



# INDUSTRY DAY 2023 – DAY 1

Giant Mine Remediation Project

Parsons' Main Construction Manager (MCM) Team  
December 5, 2023



# TRADITIONAL TERRITORY ACKNOWLEDGEMENT

Parsons acknowledges that the Giant Mine is located in Chief Drygeese Territory. From time immemorial, it has been and is the traditional land of the Yellowknives Dene First Nation. The Giant Mine Site is also within M̄owhì Gogha Dè Nìı̀tłèè (boundary from the Tłı̄ch̄o Agreement) of the Tłı̄ch̄o government and on the traditional homelands of the Indigenous Métis of the North Slave Métis Alliance.







## **PURPOSE OF INDUSTRY DAY**

Parsons, as the Main Construction Manager (MCM) for the Giant Mine Remediation Project (GMRP), is acting as the Prime Contractor and Mine Manager. Parsons is committed to ensuring procurement is conducted in a fair, open, and transparent manner while addressing Comprehensive Land Claim Agreement (CLCA) obligations and the Government of Canada's procurement objectives regarding Indigenous opportunities.

Parsons is committed to aligning tendered work packages with Indigenous and local area contractors, while maximizing Indigenous training, employment, subcontracting, and other opportunities involving Indigenous citizens and businesses in carrying out the work under this project.

# AGENDA

Day 1 – December 5, 2023

- Welcome and Traditional Territory Acknowledgement
- Purpose of the Workshop
- CIRNAC Project Update
- Safety, Health, and Environment (SH&E)
- Environmental Management and Monitoring Program
- Socioeconomic Benefits
- Schedule of Project 2023-2038 - Overview
- Review of Work Packages 2024:
  - Demolition and Debris Removal – Core Industrial Area
  - HAC Soil Removal
  - Procurement Essentials
- Wrap up and next day preview







# Giant Mine

Remediation Project

**Industry Day**

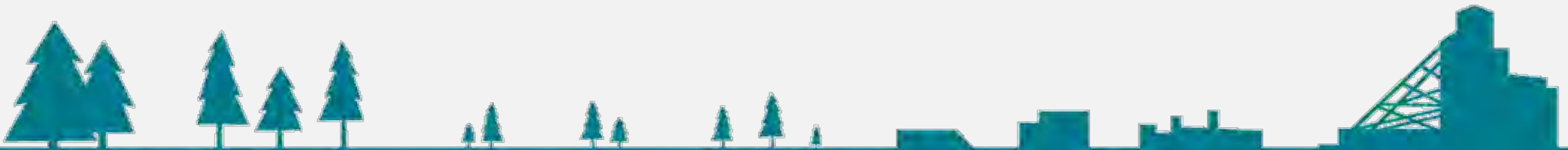
**December 5, 2023**



**Canada**

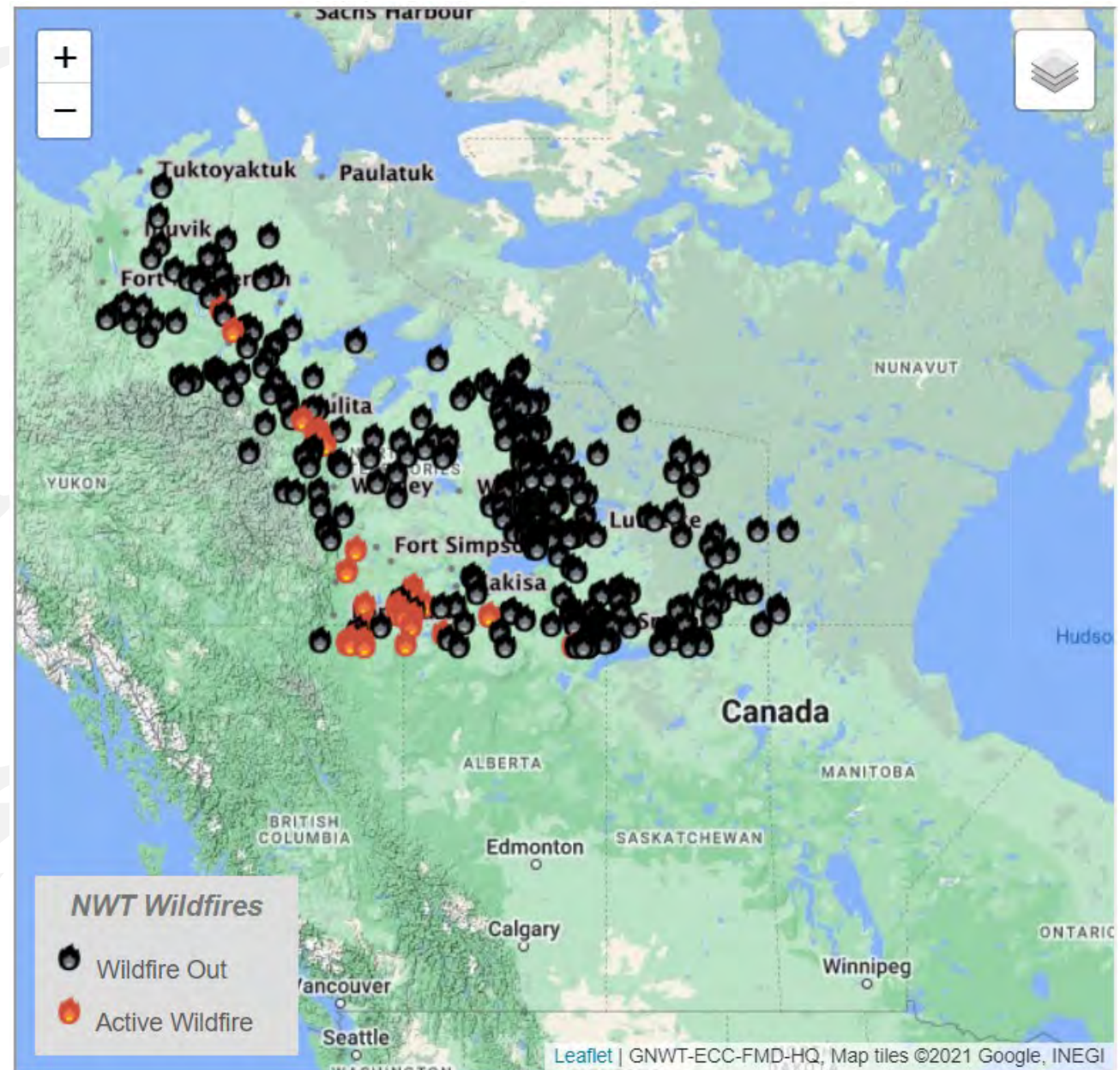


# Evacuation Updates



# NWT Wildfire Evacuation

The GMRP site shut down during the wildfires, as all staff were under the evacuation orders.



# During Evacuation

- Temporary suspension of the contractor's obligations were issued to allow them to re-deploy and provide fire suppression assistance.
- The pumps were turned on before evacuation to ensure the draw down of water in the underground was maximized before everyone left site.
- During the evacuation orders, the site was mostly unattended (some contractors remained and were able to check on the site conditions). A number of personnel were added to the list of essential workers once the fire management plan entered the re-entry phase. This allowed several people to return to site ahead of the general population.





# Post-Evacuation

- Upon returning to site, the first priority was to check the water levels. The water had only risen 2 meters, which has now been pumped and treated (this level is common for this time of year). There were no other concerns noted during the absence.
- As all contractors left the site, there was a three week pause in work. The impacts to the overall schedule and delays is not known yet. The aim is to work later into the season given the warmer weather to possibility make up the time and work missed during evacuation.
- The cost impact from the evacuation is also unknown at this point, but when there are updates of note, they will be reported back.
- Quite a bit of equipment was lent out to support the firefighting efforts. All has made it back except for some outstanding piping, which is not currently required.





# Site Updates





# Water Treatment Plant

The largest amount of work currently at the GMRP site is the Water Treatment Plant (WTP) construction.

The contractors have completed site preparation for the season.



# Deconstruction and Debris

Other work at site:

- Townsite Deconstruction
- Legacy Debris Pile collection





# Arsenic Sampling Program

600 kg of arsenic trioxide has been extracted from the underground stopes and chambers.

The arsenic has been shipped to GMOB's facility in Ontario.



# Other Site Updates

- The Effluent Treatment Plant (ETP) water treatment ceased annual operation on October 8.
- Tracer Dye Study was completed to determine where water seeping from Baker Creek via C1 Pit into the U/G.
- Test pitting was completed to further delineate soil contamination, specifically in the Great Slave Sailing Club area.





# 2023 Capacity Building Highlights

GMRP and its subcontractors issued a **total of 6 scholarships** and **supported 1 apprentice** in 2023.

- One scholarship issued by AECOM for \$5,000 to Dechita Naowo
- Three scholarships issued by Parsons for \$5,000 each
- GMRP issues, via annual Contribution Agreements, funding to YKDFN and NSMA every year that can be used for one \$5,000 scholarship each

Total funding allocated to scholarships by GMRP and its subcontractors in 2023 was \$30,000.

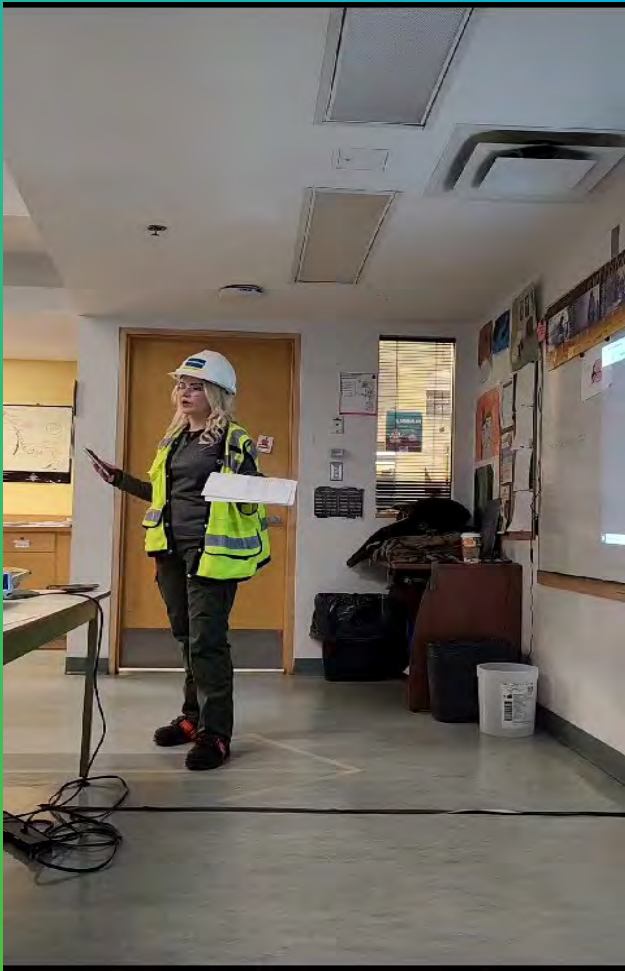


# GIANT MINE SAFETY AND HEALTH PROGRAM

TREVER AMENDT HEALTH AND SAFETY MANAGER



# GMRP MCM PRESENTATION TO GRADE 10 NORTHERN STUDIES ECOLE JOHN FRANKLIN HIGH SCHOOL



Madison Hornbeck presentation highlighted:

- Opportunity for work in the environmental sector
- A brief history of the Giant Mine's operations timeline
- Environmental/health and safety concerns that developed from mining operations
- Mitigation efforts during operations
- Remediation plan
  - Extensive scientific and technical research and community consultation that occurred
  - Freeze method
    - How it works
    - Why it is the lowest risk to H&S of workers and the community during and after remediation
    - Why it is the most appropriate of technical solutions available
    - Design tolerance for climate change
      - Ongoing climate and subsurface monitoring
      - Backup plan in event of thaw
  - Ongoing investigation of emerging technologies to ensure the best available solution is being implemented today and down the road
  - Was a young Lady in the classroom that wanted to take over Madison's role at the GMRP that was what we want to hear empowering young people from the community to step into the GMRP team!
  - Was questions on how it works to travel through the different levels of the UG. Were very interested on how things worked and were set up. Might be a great education piece to have grade 10/11 to tour the mine site.



# GMRP MCM PRESENTATION TO GRADE 10 NORTHERN STUDIES ECOLE JOHN FRANKLIN





# SAFETY, HEALTH, AND ENVIRONMENT

## Giant Mine Site Hazards

1. The GMRP contains an estimated 1.1 million cubic metres of contaminated soil throughout the Site. Much of it located in the North and South Tailings Ponds. Dust management is a priority on the GMRP. We are committed to reducing and eliminating dust from construction activities and legacy dust at the GMRP. We adapt the way we conduct the work and have multiple water trucks for wetting the roads and work areas with treated water.
2. Approximately 237,000 tons of arsenic trioxide contaminated dust is stored underground with additional drums stored in a locked facility on the surface (arsenic trioxide dust contains between 35 percent and 80 percent arsenic trioxide).
3. Located at the Northwest Pond Tailings Containment Area, the Hazardous Materials Storage Area contains approximately 1,400 pallets of containerized arsenic, asbestos, and other types of contaminated waste.
4. Currently, there is water treatment and recycling to reduce the exposure of contact water that contains various concentrations of arsenic trioxide, depending on the location on Site it is from.

# SAFETY, HEALTH, AND ENVIRONMENT

5. At least 37 mine Site openings to the underground workings and eight open pits. Continuous maintenance and safeguarding of underground work areas is part of the process for protecting arsenic underground in the designated chambers. This underground work includes scaling, bolting and mesh , erecting bulkheads, and pumping water.
6. Materials containing asbestos are present in many areas including, but not limited to, asbestos on building interior and exterior surfaces and associated with various types of insulation on piping, utilidors and boilers. Many of the buildings are not structurally sound for people to enter so, for this reason and the possibility of exposure, areas are barricaded or sealed to prevent unauthorized access. The demolition of old buildings and structures on Site is done following strict guidelines for asbestos and lead abatement, including the separation of waste for proper disposal or recycling, depending on the product.
7. Medical monitoring program has been pushed to the next level by adding an Industrial Hygienist to the Health and Safety team. He has been focused on adding more training / detailed reporting and more engagement with all subcontractors on exposure to arsenic and how to keep all workers health and safety as a top priority. All potential exposures at the GMRP have been addressed at a higher level with the expertise our new hygienists offers ( I call him our secret weapon ) !

# SAFETY, HEALTH, AND ENVIRONMENT

8. Blasting and explosives are an integral part of mining. Blasting will be conducted to level areas for new facilities and to create access to on-Site materials for road maintenance on Site. This year blasting commenced to prepare for the new Water Treatment Plant. This will continue for the next season as well!
9. As the volume of work, personnel, and equipment on Site increases, we will continue to utilize our Traffic Management Plan. Not only to keep people safe, but to improve efficiencies to workflow. This has been very effective in 2023 to maintain a controlled flow of traffic and minimize incidents.
10. New construction for the water treatment plant brings an increase in high-risk activities such as working at heights and cranes and rigging. This will be the next phase of the construction that will part of 2024.
11. Site security is maintained by having controlled access to the gated access points and security patrols to ensure the safety of personnel on Site. More site-specific training; stench gas release, fire water pump training. A big component to the GMRP team when it comes to any emergency response everything goes through security as they maintain control directed by the MCM.



# SAFETY, HEALTH, AND ENVIRONMENT

13. Joint Health and Safety Committee Meetings (JOSH), this has been a great achievement over the last year. Have all subcontractors involved in the 3<sup>rd</sup> Thursday of every month. Have had multiple recommendations being submitted to the Mine Manager and completed actions from the committee. This is a more open way for employees to address concerns and feel empowered when things are changed on site.

14. Have added 28 SWP / SOPs over the last 18 months with a lot of input from all subcontractors that work at the GMRP. PSHEP and EMSRP have gone through some great changes as well getting more dialed into the GMRP. Just had a Tabletop and Live Emergency Response drill's both very successful having all subcontractors involved. The feedback from the GMRP team has been creating change to be more effective for the site-specific goal to keep everyone safe at Giant and the Yellowknife community.

15. Safety culture has grown to a higher level with better reporting on incidents / near misses / hazard Id's. We have driven a culture of more transparency between the MCM and all subcontractors that work at GMRP. Having an open door to work with everyone and the community environment.

# SAFETY, HEALTH, AND ENVIRONMENT

16. Risk assessments have become a key to addressing hazards that come up on site to make sure there is a joint effort / collaboration with everyone that comes through the gates at the GMRP. The assessments may include the MCM, Subcontractors, PSPC, CIRNAC, WSP very specific to what needs to be addressed.

17. The Yellowknife wildfire evacuation was a great test of our emergency response. Had great community as part of the GMRP team and everyone working together to get all equipment staged and off site where required and all personnel accounted for when the site was officially shut down. Had a tour with the armed forces just before Parsons officially shut down the site to have a look if they could use Giant as a staging area for the wildfire support rescue team located in Yellowknife.

# ENVIRONMENTAL MANAGEMENT AND MONITORING PROGRAM

CAROLINE SERHAL, SENIOR ENVIRONMENTAL REGULATORY MANAGER



# ENVIRONMENTAL MANAGEMENT

Many components govern environmental management of Site activities

- 1** The Site operates under a Type A Water Licence (WL) and a Type A Land Use Permit (LUP) issued by MVLWB.
- 2** It is a requirement of the WL and LUP that Management and Monitoring Plans (MMPs) are prepared and adhered to.
- 3** Additional permits, authorizations and approvals will be required for various remediation activities (ex: DFO).
- 4** Environmental compliance and conformance is managed through an Environmental Management System (EMS) conforming to ISO 14001.
- 5** Environmental Protection Plans are required from Subcontractors to address all environmental management requirements relating to a work activity.

# Management and Monitoring Plans (MMP)

The Water Licence and Land Use Permit consist of regulatory requirements (Conditions) that must be adhered to for any project on-Site.

MMPs establish environmental requirements for remediation activities related to the monitoring of environmental conditions, the mitigation of environmental risks and the reporting of required data for the Giant Mine site.

In the event of an incident or action level exceedance, the MMPs further describe environmental response requirements and reporting protocols.

**It is the responsibility of Parsons and its subcontractors to comply with the practices and procedures set out in the WL, LUP and MMPs.**



**WATER MANAGEMENT**

**EROSION AND SEDIMENT CONTROL**

**WASTE MANAGEMENT**

**DUST MONITORING**

**WILDLIFE MONITORING**

**BORROW AND EXPLOSIVES MANAGEMENT**

### **Examples of Requirements in MMPs:**

- Water volumes/usage must be tracked
- Work may not proceed on or near water without approval from Parsons and approved erosion and sediment controls, TSS monitoring or Aquatic Life Management Plans must be in place for duration of work if required
- Every worker has the responsibility to report signs of erosion or sediment control failure
- All wastes recovered or generated must be characterized into waste categories presented in the Waste MMP and volumes must be tracked.
- Borrow materials usage, geochemical testing and stockpiles must be tracked and follow BEMMP.
- Every Subcontractor is responsible for reporting visible dust, even if it is not in their work area
- It is everyone's obligation to protect wildlife and minimize disturbance to wildlife habitat at the Giant Mine site

# ENVIRONMENTAL PROTECTION PLANS

- The purpose of the Environmental Protection Plan (EPP) is to identify and develop work procedures and operational controls which support environmental protection and achieve compliance with the WL, LUP, MMPs, other regulatory requirements and best management practices.
- Parsons will work with their subcontractors to develop the EPPs that are applicable to their work packages and to ensure environmental compliance with the project specifications and regulatory requirements related to the work activities.

**It is the responsibility of Parsons and its subcontractors to commit to and sign off on the EPPs.**



**LUNCH 11:30-1:00**



# **SOCIOECONOMIC BENEFITS/INDIGENOUS OPPORTUNITIES CONSIDERATIONS**

AARON BRAUMBERGER, SOCIOECONOMIC DEVELOPMENT MANAGER

# SOCIOECONOMIC OPPORTUNITIES

- 1** **Crown-Indigenous Relations and Northern Affairs Canada's (CIRNAC)**, mandate is to meet the Government of Canada's obligations and commitments to First Nations, Inuit, and Métis and for fulfilling the federal government's constitutional responsibilities in the North.
- 2** **CIRNAC**, as the Owner of Giant Mine, has a mandate to provide socioeconomic benefits to Indigenous and local communities through its Socioeconomic Strategy
- 3** To support the goals of the Socioeconomic Strategy, **Parsons** has developed a socioeconomic framework for the GMRP. This includes completing periodic labour capacity studies, engaging with local groups on upcoming work, and maintaining an office in Yellowknife.

# SOCIOECONOMIC OPPORTUNITIES

- 4 **Parsons** will also endeavor to package work – size, duration, complexity – to provide opportunities for Indigenous, northern, and local groups to carry out the work. (with support by Canada)
- 5 **Parsons** will work with Indigenous, northern, and local businesses to facilitate teaming with larger companies to pursue the work on Giant Mine where possible or feasible.
- 6 **Public Services and Procurement Canada (PSPC)**, is the Contracting Authority for **Parsons**, and associated government contracts supporting the GMRP (Design). They have the goal to contribute to the government’s social and economic objectives, including increasing the participation of businesses from Indigenous groups in the procurement system and increasing their capacity.
- 7 **Parsons’** goal is to maximize economic opportunities for northerners and local Indigenous groups through employment and procurement and by addressing socioeconomic effects. **Parsons** will also assist CIRNAC with addressing socioeconomic effects.





# **INDIGENOUS OPPORTUNITIES CONSIDERATIONS (IOC)**

# Indigenous Opportunities Considerations (IOC)

- IOC will be in every solicitation package
- Parsons will set a Minimum Eligibility Threshold (MET) for each category that we feel is achievable.
- A plan that outlines how a bidder will achieve their proposed commitments is required.
- Once you commit to a number on Labour, training, subcontracting and supplies, that number is carried forward for that contract. – You do not have to go above the MET and you can go below.
- You will be measured against those commitments and a bonus or penalty will be assessed at the close of the contract.
- Parsons is here to help you along the way, if you need help with Labour or training, we can connect you with people or training providers.
- Overall Goal is to support capacity building and provide opportunities

# IOC COMMITMENTS

Adjusted to local labour  
and contractor  
supply capacity



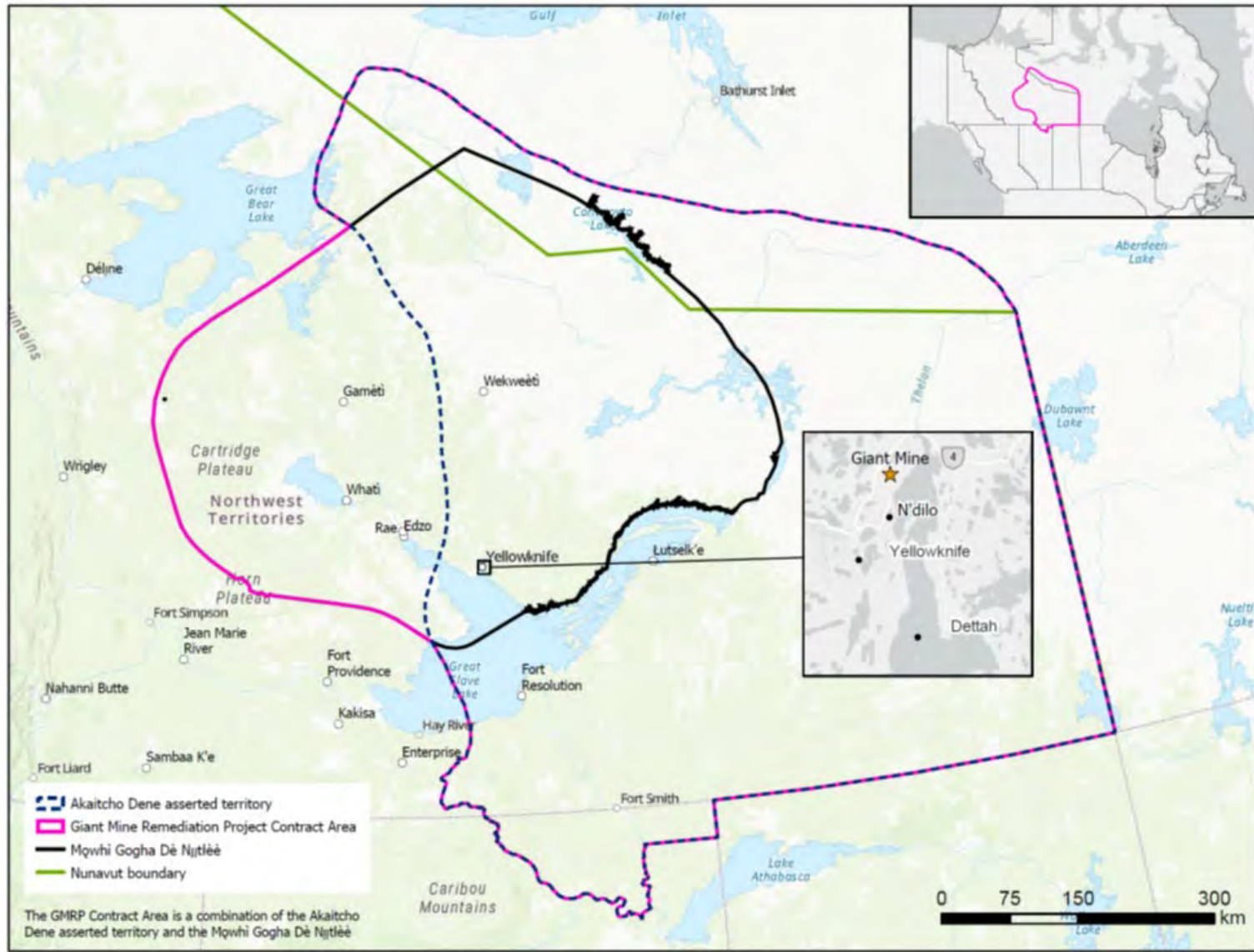
IOC bid weightings  
range from 15 to 35  
percent



Bid Weighting	Bid Commitment	Points Received
Indigenous Training	Hours	Prorated to highest bid
Indigenous Labour	Percent of total labour hours	Sliding scale
Indigenous Subcontracting/ suppliers	Percent of subcontract value	Sliding scale
Total		



# IOC – Area of the Contract



# SUBCONTRACTOR REPORTING



## TRAINING HOURS

Report all training delivered to your own staff and that of your subcontractors.

Total hours of training each labourer and apprentice receives.



## LABOUR HOURS

Report all labour hours (your own labour and that of your subcontractors), including labourers and apprentices,

Report employee name, title, and ID as well as Northwest Territories residential status and skill level.



## PROCUREMENT VALUE

Report on all your supplier/vendor expenses and your own internal expenses, e.g., labour.

- Your internal expenses (\$)
- Your subcontractors and suppliers and the value of your procurement (\$)

Subcontractor's monthly invoice amount to Parsons will match the IOC monthly report submission.



## CLOSEOUT

End of agreement closeout report and sign-off.

- Project IOC reporting
- Document due diligence undertaken to achieve your IOC commitments
- Provide supporting documentation such as invoices, work logs, payroll receipts, etc.

**Document your efforts to meet your IOC commitments**

# IOC MONTHLY REPORT TEMPLATE

## Monthly Employment and Training Reports

### Worksheet 1 - Employment and Training Record

Supplier Name

Employee Categorization					
Relationship to Supplier: Please specify "Supplier Internal Resource" or indicate the Subcontractor Name if applicable <sup>4</sup>	Employee ID <sup>5</sup>	Employee Gender <sup>7</sup>	Employee Category <sup>8</sup>	Skill Level <sup>9</sup>	NWT Residential Status <sup>10</sup>

Employment and Training Hours for Monthly - Apr 2020												
Total Hours Worked by Employee for Current	Training											
	EHS Awareness	EHS Health and Safety							EHS Environmental		General Training (Non-EHS)	
		Policy & Proc	HAZWOP	WHMIS	First Aid	Wildlife safety	Water safety	Fire response	Other	Spills response		Other

Report on anyone in your company or your subcontractors who are working under the agreement.

Template will be provided by Parsons.

Reports will be submitted via SharePoint upload.



# SCHEDULE OF PROJECT OVERVIEW

AARON BRAUMBERGER

# PURPOSE OF THE PROJECT IMPLEMENTATION PLAN (PIP)

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Project Implementation Plan (PIP) for the Giant Mine Remediation Project (GMRP) is the guiding plan that will be used as the basis to manage the execution of the Implementation of the scope of work for the duration of active remediation.

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Includes the schedule and the sequencing of work packages for the Implementation through to 2038.

The plan in the PIP may change and adjust based on a multitude of factors including socioeconomic factors, work package efficiencies and market demand.

# SCOPE OF WORK

**13 SEPARATE DESIGN PACKAGES TOGETHER DEFINE THE REMAINING WORK TO BE DONE.**

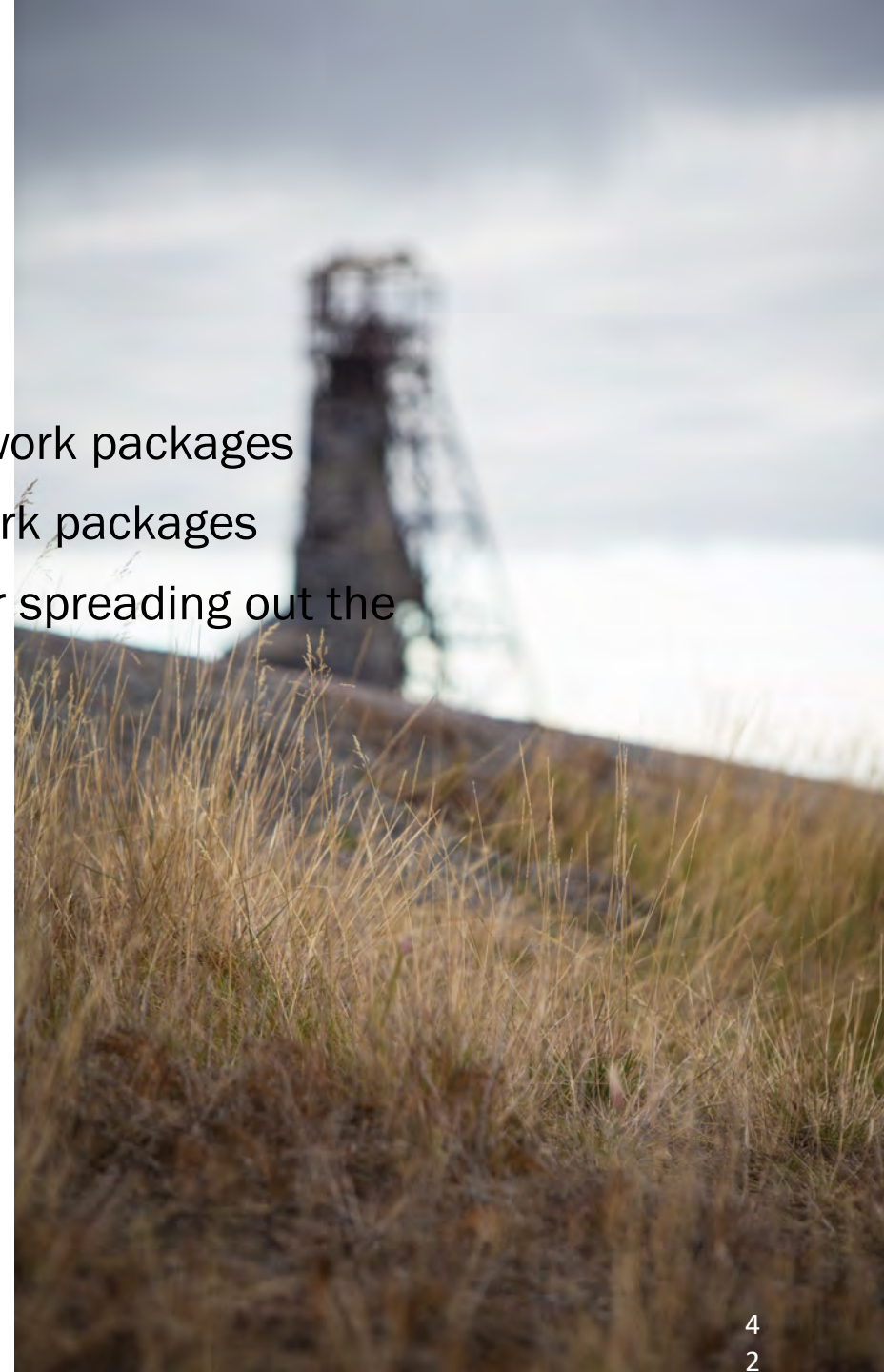
**THESE PACKAGES WILL BE BROKEN DOWN FURTHER INTO APPROXIMATELY 43 CONSTRUCTION WORK PACKAGES FOR PROCUREMENT PURPOSES**

1. Tailings
2. Contaminated Surficial Materials
3. Water Treatment Plant
4. Baker Creek Realignment
5. Surface Water Management
6. Stabilization and Remediation of Underground Works
7. Demolition and Debris Removal
8. Open Pit Closures
9. Ground Freeze
10. Openings to Surface
11. Non-Hazardous Waste Landfill
12. Borrow
13. Common Site Services (infrastructure and utilities)

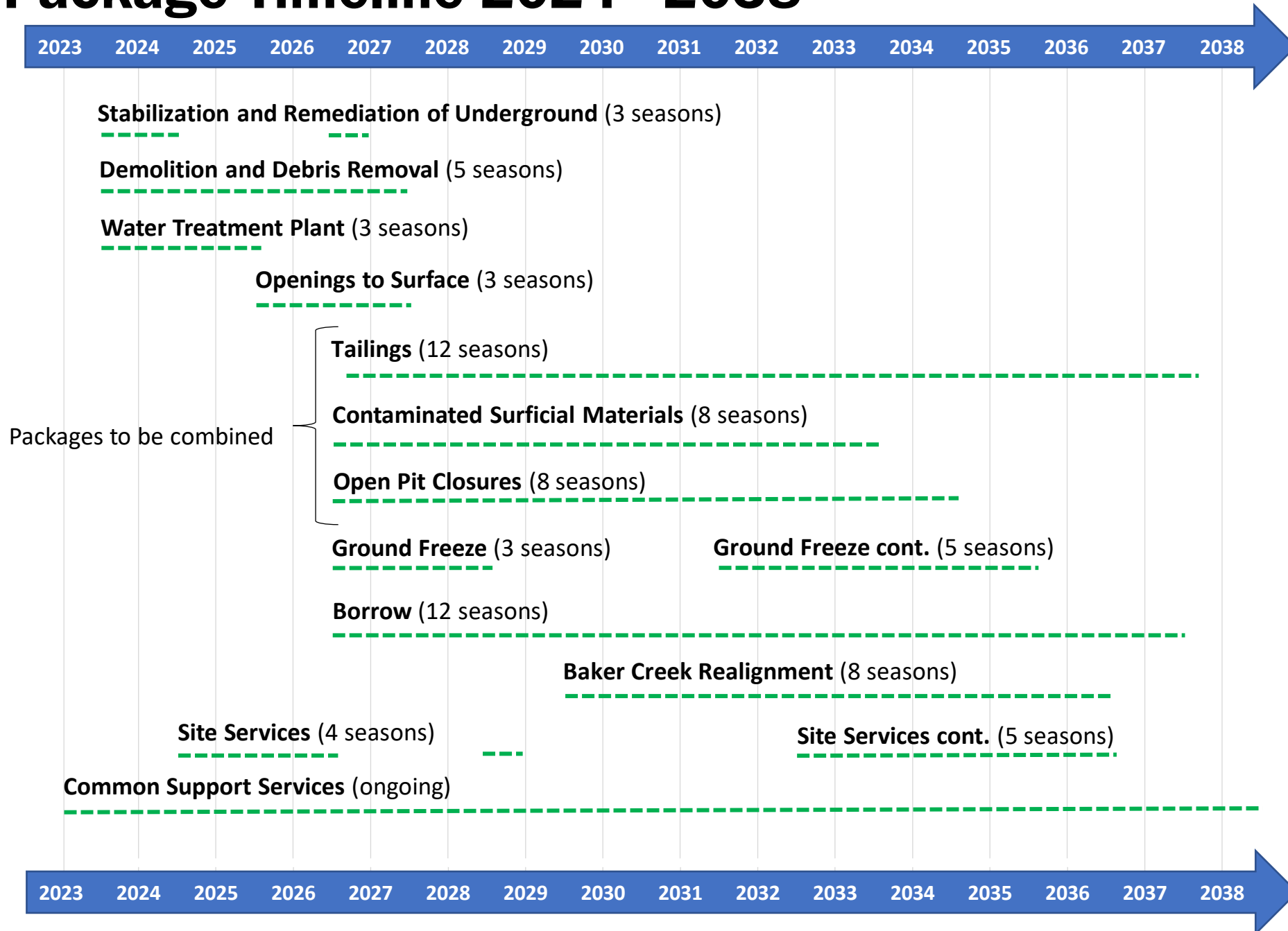


# A COMPLEX PROJECT WITH MANY DIFFERENT THINGS TO CONSIDER

- Schedule is until 2038
- Best sequencing of many work packages
- Many linkages between work packages
- Socioeconomic benefits for spreading out the work



# Work Package Timeline 2024 - 2038







BREAK 2:00-2:30



# DEMOLITION AND DEBRIS REMOVAL – CORE INDUSTRIAL AREA

Pre-Qualification  
Design-Bid-Build

MADHAVAN ANAPARA, CONSTRUCTION ENGINEER

# Demolition and Debris Removal – Core Industrial Area

- A Design-Bid-Build package – Abatement, Demolition and Subsequent removal of infrastructure waste.

4.1.7.1	Townsite Deconstruction
4.1.7.2	Legacy Debris Pile Disposal
4.1.7.3	Demo Core Industrial Area
4.1.7.4	Demo & Debris - All Other Areas

- Some of the buildings that are to be demolished are:
  - Mill plant, Reagent warehouse, New refinery, Mill Lab, most of Infrastructures in Core Industrial Area, a few sheds, warehouse and trailers, C-Dry, TRP (Tailings Reprocessing Plant)





# Demolition and Debris Removal – Core Industrial Area

## Highlights of Scope

- Conduct structural stability assessments of structures.
- Establish means and methods to handle highly contaminated structures, contents and equipment and abatement of hazardous building materials.
- Characterize, segregate and dispose of the hazardous, non-hazardous, legacy and operational wastes
- Demolition of infrastructure including, painted and unpainted wood, drywall, metals and steel, brick, paper, glass, plastic materials, furniture, rubber tires, mechanical and electrical equipment, and utility infrastructure existing across the Site.





# Demolition and Debris Removal – Core Industrial Area

## Highlights of Scope

- Many of the buildings are in a dilapidated condition and contain significant quantities of hazardous materials, the most notably being arsenic/arsenic trioxide, in some areas these items are known to be mixed together.
- Control exposure while handling materials that are highly contaminated like Arsenic, Cyanide, Sulphur, lead paint and Asbestos.
- Execution of multi-disciplines, in stages or phases carefully coordinated to ensure protection of the workers, public and the environment.
- Recyclables will be segregated, cut to size, and stored in a temporary holding area until the subcontractor's recyclers can mobilize to load and haul them away to an off-site facility.



# Demolition and Debris Removal – Core Industrial Area

## Highlights of Scope

- Non-Hazardous material will be disposed of in the On-Site Non-Hazardous Waste Landfill (NHWL)
- Arsenic Containing wastes will be disposed of in accordance with the waste MMP
- Any Asbestos containing debris will be disposed of on site



# Demolition and Debris Removal – Core Industrial Area

- List of some of the important plans and deliverables to be submitted before execution of work:
  - Subcontractor Safety, Health, and Environmental plan (SSHEP)
  - Environmental Protection Plan (EPP)
  - Quality Control Plan (QCP)
  - Construction Execution Plan (CEP)
  - Decontamination Plan
  - Deconstruction Plan
  - Initial Mobilization and Final Demobilization Plan,
  - Traffic Control Plan for Traffic Control Measures within the Construction Work Area.
  - Significance of these plans - All these plans will end up as "plan of the plan" to execute the project safely and within the stipulated time.





# Demolition and Debris Removal – Core Industrial Area

## STRUCTURAL STABILITY ASSESSEMENT

Due to the current condition of the Core Area buildings a number of structural deficiencies and other safety concerns have been identified including but not limited to:

- Loose exterior cladding
- Weakened condition of structural members (including roof members) due to water ingress
- Chemical corrosion on wood columns and concrete plinths
- Collapsing catwalks and missing handrails
- Voids below concrete floor slabs
- Flooded basements
- Deterioration and movement in concrete and wooden building foundations



# Demolition and Debris Removal – Core Industrial Area

A structural assessment of the building included in the package shall be completed:

- To identify the extent of any structural instability
- To identify safety hazards
- To identify any necessary stabilization required to complete the work.
- Determine the methods that will be utilized to safely deconstruct the structures in a manner that is consistent with the project specifications.

## Dates for Procurement & Construction

Pre-Qualification: December 2023

Request for Proposal: Q2 2024

Construction Start: Q3 2024





# HIGHLY ARSENIC CONTAMINATED (HAC) SOIL REMOVAL

Pre-Qualification  
Design, Build

HENRY WONG, DEPUTY SENIOR PROJECT MANAGER



# Highly Arsenic Contaminated (HAC) Soil Removal

- **Highlights of Scope**
- A contaminated soil management Construction Work Package (CWP).
- The management of the heavily arsenic-impacted soil (soil concentrations above 4,500 mg/kg) will include controlled surficial remedial excavation, soil washing to segregate fine-grained soils, batching the washed soil and backfill disposal into the empty underground Chamber 15.
- The HAC soil area is around the former Roaster building and extends all the way south to the C-Dry building.
- Estimated depth of HAC soil is 0.5 m, total estimated volume of HAC soil is ~52,000 m<sup>3</sup>, and 13,000 m<sup>3</sup> to 18,200 m<sup>3</sup> fine-grained soil for backfill.

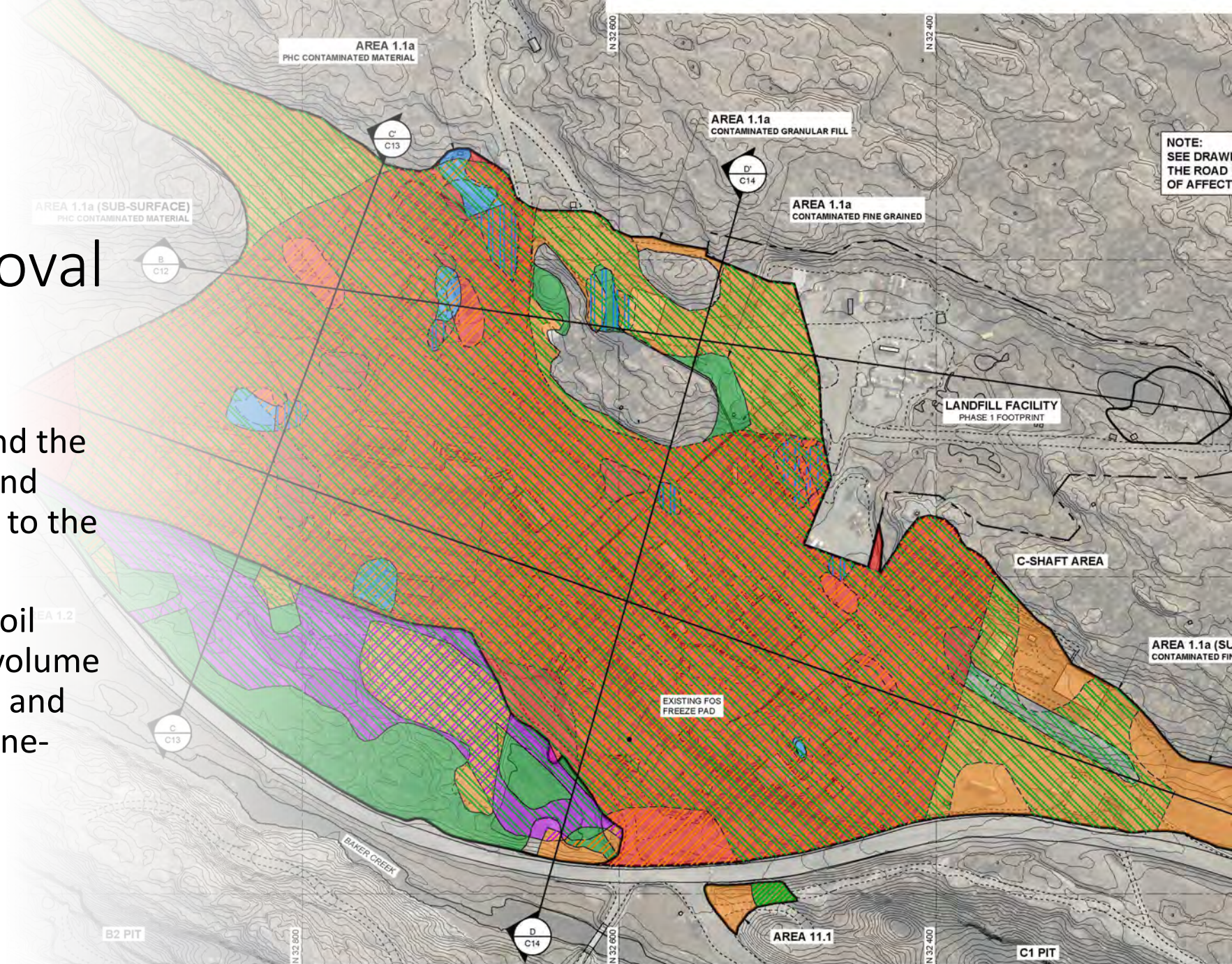




# Highly Arsenic Contaminated (HAC) Soil Removal

- **Highlights of Scope**

- The HAC soil area is around the former Roaster building and extends all the way south to the C-Dry building.
- Estimated depth of HAC soil is 0.5 m, total estimated volume of HAC soil is  $\sim 52,000 \text{ m}^3$ , and 13,000  $\text{m}^3$  to 18,200  $\text{m}^3$  fine-grained soil for backfill.





# Highly Arsenic Contaminated (HAC) Soil Removal

## Highlights of Scope

The implementation of the work package will include:

- Preparing Roaster site for use as a staging area for soil washing.
- Supply, operate, and maintain soil washing plant .
- Excavation and soil washing of all designated material in the Core Industrial Area (CIA). This includes stockpiles previously placed by previous work.
- Transport, place, and compact Owner-supplied coarse-grained backfill material to the area as required for erosion control, surface water management, and safe access for roads and walkways that need to be reestablished within the work area limits.
- Combine HAC sludge with cement, and place into Chamber 15.
  - The drilling of the access holes for being Chamber 15 are being done under separate work.
- Haul and dispose of washed material in C1 Pit or other area as designated by Parsons.



# Highly Arsenic Contaminated (HAC) Soil Removal

- This CWP is designated to be a Design-Build procurement primarily due to the soil washing and cement stabilization process required for the Chamber 15 backfill.
- A pre-qualification process will precede the tender process.
- The work is sequenced to follow Demolition and Debris Removal of the buildings and infrastructure in the CIA.



# Highly Arsenic Contaminated (HAC) Soil Removal

In consideration of worker exposure to HAC soil and significance of potential environment impacts, a key component of the Proposal review and Project Planning review will be the issuance of:

- Subcontractor Safety, Health, and Environmental plan (SSHEP)
- Environmental Protection Plan (EPP)
- Quality Control Plan (QCP)
- Construction Execution Plan (CEP)

# Highly Arsenic Contaminated (HAC) Soil Removal

- Prequalification of Bidders – Q1 2025
- Request for Proposal – Q4 2025
- Construction – Q2 2026



# PROCUREMENT ESSENTIALS

MICHELLE ANDERSON, SUBCONTRACT ADMINISTRATOR MANAGER

# PROCUREMENT ESSENTIALS

Basic licensing requirements of a bidder to participate in any type of solicitation

There are consistent administrative licensing requirements across all solicitations for Giant Mine. These include the following:

- A valid business license for the jurisdiction in which the work is located
- A valid GST registration number where the company is required by law to maintain a GST registration number
- A valid Northwest Territories WSCC registration number where the company is required to be registered with AHJ
- The ability to obtain Insurance and Agreement Security can be from \$1,000,000 to less than \$200,000,000 (post 2025)

# PROCUREMENT ESSENTIALS

Basic Safety requirements of a bidder to participate in any type of solicitation

There are consistent safety requirements across all solicitations for Giant Mine. These include the following:

- A WSCC Claims Cost Summary will be required to be submitted on all packages.
- To streamline bid development Parsons' recommends keeping an up-to-date Lost-Time Incident Rate (LTIR) report, covering the last three years of operation ready for submission with your bid.
- To streamline bid development, Parsons' recommends you regularly update your company's written Safety Program in advance of solicitations.



# PROCUREMENT ESSENTIALS

Basic Safety requirements of a bidder to participate in any type of solicitation

There are consistent safety requirements across all solicitations for Giant Mine. These include the following (continued):

- Review opportunities to form a strong network of experts you may need to employ in order to respond to a solicitation: e.g. you do not have an Industrial Hygienist on staff but need one to complete the bid submission for proposed work.
- As Giant Mine is a contaminated site, understanding the potential PPE costs to safely perform work activities on site will assist in accurate estimating for bid submissions.

# PROCUREMENT ESSENTIALS

Personnel requirements of a bidder to participate in any type of solicitation

There are consistent personnel requirements across all solicitations for Giant Mine. These include the following:

- Personnel must have the qualifications (certification, education, expertise, and related experience) relative to the work performance expected – update resumes regularly and identify which resume is being submitted for which key role.
- All supervisory positions will require either a WSCC Level I or WSCC Level II certification prior to working on site. You can choose to have the certification completed in advance of the bid or provide a guarantee that the personnel on submitted resumes will have that in place should you be awarded a subcontract. Proof of certification will be required prior to subcontract execution.

# PROCUREMENT ESSENTIALS

Basic Quality requirements of  
a bidder to participate in any  
type of solicitation

- To streamline bid development, Parsons' recommends you regularly update your company's written Quality Program in advance of solicitations.
- Common across solicitations are the following types of post award document requirements:
  - Key Personnel and Qualification Records
  - Agreement Drawings
  - Specifications
  - Addenda
  - Project Change Orders
  - Other modifications to Agreement
  - Copy of accepted Work and Progress Schedules
  - SSHEP and other safety related documents

Its important to understand the level of effort need to accomplish the administrative aspects of the work.



# PROCUREMENT ESSENTIALS

Basic Quality requirements of a bidder to participate in any type of solicitation

- Common across solicitations are the following document requirements (continued):
  - Training certifications
  - Safety data sheet (SDS) information for all chemicals on Site
  - Permits
  - Work Plan(s)
  - Activity or Job Hazard Analyses
  - Requests for Information (RFI) and responses
  - Permit Status Log .16 Specification Log
  - NCRs and NCR Log
  - Clearance letter from Workers' Safety and Compensation Commission (WSCC)
  - Other documents as specified in the Agreement

**THANK YOU  
MAHSI CHO**

Wrap-up of Day 1

Day 2 includes:

- Procurement Process Overview
- On-Site Borrow
- AR1 Freeze Pad Installation
- Underground Stabilization – Long Term Portal
- Earthworks Remediation Package
- Water Treatment Plant Operations



Hey, help us! Provide some feedback  
on the work Parsons is doing.

Scan QR code to complete Industry  
Day Survey.







# INDUSTRY DAY 2023 – DAY 2

Giant Mine Remediation Project

Parsons' Main Construction Manager (MCM) Team  
December 6, 2023



# TRADITIONAL TERRITORY ACKNOWLEDGEMENT

Parsons acknowledges that the Giant Mine is located in Chief Drygeese Territory. From time immemorial, it has been and is the traditional land of the Yellowknives Dene First Nation. The Giant Mine Site is also within M̄owhì Gogha Dè Nìttlèè (boundary from the Tłı̄ch̄o Agreement) of the Tłı̄ch̄o government and on the traditional homelands of the Indigenous Métis of the North Slave Métis Alliance.







## **PURPOSE OF INDUSTRY DAY**

**Parsons, as the Main Construction Manager (MCM) for the Giant Mine Remediation Project (GMRP), is acting as the Prime Contractor and Mine Manager. Parsons is committed to ensuring procurement is conducted in a fair, open, and transparent manner while addressing Comprehensive Land Claim Agreement (CLCA) obligations and the Government of Canada's procurement objectives regarding Indigenous opportunities.**

**Parsons is committed to aligning tendered work package with Indigenous and local area contractors, while maximizing Indigenous training, employment, subcontracting, and other opportunities involving Indigenous citizens and businesses in carrying out the work under this project.**



# AGENDA

Day 2 – November 2, 2022

- Welcome
- Site Wide Surveying
- Overview of Procurement Process
- Review of remediation work:
  - On Site Borrow
  - AR1 Freeze System Installation
  - Long Term Access Portal
  - Earthworks Remediation Package
  - Water Treatment Plant Operations
- Wrap up





# SITE WIDE SURVEYING

MADHAVAN ANAPARA

# Site Wide Surveying

- This work package is for the supply of all labour, equipment, tools, and supervision necessary to conduct surface - surveying and geomatics engineering services for the projects undertaken at the Giant Mine site in a safe, timely, and cost-effective manner.
- This includes:
  - Surveying general procedures, maintaining accuracies as specified in the specifications.
  - Global Positioning System (GPS) surveys
  - Aerial surveys
  - Preliminary surveys
  - Construction surveys
  - Perform survey data research and preliminary field reconnaissance.





# Site Wide Surveying

- Perform drone enabled topographic survey as required basis.
- Provide pre-construction and post-construction survey to measure fill quantities and validation of As-Built conditions.
- Staking of co-ordinates of work locations and boundaries before the execution of the projects.
- Annual Giant Mine LiDAR survey update



# Site Wide Surveying

- The Subcontractor must provide qualified project personnel, which include, but are not limited to, the following:
  - Site Surveyor/Field Lead
  - Field Survey Technician
  - Site Helper
- The Site Surveyor/Field Lead must:
  - Be registered land surveyor, licensed to practice in Place of Work.
  - Fulfill the NWT Mine Health and Safety Act requirements and associated Regulations.
  - Be certified as a Level 1 Supervisor.
  - Have at least five years of experience working in a similar capacity

Request for proposal : Q2 2024

Up to October 2026 with optional to continue  
up to October 2029



# PROCUREMENT

MICHELLE ANDERSON, SUBCONTRACT MANAGER GMRP





# PROCUREMENT CYCLE

# PROCUREMENT

Basic components of a  
work package

- Procurement Strategy for Indigenous Business (PSIB) is the first consideration in solicitation development
- Advanced Notices are posted to give potential bidders time to assemble the general requirements we noted yesterday so you can manage your time on the specific criteria items that helps you to get the most points scored

# PROCUREMENT

Basic components of a work package

## Components of a solicitation:

- Scope of Work (SOW) including specifications and drawings and regulatory requirements
- Basis of Payment (BOP)
- Bid Submission Form (BSF)
- Contractor Safety Evaluation (CSE)
- Indigenous Opportunities Commitment (IOC)
- Terms and Conditions
- Procurement Strategy for Indigenous Business (PSIB) form



# PROCUREMENT

Basic components of a work package

## Components of a solicitation:

- Registration is necessary for all pre-bid conferences, even if held as a virtual call
- Every solicitation will require insurance and construction work over \$150,000 will also require bonding or letters of credit
- Bid Evaluation is based on safety statistics response, technical requirements response, IOC response, and financial response as outlined in the criteria of each solicitation package

Solicitation Component	Available Points
<b>MANDATORY BID DELIVERABLES</b>	
<b>TECHNICAL PORTION (OVERALL)</b>	<b>## PERCENT</b>
<ul style="list-style-type: none"> <li>▪ <b>Project Experience</b></li> </ul>	
<ul style="list-style-type: none"> <li>▪ <b>Management and Organizational</b></li> </ul>	
<ul style="list-style-type: none"> <li>▪ <b>Project Understanding</b></li> </ul>	
<ul style="list-style-type: none"> <li>▪ <b>Staffing Plan</b></li> </ul>	
<ul style="list-style-type: none"> <li>▪ <b>Preliminary Schedule</b></li> </ul>	
<ul style="list-style-type: none"> <li>▪ <b>Safety LTIR</b></li> </ul>	
<b>FINANCIAL PORTION</b>	<b>## PERCENT</b>
<ul style="list-style-type: none"> <li>▪ <b>Attachment A Basis of Payment</b></li> </ul>	
<ul style="list-style-type: none"> <li>▪ <b>Attachment B Bid Submission Form</b></li> </ul>	
<ul style="list-style-type: none"> <li>▪ <b>Northwest Territories &amp; Nunavut WSCC Claims Cost Summary or equivalent</b></li> </ul>	
<b>IOC PORTION</b>	<b>## PERCENT</b>
<ul style="list-style-type: none"> <li>▪ <b>Attachment D Indigenous Opportunities Consideration</b></li> </ul>	
<ul style="list-style-type: none"> <li>▪ <b>Attachment G Procurement Strategy for Indigenous Business</b></li> </ul>	



# PROCUREMENT

Basic components of a work package

## Components of a solicitation:

Several submittals are required, plan ahead if you can

Reference Summary	Timeline for Submission to Parsons
<b>Div. 0 - Solicitation Package</b>	
Technical portion	Provide with bid
Attachment B - Basis of Payment Schedule	Provide with bid
Attachment C - Bid Submission Form	Provide with bid
Workers' Safety and Compensation Commission Claims Cost Summary for the past three years	Provide with bid
Preliminary schedule	Provide with bid
Preliminary Environmental Protection Plan	Provide with bid
Preliminary Construction Execution Plan	Provide with bid
Quality Control Plan	Provide with bid
Resumes of key personnel and backup key personnel	Provide with bid
Signed Attachment F Indigenous Opportunities Consideration	Provide with bid
Attachment E Contractor Safety Evaluation	Due at award and prior to execution of Agreement
Updated Subcontractor Safety, Health, and Environmental Plan (SSHEP)	Due at award and prior to execution of Agreement
Northwest Territories Workers' Safety and Compensation Commission	Due at award and prior to execution of Agreement
Certificate of Recognition (COR) or Registered Safety Plan (RSP or equivalent)	Due at award and prior to execution of Agreement
Updated Environmental Protection Plan (EPP)	Due at award and prior to execution of Agreement
Updated Construction Execution Plan (CEP)	Due at award and prior to execution of Agreement
Updated Quality Control Plan (QCP)	Due at award and prior to execution of Agreement
Certificate of insurance (COI)	Due at award and prior to execution of Agreement
Agreement security	Due at award and prior to execution of Agreement



# PROCUREMENT

Tools you may see in a solicitation

## Request for Proposal

RFPs can be used in a competitive process when the methodology for the services requested will need to be described by the bidder to be evaluated. Points evaluation for various technical criteria as well as safety criteria are applied. IOC thresholds are set and weighting for the financial portion of the bid is less than 50 percent.

## Invitation to Tender

An ITT can be used in a competitive process when the materials or services requested are prescriptive in nature but minimal points for non-technical criteria such as evaluation of key personnel qualifications are necessary to ensure the materials or services will meet the specifications. An IOC threshold is applied and if the work involves anything other than delivery of product, minimal points on safety criteria will also apply. Weighting for the financial portion of the bid is more than 50 percent.

# PROCUREMENT

Tools you may see in a solicitation

**Request for Quote (RFQ)** can be used in a competitive process when the materials or services requested are prescriptive in nature and no evaluation other than pricing is necessary to acquire the materials or services. An IOC threshold is applied and, if the work involves anything other than delivery of product, minimal points on safety criteria will also apply.

**Request for Standing Offer RFSO** can be used in a competitive process when the materials or services requested will be divided, by separate agreements, among the successful bidders. Minimal points evaluation for technical criteria may be applied to ensure the materials or services will meet the specifications. An IOC threshold is applied and, if the work involves anything other than delivery of product, minimal points on safety criteria will also apply.

# PROCUREMENT

Tools you may see in a solicitation

**Sole Source (SS)** can be used when a CWP is valued at less than CA\$100,000, if only one supplier can be used for proprietary reasons, or if running a competitive process is not possible based on capacity. An IOC threshold is applied and, if the work involves anything other than delivery of product, minimal points on safety criteria will also apply.



# PROCUREMENT STRATEGY FOR INDIGENOUS BUSINESS

## Eligibility

### Eligibility for Procurement Strategy for Indigenous Business (PSIB):

A business must be at least 51% owned and controlled by Indigenous peoples. An Indigenous business can be:

- a band as defined by the Indian Act
  - a sole proprietorship
- or
- a limited company
  - a co-operative
  - a partnership
  - a not-for-profit organization in which Indigenous persons have at least 51% ownership and control
- or
- a joint venture consisting of 2 or more Indigenous businesses or an Indigenous business and a non-Indigenous business, provided that the Indigenous business or businesses have at least 51% ownership and control of the joint venture

# PROCUREMENT STRATEGY FOR INDIGENOUS BUSINESS

How PSIB is applied to  
Solicitations

## PSIB Regional Conditional

- When it is impossible to determine Regional PSIB Indigenous Business capacity with at least **two** potential PSIB Regional Indigenous Businesses, then the solicitation may go PSIB Regional Conditional.
- This means that the solicitation is open to PSIB Regional Indigenous Businesses and Regional non-Indigenous businesses, evaluation being in that order.
- In the case of the PSIB Regional Conditional strategy being implemented, if two or more Indigenous Businesses from the Area of the Contract bid, the work package will be restricted to these Indigenous Businesses in the Area of the Contract.
- If less than two Regional Indigenous Businesses bid, the work package will be open to any businesses in the Area of the Contract.

# PROCUREMENT STRATEGY FOR INDIGENOUS BUSINESS

How PSIB is applied to  
Solicitations

## PSIB Regional

- When there are two or more Regional PSIB Indigenous Businesses with confirmed affiliation with any Indigenous Groups that demonstrates the capacity to perform the work, then the solicitation is PSIB Regional.
- PSIB Regional bidders maybe subject to prequalification prior to posting the solicitation on MERX. If there is only one prequalified local PSIB Indigenous Business, then the solicitation will go PSIB Regional Conditional.



# PROCUREMENT STRATEGY FOR INDIGENOUS BUSINESS

How PSIB is applied to  
Solicitations

## PSIB

- When a Regional or Regional Conditional PSIB cannot be done, a Procurement Strategy for Indigenous Business open to all Indigenous groups in Canada may be considered.

## Non- PSIB

- When there is no PSIB Indigenous business identified to perform the work, then the solicitation will go non-PSIB, but will still apply the required IOC Commitments as with all solicitations.

BREAK

10:15-10:30





# ONSITE BORROW

Pre-Qualification

Design Bid Build

MADHAVAN ANAPARA

CONSTRUCTION ENGINEER



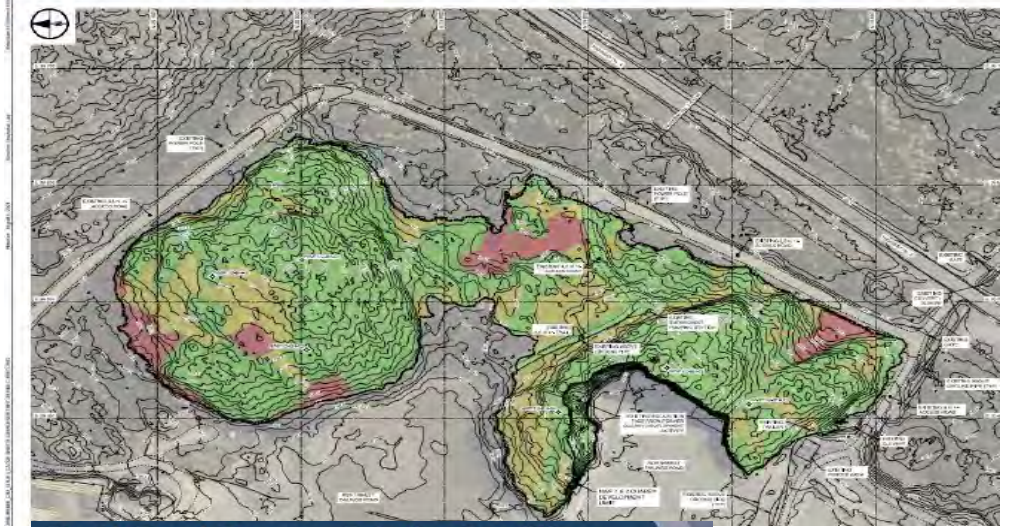
# ONSITE BORROW

- A Design-Bid-Build package – Development of Onsite quarry, produce aggregate of different gradations as per contract, stockpile and supply within the stipulated time frame.

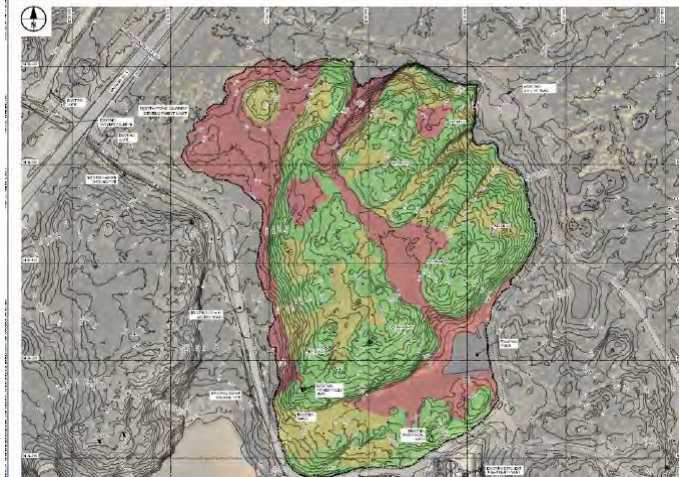
Potential Onsite quarries in the order of development:

- Northwest Pond 1 and 2
- North Pond
- North Pond Spillway
- Northwest Pond 3
- Baker Pond
- Brock

NWP1&2 Quarry – Existing Conditions



North Pond Quarry – Existing Conditions

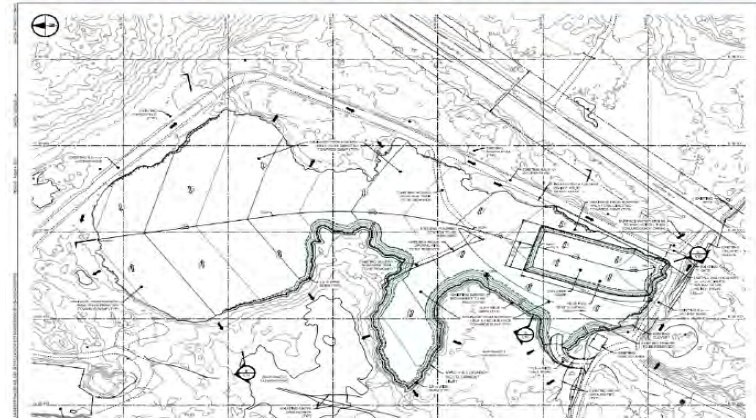


# ONSITE BORROW

## HIGHLIGHT OF SCOPE.

- Removal of Vegetation, Overburden and Contaminated soil.
- Removal of existing infrastructures and debris within quarry development area.
- Reduce visual impact during development.
- Implement suitable measures to minimize impact of noise and dust outside the quarry.
- Aware of nearest water body and take necessary water run-off control measures.
- Tap off overhead power source and maintain electrical supply system.
- Development of Surface water collection system during quarry development.

NP1&2 Quarry – General Layout



North Pond Quarry – General Layout





# ONSITE BORROW

## HIGHLIGHT OF SCOPE.

- Establish blasting sequence and potential blasting patterns to keep up the necessary production.
- Maintain access roads within then battery limit.
- Aggregate Processing Facility arrangement and installation of necessary equipment and infrastructures.
- Placement of weighing scale and monitor production.
- Stockpiling products, supply and maintain inventory control
- At the end of the project establish positive drainage to final grade.





# ONSITE BORROW

Plans and Deliverables to be submitted before and during the quarry development:

- Subcontractor Safety, Health, and Environmental plan (SSHEP)
- Environmental Protection Plan (EPP)
- Quality Control Plan (QCP)
- Construction Execution Plan (CEP)
- **Quarry Development Plan**
- Blasting Plan
- Geochemical Verification Plan.
- Initial Mobilization and Final Demobilization Plan
- Traffic Control Plan for Traffic Control Measures within the Construction Work Area and well as Public Highway usage.



# ONSITE BORROW

## Strategy:

- Production of Tailing cover material early on and storing meanwhile utilizing the by product for immediate site.
- Stockpile the different gradations of aggregate at different locations and operate as supply centers for other packages.
- Establish a dynamic stockpile management and inventory control

Pre-Qualification: Q1 2025

Request for Proposal: Q4 2025

Construction Start: Q2 2026

## Estimated Gradations and Volumes:

- 300 mm aggregate: 1.5 million cubic metres
- 80 mm aggregate: 400,000 cubic metres
- 25 mm aggregate: 750,000 cubic metres





# ONSITE BORROW

Estimated average annual demand, includes different gradations and quantity of production.

Year	Estimated Demand (Cubic Metres)
2027	300,000
2028	450,000
2029	250,000
2030	850,000
2031	900,000
2032	600,000
2033	250,000
2034	250,000
2035	150,000
2036	300,000
2037	250,000





# AR1 FREEZE SYSTEM INSTALLATION

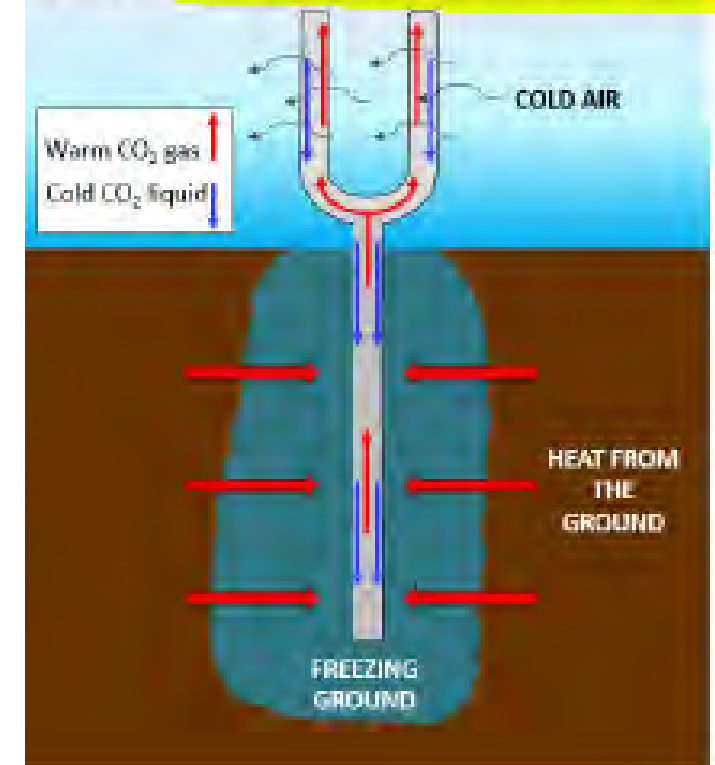
Pre-Qualification  
Design, Bid, Build

HENRY WONG, DEPUTY SENIOR PROJECT MANAGER

# AR1 Freeze System Installation

- **Highlights of Scope**
- A drilling and specialized instrumentation install Construction Work Package (CWP).
- The construction of the freeze system for Area AR1.
  - 1 of 4 total freeze systems at the Giant Mine
- 189 Long Thermosyphons, 67 Short Thermosyphons, and 23 Monitoring holes are required for AR1.
- Each thermosyphon will consist of a drilled 203 mm diameter open borehole, into which a 100 mm Schedule 80 (Sch80) welded steel pipe will be grouted. Borehole lengths range from 15 m to 156.5 m.
- ~18,000 linear meter of drilling for AR1.

Figure 4-2: Description and Function of a Passive Thermosyphon



# AR1 Freeze System Installation

## Highlights of Scope

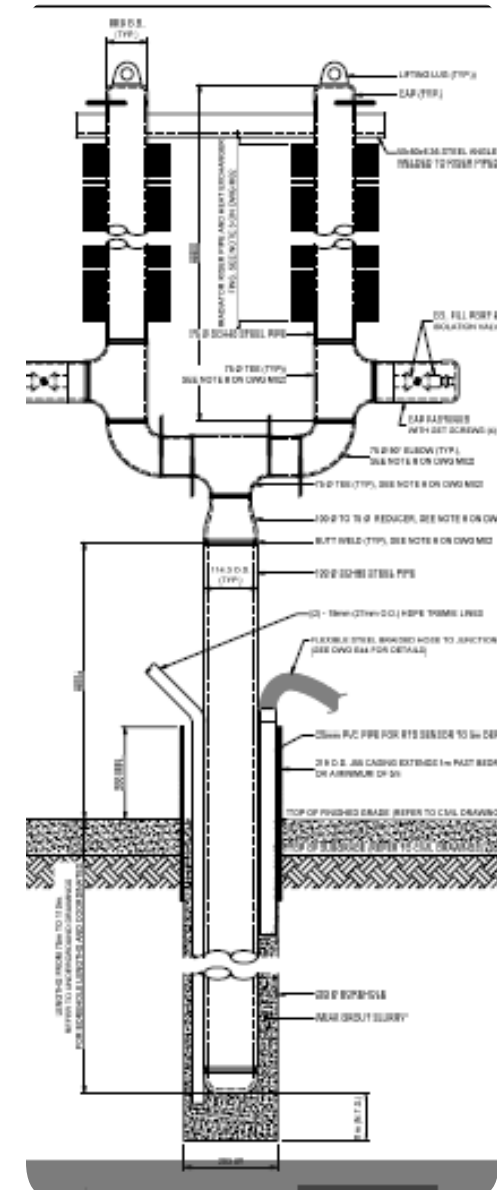
Implementation of the work package will include:

- Drilling including supply and installation of casing, thermosyphon and instrumentation pipes.
- Fabrication, supply, and installation of the thermosyphon radiators and connection piping.
- Pressure testing and charging to make the thermosyphons fully functional.
- Electrical and instrumentation I/O cabinets and distribution panels including terminations of all wiring downstream of primary feed.
- Fabrication and installation, wiring, and testing of the control panel in the WTP.
- Testing and commissioning as required by the specifications.



# AR1 Freeze System Installation

- This CWP is designated to be a Design-Bid-Build procurement.
- A pre-qualification process will precede the tender process.
- The work is sequenced to follow:
  - Construction of the new Water Treatment Plant



# AR1 Freeze System Installation

- Prequalification of Bidders – Q2 2025
- Request for Proposal – Q1 2026
- Construction – Q2 2026



LUNCH 11:30 – 1:00



# LONG TERM ACCESS PORTAL

Design- Build

MADHAVAN ANAPARA

CONSTRUCTION ENGINEER

# Long Term Access Portal

## Purpose:

- Re-entry of Mine in case of unexpected conditions and to support ground freezing reversibility.
- Need access for Underground inspection to address occurrence such as deep underground instability.
- Access to Underground frozen arsenic storage areas to support future reversibility.



# Long Term Access Portal

The project will be solicited as Design – Build package after Pre-qualification.

Scope of Design/Construction consists of not limited to:

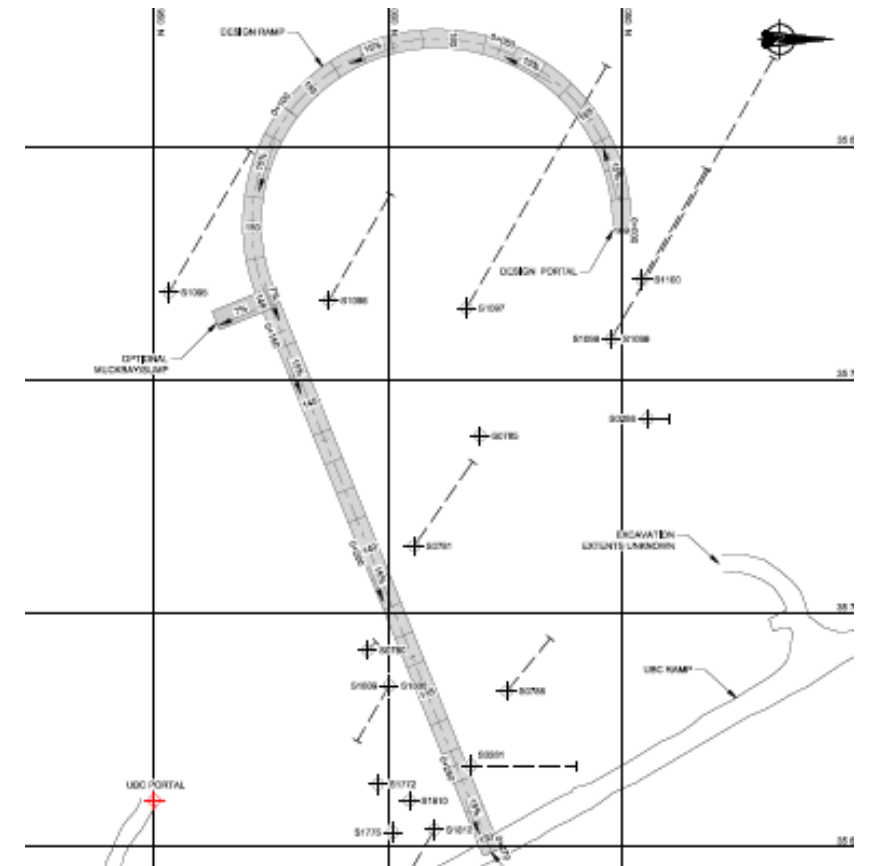
- Access road connecting portal location to travel ways in surface.
- Primary surface laydown for staging equipment, supplies and stock-pile blasted rock
- A portal location at a 15mt tall rock outcrop
- Around 270mt long ramp that connects portal to existing Underground workings
- 10mt long muck bay connecting ramp alignment facilitate muck handling



# Long Term Access Portal

Scope of Construction consists of but is not limited to:

- Construction of new portal, including not limited to:
  - Scaling
  - Drilling
  - Blasting
  - Mucking
  - Ground support Installation
- Electrical, pumps and mechanical equipment operation
- Required for portal construction.
- Access Road
- Laydown area
- Underground inspection



# Long Term Access Portal

## Special notes:

- Elevation of portal and ramp shall be above surficial Probable maximum flood elevation
- and Predicted Underground mine water raise elevation
- Usage of good quality rock mass for ease construction and long-term stability.

Pre-Qualification: Q2 2025

Request for Proposal: Q4 2025

Construction Start: Q2 2026





# EARTHWORKS REMEDIATION PACKAGE

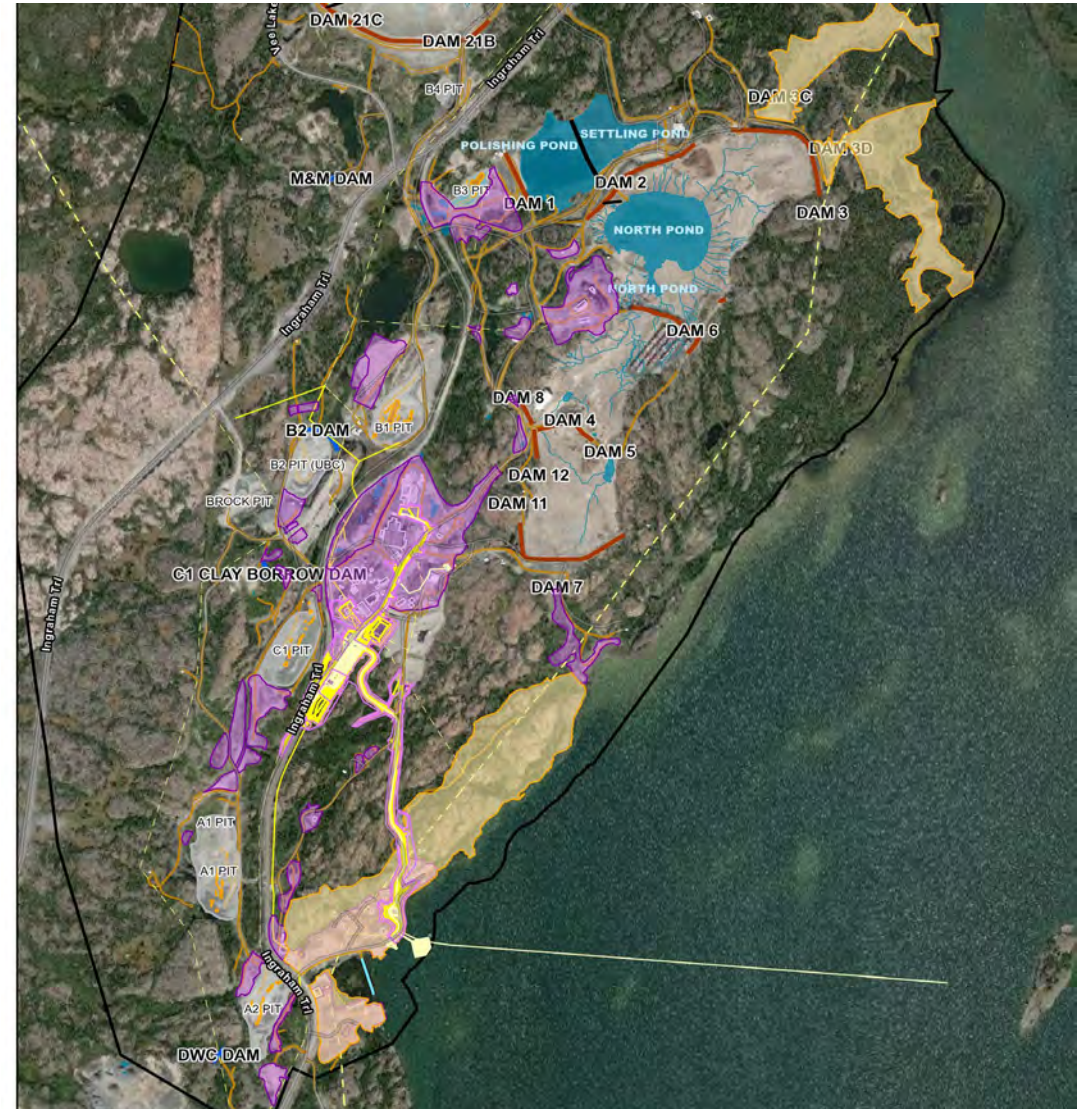
Pre-Qualification  
Design, Bid, Build

HENRY WONG, DEPUTY SENIOR PROJECT MANAGER



# Earthworks Remediation Package

- **Highlights of Scope**
- A civil earthworks remediation Construction Work Package (CWP)
- The work is the integration of contaminated soil remediation across the Giant Mine, backfilling of select open pits, and rehabilitation of the "Original" Tailings Containment Area (TCA)
  - It is the primary contaminated soil remediation work package for Giant Mine
  - Backfilling of A1, A2, B2 and B3 open pits, while B1, C1 and B4 will be completed separately
  - Rehabilitation of the Original TCA (South Pond, Central Pond and North Pond), while the Northwest TCA, and Nearshore/Foreshore Tailings work will be completed separately



# Earthworks Remediation Package

## Highlights of Scope

- The work package is the remediation of  $>1,000,000 \text{ m}^3$  of contaminated soil, across 100 ha of the site,
  - Including excavation of  $\sim 100,000 \text{ m}^3$  of impacted soil over difficult bedrock, forest and wetland terrain.
- Backfilling of the pits will include placement of  $\sim 600,000 \text{ m}^3$  of contaminated soil from the remediation work, backfilling of  $>1,100,000 \text{ m}^3$  of owner-supplied clean borrow, and construction of BGM covers.
  - Including closing 14 mine-openings within the pit.
- Rehabilitation of the Original TCA will include placement of  $>400,000 \text{ m}^3$  of contaminated soil from the remediation work, the excavation and relocation of  $>1,000,000 \text{ m}^3$  of the South Pond tailings and dams to Central/ North Pond, backfilling of  $>1,200,000 \text{ m}^3$  of owner-supplied clean borrow, and construction of a  $>67 \text{ ha}$  BGM cover.
  - Including installation of a dewatering system for the South Pond.

# Earthworks Remediation Package

## Highlights of Scope

Implementation of the work package will include:

- Remedial excavation of contaminated soils, hauling to designated receiving areas in the Pits and Original TCA, coordinating placement of contaminated soils with the construction of the Pits and TCA.
- Construction of new Mill Pond and drainage pipe to sump.
- Transport, place, and compact Owner-supplied coarse-grained borrow to construct the AR2 Freeze Pad and AR3 Freeze Pad.
- Screening and confirmatory testing by the contractor will be a major component of the soil remediation.
- Material tracking (by type and area) and implementation of a manifest tracking system will be key components of the soil movement.



# Earthworks Remediation Package

## Highlights of Scope

Implementation of the work package will include:

- Preparing the pits for backfill.
  - Scaling pit walls at the start of work as needed.
  - Perform high wall blasting as required.
  - Development of a new access ramp.
  - Removal of fine-grained material inside the pit
- Backfilling the pits with contaminated soil from the remedial excavations.
- Close underground openings within the pits.
- Backfilling the pits with owner-supplied and stockpiled coarse-grained borrow.
- Construct the water shedding cover for the pits.
- Construct the surface drainage network adjacent to the pit covers.

# Earthworks Remediation Package

## Highlights of Scope

Implementation of the work package will include:

- Construction and operation of a BGM Lined Dedicated Cell in the North Pond to received designated waste.
- South Pond Tailings relocation.
  - Including Supply, Install, operate and maintain a South Pond dewatering system
  - Dams 11 and 12 removals.
  - Dam 7 rehabilitation
- Rehabilitation of Dams 2, 3, 4, and 5.
- Placement and compaction of site-generated contaminated soils, relocated South Pond tailings and sediments delivered to the Original TCA.
  - Condition as required
  - This wet to saturated material will need to be spread out to dry or conditioned by blending with dry material in order to meet the settlement criteria called out in the specifications.
- The management of water runoff for the duration of work will be a key component of the planning.

# Earthworks Remediation Package

## Key Work Package Considerations for Bidders

- Geotechnical and mining qualified persons will be required by the Subcontractor to plan safe work in the open pits
- Experience in handling and movement of wet tailings will be project requirement
- Short and long-term environmental control of contaminated soils excavation areas will require detailed planning
- Limited physical workspace at the Giant Mine site will require detailed planning; e.g. limited laydown areas, limited construction traffic routes, required integration with other work packages



# Earthworks Remediation Package

- Prequalification of Bidders – Q2 2025
- Request for Proposal – Q1 2026
- Start of Submittals – Q4 2026
- Construction – Q2 2027

# Earthworks Remediation Package

- This CWP is designated to be a Design-Bid-Build procurement.
- The project will be awarded as a phased contract:
  - An initial scope of work as the base contract, aligning with 1/3 of the scope of work, and then
  - 2 option years to complete and fulfill the contract.
- A pre-qualification process will precede the tender process.
- The work is sequenced to follow:
  - Demolition and Debris Removal of the buildings and infrastructure in the CIA
  - HAC Soil Removal
  - Commissioning of the new Water Treatment Plant



BREAK 2:15-2:30



# WATER TREATMENT PLANT OPERATIONS

HENRY WONG

# Water Treatment Plant Operations

- This package will include Water Treatment Plant and system operators to run the equipment, control the processes, and monitor the plants that treat water to meet the requirements set out in the GMRP Water License.
- This contract will be to operate the new Water Treatment Plant on site.
- Water treatment will shift from seasonal to all year round once new plant is commissioned.
- There will be a 1-year transition from the Effluent Treatment Plant to the new Water Treatment Plant, where the ETP will be available as back up.
- Contract will be for the period of transition and then the long-term operating of the plant until end of remediation in 2038.
- The Water Treatment Plant will contain lots of automated systems, so its not anticipated to require the need for lots of people operating the plant.





# **SUMMARY AND FUTURE WORK PACKAGES**

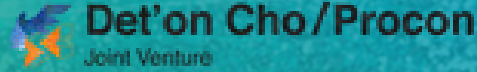


# Overview 2024-2025

- 2024 Work Packages
  - Demolition and Debris – Core Industrial Area
    - Pre-qualification posted in December 2023
  - Soil Washing
    - Late 2024
  - Site Wide Surveying – Early in the new year
- 2025 Work Packages
  - On Site Borrow
  - AR1 Freeze System Installation
  - Underground Stabilization – Long Term Portal
  - Earthworks Remediation Package
  - Water Treatment Plant Operations

# 2025 and Beyond Opportunities

- Baker Creek (Reach 3, Reach 4, Reach 5, Reach 6)
- Baker Creek (Reach 0, Reach 1, Reach 2)
- Final Roads and Bridge Demo
- Permanent Bridge Construction
- Communication and Cell Towers
- Site Fencing and Signage
- Demo and Debris – All other Areas
- B1 Pit Backfill
- Northwest Tailings Containment Area/Northwest Pond Spillway
- Nearshore/Foreshore Tailings and boat launches
- Landfill closure
- AR2/AR3/AR4 Freeze installation



OUR PARTNERS ON SITE.



THANK YOU





**THANK YOU  
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Submit questions to:

[Denise.Aspinall@parsons.com](mailto:Denise.Aspinall@parsons.com)

no later than December 22, 2023.

Questions and answers will be posted to:

[www.giantminer.ca](http://www.giantminer.ca) by January 12, 2024.

Participants will be notified via email.



Hey, help us! Provide some feedback on the work Parsons is doing.

Scan QR code to complete Industry Day Survey.

