

LAND USE PERMIT

Permit Number: Parks2012-L001

Permittee: Canadian Zinc Corporation

Issuing Office: Nahanni National Park Reserve of Canada

Southwest NWT Field Unit

Permit validation: From August 28, 2013 to August 28, 2018

Her Majesty the Queen, in the right of Canada, represented herein by the Minister of the Environment for the purposes of the Parks Canada Agency

Authorization Signature: _____

Date: _____

Jeff Anderson, Vice-President, Western and Northern Canada

Parks Canada Agency

Conditions Annexed to and Forming Part of Land Use Permit # Parks2012_L001

Authorities

This Permit is issued under the following authorities:

Canada National Parks Act 41.1(3)
National Parks of Canada General Regulations s. 11(1)
National Parks of Canada General Regulations s.12(1)
National Parks of Canada General Regulations s.35(1)
National Parks of Canada Highway Traffic Regulations s.41(1)
National Parks of Canada Highway Traffic Regulations s.41(2)
National Parks of Canada Highway Traffic Regulations s.3(2)
National Parks of Canada Fire Protection Regulations s.5(2)
National Parks of Canada Building Regulations s.5(1)
National Parks of Canada Camping Regulations s.4(1)

Part A: Scope of Permit

1. This Permit entitles Canadian Zinc Corporation (the "Permittee") to conduct the following activities: construction, maintenance, operation and use of a winter road¹ within Nahanni National Park Reserve of Canada connecting Prairie Creek Mine site to the Liard Highway and associated facilities, between the following locations:

West Park Boundary 61°36' 36"N; 124°41' 4"W

East Park Boundary 61°25' 43"N; 123°34' 30" W

2. The Permit is issued subject to the conditions contained herein with respect to the use of land for the activities and area identified in Part A, item 1 of this Permit.

3. Compliance with the terms and conditions of this Permit does not absolve the Permittee from the responsibility for compliance with the requirements of all applicable federal, territorial, and municipal legislation.

Part B: Definitions

"Application" means the application submitted on May 18, 2012 and the information

¹ Although the Permit references "winter road", it is acknowledged a portion of the road will be constructed and maintained to an all seasonal standard and it is further acknowledged some maintenance will occur other than in the operating season.

submitted on November 16, 2012 and the information submitted on February 13, 2013.

“Cat Camp” means the site described in Figure 3 in “Final-Cat Camp Environmental Site Investigation and Remedial Options Review Report” by EBA, 2007.

“Cat Camp Aggregate Pit” means the area for the purpose of aggregate extraction outlined in figure “Prairie Creek Mine, Location of Proposed Aggregate Source KM 38, near Cat Camp” in the letter of February 13, 2013 from Canadian Zinc Corporation to Parks Canada.

“Cat Camp Water Pit” means the pit at the location identified on Figure 1 of the February 13, 2013 letter from Canadian Zinc Corporation to Parks Canada.

“Inspector” has the same meaning as “Inspector” in section 41.1(3) of the *Canada National Parks Act*.

“Minister” means the Minister responsible for the Parks Canada Agency.

“Operating Season” means the time from the first vehicle using the road beyond km 39 until spring break-up.

“Ordinary High Water Mark” means the usual or average level to which a body of water rises at its highest point and remains for sufficient time as to change the characteristics of the land. In flowing water this refers to the “active channel/bank-full level” which is often the 1:2 year flood flow return level. In inland lakes, or wetlands, , it refers to those parts of the watercourse bed and banks that are frequently flooded by water so as to leave a mark on the land and where the natural vegetation changes from predominantly aquatic vegetation to terrestrial vegetation (excepting water tolerant species).

“Park” means the Nahanni National Park Reserve of Canada

“Polje-West Aggregate Pit” means the area outlined on the map “Polje-West Aggregate Location” in the letter of February 13, 2013 from Canadian Zinc Corporation to Parks Canada for the purposes of aggregate extraction.

“Right of Way” means 10 m on either side of the centre line identified on the drawings submitted November 16, 2012 from Canadian Zinc Corporation to Parks Canada and the Cat Camp Aggregate Pit, the Polje-West Aggregate Pit, Cat Camp Water Pit, Tetcela Transfer Station and the access roads to Mosquito Lake and the Lake at Km 70.

“Secondary Containment” - containment that prevents liquids that leak from Fuel Storage Tanks or containers from reaching outside the containment area and includes double-walled tanks, piping, liners, and impermeable barriers.

“Superintendent” means the Superintendent of the Park and includes any person appointed under the *Canada National Parks Act* who is authorized by the Superintendent to act on the Superintendent’s behalf.

“Tetcela Transfer Station” means the area identified in Drawing 003 submitted on November 16, 2012 plus a 10 m buffer around that area.

“Vehicle” means only those vehicles authorized by this Permit.

“Winter road” means the portion of the Right of Way located east of km 33, but not including the Tetcela Transfer Station.

Part C: Conditions Applying to All Activities (the headings correspond to subsection 26(1) of the Mackenzie Valley Land Use Regulations)

26(1)(a) Location and area		
1.	The Permittee shall not conduct this land use operation on any lands not in the Right of Way and Cat Camp.	LAND USE
2.	The Permittee shall only use mobile trailers for the construction/maintenance of the road.	MOBILE TRAILERS
3.	After initial construction, outside of operating season, mobile trailers may only be located at Tetcela Transfer Station.	MOBILE TRAILERS
4.	The Permittee shall scout the right of way to select the best location for crossing streams and avoiding terrain obstacles prior to the movement of any vehicle that exerts pressure on the ground in excess of 35 kPa.	DETOURS AND CROSSINGS
5.	The Permittee may remove up to 5000m ³ of aggregate from the Cat Camp Aggregate Pit and up to 50 000m ³ of aggregate from the Polje-West Aggregate Pit.	AGGREGATE SOURCES
26(1)(b) Time		
6.	<p>The Permittee shall advise an Inspector in the following circumstances:</p> <ul style="list-style-type: none"> a) 48 hours prior to starting work in the park after an absence of 4 weeks or more and shall provide the Name(s) of the person(s) in charge of the field operation to whom notices, orders, and reports may be served; alternates; and all methods for contacting the above person(s); b) when all activity completed before spring break up and equipment left in the park; c) within 24 hours of their operation harming or killing an animal; 	REPORTS BEFORE REMOVAL

	d) immediately of any serious injury or fatality; and e) at least ten days prior to the completion of the land use operation of the plan for removal or storage of equipment and materials; and when final clean-up and restoration of the land used will be completed.	
7.	For the purpose of this operation, March 31 is designated as spring break-up, or as otherwise determined by an Inspector.	SPRING BREAK-UP
8.	The Permittee shall obtain approval from the Inspector for any stream crossings through water from km 23 to the eastern park boundary.	STREAM CROSSINGS
9.	The Permittee shall not cross the streams at km 23, 24, 26.4, 26.8, 28.7, 43 and 53 without a bridge during the operating season unless mitigations have been identified appropriate to the scale of traffic to the satisfaction of the Superintendent.	STREAM CROSSINGS
10.	The Permittee shall conduct all activities only within the operating season and from July 15 to September 31, with only one exception: the Permittee may conduct activities at any time: (1) for the purposes of responding to an emergency or performing monitoring; or (2) as approved by the Inspector.	SUMMER WORK
26(1)(c) Type and size of equipment		
11.	The Permittee shall not use any equipment except of a similar type, size, and number listed in the Application and approved by the Superintendent from time to time.	ONLY APPROVED EQUIPMENT
12.	The Permittee shall equip bulldozer blades used in this operation on the Winter Road with "mushroom" type shoes or a similar type of device which shall be extended 15 centimetres below the cutting edge of the blade.	BULLDOZER BLADES AND SHOES
13.	The Permittee shall ensure all vehicles remain within the Right of Way and Cat Camp.	VEHICLES
14.	The Permittee shall ensure a communication system is in place that allows for communication between vehicles on any part of the right of way and the mine site.	
26(1)(d) Methods and techniques		
15.	The Permittee shall construct and maintain the Winter Road with a minimum of 10 centimetres packed snow and/or ice at all times during this land use operation. If the Inspector is satisfied this cannot be done, the Permittee shall construct Winter Road in a manner authorized by an Inspector.	SNOW ROADS/ ICE ROADS
16.	The Permittee shall not clear areas larger than the Right of Way.	MINIMIZE AREA CLEARED

17.	The Permittee shall ensure that all vehicles and equipment within the Right of Way are properly maintained and free of leaks.	MAINTAINED EQUIPMENT
18.	The Permittee shall ensure that all stationary equipment use drip pans.	USE OF DRIP PANS
19.	The Permittee shall ensure that machinery arriving on site is in a clean condition.	ARRIVAL OF MACHINERY
20.	The Permittee shall not erect camps or store material other than that required for immediate use on the surface ice of a watercourse.	STORAGE ON ICE
21.	The Permittee may use explosives after evidence has been provided to the Inspector of an Explosives Permit under the <i>Explosives Act</i> and mitigations have been described to the satisfaction of the Inspector.	EXPLOSIVES
22.	The approved road design and geometry will be engineered to the "Forest Road Engineering Guidebook" produced by British Columbia for the Right of Way not in the Winter Road and Transportation Association of Canada "Guidelines for the Construction and Operation of Winter Roads" for the Winter Road.	DESIGN STANDARD
23.	The Permittee shall monitor the road design geometry and structural integrity on a regular basis during Operational Season using a frequency and method described in the Construction, Operation and Maintenance Plan. Corrective measures of areas of irregularities must be addressed within 48 hours.	ROAD INTEGRITY MONITORING
26(1)(e) Type, location, capacity, and operation of all facilities		
24.	The Permittee shall ensure that the land use area is kept clean at all times, to the satisfaction of the Superintendent.	CLEAN WORK AREA
25.	The Permittee shall remove from the Right of Way all fuel, concentrate, materials, supplies and waste prior to spring break-up.	TETCELA TRANSFER STATION
26(1)(f) Control or prevention of ponding of water, flooding, erosion, slides, and subsidence of land		
26.	The Permittee shall slope the sides of waste material piles, excavations, and embankments - except in solid rock - to a minimum ratio of two (2) horizontal to one (1) vertical, unless otherwise authorized in writing by an Inspector.	EXCAVATIONS AND EMBANKMENTS
27.	The Permittee shall limit ground disturbance such as clearing and filling to the extent possible to avoid erosion and stability concerns during spring melt and summer precipitation events.	GROUND DISTURBANCE
28.	The Permittee shall minimize approach grades on all winter lake and/or stream crossings.	MINIMIZE APPROACH
29.	The Permittee shall ensure the land use operation shall not cause obstruction to any natural drainage.	NATURAL DRAINAGE

30.	The Permittee shall not cut any stream bank, unless authorized in writing by an Inspector.	STREAM BANKS
31.	The Permittee shall minimize disturbance of stream banks and riparian areas. If disturbance occurs the Permittee shall restore the banks to the original condition to the satisfaction of the Superintendent.	RESTORATION OF STREAM BANKS
32.	The Permittee shall not use any material other than water and snow in the construction of ice bridges.	ICE BRIDGE MATERIALS
33.	The Permittee shall not use any material other than snow in the construction of snow fills.	SNOW FILLS
34.	The Permittee shall clean up and remove all snow fills from stream crossings prior to spring break-up or completion of the land use operation, unless otherwise authorized in writing by an Inspector.	REMOVE SNOW FILLS
35.	The Permittee shall not allow any ice bridge to hinder the flow of water.	ICE BRIDGE
36.	The Permittee shall clean up and v-notch all stream crossings prior to spring break-up or completion of the land use operation, unless otherwise authorized in writing by an Inspector.	V-NOTCH STREAM CROSSINGS
37.	The Permittee shall implement erosion control measures, satisfactory to the Superintendent, as the land use operation progresses.	PROGRESSIVE EROSION CONTROL
38.	The Permittee shall ensure effective control measures are incorporated into the road design, construction and operation to prevent sedimentation and erosion to adjacent water courses, all to the satisfaction of the Superintendent.	EROSION CONTROL MEASURES
39.	The Permittee shall insulate the ground surface beneath all structures and facilities associated with this land use operation to prevent: a) Any vegetation present from being removed and the melting of permafrost; and b) The ground settling and/or eroding.	INSULATE GROUND SURFACE
40.	The Permittee shall not deposit fill or other material that may degrade water quality at stream crossing.	PLACEMENT OF FILL
41.	The Permittee shall prepare the site in such a manner as to prevent rutting of the ground surface.	PREVENTION OF RUTTING
42.	The Permittee shall suspend overland travel of equipment or vehicles at the first sign of rutting.	SUSPEND OVERLAND TRAVEL
43.	The Permittee shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging.	VEHICLE MOVEMENT FREEZE-UP

26(1)(g) Use, storage, handling, and ultimate disposal of any chemical or toxic material		
44.	At least seven days prior to the use of any chemicals that were not identified in the Application, the MSDS sheets must be provided to an Inspector.	CHEMICALS
45.	The Permittee shall dispose of all combustible waste petroleum products by removal.	WASTE PETROLEUM DISPOSAL
46.	Prior to commencement of operations, the Permittee shall ensure that spill-response equipment is in place, to respond to any potential spills.	SPILL KITS
47.	The Permittee shall wash, refuel and service machinery, and store fuel and other material for the machinery away from the water to prevent any deleterious substances from entering the waters.	MACHINERY FLUIDS
48.	The Permittee shall dispose of all toxic or persistent substances in a manner as described in the approved Waste Management Plan.	WASTE CHEMICAL DISPOSAL
49.	The Permittee shall report spills immediately to the 24-hour Spill Report Line, (867) 920-8130, in accordance with instructions contained in the "NT-NU Spill Report" form AND to the Inspector.	REPORT CHEMICAL AND PETROLEUM SPILLS
50.	The Permittee may transport fuel on the Right of Way but only in accordance with territorial and federal laws and regulations	FUEL
51.	The Permittee shall not use salt on the Right of Way.	SALT
26(1)(h) Wildlife and fish habitat		
52.	The Permittee shall take all reasonable measures to prevent damage to wildlife and fish habitat during this land use operation.	HABITAT DAMAGE
53.	The Permittee shall use food handling and garbage disposal procedures that do not attract wildlife.	WILDLIFE/ HUMAN CONFLICT
54.	If caribou, wood bison, grizzly bear, wolverine, peregrine falcon, short-eared owl, horned grebe, rusty blackbird, olive-sided flycatcher, and common nighthawk are injured or killed as a result of the operation, the Annual Report shall include a description of the factors that contributed to the death and any appropriate changes to mitigations.	WILDLIFE
55.	The Permittee shall construct and maintain the water intake from surface water using the DFO recommended 2.54 millimetre fine mesh size to prevent entrainment of fish. Other dimensions must follow DFO's "Freshwater Intake End-of-Pipe Fish Screen Guidelines".	PREVENT ENTRAINMENT

56.	If migratory birds or their nesting areas or any species at risk are encountered during the course of operations, the Permittee shall minimize disturbance by complying with the Wildlife Mitigation and Monitoring Plan.	MINIMIZE ACTIVITY
57.	The Permittee shall ensure that chemicals, fuel or wastes associated with the project do not enter any watercourse.	WATER FREQUENTED BY FISH
26(1)(j) Storage, handling, and disposal of refuse or sewage		
58.	The Permittee shall adhere to the approved Waste Management Plan and shall annually review that plan and make any necessary revisions to reflect changes in operations, technology, chemicals or fuels. Revisions to that plan shall be submitted to the Superintendent for approval.	WASTE MANAGEMENT
59.	The Permittee shall stabilize waste material to prevent entry into lakes, rivers, or streams.	STABILIZATION OF WASTE
60.	The Permittee shall dispose of all garbage, waste, sewage and debris as described in the approved Waste Management Plan, unless otherwise authorized in writing by an Inspector.	REMOVE GARBAGE
26(1)(j) Protection of historical, archaeological, and burial sites		
61.	The Permittee shall not operate any vehicle within 100 metres of a known or suspected archaeological site unless otherwise approved by the Inspector.	OPERATE VEHICLE
62.	If the Permittee discovers a site that is or might be an archaeological or historical site or burial ground, the Permittee shall immediately suspend operations on the site and notify the Inspector.	SITE DISCOVERY AND NOTIFICATION
26(1)(k) Objects and places of recreational, scenic, and ecological value.		
63.	The Permittee shall not feed wildlife.	NO FEEDING WILDLIFE
26(1)(l) Security deposit		
64.	<p>The Permittee shall deposit, with the Minister, a security deposit in the amount of \$1,072,097.00 in a form provided by section 32(4) of the Mackenzie Valley Land Use Regulations. The deposit shall be made in the following schedule:</p> <p>a) Prior to commencement of the operation, the Licensee shall deposit \$674,376.00;</p> <p>b) Prior to the construction of the Tetcela Transfer Station, the Licensee shall make an additional security deposit of \$397,721.00;</p> <p>The security deposit shall be maintained until such time as it is fully or in part refunded pursuant to section 32(5) of the Mackenzie Valley Land Use Regulations. This clause shall survive the expiry of this Licence.</p>	SECURITY DEPOSIT

65.	The amount of the security deposit referred to in Item 64 may be revised by the Superintendent based on new information provided by the Permittee.	
66.	The costs to remediate the area under this Permit are the sole responsibility of the Permittee	RESPONSIBILITY FOR REMEDIATION COSTS
26(1)(m) Fuel storage		
67.	The Permittee shall not place any fuel storage containers within one hundred (100) metres of the Ordinary High Water Mark of any watercourse, unless otherwise authorized in writing by an Inspector.	FUEL BY STREAM
68.	The Permittee shall ensure petroleum products do not spread to surrounding lands or watercourses.	FUEL CONTAINMENT
69.	The Permittee shall ensure that all fuel at the Tetcela Transfer Station has adequate Secondary Containment.	SECONDARY CONTAINMENT
70.	The Permittee shall set up all refueling points with Secondary Containment.	REFUELLING
71.	The Permittee shall adhere to the approved Spill Contingency Plan and shall annually review that plan and make any necessary revisions to reflect changes in operations, technology, chemicals or fuels. Revisions to that plan shall be submitted to the Superintendent for approval. If a spill occurred during that year, the annual review must include an assessment of contributing factors to the spill and the actions taken to avoid them in the future and the effectiveness of spill response and any changes that are necessary to respond more effectively.	SPILL CONTINGENCY PLAN
72.	The Permittee shall submit a Spill Risk Analysis Plan four months prior to hauling and make changes to any corresponding plans considered by the Superintendent to be necessary to reflect the results of the Spill Risk Analysis Plan.	SPILL RISK ANALYSIS PLAN
73.	The Permittee shall ensure that adequate contingency plans and spill kits are in place, prior to commencement of operations, to respond to any potential spills.	SPILL RESPONSE
74.	The Permittee shall ensure that all equipment that may be parked for 2 hours or more, shall have a haz-mat/drip tray under it. The Permittee shall ensure that leaky equipment shall not be used and shall be repaired immediately.	DRIP TRAY
26(1)(n) Methods and techniques for debris and brush removal		
75.	The Permittee shall make the windrow of brush and debris lie flat and compact by: a) Bucking the material into suitable lengths and lopping the branches from the stem;	BRUSH DISPOSAL

	b) Crushing with heavy machinery in order to compact the material; or, c) Chipping the material with a chipper	
76.	The Permittee shall progressively dispose of all debris and brush.	PROGRESSIVE DISPOSAL
26(1)(o) Restoration of the lands		
77.	The Permittee shall store overburden and use it to re-contour the site after operations are complete, unless otherwise authorized in writing by an Inspector.	SAVE AND PLACE ORGANIC SOIL
78.	Prior to the expiry date of this Permit, the Permittee shall complete all clean-up and restoration of the lands used, all to the satisfaction of the Superintendent.	CLEAN-UP
79.	Stripping of overburden must be approved in writing by an Inspector prior to stripping overburden.	STRIPPING OF OVERBURDEN
80.	The Permittee shall store the overburden as instructed by the Inspector.	DISPOSAL OF OVERBURDEN
81.	The Permittee shall not use organic overburden for road bed construction. Where possible, overburden should be stockpiled in a manner that preserves its integrity for use in restoration and should be stored greater than 100m from any water body in an enclosed or clearly marked location.	ORGANIC OVERBURDEN
26(1)(p) Display of permits and permit numbers		
82.	The Permittee shall keep on hand, at all times during this land use operation, a copy of the Permit.	COPY OF PERMIT
26(1)(q) Matters not inconsistent with the regulations		
83.	The Permittee shall not remove any material from below the Ordinary High Water Mark of any water body.	WORK IN WATER BODIES
84.	The Permittee shall not conduct activities related to any amendments to this Permit until the Superintendent approves the amendments. The Permittee shall submit all amendment requests to the Superintendent, for approval, prior to commencement of the proposed amended activity(ies).	PRIOR NOTIFICATION
85.	The Permittee shall reclaim the existing Cat Camp site until, in the opinion of the Inspector, the site meets CCME guidelines for park land. In doing so, the Permittee shall complete the reclamation to the satisfaction of the Inspector.	RECLAMATION
86.	By January 10, 2014, the Permittee shall submit a Cat Camp Remediation Plan to the Superintendent for approval describing how and when reclamation will occur.	CAT CAMP RECLAMATION

87.	<p>The Permittee shall submit to the Superintendent for approval 90 days prior to construction:</p> <ul style="list-style-type: none"> • Engagement Plan; • Sediment and Erosion Control Plan; • Road Operation Plan; • Construction Operation and Maintenance Plan; • Contaminant Loading Management Plan; • Interim - Closure and Reclamation Plan; • Waste Management Plan; • Wildlife Mitigation and Monitoring Plan or similar; • Aggregate Site Plan for Cat Camp Aggregate Pit; • Aggregate Site Plan for Polje-West Aggregate Pit; and • Avalanche Assessment. <p>With the exception of the Aggregate Site Plans and Avalanche Assessment, the geographic scope of the above plans will be the Right of Way.</p> <p>If any of the above noted plans are not approved by the Superintendent, the Permittee shall revise and resubmit the plan that was not approved within three (3) months of receiving notification of the Superintendent's decision.</p> <p>The Permittee shall review the above noted Plans annually or as directed by the Superintendent and modify the Plan(s) as necessary to reflect changes in operation, technology and staffing. Any proposed modifications shall be submitted to the Superintendent for approval.</p>	PLANS
88.	The Permittee shall implement the above noted plans when approved by the Superintendent.	IMPLEMENTATION OF PLANS
89.	The Permittee shall not begin construction without the plans identified in section 87 approved by the Superintendent.	PLANS REQUIRED
90.	The Permittee shall submit to the Superintendent 90 days prior to construction plans indicating where permafrost is located and how it will be mitigated and plans indicating where geotextile will be laid.	

91.	The Permittee shall submit to the Superintendent 90 days prior to construction, any further geotechnical studies for the realignments, the Tetcela Transfer Station and the bridges.	GEOTECHNICAL STUDIES FOR REALIGNMENTS AND BRIDGES
92.	The Permittee shall submit to the Superintendent 90 days prior to construction, engineering designs for the crossings at km 24, 26.4, 36.8, 28.7 and 43 or notification that bridges will be constructed at these crossings.	
93.	The Permittee shall submit to the Superintendent 90 days prior to construction, the final engineering designs.	ENGINEERING DESIGNS
94.	The Permittee shall submit to the Superintendent 90 days prior to construction, the construction drawings showing any additional areas that will require cut and fill and the approximate amounts.	CONSTRUCTION DRAWINGS
95.	The Permittee shall ensure that all persons working under the authority of this Land Use Permit are aware of, and adhere to, the terms and conditions of this Land Use Permit.	NOTIFICATION TO PERSONS
96.	The Permittee shall submit to the Superintendent a haul schedule.	HAUL SCHEDULE
97.	The Permittee shall keep a log of all spills and provide a copy to the Inspector every 30 days.	SPILL LOG
98.	The Permittee shall operate machinery on land above the high-water mark in a manner that minimizes disturbance to the banks of the water course.	BANK DISTURBANCE
99.	The Permittee shall utilize secondary containment when transporting concentrate along the road.	SECONDARY CONTAINMENT
100.	The Permittee shall adhere to all the commitments made by the Permittee during the review of the Application and supporting documents.	COMMITMENTS
101.	The Permittee shall adhere to all commitments made by the Permittee during the Environmental Assessment Process (EA0809-002).	COMMITMENTS
Monitoring and reporting		
102.	The Permittee shall monitor for invasive species along the Right of Way as described in the Construction, Operation and Maintenance Plan.	INVASIVE SPECIES
103.	The Permittee shall monitor wildlife as describe in the Wildlife Mitigation and Monitoring Plan.	WILDLIFE

104.	The Permittee shall monitor for potential contaminants along the Right of Way as outlined in the Contaminant Loading Management Plan.	CONTAMINANT LOADING
105.	The Permittee shall monitor erosion and permafrost degradation as outlined in the Sediment and Erosion Control Plan and Aggregate Site Plans.	EROSION
106.	The Permittee shall monitor ground temperature at locations on the Right of Way and at such times as described in the Construction, Operation and Maintenance Plan.	GROUND TEMPERATURE PLAN
107.	The Permittee shall undertake a road survey at least once per year to identify and implement required mitigation measures in potential sediment and erosion concern areas as described in the Sediment and Erosion Control Plan.	EROSION
108.	The Permittee shall monitor the road immediately after freshet for sources of sedimentation and erosions as outlined in the Sediment and Erosion Control Plan. Mitigation measures shall be implemented in accordance with the Sediment and Erosion Control Plan.	SEDIMENT AND EROSION
109.	<p>The Permittee shall submit to the Superintendent an Annual Report for the year beginning April 1 to March 31, by July 31 of each year, which shall include, in detail satisfactory to the Superintendent, the following:</p> <ul style="list-style-type: none"> • Volume of aggregate removed from pits; • Results from monitoring carried out under clauses 102,103,104,105,106, 107 and 108 and any mitigation implemented in response to monitoring; • Analysis of any deaths of caribou, wood bison, grizzly bear, wolverine, peregrine falcon, short-eared owl, horned grebe, rusty blackbird, olive-sided flycatcher, and common nighthawk in accordance with clause 54; • Results from any analysis of spills as described by clause 71; • Erosion and sedimentation control effectiveness; • Comparison of actual haul to haul schedule; • Traffic incidents including: accidents between vehicles, break-downs for significant periods of time, jack-knifing, and any incidents of vehicles leaving the approved ROW; and • Such other information as the Superintendent requests. 	ANNUAL REPORT