Technician - GeoFabric Liner Welder Crusher/ screener operator Mechanic Surveyor Driller Driller's helper Underground driller Underground shift boss Underground miners Supervisor Shift foreman
Professional	Safety officer Underground safety Mining engineer

Openings to Surface

Category	Position
Entry Level	General Labourer
Semi-Skilled	5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor) Excavator
Skilled	Carpenter Ironworker (Rebar or Structural) Mechanic Underground shift boss Underground miners Supervisor
Professional	Civil engineer

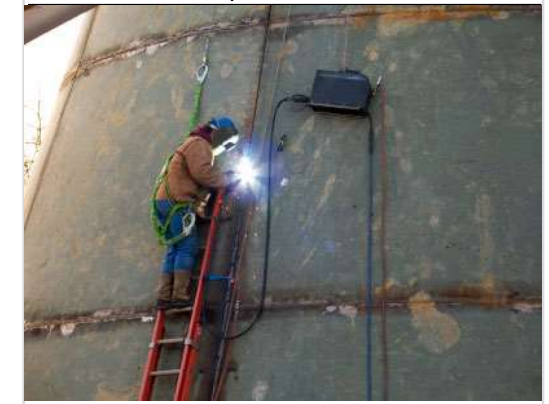


Freeze Program

Category	Position
Entry Level	General Labourer
Semi-Skilled	Articulated dump truck Dozer operator
Skilled	Instrument technician Technician - GeoFabric Liner Welder Crane Operator Mechanic Pipe fitter Pipe welder Surveyor Driller Driller's helper Supervisor
Professional	Safety officer

Filing Open Pits

Category	Position
Entry Level	Flag Person
Semi-Skilled	Articulated dump truck Excavator 966 Loader Dozer operator
Skilled	Mechanic Surveyor Supervisor



Welder picture courtesy of Nextreme.ca as found on <http://www.nextreme.ca/images/steelerection/img2.jpg>

Future+ Employment

Contaminated Soil Removal/Remediation

Category	Position
Entry Level	General Labourer
Semi-Skilled	Articulated dump truck Excavator 966 Loader Dozer operator Crusher/ screener operator
Skilled	Mechanic Supervisor Shift foreman
Professional	Environmental monitor Safety officer

Baker Creek & Surface Drainage

Category	Position
Entry Level	General Labourer
Semi-Skilled	Articulated dump truck Excavator 966 Loader Dozer operator
Skilled	Mechanic Driller's helper Surface driller Surface blaster Supervisor Shift foreman
Professional	Safety officer

Tailings Containment Areas

Category	Position
Entry Level	General Labourer Flag Person
Semi-Skilled	Articulated dump truck 5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor) Skid Steer / Telehandler / Mini Excavator/Manlifts Excavator 966 Loader Dozer operator
Skilled	Technician - GeoFabric Liner Welder Mechanic Surveyor Supervisor Shift foreman

Borrow Material

Category	Position
Entry Level	General Labourer Flag Person
Semi-Skilled	Articulated dump truck 5 Ton (Mixer/Water/Flat Deck w Picker /Vac /Tandem Dump /Compactor) Excavator 966 Loader Dozer operator
Skilled	Crusher/ screener operator Mechanic Surveyor Driller Driller's helper Surface blaster Supervisor Shift foreman
Professional	Safety officer

Future+ Employment

New Water Treatment Plant

Category	Position
Entry Level	General Labourer
Semi-Skilled	Articulated dump truck Excavator 966 Loader
Skilled	Instrument technician Carpenter Ironworker (Rebar or Structural) Crane Operator HVAC Electrician Millwright Pipe fitter Pipe welder Surveyor Supervisor
Professional	Safety officer Civil engineer Chemical engineer Mechanical engineer Electrical engineer

Demolition of Site Infrastructure

Category	Position
Entry Level	General Labourer
Semi-Skilled	5 Ton (Mixer /Water /Flat Deck w Picker /Vac /Tandem Dump /Compactor) Skid Steer / Telehandler / Mini Excavator/Manlifts
Skilled	Excavator Technician - Environmental Site Services Trades Supervisor Crane Operator Hazmat crew workers Hazmat FM Supervisor Shift foreman
Professional	Safety officer

Landfill

Category	Position
Entry Level	General Labourer Flag Person
Semi-Skilled	5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor) Excavator 966 Loader Dozer operator
Skilled	Technician - GeoFabric Liner Welder Mechanic Surveyor Supervisor Shift foreman
Professional	Safety officer

PSAB and AOC in MCM Request for Proposals & Invitations to Bid



PSAB

Aims to assist Aboriginal businesses compete for and win MCM contract opportunities by setting aside contracts for only Aboriginal businesses.

MCM uses PSAB Voluntary Set Asides to increase Aboriginal business participation. Voluntary Set-Asides are used when:

- Aboriginal business capacity exists
- Operational requirements, best value prudence and probity and sound contracting management can be assured.



AOC

Gives consideration in the evaluation of proposals/bids to the inclusion of Aboriginal employment, training and subcontracting in the area of the contract.

AOC Bid & proposal evaluation weighting includes business location, training, labour, and Procurement

Thank you!!

Loue Azzolini, Economic Development Manager

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MCM website <http://giantminerp.ca>