



March 13, 2023

Mackenzie Valley Land and Water Board
7th Floor – 4922 48th Street
PO Box 2130
Yellowknife, NT X1A 2P6
Attention: Kimberley Murray, Regulatory Specialist

Ms. Murray,

Re: MV2015L2-0003 Renewal, Emergency Response Plan

North American Tungsten Corporation Ltd. ("NATC") is pleased to provide the enclosed revised document, *Emergency Response Plan*, in relation to NATC's application for a new land use permit and Type-B care and maintenance water licence, as the existing water licence expires on January 27, 2024. NATC looks forward to the public review of the enclosed document and other documents related to the application.

Should you have any questions regarding these responses, feel free to contact the writer or Vicki Chan at 604.639.0847 or vchan@alvarezandmarsal.com.

Yours truly,

North American Tungsten Corporation Ltd.
by its Monitor, Alvarez & Marsal Canada Inc.
acting in its capacity as Monitor of NATC and not
in its personal capacity

A handwritten signature in black ink, appearing to read "Todd M. Martin", written over a horizontal line.

Todd M. Martin
Senior Vice President



EMERGENCY RESPONSE PLAN

CANTUNG MINE, NT

Airstrip Coordinates: Latitude/Longitude: 61.9717°N, 128.2683°E

Cantung Radio Frequencies: RX 162.285 TX 167.265

VERSION #7

PREPARED BY NORTH AMERICAN TUNGSTEN CORPORATION LTD.

DATED: MARCH 13, 2023

EMERGENCY CONTACT INFORMATION

Organization	Contact	Location	Telephone/Radio
Internal			
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	<i>Vice President Engagement Lead</i> Vicki Chan	Vancouver	(604) 638-7440
North American Tungsten Corporation Ltd.	<i>Site Manager</i>	Onsite - Radio	RX 162.285 (receiving) TX 167.265 (transmitting)
		Onsite – Sat phone	011 8816 316 29741 011 8816 316 65799
Tetra Tech	<i>Tailings Storage Facility Engineer of Record</i> Chad Cowan	Whitehorse	1.867.668.9214
Government & Regulatory			
Crown-Indigenous Relations and Northern Affairs Canada	<i>Inspector</i> Tim Morton	Yellowknife	867-445-7935 c 867-669-2442 o
Mackenzie Valley Land and Water Board	General	Yellowknife	867-669-0506
	<i>Regulatory Specialist</i> Kimberley Murray	Yellowknife	867-766-7458
Fisheries and Oceans Canada	General	Yellowknife	867-669-4900
ENR - Wildlife Emergency		Fort Simpson	867 695 7433
Injury or Incident			
RCMP		NT	867-695-1111
		Yukon	867-536-5555
WSCC	Mines Inspector	Yellowknife	1-800-661-0792
	General	Yellowknife	867-669-4418
Coroner	Chief Coroner	Yellowknife	1-867-767-9251
Medical			
Hospital		Yellowknife	867-767-9200
Hospital and Ambulance		Watson Lake	867-536-4444
Hospital		Whitehorse	867 393 8700
Medivac	OCC	Yellowknife	867-669-4115
Medivac	EMS Dispatch	Yukon	867 667 3333
Poison Control		NT	1-800-332-1414
Fire			
Wildfire Reporting		Yukon	1-888-798-3473
		NT	1-877-698-3473
Fire Marshall		Yellowknife	867-873-7469
Fire Department	Emergency	Watson Lake	867 536 2222
Nahanni National Park			867 695 2446

SUMMARY

This Plan relates to emergency preparedness and response associated with the care and maintenance activities being carried out at the Cantung Mine.

REVISION SUMMARY

Version	Date	Summary of Changes
<i>MV2023L2-xxxx, MV2023Dxxxx</i>		
7	Mar 2023	Consolidated TSF ERP with Site-wide ERP, for consistency and ease of implementation. Edited and restructured throughout for clarity and consistency with other Plans, updated contacts. Revised throughout to reflect current status of the mine site, being care and maintenance.
<i>MV2015L2-0003</i>		
5.1	Sep 2022	<i>Emergency Preparedness Plan for above-ground Tailings Storage Facility Emergencies</i> Highlighted V5 substantive changes
5	Aug 2022	<i>Emergency Preparedness Plan for above-ground Tailings Storage Facility Emergencies</i> Revised to reflect C&M, updated contacts, revised inspection frequency
6	2018	<i>General Site Emergency Response Plan</i> Revised to reflect C&M, updated contacts
<i>MV2002L2-0019</i>		
5	2014	<i>General Site Emergency Response Plan</i> Updated contacts, modified layout, added regulatory requirements
4	Oct 2013	<i>Emergency Preparedness Plan for above-ground Tailings Storage Facility Emergencies, Cantung Mine, NT</i> Insert inundation map, update contacts
3	Dec 2012	<i>Emergency Preparedness Plan for above-ground Tailings Storage Facility Emergencies</i> Reformat, revise based on Dam Safety Guidelines and party comments
4	2012	<i>General Site Emergency Response Plan</i> Updated contacts
2	Dec 2011	<i>Emergency Preparedness Plan for above-ground Tailings Storage Facility Emergencies</i> Update
1	Sep 2011	<i>Emergency Preparedness Plan for above-ground Tailings Storage Facility Emergencies, Cantung Mine, NT</i> Update
3	2011	<i>General Site Emergency Response Plan</i> Revised to reflect C&M, updated contacts
2	2010	<i>General Site Emergency Response Plan</i> Revised to reflect C&M, updated contacts
0	Mar 2009	<i>Emergency Preparedness Plan for above-ground Tailings Storage Facility Emergencies, Cantung Mine, NT</i> Initial plan
1	2009	<i>General Site Emergency Response Plan</i> Revised
0		<i>General Site Emergency Response Plan</i> Initial Plan

CONFORMITY

Condition	Plan Section	Comment
		[Table to be populated following licence issuance]

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GLOSSARY AND ACRONYMS

Term	Definition
A&M	Alvarez & Marsal Canada Inc., Court-appointed monitor of NATC
BLEVE	Boiling liquid expanding vapor explosion
CCAA	Companies' Creditors Arrangement Act
CDA	Canadian Dam Association
CIRNAC	Crown-Indigenous Relations and North Affairs Canada
C&M	Care and Maintenance
Care and Maintenance	The status of a mine when it undergoes a temporary closure
Company	North American Tungsten Corporation Ltd.
Court	The Supreme Court of British Columbia
DCC	Dam Failure Consequence Classification
EOR	Engineer of Record
FMEA	Failure Modes and Effects Analysis
GOC	Government of Canada
GNWT	Government of the Northwest Territories
Inspector	An Inspector designated by the Minister under subsection 84(1) of the <i>Mackenzie Valley Resource Management Act</i>
Joint Sales Process	A joint sales and marketing process for the Cantung Mine and Mactung property was undertaken by the Government of Canada and Government of Northwest Territories.
Mine	Cantung Mine
MVRMA	<i>Mackenzie Valley Resource Management Act</i>
Monitor	Alvarez & Marsal Canada Inc.
NATC	North American Tungsten Corporation Ltd.
NT	Northwest Territories
OMS	Operations, maintenance and surveillance
Plan	Emergency Response Plan
RCMP	Royal Canadian Mounted Police
Site Manager	The person or organization responsible for the implementation of routine site plans and procedures and site projects, and all H&S at site as defined in the <i>Mine Health and Safety Act</i>
SOP	Standard Operating Procedure
TSF	Tailings Storage Facility
YK	Yukon

1.0 INTRODUCTION

North American Tungsten Corporation Ltd.'s (NATC or the Company) Cantung Mine (Mine) is located on the Flat River, approximately 275 km northwest of Nahanni Butte, 300 km north of Watson Lake, just east of the Yukon border in the Dehcho Region of the Northwest Territories (NT).

The Cantung Mine, which opened in 1962, is North America's largest tungsten producer. It was most recently operated by NATC, up until the fall of 2015 when mining and milling ceased and the site entered care and maintenance. On June 9, 2015, NATC filed for creditor protection under the *Companies' Creditors Arrangement Act* (CCAA) and Alvarez & Marsal Canada Inc. (A&M or the Monitor) was appointed as Monitor by the Supreme Court of British Columbia (the Court).

This *Emergency Response Plan* (the Plan) has been prepared by NATC to prepare for and respond to emergencies during care and maintenance (C&M).

1.1 BACKGROUND

On June 9, 2015, NATC filed for creditor protection under the CCAA and A&M was appointed as Monitor by the Court.

Subsequent to cessation of mining and operations at Cantung at or around November 16, 2015, the Monitor has managed the affairs of the Company pursuant to an Order of the Court. Funding of NATC's care and maintenance activities since November 2015 have been provided by Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC).

On November 18, 2015, the Government of Canada determined that the Mine is a New Site Requiring Remediation, as per section 6.28 of the *Devolution Agreement*. As such, the site is now a federal area under the *Mackenzie Valley Resource Management Act* (MVRMA), for which the Government of Canada is now responsible.

Prior to a decision by NATC to transition Cantung to permanent closure and remediation, NATC and the Monitor solicited third parties for any interest in a possible investment or acquisition of Cantung that would see a restart of Mine operations. In that regard, a sale and investment solicitation process was conducted by the Company and the Monitor in 2015 which did not result in a transaction. Subsequently, with the assistance of the Monitor, a re-marketing of the Cantung Mine and Mactung property (formerly owned by NATC) was undertaken by the Government of Canada and Government of the Northwest Territories (Joint Sales Process) during the period July 2019 through March 2022. Despite interest from select interested parties, NATC and the respective governments did not identify or transact with a party to invest, acquire or otherwise partner with NATC to take a financial interest in the Mine with a possible restart of same.

In April 2022, NATC, with input from CIRNAC, decided to continue care and maintenance in the near term and transition the Mine towards permanent closure and ultimately, remediation.

1.2 SITE DESCRIPTION

The Mine site area occupies approximately 75 ha, held under surface lease by NATC. It is located within the traditional territory of the Dehcho First Nations and is also within the Kaska Dena Council asserted territory.

As illustrated in Figure 1, the Mine comprises both open pit and underground workings together with milling facilities and five tailings containment areas. The historic Tungsten townsite is located adjacent to the Mine and mill facilities on the west side of the Flat River at an elevation of 1,128 m, and includes historic residential, recreational and office/shop buildings, some of which remain in use.

The Flat River is located in a steep-sided valley with the valley bottom being approximately 500 m wide. The valley rises to mountain peaks up to 2,750 m high. Climatic conditions in this area are typically sub-arctic with an average mean annual air temperature -4.0°C^1 . Blizzard conditions during January and February are frequent but usually of short duration and maximum snow depth in the valleys during the winter averages 127 cm. The snow-free season extends from mid-May to early October. Total annual precipitation averages 551 mm¹, with approximately half occurring as rain and half as snow.

The site is accessible by air, utilizing the existing airstrip, or by the Nahanni Range Road.

1.3 TYPES OF EMERGENCIES

An emergency is the unforeseen combination of circumstances or resulting state that calls for immediate action from management and/or trained first aid, fire and rescue personnel. Emergencies may occur anywhere on the Mine site and may arise due to either natural or operational aspects, or a combination thereof. Emergencies are considered to be one of the following:

- **Hazardous Condition:** poses no immediate threat to a structure but if left unattended may put the structure and personnel at risk;
- **Localized Emergency:** occurs on part of the site and may require evacuation of an area of the Mine site; and
- **Site-Wide Emergency:** required site-wide evacuation.

Natural emergencies could involve, but are not limited to, the following:

- Earthquake;
- Extreme precipitation event;
- Rapid freshet (rapid thawing of winter snow pack);
- Extreme flood event (high surface water run-off and high river levels in the Flat River);
- Landslide;
- Hail storm;
- Avalanche;
- Rock falls; and
- Site and wild fires.

Operational emergencies could involve, but are not limited ,to the following:

- Slope or foundation failure;
- Overtopping of tailings dam;
- Seepage or piping (visual observation of water leaking through dam);
- Visual observation of cracks in dam structure;
- Explosion; and
- Loss of motor vehicle control.

¹ Record period of 2017-2022, Cantung Weather Station.



Figure 1: Site layout, Cantung Mine

1.4 PURPOSE & OBJECTIVES

The purpose of the Plan is to outline the basic responsibilities and procedures to be followed should an emergency occur at the Mine. This Plan fulfills all applicable requirements pursuant to the *Mine Health and Safety Act* and *Regulations*, as well as other legislation including current guidelines from the Canadian Dam Association.

The objectives of this Plan are to:

- Assist site personnel in timely identification, evaluation and classification of potential emergencies;
- Ensure site personnel are trained to respond to emergencies in an effective manner; and
- Ensure site personnel are aware of the notification and reporting process when an emergency occurs.

1.5 SCOPE

This Plan applies to all emergency preparedness and response aspects at the Mine during C&M.

1.6 RELATED DOCUMENTS

The documents listed in Table 1 are related to and should be considered when implementing this Plan and may be updated from time to time.

1.7 PLAN MANAGEMENT AND IMPLEMENTATION

The Plan is effective upon approval. The Plan is reviewed annually by the Site Manager or designate and updated as needed and following issuance of new or amended authorizations to ensure alignment with relevant terms and conditions. When material changes occur, the updated document is provided to parties in accordance with the *Engagement Plan*.

A copy of this Plan is maintained on site in the office, and in A&M's office in Vancouver.

2.0 ROLES AND RESPONSIBILITIES

NATC is responsible for the Mine, including implementation and management of this Plan. Contact information for NATC is provided below.

North American Tungsten Corporation Ltd.
 c/o Alvarez & Marsal Canada Inc.
 925 W. Georgia St.
 Suite 902, Cathedral Place Building
 Vancouver, BC V6C 3L2
 Ph: (604) 638-7440
 Contact: Todd M. Martin, Sr. Vice President
 tmartin@alvarezandmarsal.com
 or
 Vicki Chan, Vice President
 vchan@alvarezandmarsal.com

Table 1: Related documents

Title	Author	Year	Relation to this Plan
<i>Companies' Creditors Arrangement Act</i>	GOC	1985	Enables the Monitor
<i>Environmental Emergency Regulations</i>	GOC	2019	Regulates environmental emergency planning for designated substances and quantities
<i>Mackenzie Valley Resource Management Act</i>	GOC	1998	Enables the water licencing process
<i>Mackenzie Valley Federal Areas Waters Regulations</i>	GOC	1998	Defines water use and classifies undertakings
<i>Mine Health and Safety Act</i>	Government of the Northwest Territories (GNWT)	1994	Identifies worker and employer obligations on mine sites, addresses PPE and safety requirements, enables the Mine Inspector
<i>Mine Health and Safety Regulations</i>	GNWT	1995	Identifies worker and employer obligations on mine sites, addresses PPE and safety requirements
Northwest Territories Lands and Resources Devolution Agreement	GOC, GNWT, Inuvialuit Regional Corporation, Northwest Territories Métis Nation, Sahtu Secretariat Incorporated, Gwich'in Tribal Council, Tłıchǫ Government	2013	Provides federal jurisdiction for specific areas within the Northwest Territories
Standard Outline for Management Plans	Land and Water Boards of the Mackenzie Valley	2021	Identifies management plan requirements
Water Licence	MVLWB	2024	Identifies monitoring and reporting requirements
Land Use Permit	MVLWB	2024	Permits activities to occur
Surface Leases	GOC	1984	Allows for exclusive surface access and specifies activities
Engagement Plan	NATC	2023	Identifies interested parties, provides triggers for engagement
Spill Response Plan	NATC	2023	Outlines procedures for responding to spills
Tailings Storage Facility Operations, Maintenance and Surveillance Manual	NATC	2023	Describes TSF surveillance procedures and Trigger Action Response Plans

2.1 SITE MANAGER AND STAFF

The Site Manager or its designate is responsible for implementation and management of the Plan.

2.2 CONTRACTORS, SUPPLIERS AND VISITORS

All personnel conducting activities on site, including contractors, suppliers and visitors, are required to comply with this Plan as it pertains to their activities on site.

3.0 COMMUNICATION

The Mine uses a satellite-based communications system for routine external communication including phone and internet, when occupied for an extended duration. This system is supported by portable back-up satellite phone units as well as SPOT, InReach or similar devices. When the Mine is occupied intermittently, a combination of handheld satellite phone, SPOT, InReach or similar devices may be used. Redundant communication methods are available at all times when the site is occupied.

All Mine vehicles are equipped with a VHF radio system for site-wide mobile communication. The main office is equipped with a VHF base radio station and workers or crews are equipped with handheld units.

The Mine radio frequency is:

- RX **162.285**
- TX **167.265**

3.1 EMERGENCY CONTACTS

Emergency contact information is provided in this Plan and is maintained current and available in accessible locations across the Mine site.

While the Mine is located in the NT, it is accessible by land through Yukon (YK). Depending on the emergency and mode of travel, the nearest available resources may be based in either Watson Lake, YK or Fort Simpson, NT. The nearest major centers, being Whitehorse, YK and Yellowknife, NT, are approximately the same distance from the Mine by air. Accordingly, emergency response contacts for both territories are provided.

4.0 EMERGENCY PREVENTION & PREPAREDNESS

Most emergencies are preventable, through implementation of safe work practices, use of personal protective equipment, and operation of a compliant work site, supported by clear communication, worker training and designated roles and responsibilities.

Similarly, emergency preparedness is achieved through development of standard operating procedures for emergency response aspects, maintaining adequate equipment on site for communication and response measures.

Various procedures and plans have been developed for all aspects of activities occurring on site and should be considered along with the Plan, where applicable.

5.0 EMERGENCY RESPONSE

5.1 INITIAL NOTIFICATION – ALL EMERGENCIES

Upon encountering an emergency, the worker shall:

1. Make contact with Site Manager through radio.
2. Provide any requested information to the Site Manager.
3. Maintain communications with the Site Manager and standby for further instructions.

When providing initial notification via radio, the following standard codes may be used:

- MEDIC-MEDIC-MEDIC
 - Used during a medical emergency
 - Designated site medic will respond
- FIRE-FIRE-FIRE
 - Used when a fire has been detected
 - Site Manager will respond
- BREAK-BREAK-BREAK
 - Used to interrupt unnecessary radio traffic during an emergency response
 - Used by Site Manager
- SHELTER IN PLACE
 - Used to direct all workers to the assigned muster station for their work area
 - Used by Site Manager

Alarms or air horns may also be used to notify workers of emergent conditions.

The Site Manager is thereafter responsible for directing the emergency response and providing notifications. Additional notifications are coordinated with the Engagement Lead and undertaken pursuant to the *Engagement Plan*.

5.2 LOCALIZED EMERGENCY

The majority of emergencies that may reasonably occur at the Mine are localized in nature and do not require a full site evacuation. Rather, a local response, or a local or building evacuation may be required to respond to an emergency or a hazardous condition. Each of these is discussed below.

5.2.1 FIRE

In the event of a fire, and following initial notification, the first person at the scene of a fire will:

- If it is safe to do so, attempt to extinguish the fire.
- If the fire is not extinguishable
 - Notify the Site Manager.
 - Exit the building, notify all occupants to evacuate.
 - Report to the nearest safe muster station.
 - Await further instructions from the Site Manager regarding the fire response plan.

Depending on the nature of the fire, the local area or buildings may be evacuated.

5.2.2 MEDICAL

5.2.2.1 WORKPLACE INJURIES

All workplace injuries are immediately reported to the Site Manager and designated medic, who will follow protocols for care of injured workers. Injuries which may require referral to a higher level of care via ground or air transportation will be initiated as outlined in the relevant Standard Operating Procedure (SOP). Reporting and further coordination is undertaken by the Site Manager following the appropriate SOP.

5.2.2.2 MEDICAL CONDITIONS

Any emergencies due to medical conditions are coordinated by the Site Manager. Patients may be treated on site following medical protocols or may be referred to a higher level of care via ground or air transport with consideration of patient condition, weather and available daylight. Illnesses which may require referral to a higher level of care via ground or air transportation will be initiated as outlined in the appropriate SOP.

5.2.3 RESCUE

A rescue may be required in a number of emergent situations, discussed separately below.

In the event of an incident requiring rescue, and following initial notification, the first person at the scene will:

1. If it is safe to do so, attempt to assist the person(s) involved in the incident.
2. Call the Site Manager with the details of the incident.
3. If it is safe to do so, stand by at the scene of the incident to report any changes and to pass on information to attending emergency response crews.
4. Await further instructions from the Site Manager regarding the Plan.

5.2.3.1 CONFINED SPACE RESCUE

Confined space entries require notification to the Site Manager to ensure appropriate rescue response availability.

5.2.3.2 FALL ARREST RETRIEVAL

Working at heights requiring the use of fall protection systems require notification to the Site Manager to ensure appropriate rescue response availability.

5.2.3.3 MOTOR VEHICLE ACCIDENT

In the event of a motor vehicle accident involving company vehicles, either on site or on the section of the Nahanni Range road from Km 134, the Site Manager will coordinate rescue response for the incident.

Any injuries to personnel involved in the motor vehicle accident will be treated as Workplace Injuries.

5.2.3.4 MISSING PERSONS – WORKER TRAVEL

A Travel Log Book is maintained at the Site Manager's office documenting all worker departure and return from the Mine.

Overdue travelers are noted by the Site Manager. If the Site Manager is unable to reach the travelers, further outreach is undertaken and a rescue initiated.

5.2.3.5 MISSING PERSONS – RECREATIONAL ACTIVITIES

After hours offsite recreational activities such as hiking and fishing are a privilege afforded to Mine personnel. Similar to worker travel, recreational travel is tracked in a log book.

Overdue travelers are noted by the Site Manager. If the Site Manager is unable to reach the travelers, further outreach is undertaken and a rescue initiated.

5.2.4 SPILL

Spill response and reporting occurs in accordance with the *Spill Response Plan*. Depending on the nature of the spill, the local area may be evacuated.

5.2.5 NATURAL DISASTERS

5.2.5.1 AVALANCHE MONITORING

Avalanches may occur in some areas on the Mine site. Should monitoring indicate an avalanche risk exists, the local area may be evacuated.

5.2.5.2 WILDFIRE

In the event of a wildfire near the Mine measures for a fire response listed above are employed. In the event of an uncontrolled approaching or nearby wildfire, a Site-Wide Emergency may be declared (see below).

5.2.6 WILDLIFE ENCOUNTERS

In the event of a dangerous encounter with wildlife, any injuries will be reported immediately and treated as Workplace Injuries.

Should dangerous wildlife be observed on site the local area may be evacuated and workers required to

shelter in place to ensure wildlife and worker safety.

5.2.7 EVACUATIONS

Should an emergency require restriction of worker access to part of the site, a **local area/building evacuation** may be initiated. Examples of emergencies requiring a local evacuation include:

- Explosion;
- Fire;
- Release of poisonous, flammable or explosive gas or liquids;
- Threat of an avalanche; or
- Dangerous wildlife.

In the event of a local area/building evacuation, workers are alerted to the need to muster either by radio or emergency alarm.

Once mustered, the Site Manager accounts for all workers and directs next steps. Workers remain at the muster station until directed to leave.

If personnel are unaccounted for, an area sweep can be conducted by the Site Manager and other site personnel with appropriate PPE if it is safe to do so. Rescue measures may be implemented subsequently as needed.

5.3 SITE-WIDE EMERGENCY

A site wide emergency may be declared and related **general mine site evacuation** may be initiated in the event of:

- Major fire on site;
- Imminent boiling liquid expanding vapor explosion (BLEVE) situation of propane storage tanks; or
- Wildfire posing an imminent threat to worker safety.

A general mine site evacuation is initiated by the Site Manager. Workers are alerted to the need to muster either by radio or emergency alarm.

Once mustered, the Site Manager accounts for all workers and directs next steps. Workers remain at the muster station until directed to leave.

The Site Manager makes evacuation arrangements and directs worker transport offsite.

6.0 TAILINGS STORAGE FACILITY

Emergencies and response actions specific to the tailings storage facility (TSF) are presented in this section and have been developed with advice from the Engineer of Record (EOR). TSF surveillance procedures and Trigger Action Response Plans are described in the *TSF Operations, Maintenance and Surveillance (OMS) Manual*, while a detailed discussion of potential failure modes is presented in the *Failure Modes and Effects Analysis (FMEA; Tetra Tech 2023)*.

The TSF consist of five Tailings Containment Areas (TCA 1 through 5), that are monitored by NATC personnel or designates; a description of each TCA can be found in the *TSF OMS Manual*. The general nature of a dam failure and the possible associated downstream hazards are discussed in the following sections.

All of the TCA dams (1 through 5) have been assigned a “Significant Consequence” Dam Failure Consequence Classification (DCC) as per the Canadian Dam Association (CDA 2013). This means that it is highly unlikely that a dam failure would result in a loss of life and limited to no economic, social or cultural losses may occur, while some environmental losses may occur such as habitat deterioration and adverse effects to biota.

6.1 POTENTIAL FLOOD EMERGENCY

A Potential Flood Emergency is any condition that could cause a significant and/or sudden increase in water levels downstream of the dams. A Potential Flood Emergency is a condition that has been identified but not yet confirmed as to severity, wherein:

- **Condition** is defined as an impending flood event or structural situation that threatens, or may threaten, the integrity of a TCA.
- **Significant increase in water level** downstream of the TCA is defined as those flows likely to exceed bank full at critical locations downstream of the TCA.

If a Potential Flood Emergency progresses to the Imminent Flood Emergency stage (described below) the protocols outlined in this Plan shall be employed.

6.2 IMMINENT FLOOD EMERGENCY

An Imminent Flood Emergency is defined as any condition that will, or likely will, produce significant and/or sudden increases in flow downstream of the dam. An Imminent Flood Emergency is a condition that has been confirmed as serious; however, timelines might be uncertain. An Imminent Flood Emergency can impact the integrity of the TSF and may result in failure.

6.3 DAM FAILURE

Heavy rain events, freshet, seismic activity, or foundation failure could have an adverse effect on the integrity of any of the TCAs and can result in an Imminent Flood Emergency.

Failure of the Cantung TSF considers both structural and functional failures which may affect long-term performance. Per the FMEA (Tetra Tech 2023), the failure definition considered the following:

- Settlement or deformation of the dam resulting in a loss of tailings containment;
- Mobilization of exposed surface tailings by wind, water, or other means, with deposition into the receiving environment; and
- Surface and/or groundwater influenced by seepage or runoff that result in water quality conditions that no longer meet water licence criteria.

6.4 RESPONSE

Workers that observe a potential or imminent flood emergency or an aspect indicating a potential dam failure shall undertake the Initial Notification as above.

The Site Manager identifies the level of emergency and carries out a Local Area Evacuation as needed, based on the following:

- **Hazardous condition or incident** – The hazard or incident does not pose an immediate danger but could develop into one.
- **Potential dam emergency** – Workers may need to take steps to mitigate damage and notify workers potentially working downstream of TCAs.
- **Imminent or actual dam emergency** – Evacuation of downstream workers is appropriate.

A general mine site evacuation is initiated by the Site Manager. Workers are alerted to the need to muster either by radio or emergency alarm.

Once mustered, the Site Manager accounts for all workers and directs next steps. Workers remain at the muster station until directed to leave or undertake remedial or further response measures.

The Site Manager undertakes notification, including emergency personnel and the EOR, and makes evacuation arrangements and directs worker next steps.

6.5 REMEDIAL ACTIONS

After a significant failure backfill materials will be required to repair the area of concern. The following areas and associated materials have been identified throughout the site, while the volume of available material is listed in Table 2:

- **Fine Grained Soil** – silt and sand stripping from the Ski Hill Borrow site is located along the western perimeter on the north side of the Flat River northwest of the TCA 1 and 2. The volume of available material is estimated at approximately 10,000 m³.
- **Colluvium** – a mixture of fine-grained soil, sand, gravel, cobbles and some boulders can be sourced from the Ski Hill Borrow and used as general fill. The volume of available material is estimated at approximately 15,000 m³, and if select material gradation is desired this source will require some processing.
- **Waste Rock** – fine to coarse grained rock is available from the four ramps/pads that were constructed along the toes and perimeter slopes of TCA 3 and 4. The EOR has confirmed that the removal of the material will not impact the stability of the TCA containment structures as these ramps/pads were only put in place to allow access to the borehole locations required for the past geotechnical assessment.

Table 2: Volumes of Waste Rock at the Ramp/Pad locations along the toe of TCA 3 and 4.

TCA 4		TCA 3	
West	East	West	East
6,700 m ³	7,200 m ³	14,000 m ³	13,000 m ³

7.0 TRAINING

All personnel on site are oriented to emergency response procedures, and where appropriate trained in procedures. Further, designated NATC personnel have been specifically trained in TSF inspection and problem detection.

NATC periodically undertakes emergency response drills and mock response exercises to test procedures and refresh training. Outcomes and revisions are documented and reviewed with the appropriate agencies as needed.

Outcomes of drills and exercises are discussed in detail with the crew on site. Any resulting required revisions to procedures, documents or training are noted and implemented in a timely manner.

8.0 DOCUMENTATION & REPORTING

Forms to support emergency response measures can be found in the appendices. Completed forms are maintained on site in hard copy and in A&M's office in Vancouver. Forms may be provided to the Inspector or other designated authority upon request.

Reporting occurs in accordance with authorizations and pursuant to regulations.

Routine inspections of the TCAs are documented, and inspection reports are readily available to site workers.

9.0 REFERENCES

- Canadian Dam Association (CDA). 2013. Dam Safety Guidelines 2007 (2013 Edition).
- Canada Labour Code* R.S.C., 1985, c. L-2.
- Canada Occupational Safety and Health Regulation*. 1986. SOR/86-304.
- Companies' Creditors Arrangement Act*. R.S.C., 1985, c. C-36.
- Environmental Emergency Regulations* SOR/2019-51.
- Government of Canada, Government of the Northwest Territories, Inuvialuit Regional Corporation, Northwest Territories Métis Nation, Sahtu Secretariat Incorporated, Gwich'in Tribal Council, Tłıchq Government. 2013. Northwest Territories Lands and Resources Devolution Agreement.
- Land and Water Boards of the Mackenzie Valley. 2021. Standard Outline for Management Plans. Available at https://mvlwb.com/sites/default/files/2021-06/LWB%20Standard%20Outline%20for%20Management%20Plans%20-%20Approved%20-%20Jun%2010_21_0.pdf
- Mackenzie Valley Resource Management Act*. S.C. 1998, c. 25.
- Mackenzie Valley Federal Areas Waters Regulations* (SOR/93-303).
- Mine Health and Safety Act*, SNWT 1994, c 25.
- Mine Health and Safety Regulations*, NWT Reg 125-95

APPENDIX A

APPENDIX A EMERGENCY CALL REPORT

EMERGENCY CALL REPORT

Who is reporting the Emergency?

**What
happened?**

**Where are you and where is the help
required?**

**What help do you need (first aid,
rescue)?**

**Who else has been
notified?**

**Check off when
complete:**

- ☐ Instruct caller to remain by phone/radio for further instructions if appropriate
- ☐ Initiate call to Site Manager

Date:

Time:

APPENDIX B

APPENDIX B EMERGENCY COMMUNICATIONS LOG

EMERGENCY COMMUNICATIONS LOG

Date	Name

[illegible]

APPENDIX C

APPENDIX C SITUATION ASSESSMENT CHECKSHEETS

LOCALIZED EMERGENCY - CHECKSHEET

#	ACTION	NOTES (Date/Time)
1.	If the actions required to minimize the emergency can be controlled with the assistance of the supervisor, the Site Manager can assign the responsibility to the supervisor.	
2.	Activate ERP. Site Manager to assemble all responders and delegate tasks based on safety and priority.	
3.	Log all actions taken and any information pertaining to the emergency event.	
4.	<p>ENSURE :</p> <ul style="list-style-type: none"> • Notifications are complete. • Coordinate all emergency procedures and response actions through various levels of company personnel and delegate authority where appropriate. • Make available the resources necessary to deal effectively with the emergency. 	

Additional Notes:

SITE WIDE EMERGENCY – CHECK SHEET

ACTION	NOTES (Date/Time)
Once an Emergency condition affecting the entire mine site has been confirmed, activate ERP, Site Manager to assemble all responders and required resources.	
Inform internal personnel and notify external agencies that a site wide Emergency status has been assigned to the situation and begin the site evacuation process as described in section 5.3 of the site ERP.	
Log all actions taken and any information pertaining to the emergency event.	
<p>ENSURE :</p> <ul style="list-style-type: none"> • Notifications are complete. • Coordinate all emergency procedures and response actions through various levels of company personnel and delegate authority where appropriate. • Assist in developing the IAP, in coordination with Site Manager. • Make available the resources necessary to deal effectively with the emergency. 	

Additional Notes:

TSF EMERGENCY – INITIAL OBSERVER CHECK SHEET	
ACTION	NOTES (Date/Time)
Assess and determine the nature of the hazard. Record as many details as possible.	
Notify Site Manager of hazardous condition (i.e. evidence of dam failure, Potential Flood Emergency).	
Continuously monitor hazardous conditions, including photos, video and notes.	
Maintain a log of all communications and observations until advised otherwise.	
Additional Notes:	

TSF EMERGENCY – SITE MANAGER CHECK SHEET

ACTION	NOTES (Date/Time)
As soon as practical, go to the hazard site to observe and assess the level of emergency as one of the following: <ul style="list-style-type: none"> • Hazardous Condition • Potential Flood Emergency • Imminent Flood Emergency 	
Take all measures required to ensure the ongoing safety of all site personnel.	
If the present condition appears to worsen proceed to next level of emergency response activation (evacuation – local or site-wide).	
If remedial action can delay the hazards progression, coordinate the mitigation activities. Ensure that all required local resources are available for use.	
Inform internal personnel and notify external agencies that a Potential Flood Emergency status has been assigned to the situation.	
Assemble all responders and delegate tasks based on safety and priority.	
Coordinate all emergency procedures and response actions and delegate authority where appropriate.	
Make available the resources necessary to deal effectively with the emergency.	

Additional Notes: