



**ABANDONMENT AND RESTORATION PLAN**  
***Kuulu Project***

**Kivalliq Region, Nunavut**

**March 2017**

## **PLAIN LANGUAGE SUMMARY**

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This Plan describes what will be done when the site is closed annually, in the event of a temporary closure and at the end of the program associated with the Kuulu Project, near Rankin Inlet, Nunavut.

## REVISION HISTORY

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Revision #	Date	Section	Summary of Changes	Author	Approver
1	March 2017	-	New document	S. Hamm	C. McFadden

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## 1.0 INTRODUCTION

The purpose of this *Abandonment and Restoration Plan* (the Plan) is to outline what tasks will occur to secure the Kuulu Project site (the Site) upon seasonal and temporary closure, and to outline how the Site will undergo final closure. This Plan considers the guidance and requirements provided in the documents listed in Table 1.

Table 1 Relevant guidance documents including legislation, permits and licences.

Document	Authority
Nunavut Mine Site Reclamation Policy (2002)	Indigenous and Northern Affairs Canada
Abandonment and Reclamation Policy for Inuit Owned Lands (Version 2.0)	Qikiqtani Inuit Association
Dangerous Goods Regulations (2016)	International Air Transport Association
<i>Transportation of Dangerous Goods Act</i> (1992) and <i>Regulations</i> (2015)	Transport Canada
<i>Canadian Environmental Protection Act</i> (1999)	Environment and Climate Change Canada
<i>Interprovincial Movement of Hazardous Waste Regulations</i> (2002)	Environment and Climate Change Canada
<i>Nunavut Water Nunavut Surface Rights Tribunal Act</i> (2002) and <i>Nunavut Water Regulations</i> (2013)	Indigenous and Northern Affairs Canada
<i>Territorial Lands Act</i> (1985) and <i>Land Use Regulations</i> (2016)	Indigenous and Northern Affairs Canada
Water Licence	Nunavut Water Board
Approval Without a Licence	Nunavut Water Board
Land Use Licence # KVL311B01	Kivalliq Inuit Association
Land Use Permit	Indigenous and Northern Affairs Canada

### 1.1 SCOPE

This Plan applies to seasonal, temporary and final closure of the Kuulu camp, associated fuel caches and the core storage areas. Should winter resupply occur via winter trail, considerations associated with seasonal decommissioning of the winter trail will be addressed in a *Winter Trail Plan*, drafted and submitted to relevant parties 90 days prior commencement of winter trail use.

### 1.2 SITE DESCRIPTION

The Kuulu site is characterized by very low relief tundra with a dominant soil permafrost. The area has frequent shallow lakes and small rolling hills covered with thin glacial tills, drumlins, moraines, and eskers. Elevation varies from 20 m to 60 m above sea level. Bedrock outcrop is sparse (Cuttle 2017).

The Site has a subarctic climate, with temperatures below freezing from late September to early June, and up to 30°C in mid-August (Cuttle 2017).

There is an abundance of fresh water lakes, ponds and small rivers located throughout the Property (Cuttle 2017). The Site is adjacent to two large lakes, Meliadine Lake to the east and Peter Lake to the west.

### **1.3 CLOSURE OBJECTIVES**

The temporary closure objective for the site is to:

- ensure that the facilities are not posing a risk to the physical environment, wildlife or humans.

Final closure objectives for the site are to:

- re-establish pre-disturbance terrain conditions, where possible;
- restore areas occupied by the undertaking to a condition compatible with future land use.

### **1.4 FACILITY DESCRIPTION**

The Kuulu Project is located 40 km northwest of Rankin Inlet, Nunavut between Meliadine Lake and Peter Lake (see

Figure 1). The property abuts Agnico Eagle Mines claims to the south. The camp is located within the boundaries of the parcel as indicated in the Mineral Exploration Agreement R12-001(*coordinates to be provided once camp location is confirmed*) and can support up to 60 persons. The site is largely accessible by air, with overland access for resupply via winter trail to Rankin Inlet.

At its maximum capacity (60 persons), the Kuulu camp may consist of the following:

- Kitchen;
- Medical tent;
- Accommodations;
- Driller's dry and Worker's dry;
- Recreation tent;
- Shop;
- Office;
- Generator shack;
- Heli shack;
- Heli pads;
- Materials storage areas;
- Core shack.

Remote fuel caches may be established elsewhere on the property.

## **1.5 PLAN MANAGEMENT**

This Plan is intended to fulfill requirements associated with the water licence and land use licences and permits. The Plan will be updated to reflect final camp and fuel cache locations upon establishment.

The Plan will be reviewed annually by the Project Manager and updated as needed. When material changes occur, the updated document will be provided to the Nunavut Water Board.

## **1.6 PLAN IMPLEMENTATION**

This Plan is effective upon approval and is valid throughout all phases of the Project.

The Project Manager or designate is responsible for Plan implementation.

A copy of this Plan is maintained on site in the Office.

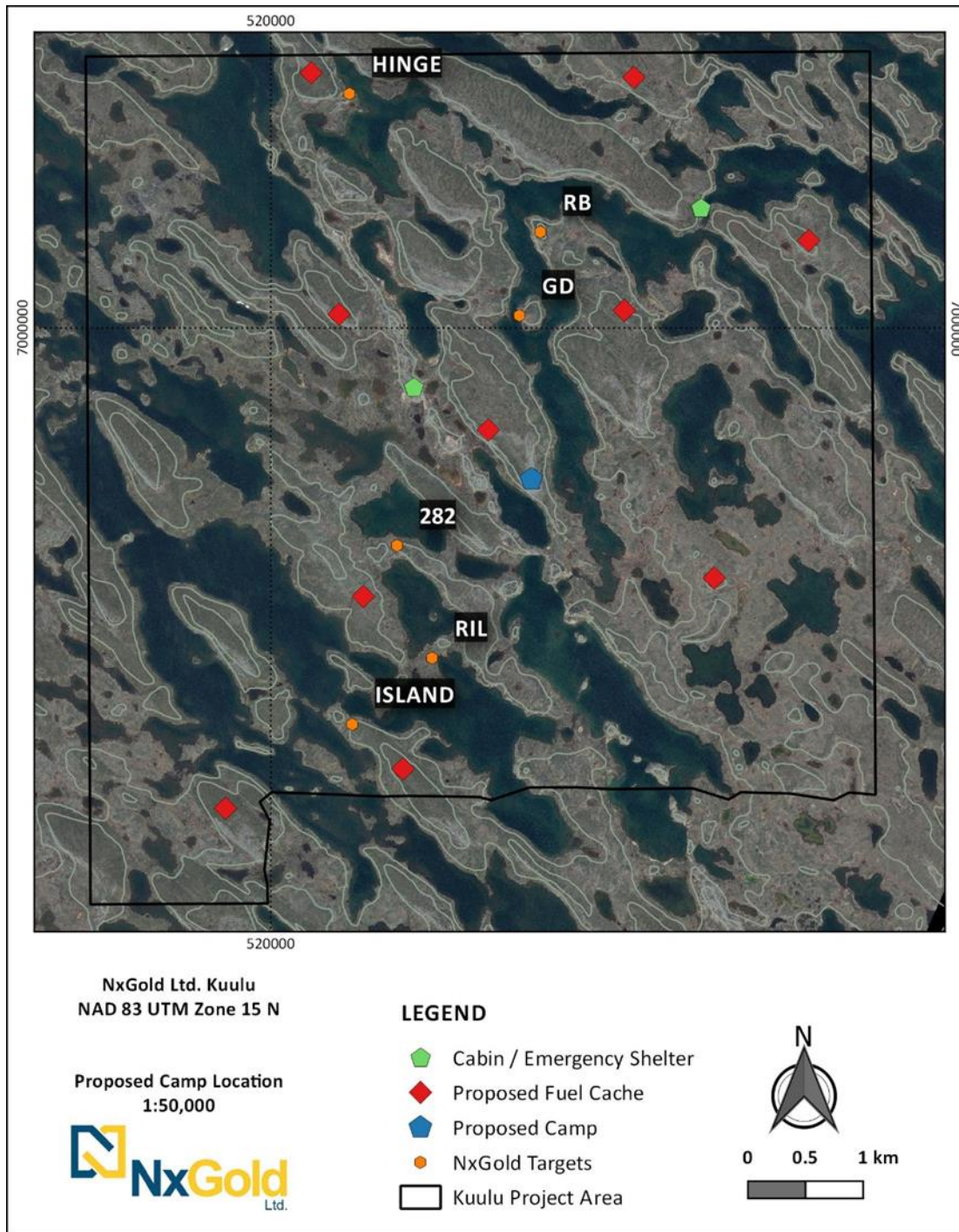


Figure 1 Kuulu Project site map



## 2.0 ROLES AND RESPONSIBILITIES

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NxGold Ltd. is responsible for activities associated with the Kuulu Project, including implementation and management of this Plan. NxGold's contact information is provided below.

### **NxGold Ltd.**

Suite 3150, 1021 West Hastings Street  
Vancouver BC V6E 0C3  
604 428 4112

**Contact: Chris McFadden, CEO**

Cell: 1 604 910 4859

Email: cmcfadden@nxgold.ca

### 2.1 NXGOLD PERSONNEL

NxGold personnel are responsible for directing, documenting and reporting pertaining to closure activities.

### 2.2 DRILL CONTRACTORS

Drill contractors are responsible for ensuring each drill site is cleaned up to the satisfaction of an NxGold inspector following each drill move and prior to commencing drilling at a new drill target. Closure-related activities to be undertaken include:

- Removing all drill timbers, hoses, equipment, debris and garbage from the drill site;
- Cut drill stems flush with the ground surface;
- Cap or plug drill holes;
- Backfill flush with the ground surface any areas that may have eroded or subsided around the drill stem;
- Remove to a sump any drill cuttings that may have been spilled to the surrounding land;
- Ensure cuttings sump is stable;
- Implement erosion control measures where necessary.

## 3.0 SEASONAL & TEMPORARY CLOSURE

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Seasonal and temporary closure may occur for different reasons; however, related closure activities are the same. Typical activities associated with temporary closure of each project component are outlined below.

### 3.1 CAMP

Valuables are removed from camp to off-site storage. Remaining items key to the closure and start-up of the camp are secured inside one hard-sided tent (ie. core shack), reinforced to withstand heavy snow accumulation.

Tents are cleaned out, fuel disconnected and doors wired shut to prevent snow and wildlife ingress.

All perishable food and most non-perishable food is removed to off-site storage. A small amount of non-perishable food may be left on site, stored in a manner such that it is not a wildlife attractant, as emergency rations.

The kitchen is emptied and cleaned, including the grease traps, in a manner such it is not a wildlife attractant.

The greywater sump is inspected to ensure it is stable and free from wildlife attractants. Erosion control measures are implemented where necessary.

The incinerator and surrounding area are cleaned out, ash and debris removed, and incinerator secured in such a manner as to prevent snow ingress into the chambers and wildlife attraction.

### **3.2 FUEL & MATERIAL STORAGE**

Fuel and other materials such as drill additives, lubricants and coolants are removed from site, where possible, for off-site storage. A small amount of fuel may remain in fuel caches for emergency use and to support camp closure and start-up. Fuel remaining in caches is inspected to ensure integrity of barrels, and is stored in covered secondary containment.

### **3.3 WASTE**

Hazardous and domestic waste generated during the preceding season is backhauled for off-site disposal or treatment.

### **3.4 WATER INTAKE**

The water intake facility is removed from the lake and securely stored on site. Fuel is removed from the water pump prior to storage.

### **3.5 CORE SHACK**

The core shack is cleaned out, fuel disconnected and doors wired shut to prevent snow and wildlife ingress, and is reinforced to withstand heavy snow accumulation. Core storage areas are inspected for stability.

### **3.6 DRILLS**

Drills are demobilized from the field and stored in a designated, durable area on site. Fuel lines are disconnected, and fuel tanks are stored in secondary containment. Drill cuttings sumps undergo a final inspection to ensure stability. The area around drill stems undergo a final inspection to ensure any areas of subsidence around drill stems have been backfilled in such a manner as to prevent water accumulation.

## **4.0 FINAL CLOSURE**

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Final closure at the end of the project involves a planned abandonment of the property, and entails removal of all temporary facilities rectified onsite.

Where possible, reusable equipment and supplies will be salvaged for reuse on other projects. Structures will be emptied and dismantled. Clean wood not suitable for reuse will be either chipped or open-burned on site. Chipped wood may be mixed with overburden, bentonite chips or drill cuttings and used to fill depressions (subsidence around drill stems, sumps). Materials not suitable for reuse or open burning will be transported off site for final disposal at appropriate facilities. Core will remain on site, stored in a stable manner.

Fuel, hazardous wastes, recyclables and other materials will be bulked and packaged in a manner suitable for off-site transport and disposal, recycle or resale, as appropriate.

Fuel caches will be decommissioned. Instaberms will be inspected to determine if they are suitable for reuse on other sites. If not suitable for reuse, instaberms will be disposed of off site. Following fuel cache decommissioning, the land underneath will be visually inspected for evidence of leaks resulting in contamination. If any soil contamination is detected, contamination delineation and clean-up will be coordinated in consultation with the Kivalliq Inuit Association and Indigenous and Northern Affairs Canada.

## **5.0 REPORTING AND DOCUMENTATION**

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Annual reporting will occur in accordance with water licence and land use licence and permit terms and conditions. Temporary and final closure efforts will be photo-documented.

## **6.0 SECURITY**

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A \$35,000 security deposit is held by the Kivalliq Inuit Association in relation to the undertaking associated with land use licence KVL311B01.

## 7.0 REFERENCES

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*Canadian Environmental Protection Act (CEPA). S.C. 1999, c.33*

*Interprovincial Movement of Hazardous Waste Regulations. SOR/2002-301*

*Nunavut Waters and Nunavut Surface Rights Tribunal Act. S.C. 2002, c.10*

*Nunavut Waters Regulations. SOR/2013-69*

*Territorial Lands Act. R.S.C., 1985, c. T-7*

*Territorial Land Use Regulations. SOR/2016 R-32, s.1.*

*Transportation of Dangerous Goods Act (TDGA). S.C. 1992, c.34*

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