



January 21, 2016

Ms. Sachi De Souza
Environmental Assessment Officer
Mackenzie Valley Environmental Impact Review Board
5102 50th Avenue,
Yellowknife, NT
X1A 2N7

Dear Ms. De Souza

RE: Environmental Assessment EA1415-001, Prairie Creek Mine
All Season Road, December 2015 Information Requests

We refer to the three information requests (IR's) from the Review board that were posted on the on-line review system (ORS) in December 2015. Canadian Zinc Corporation (CZN) provides responses to these below.

ID1 Concordance Table

The errata noted in the information request have been corrected in the attached revised Concordance Table.

ID2 Clarification of Project Description

Regarding the construction schedule for the road, the information request is correct in that Table 4 of the Allnorth report in Appendix A of the DAR Addendum provides a construction schedule for the entire road, with construction starting from the east and progressing west, components of Phases 1 and 2 of the road constructed simultaneously, and the Phase 2 portion completed before Phase 1. The main reasons for this are:

- a) equipment and supplies must be brought in from the east to sustain the construction, whereas construction from the Mine would leave equipment stranded for a large part of the year, and supplies, specifically fuel, could run out; and,
- b) CZN's position is that the whole road must be built in order to realize positive economics, as indicated in Section 3 of the DAR Addendum.

Therefore, we do not now envisage Phase 1 of the road being constructed first. If only Phase 1 was to be built, which is not our preference, the same schedule as described in the Allnorth report would likely be followed, except that Phase 2 activities would obviously not occur, and

Phase 1 winter activities in Year 2 would be completed in the Year 1 winter, thus reducing the total construction duration from 3 to 2 years.

ID3 Terrain Mapping Clarification

A summary table describing the terrain attributes used to assign the stable, potentially unstable and unstable categories is attached. Our consultant, Tetra Tech EBA, also provided the following advice:

“When mapping terrain stability, the mapper often uses his/her discretion in assigning stability classes; however, consistency across the mapping is important and the mapping was re-examined in light of the attached terrain stability classification table. Sixteen polygons were identified as requiring changes that are acceptable to the mapper to maintain consistency with the classification table. These changes are listed in a second table, attached. Considering the total number of polygons mapped to date is 759, the changes are considered to be a minor adjustment.”

If you have any questions, please contact us at 604 688 2001.

Yours truly,
CANADIAN ZINC CORPORATION



David P. Harpley, P. Geo.
VP, Environment and Permitting Affairs

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
2.3 Public Engagement	1	Engagement Summary	7.2	DAR Appendix 13
	2	Engagement Methods	7.1	
	3	Traditional Knowledge info. collection	7.3	
	4	Engagement Plan		DAR Appendix 14
2.4 Summary Materials	1	English and South Slavey summaries	Exec Sum	
	2	Concordance table	Table A	DAR Adden. Table A
	3	Commitments table	Table B	
2.5 Developer	1	Corporate Summary	2.1	
	2	Ensure contractor's commitments	2.2	
	3	Environmental Performance	2.3	
	4	Corporate Policies	2.4	
3.1 Scope of Development	1	Project Facilities	6	DAR Adden. Appendix A (2.8)
3.3 Geographic Scope	1	Spatial Study Area boundaries	3.1	
3.4 Temporal Scope	1	Temporal boundaries	3.2	
3.5 Alternatives	1	Alternatives to the Development	3.3	DAR Adden., Section 3 & Appendix A (Section 2.1)
5.1.1 Terrain, Geology, Soils, and Permafrost	1	topography and geology, including key terrain features such as rivers, lakes, karst features and wetlands and other important processes and features	4.1	DAR Adden. Appendices A (Section 2.2) & F (Section 2.2)
	2	bedrock type and depth		item withdrawn
	3	unconsolidated surficial materials and terrain types, including thickness of landforms		DAR Appendix 2, Section 5, p.17-63; DAR Adden. Appendix F, Section 2.3
	4	soil types, including group, series and type, as applicable		DAR Appendix 2, Section 5 and Appendix B, p.17-63. DAR Adden. Appendix F, Section 2.4
	5	borrow locations		DAR Appendices 1 (Appendix 4) & 2 (Section 5). DAR Adden. Appendix A (Section 2.3 & Appendix D)
	6	probable borrow ice content		
	7	size of borrow areas		
	8	borrow volumes to be removed		DAR Appendix 1 & Adden., Appendix A - Section 2.3 Appendix A
	9	quality of borrow materials at each location (including acid generation potential)		
	10	probable existence and extent of ice rich permafrost areas that may be excavated		DAR Appendices 1 & 2 (Sections 6, p.63-65, and 8.2, p. 79-81). DAR Adden. Appendices A (Section 2.3, Appendix A) & F (TSM in areas identified as "high-risk")
	11	borrow ownership		DAR Adden., Appendix A - Section 2.3 Appendix C BPMRP
	12	probable permafrost distribution (thickness and lateral extent) on land, water, shoreline and slope crossings		DAR Appendix 2, Section 5, p.17-63; Section 5.4, p. 62-63. DAR Adden., Appendix F, p.7.

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
5.1.1 Terrain, Geology, Soils, and Permafrost	13	permafrost distribution and stability beneath waterbodies		DAR Appendix 2, Section 5, p.17-63; Section 5.4, p. 62-63. DAR Adden., Appendix F, p.7.
	14	permafrost processes, features and landforms and their stability, including slopes, shorelines and stream banks		DAR Appendix 2, Section 5, p.17-63; Section 5.4, p. 62-63. DAR Adden., Appendix F, Section 2.5
	15	probable ground ice conditions, temperature and ground thermal regime		
	16	probable active layer thickness, seasonal frost, penetration, thaw sensitivity and frost susceptibility		DAR Appendix 2, Section 5, p.17-63; Section 5.4, p. 62-63. DAR Adden., Appendix F, p.5, 8.
	17	how fires may affect ground temperature regimes and permafrost		DAR Appendix 2, Section 5, p.17-63; Section 5.4, p. 62-63. DAR Adden., Appendix F, p. 8, 10-11.
	18	thaw slumps in the project area		DAR Appendix 2, Section 5, p.17-63; Section 5.4, p. 62-63. DAR Adden., Appendix F, Section 2.5, Table 2.7-1
	19	how regional climate variation and documented warming of ground temperatures in the region may affect ground conditions.		DAR Appendix 2, Section 6, p.63-65. DAR Adden. Appendix F, Section 2.5
5.1.2 Climate	1	the location of recording stations, length of record for any meteorological data presented, and the quality of the data	4.2	DAR Appendix 2, Section 5.3 (p.61-62). DAR Adden. Appendix D (Section 3.1).
	2	prevailing climatic conditions, seasonal variations, predominant winds including direction and velocity, temperature and precipitation (snowfall, snow depth, rain, fog, wind)		
	3	spatial and temporal boundaries for the description of climate		
	4	any current climate-related extreme events that may affect the project and frequency of occurrence		
	5	define the variability and trends within the “current” climate normal period and within the historical period of instrumental record		
	6	discuss the contribution of traditional knowledge to the understanding of climate conditions and variability	4.2 (p.72)	DAR Appendix 2, Section 5.3 (p.62). DAR Adden. Appendix D.
5.1.3 Water Quality and Quantity	1	surface water bodies, watercourses and major drainage areas including the total number of crossings and the stream order of the watercourse crossings	4.3.1	
	2	groundwater and subsurface water sources with particular attention to water within karst features	4.3.3	
	3	watercourses that have year-round flow	4.3.1	DAR Pages 78 & 84
	4	the extent of connectivity to adjacent watercourses including any potential seasonal variation		
	5	seasonal and perennial springs including ephemeral streams located within or near the boundaries of the development		
	6	naturally occurring icings		

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
5.1.3 Water Quality and Quantity	7i	surface water flow regimes, variability and seasonal patterns	4.3.1	
	7ii	channel characteristics including channel width, normal water depth, and high water depth, with consideration of inter-annual variability (e.g. consideration of the changes between low flow and peak flow conditions)		DAR Appendices 1, 3, 4 and 5. DAR Adden. Appendices A (Section 2.2 & Appendix B) and B.
	7iii	estimated peak flow rates, water surface elevation, and erosion potential for flood events (considering multiple events from a 1 in 10 year event to a 1 in 250 year event)		
	7iv	channel and bed morphology and stability		DAR Appendix 2 (Section 5, p.17-63, Appendix C). DAR Adden., Section 7.6, Appendices A (Section 2.2) & F (Section 2.6).
	7v	bank stability and areas of erosion		DAR Appendix 1 (Section 6). DAR Adden., Section 7.6, Appendices A (Section 2.2 & F (Section 2.6)
	7vi	sediment load – suspended and bed load		DAR Table 4-2; Appendix 9, Attachment B.
	8	sediment quality (type of sediment and concentrations of organics and inorganics in sediment)	4.3.2	
	9	water quality, including seasonal variability in quality		DAR Adden. Appendix B Section 6
	10	active and historical floodplains		DAR Appendix 1, Section 6; DAR Adden., Appendices A (Table 2) and F (p.6).
	11	freeze and thaw timing	4.3.1	DAR Page 79
	12	the role of wetlands (e.g., bogs, fens and peat plateaus)	4.3.1 & 4.6.4	DAR Pages 78 and 112, respectively
	13i	subsurface and groundwater flow paths with particular attention to flow within karst features	4.3.3	
	13ii	hydraulic conductivity		DAR Page 84
5.1.4 Species at Risk	1	wildlife species presence, distribution and abundance	4.4	
	2	seasonal movements, habitat requirements (e.g., breeding, calving, feeding) and sensitive time periods		
	3	population status and trends, limits and size, sensitivity and any other limiting factors		DAR Adden., Appendix B Section 2, and Appendices C (Sections 15.2 & 16, and Appendix B Section 1) & E (Section 4.3 (Wildlife species at risk))
	4	habitat types including local and regional distribution and abundance		
	5	habitat or sites of special value or sensitivity, including species use and timing		
	6	migratory patterns, routes and timing in relation to all season road route alternatives, construction activities, and operation		DAR Adden., Appendix E: Sections 2 & 4.3
	7	harvest pressures (subsistence, resident and non-resident harvesting) by species, season and geographic area		DAR Adden., Appendix E: Section 4.3 (Wildlife species at risk)
	8	current and historic levels of natural and human-caused fragmentation and connectivity		DAR Adden., Appendix E: Section 4.1.1 (Current and historic levels of habitat fragmentation)

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
5.1.4 Species at Risk	9	baseline contaminant concentrations in harvested species that may change as a result of the all season road using existing data	4.4	DAR Adden., Appendices C (Attachment C) & E (Section 4.3)
	10	any known issues with respect to the health (e.g. parasites, diseases, condition) using existing data		DAR Adden., Appendix E: Section 4.3 (Wildlife species at risk)
	11	location of raptor nesting sites within 1km of the proposed project footprint		
	12	use of the project area by resident and migratory birds		
5.1.5 Fish and Aquatic Habitat	1	a description of fish habitat present at each of the planned water crossings and realignments, including references (such as photographs and diagrams) at those locations with particular emphasis on riparian areas	4.5.3, Appendix 8, 9, 10	DAR Adden., Appendix C, Attachments A and B
	2	fish species including forage fish (non-harvested) and any other aquatic resources of value present	4.5.1	DAR Adden., Appendix C, Attachments A and B
	3	seasonal and life cycle movements and sensitive periods	4.5	DAR Adden., Appendix C, Section 15.2 (bull trout)
	4	habitat requirements for each life stage		DAR Adden., Appendix C: Section 15.2, App. B Sec. 1, Atmnt A
	5	local and regional abundance, distribution and use of habitat types, including aquatic and riparian vegetation		DAR Adden., Appendix C, Attachments A and B
	6	known sensitive or important areas in terms of habitat type (e.g., spawning, overwintering, refugia, feeding), species and timing of use	4.5.3	DAR Adden., Appendix C, Attachments A and B
	7	existing baseline contaminant concentrations in harvested species that may change as a result of the all season road and as available		DAR Adden., Appendix C (Appendix B Section 8, and Attachment C)
	8	any known issues with respect to health of harvested species (e.g. parasites, disease, condition)		DAR Adden., Appendix C, Attachment D
	9	locations and species of particular importance to subsistence harvesters (including Bluefish creek, Tetcela River, and Fishtrap creek)	4.5.2	DAR Adden., Appendix C, Attachments A and B
	10	harvest pressures by species, season and geographic area	4.5.2	DAR Adden., Appendic C: Sections 6.3 and 15.2
	11	a listing of existing invasive species		DAR Adden., Appendix C: App. B Sec. 7
5.1.6 Wildlife and Wildlife Habitat	1	wildlife species presence, distribution and abundance	Appendix 7	DAR Adden., Appendix E: Sections 4.3 & 4.4
	2	seasonal movements, habitat requirements (e.g., breeding, calving, feeding) and sensitive time periods		DAR Addendum, Appendix E: Sections 4.3 & 4.4
	3	habitat types including local and regional distribution and abundance		
	4	species of importance to subsistence harvesters		
	5	habitat or sites of special value or sensitivity, including species use and timing		

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
5.1.6 Wildlife and Wildlife Habitat	6	migratory patterns, routes and timing in relation to all season road route alternatives, construction activities, and operation as well as in relation to construction activities and operation of the airstrip	Appendix 7	DAR Adden., Appendix E: Sections 2, 4.3 & 4.4
	7	harvest pressures (subsistence, resident and non-resident harvesting) by species, season and geographic area		DAR Adden., Appendix E: Section 4.3 & 4.4
	8	listing and location(s) of existing invasive species		DAR Adden., Appendix E: Sections 7.6, 7.7 & 8.2.4
	9	current and historic levels of natural and human-caused fragmentation and connectivity		DAR Adden., Appendix E: Section 4.1.1 (Current and historic levels of habitat fragmentation)
	10	existing baseline contaminant concentrations in harvested species that may change as a result of the all season road		DAR Adden., Appendix E: Sections 4.3 & 4.4
	11	any known issues with respect to the health of harvested species (e.g. parasites, diseases, condition)		DAR Adden., Appendix E: Section 4.4.4 (Forest birds)
	12	use of the project area by resident and migratory birds		DAR Adden., Appendix E: Section 4.4.6 (Raptors)
5.1.7 Vegetation	1	vegetation and vegetation assemblages	Appendix 7	DAR Adden., Appendix E: Section 4.5.4.2 (Current EOSD cover units)
	2	any classification system followed, as appropriate		DAR Adden., Appendix E: Section 4.5.4 (Vegetation cover description)
	3	identification of species or assemblages that are rare, valued, protected or designated (e.g., vulnerable, threatened, endangered)		DAR Adden., Appendix E: Sections 4.5.4, 4.5.6, 4.5.7 & 4.5.8
	4	location and abundance of rare plants		DAR Adden., Appendix E: Section 4.5.4 (Species at risk)
	5	historic and current human use of vegetation, including subsistence and commercial harvesting, (e.g., berry picking, forestry)		DAR Adden. Appendix B Section 10, and Appendix E (Section 4.5.9 (Traditionally harvested plants))
	6	existing baseline contaminant concentrations in harvested species or vegetation (e.g. berries) that may change as a result of the all season road and as available		DAR Adden., Appendix E: Section 4.5.10 (Existing contaminant concentrations in traditionally harvested plants)
	7	locations and quantities of merchantable timber		DAR Adden., Appendix E: Section 4.5.12 (Merchantable timber resources)
	8	listing and location(s) of existing invasive species		DAR Adden., Appendix E: Section 4.5.11 (Invasive species)
	9	frequency of forest fires and post-fire vegetation succession		DAR Adden., Appendix E: Section 4.5.13 (Fire regime)
5.2.1	1	Education, Training and Skills	5.1	
5.2.2	1	Harvesting	5.2	DAR Adden. Appendix B Section 4
5.2.3 Cultural and Heritage Resources	1	archaeological, paleontological and historic sites and resources	5.2, 5.3	
	2	culturally important sites		DAR Section 11.9.2
	3	burial sites		
	4	heritage resource potential		
5.2.4 Tourism	1		5.4	DAR Adden., Section 20.1

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
5.2.5 Regional and Local Economies	1	employment rate	5.5	DAR Adden., Section 20.2
	2	employment by industry and occupation, including occupations related to traditional activities		
	3	job vacancy and unfilled positions, labour force growth, participation and balance between wage and non-wage sector activities and earnings growth		
	4	poverty levels and annual level of social assistance benefits and recipients		
	5	the level of local households consuming harvested meat and fish and current harvest activities		
	6	current and projected land-based enterprises and economic activities, including those related to tourism, recreation, renewable and non-renewable resources		
5.2.6 Existing Transportation Routes and	1	fuel services	5.6	DAR Adden., Appendix A -Section 2.12
	2	road transportation routes including current usage		
	3	water transportation routes and navigable waters		
6.1 Project Components and Activities	1	design standards (for all project components)	6.3 & Table 6-1	DAR Appendix 1 (Section 4.3)
	2	land requirements (footprint, location, permanent or temporary, ownership, zoning)		DAR Appendix 1, DAR Adden. Appendix A (Appendix E, Table 16)
	3	right of way clearing		DAR Appendix 1, DAR Adden. Appendix A (Appendix E, Table 2)
	4	road construction methods		DAR Appendices 1 (Section 4) and 2 (Section 8.1.3, p.79-81). DAR Adden., Appendices A (Appendix E, Tables 5 & 6) & F (p.11-12)
	5	cut and fill estimates and plans for excess material disposal/storage		DAR Appendix 1 (Section 7), DAR Adden. Appendix A (Section 2,2; Appendix E, Table 8)
	6	water crossing structures and locations		DAR Appendix 1 (Section 6), DAR Adden. Appendix A (Section 2,2; Appendix E, Table 11)
	7	alterations to stream flow		DAR Section 6.4 & Appendix 1 (Section 6.3). DAR Adden. Section 7.6 & Appendix A (Section 2.2)
	8	borrow source locations, quality and quantities, activities and methods (including gravel crushing)		DAR Appendix 1 (Section 7). DAR Adden. Appendix A (Appendix A, Table 15)
	9	temporary winter or all season access roads to borrow areas		DAR Appendix 1 (Section 7.3). DAR Adden. Appendix A (Appendix A, Table 15)
	10	camp, staging areas, laydown areas, access roads and other support facilities		DAR Appendix 1 (Section 4.8.1)
	11	fuel storage and management		DAR Section 6.3.2, Appendix 1 (Section 4.8.2)
	12	explosives manufacturing, storage, transportation, and use		DAR Appendix 1 (Section 4.3)
	13	toxic or hazardous materials to be used		
	14	equipment requirements (by phase)		DAR Table 6-2
	15	concentrate containment		DAR Section 6.3.1
	16	solid, liquid, and gas waste management		DAR Section 9.3.2; Appendix 1 Section 4.8.3

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
6.1 Project Components and Activities	17	water use	6.3 & Table 6-1	DAR Adden. Section 4.11
	18	wastewater treatment		DAR Appendix 1 Section 4.8.3
	19	mobilization and demobilization (this should include a discussion of related activities and land requirements which are necessary for construction but not a part of the project)		DAR Appendix 1
	20	frequency of vehicle and aircraft movement during construction		DAR Section 6.3.3
	21	routine maintenance activities		DAR Appendix 1 Section 9. DAR Adden. Appendix A (ROP, RCMP)
	22	expected traffic volumes and weights during all phases		DAR Adden. Sections 4.2 & Appendix A (2.4)
	23	clean-up and restoration of work areas during construction phase		DAR Appendix 1 Section 10 DAR Adden. Appendix A (RCMP, SECP)
	24	reclamation		DAR Appendix 1 Section 10 DAR Adden. Appendix A (RCMP)
	25	procurement and implementation approach		DAR Appendix 1 Section 4.8.6
	26	training, employment and business opportunities		DAR Section 5.1. DAR Adden. Sections 20.4 & 20.8
6.2 Road Design Considerations	27	ongoing operations and maintenance of the all season road (including access control)	6.4	DAR Appendix 1 Section 9. DAR Adden. Appendix A (ROP, RCMP)
	28	land ownership and jurisdiction		
	1	design standards		DAR Appendix 1 (Section 4.3), DAR Adden. Appendix A
	2	longitudinal slope of the road		DAR Appendix 1, DAR Adden. Appendix A
	3	runaway lanes		DAR Appendix 1. DAR Adden. Appendix A (Section 2.4)
	4	safety railings		DAR Appendix 1, DAR Adden. Appendix A (Section 2.5)
	5	side slopes		
	6	channel bank reinforcement		
	7i	freeboard when adjacent to or crossing watercourses for multiple flood events		DAR Appendix 1 (Section 6). DAR Adden. Appendix A (Section 2.2 & Appendix B)
	7ii	crossing type and structure design given the hydrologic and hydraulic characteristics of the watercourse and the proposed road design standards		
	8	pull-outs		DAR Appendix 1, DAR Adden. Appendix A (Section 2.7)
	9	dust control		DAR Adden. Section 4.11, Appendices A (Appendix E ROP) & D
10	geotechnical stability	DAR Appendix 2, Section 8.1.3, p.79-81. DAR Adden., Appendix F, p.11-12.		
11	sediment and erosion control especially where immediately adjacent to a waterbody	DAR Adden. Appendix A (Appendix C SECP)		
12	landslide and avalanche protection	DAR Appendix 2 (Sections 7.1 & 7.3.2). DAR Adden. Appendix A (Appendix C RCMP, ROP)		
6.3 Construction Phases and Schedule	1		6.5	DAR Appendix 1 (Table 6), DAR Adden. Appendix A (Section 2.9)

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
6.4 Existing Infrastructure, Facilities	1i	operation of the airstrip, frequency of use, type of aircraft, and estimated number of passengers and volume of material	6.3.3	DAR Adden. Section 4.4
	1ii	potential increase in the number of vehicles travelling along existing roads and highways	6.6	DAR Adden., Appendix A (Section 2.12)
	2	how it will be used in the context of the proposed development	6.3.3 & 6.6	
	3	the capacity of existing facilities and infrastructure to handle the proposed development	6.6	DAR Adden., Appendix A (Sections 2.5 & 2.12)
	4	any changes to the existing infrastructure or facilities that will occur as a result of the project		DAR Appendix 1, Table 5 & 6. DAR Adden. Appendix A (Section 2.6).
6.5 Existing Management Plans	1		6.7	DAR Adden. 4.17 & Appendices A (Appendix C), C (Section 4.17), D (Section 4) & E (Sections 7.7 & 10)
7.2.1 Traditional Harvesting and Traditionally Harvested Species	1	sensitive or important harvesting areas or habitat both inside and outside the Nahanni National Park Reserve	Appendix 7	DAR Adden., Appendix E: Section 6.8
	2	direct and indirect alteration of habitat including all season road footprint impact		DAR Adden., Appendix E: Sections 6.3 & 6.4
	3	sensory disturbance, and predicted changes in behaviour (including habitat avoidance and effective habitat loss in relation to all season road facilities or activities), energetics, health and condition		DAR Adden., Appendix E: Sections 6.4, 6.5, 6.6 & 6.7.1
	4	wildlife movement patterns, home ranges, distribution and abundance		DAR Adden., Appendix E: Sections 6.5 & 6.6
	5	wildlife mortality due to harvesting and vehicle collisions		DAR Adden., Appendix E: Section 6.7.2 & 6.8
	6	disruption of sensitive life stages or habitat (e.g., migration, calving, denning, overwintering)		DAR Adden., Appendix E: Section 6.5
	7	effect to population cycles		DAR Adden., Appendix E: Section 6.7.4
	8	effects to predator-prey relationships		DAR Adden., Appendix E: Section 6.7.5
	9	increased human-wildlife interactions		DAR Adden., Appendix E: Section 6.7.2
	10	contaminant levels in harvested species that could be impacted by the all season road		DAR Adden., Appendix E: Section 6.4
	11	changes in access, including increased access to the land and surrounding waters, as well as increased access to environmentally and culturally sensitive areas		DAR Adden., Appendix E: Section 6.8
	12	changes in hunting and fishing pressures from people who do not reside in the region and how road-related changes in harvest pressures could impact the resource	8.11	DAR Adden., Appendices C (Section 6.3 (fish)) & E (Section 6.9 (wildlife))

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Sub-Sec.	Item	Description	DAR Section	Additional Reference	
7.2.1 Traditional Harvesting and Traditionally Harvested Species	13	changes in the abundance and distribution of harvested resources, including caribou, moose, sheep, and other wildlife (e.g. furbearers, waterfowl) that would adversely affect <u>harvesting</u>	Appendix 7	DAR Addendum, Appendix E (Section 6.5)	
	14i	changes to harvest effort as perceived by harvesters		DAR Adden., Appendix E: Section 6.8	
	14ii	changes in harvester travel patterns			
	14iii	changes in harvest levels			
	14iv	changes in harvesters' costs			
	14v	changes in seasonal harvesting patterns			
	15	competition among harvesters within and between communities as a result of increased access and loss or alteration to the land resulting from the project			DAR Adden., Appendix E: Section 6.9 (Risk of harvesting pressure)
	16	changes in the quality of harvested species (including contamination) that would negatively affect their consumption		DAR Adden., Appendix E: Sections 6.4 & 6.7.1	
	17	measures to avoid or minimize changes in the abundance, distribution, or quality of harvested species, or mitigate the consequences of such changes		DAR Adden., Appendix E: Section 6.5 (Effects on the abundance and occurrence of harvested species) & Table 1	
	18	mechanisms to control project workforce-related hunting, fishing, or disturbance of wildlife		DAR Adden., Appendix E: Section 6.9 (Risk of harvesting pressure) Table 1	
	19	other traditional harvesting activities such as for berries or medicinal plants		DAR Adden., Appendix E: Section 6.10.1 (Berries and medicinal plants)	
	7.2.2 Effects of Potential Accidents and Malfunctions	20i		mechanisms to manage hunting, and fishing by resident hunters and fishers	9.3.1
20ii		mechanisms to manage hunting, and fishing by non-resident hunters and fishers			
20iii		mechanisms to manage hunting, and fishing by Aboriginal harvesters			
1		contamination to soil from concentrate aerial dispersal and spills along the road	9.3.3		
2		contamination of surface water, groundwater, and subsurface water from concentrate aerial dispersal and spills along the road	9.3.2		
3		spills of concentrate at transfer facilities	9.3.2		
	4	leaks of fuel or other materials during transport			
	5	fuel leaks during extraction for road building			
	6	fuel or contaminant leaks at storage facilities			

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Sub-Sec.	Item	Description	DAR Section	Additional Reference
7.2.2 Effects of Potential Accidents and Malfunctions	7i	how flooding may contribute to potential accidents, malfunctions, and spills		DAR Appendix 2, Section 7.1, p.65-68. DAR Adden.. Section 7.1
	7ii	how overland flow may contribute to potential accidents, malfunctions, and spills		
	7iii	how landslides may contribute to potential accidents, malfunctions, and spills		
	7iv	how seismic activity may contribute to potential accidents, malfunctions, and spills		
	7v	how avalanche activity may contribute to potential accidents, malfunctions, and spills		
	8	A risk assessment using best practices for the Project including components, systems, hazards, and failure modes	9.4 & 9.5	DAR Appendix 2, Section 7.2, p.68-74. DAR Adden. Section 7.1
	9i	A map of high risk zones		DAR Fig. 9-1
	9ii	Site-specific contingencies for high risk areas		DAR Appendix 2, Section 7.3, p.74-76.
	10	A description of contingency plans for accidents, malfunctions, or unforeseen impacts of the environment on the development and the development on the environment	9.5	
11	A description of emergency response plans that will be in place		Spill Contingency Plan; DAR Adden. Appendix A (Road Ops. Plan)	
7.2.3 Impacts to NNPR	1	ecosystem and habitat loss	10.1	DAR Adden., Appendix E: Section 7.2 (Ecosystem and habitat loss)
	2	wilderness quality	10.11	DAR Adden.: Section 8.1 & Appendix E (Section 7.11)
	3	habitat fragmentation and barriers to movement and gene flow	10.2	DAR Adden., Appendix E: Section 7.4
	4	ability of habitat or species to recover	10.7 & 10.8	DAR Adden., Appendix E: Section 7.8 & 7.9
	5	response to edge effects		DAR Adden. Appendix E, Section 7.4
	6	changes to species distribution and abundance	10.3 & 10.4	DAR Adden., Appendix E: Section 7.3
	7	changes to the karst formations	10.10	DAR Appendix 2, Section 5, p.17-63. DAR Adden., Appendix F, Section 2.7
	8	invasive species (vegetation and wildlife)	10.5 & 10.6	DAR Adden., Appendix E: Section 7.6 & 7.7
	9	ecosystem functioning	10.9	DAR Adden., Appendix E: Section 7.10
	10	overall visitor experience	10.11	
	11	long term changes to Nahanni National Park Reserve	10.12	DAR Adden., Appendix E: Section 7.12
7.3.1 Terrain, Soils, Permafrost and Karst Topography	1	slope and soil stability, erosion and subsidence	11.1	DAR Appendix 2, Section 5, p.17-63; Section 8, p. 77-81.
	2	the effect of changes in road bed weight relative to the winter road, drainage, traffic volume, traffic speed, and borrow site development on karst topography		DAR Appendix 2, Section 5, p.17-63; Section 8.1.3, p. 79-81. DAR Adden., Appendix F, p.3.
	3	the effects on wetlands with particular attention to the wetland areas		DAR Appendix 2, Section 5, p.17-63; Section 8, p. 77-81.

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location			
Sub-Sec.	Item	Description	DAR Section	Additional Reference		
7.3.1 Terrain, Soils, Permafrost and Karst Topography	4	thaw slumps, compaction of organic peat lands, and potential for melt of ice rich ground	11.1	DAR Appendix 2, Section 5, p.17-63; Section 8, p. 77-81.		
	5	snow distribution and consequences on ground thermal regime		DAR Appendix 2, Section 5, p.17-63; Section 6, p. 63-65; Section 8, p. 77-81. DAR Adden., Appendix F, p.7.		
	6	drainage beside and beneath the road, channelization and non-channelization flow and permafrost degradation		DAR Appendix 2, Section 7, p.65-76; Section 8, p. 77-81. DAR Adden., p.8.		
	7	avalanche risks and the effect of avalanche management on the environment.		DAR Appendix 2, Section 7, p. 65-76. DAR Adden., Appendix F, p.7-8.		
	8	permafrost as a design feature in the road bed, failure modes analysis and associated contingency plans		DAR Appendix 2, Section 8, p. 77-81.		
	9	changes to permafrost beneath the Tetcela Transfer Facility		DAR Appendix 2, Section 5, p.33-38.		
	10	thermal conditions, active layer thickness, thaw depth, distribution and stability		DAR Appendix 2, Section 5, p.17; Section 6, p. 63-65; Section 8, p. 77-81.		
	11	ice rich soils (thaw settlement, thermokarst) permafrost thaw and related settlement		DAR Appendix 2, Section 5, p.17-63; Section 6, p. 63-65; Section 8, p. 77-81.		
	12	frost heave or frost susceptible soils in thin permafrost as well as seasonally frozen soils		DAR Appendix 2, Section 5, p.17-63; Section 6 (p. 63-65); Section 8, p. 77-81. DAR Adden., Appendix F, p.8.		
	13	thaw or settlement-related impacts on drainage and surface hydrology		DAR Appendix 2, Section 5, p.17-63; Section 6 (p. 63-65); Section 8, p. 77-81. DAR Adden., Appendix F, p.8.		
	14	shorelines and channels		DAR Appendix 2, Section 5, p.17-63. DAR Adden., Appendix F, p.8.		
	15	combined impacts of the all season road and fires		DAR Appendix 2, Section 5 p.17-63; Section 5.4 p.62-63; Section 6 p. 63-65; Section 8 p. 77-81. DAR Adden., Appendix F p.8.		
	16	how warming ground temperatures and deepening active layers will affect the all season road and how mitigation measures will remain effective in various climate warming scenarios.		DAR Appendix 2, Section 5 p.17-63; Section 5.4 p.62-63; Section 6 p. 63-65; Section 8 p. 77-81. DAR Adden., Appendix F p.8-9.		
	7.3.2 Granular Materials	1		locations, areas and volumes of material from each proposed borrow site.	11.2	DAR Appendix 1; Table 14, Appendix I. DAR Adden. Appendix A (Section 2.3 & Table 14)
		2		potential for excavation and use of hot rocks		DAR Appendix 1, Section 7.4.1. DAR Adden. Appendix A (Section 2.3 & Table 14)
		3		measures to limit the effect on the surrounding environment		DAR Appendix 2, Section 8 p. 77-81. DAR Adden., Appendix A (Appendix C BPMRP)
4		excavation requirements	DAR Appendix 1 (Section 4.7 & 7, Table 8). DAR Adden. Appendix A (Section 2.3 & Table 14)			
5		talus slope stability	DAR Appendix 2, Section 5, p.17-63. DAR Adden., Appendices F (p.9) & A (Section 2.3 & Table 14)			
6		ownership and operation of borrow pits				
7		remediation and reclamation of borrow pits	DAR Appendix 1, Section 7.4.3. DAR Adden. Appendix A, Appendix C (BPMRP)			
8		potential for acid rock drainage.	DAR Appendix 1, Section 7.4.1. DAR Adden. Appendix A (Appendix C BPMRP)			

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
7.3.3 Air Quality	1	dust and carbon emissions from vehicles, equipment and stationary sources	11.3.1	DAR Adden. Appendix D
	2	emissions by source for each phase (construction, operation and maintenance, and closure), including quantity, timing and duration, normal operation conditions and upsets		
	3	how changes in air quality could have an impact on humans, wildlife, vegetation, and waterbodies	11.3.2	DAR Adden. Appendices D & E (Sections 8.3.4 & 8.3.5)
	4	methods of dust suppression	11.3.3	DAR Adden. Section 4.11 & Appendix A (Appendix C RCMP)
7.3.4 Noise	1	road (including borrow pits and gravel crushing) and airstrip components and activities that could produce undesirable noise including source location, timing and duration	6.3.3	DAR Appendix 1. DAR Adden. Appendix A
	2	sensory disturbance to fish, birds and wildlife, including caribou and moose	11.4.1 and 11.4.2	DAR Adden., Appendices C (Section 8.4) & E (Section 7.11)
	3	disturbance of harvest and recreational activities, including tourism	11.4.3	DAR Adden. Sections 6.4, 8.1 and 13.2
	4	potential impacts to wildlife harvesting activities and impacts to communities	8.5	
7.3.5 Water Quality and Quantity	1	changes to surface drainage patterns and surface water hydrology including changes caused by road-related impacts on terrain, soils and permafrost	11.5.1	DAR Appendix 2, Section 8 p. 77-81. DAR Adden., Section 14.2 & Appendix F, p.10.
	2	alterations to streamflow		DAR Appendix 1 (Section 6). DAR Adden., Section 14.2 & Appendix A (Section 2.2 & Appendix B)
	3	possible contamination to surface water, subsurface water and groundwater including within karst features	9.4 & 11.5.2	DAR Adden. Section 14.3
	4	drinking water quality for humans and wildlife	11.5.2	
	5	recreational water quality		
	6	discharge or seepage of wastewater effluent, contaminants, chemical additives, etc.		
	7	changes to water quality at water crossings and realignments (bridges, culverts and other wetted areas)		DAR Appendix 1 (Section 6). DAR Adden. Section 14.3 & Appendix A (Appendix C, SECP, RCMP)
	8	changes to water quality due to thaw slumps and other slope instability at water crossing		DAR Appendix 2, Section 8 p. 77-81. DAR Adden., Section 14.3 & Appendix F, p.10.
	9	changes to snow distribution and potential impacts on drainage		DAR Appendix 2, Section 5.3 p.62; Section 6 p. 63, Section 7 p.66, Section 8 p. 78-80. DAR Adden., Appendix F, p.7.
	10	issues related to borrow extraction including melting of ground ice and potential changes to drainage patterns etc.		DAR Appendix 2, Section 5, p.17-63. DAR Adden., Appendices A (Appendix C BPMRP) & F (p.7)
	11	erosion, sediment deposition, sediment re-suspension	11.5.1	DAR Adden., Section 14.3 & Appendix A (Appendix C RCMP, SECP)
	12	changes to flow or water levels including potential for glaciation and icings at watercourse crossings	4.3.1 & 11.5.1	DAR Appendices 3 & 4

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location		
Sub-Sec.	Item	Description	DAR Section	Additional Reference	
7.3.5 Water Quality and Quantity	13	water withdrawal and volume of withdrawal (e.g., for potable water, dust suppression)	11.5.4	DAR Adden. Section 4.11	
	14	potential effects on the aquatic environment including invertebrates	11.6.1 & 11.6.3		
7.3.6 Species at Risk	1	methods to minimize the effect of the project on the species including strategies for mitigation and monitoring	Appendix 7	DAR Adden., Appendices C (Section 15.2, bull trout) & E (Section 8.0 and Table 1)	
	2	direct and indirect alteration of habitat including direct road footprint impact	10.1	DAR Adden., Appendices C (Section 15.2, bull trout) & E (Sections 8.2 & 8.3)	
	3	visual or auditory disturbance, including habitat avoidance and effective habitat loss in relation to all season road facilities or activities	Appendix 7	DAR Adden., Appendices C (Section 8.4) & E (Section 8.4)	
	4	effect of construction and pre-construction activities, including aircraft effects		DAR Adden., Appendix E: Sections 8.1 to 8.6	
	5	mortality due to harvesting and vehicle collisions		DAR Adden., Appendix E: Sections 6.8, 6.9 & 8.6.1	
	6	disruption of sensitive life stages or habitat (e.g., migration, calving, denning, overwintering)		DAR Adden., Appendix E: Section 8.4 & 8.5	
	7	changes to movement patterns and corridors, home ranges, distribution and abundance		DAR Adden., Appendices C (Sections 8.4 (noise - fish) & 16.5 (riparian veg)) & E (Section 8.4)	
	8	effects to sensitive or important areas of habitat		11.6.1	DAR Adden., Appendices C (Section 15.2 (bull trout) & E (Section 8.2))
	9	habitat fragmentation		Appendix 7	DAR Adden., Appendix E: Section 8.6.2 (Effects to population cycles)
	10	effects to population cycles		Appendix 7	DAR Adden., Appendix E: Section 8.6.3 (Effects from predator-prey relationships)
	11	effects to predator-prey relationships		DAR Adden., Appendix E: Sections 8.6.1 & 8.6.3	
	12	attraction to predators of birds and bird eggs		DAR Adden., Appendix E: Section 8.6.1 (Risk of project-related mortality)	
	13	increased human-wildlife conflicts (e.g. bear encounters)		Not applicable , as infrastructure approved as part of the winter road. The proposed Project and the approved winter road does not include wires.	
	14	mortality from collisions with temporary or permanent structures and wires	Appendix 7	DAR Adden., Appendix E: Sections 8.1 to 8.6	
	15	potential disturbance to raptors nesting within 1km of the proposed project footprint		DAR Adden., Appendix E: Sections 4.3, 4.4.4, 7.2 to 7.9, 8.1 to 8.6	
	16	use of the project area by resident and migratory birds protected by the Migratory Birds Convention Act, 1994		DAR Adden., Appendix E: Sections 6.5, 6.8, 6.9, 7.2 to 7.9	
	17	how road-related changes in harvest pressures could impact the resource		DAR Adden., Appendix E: Sections 7.9 & 8.6.5	
	18	ability of habitat or species to recover		DAR Adden., Appendix E: Sections 8.2, 8.4, 8.6.1 & 8.6.3	
	19	response to edge effects			DAR Adden., Appendix E: Sections 8.2, 8.4, 8.6.1 & 8.6.3
	20	invasive species (vegetation, wildlife and other threats)			DAR Adden., Appendices A (Appendix C BPMRP, RCRP) & E (Sections 8.6.4 & 8.7.7)

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
7.3.7 Fish and Aquatic Habitat	1	alteration or loss of fish habitat due to development activities during all project phases	11.6.1, 11.6.2	DAR Adden., Appendix C, 4.16 (fragmentation), 16.3 (habitat), 16.2 (fish and fish habitat), Attachment E (matrix)
	2	the estimated time to redevelop habitat	10.8	DAR Adden., Appendix C, 4.16 (fragmentation), 16.3 (fish habitat), 16.2 (assessment steps), Attachment E (matrix)
	3	effects of proposed watercourse crossings, realignments and temporary vehicle crossing methods	10.9.3	DAR Adden., Appendices A (Appendix C RCMP) & C (4.16 (fragmentation), 16.3 (fish habitat), 16.2 (assessment steps), Attachment E (matrix))
	4	standards or guidelines related to watercourse crossings and realignments that would be applied	11.6	DAR Adden., Appendices A (Appendix C RCMP) & C (Section 16.4)
	5	relevant policies, management plans or other measures to protect or enhance fish and aquatic habitat, including timing restrictions, protected areas or regulations	11.6	DAR Adden., Appendices A (Appendix C RCMP) & C (16.4 (mitigation))
	6	disruption of sensitive life stages or habitat (e.g., spawning and incubation, rearing, overwintering) including loss of substrate habitat and known sensitive or important site	10.9.3	DAR Adden., Appendix C, 4.16 (fragmentation), 16.3 (fish habitat), 16.2 (assessment steps), Attachment E (matrix)
	7	effects on riparian areas	11.6	DAR Adden., Appendices A (Appendix C RCMP, RCRP) & C (16.5 (effects on riparian veg))
	8	effects to locations and species of particular importance to subsistence harvesters (including Bluefish creek, Tetcela River, and Fishtrap creek)		DAR Adden., Appendix C, 6.3
	9	impacts related to changes in water quality or quantity		DAR Adden.: Section 4.11; Appendix C, Sec. 15.2, Sec. 16.2
	10	changes to distribution or abundance	11.6.2	DAR Adden., Appendix C, 4.16 (fragmentation), 16.3 (fish habitat), 16.2 (assessment steps), Attachment E (matrix)
	11	effects to sensitive or important areas or habitat	11.6	DAR Adden., Appendix C, 4.16 (fragmentation), 16.3 (fish habitat), 16.2 (assessment steps), Attachment E (matrix)
	12	contaminant levels in harvested species that could be changed by the all season road, if applicable		DAR Adden., Appendix C, Attachment C (assessment matrix)
	13	potential effects on fish health	11.6.2	DAR Adden., Appendix C (Appendix B Section 9, and Attachment D (assessment matrix))
	14	blockages to movement	11.6.2	DAR Adden., Appendix C, 4.16 (fragmentation)
	15	effects of blasting (if required)	11.6	DAR Adden., Appendix C, 16.2
	16	dredging or disposal of sediments	11.6.1	DAR Adden., Appendix C, 16.6 (effects of dredging)
	17	effects of water withdrawal	8.6	DAR Adden.: Section 4.11
	18	potential for increased pressure on the resource that could arise from improved access	8.11	DAR Adden., Appendix C, 6.3 (traditional harvesting)
	19	reclamation of in-stream and riparian work areas during construction and also during maintenance operations	11.6.3	DAR Adden., Appendices A (Appendix C RCMP, RCRP) & C (24.4 (reclamation of in-stream and riparian areas))
	20	criteria for evaluating the success of mitigation or reclamation measures and indicate when and how this evaluation would be conducted	15	DAR Adden., Appendices A (Appendix C RCRP) & C (4.17 (AEMP))

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
7.3.8 Wildlife and Wildlife Habitat	1	methods to minimize the effect of the project on the species including strategies for mitigation and monitoring	Appendix 7	DAR Adden., Appendix E: Section 8.0 and Table 1
	2	direct and indirect alteration of habitat including direct road footprint impact		DAR Adden., Appendix E: Sections 8.2 & 8.3
	3	visual or auditory disturbance, including habitat avoidance and effective habitat loss in relation to all season road facilities or activities		DAR Adden., Appendix E: Section 8.4 (Effects to abundance and occurrence)
	4	effect of construction and pre-construction activities, including aircraft effects on wildlife		DAR Adden., Appendix E: Sections 8.1 to 8.6
	5	wildlife mortality due to increased harvesting and vehicle collisions		DAR Adden., Appendix E: Sections 6.8, 6.9 & 8.6.1
	6	disruption of sensitive life stages or habitat (e.g., migration, breeding, calving, denning, overwintering)		DAR Adden., Appendix E: Sections 8.4 & 8.5
	7	wildlife movement patterns and corridors, home ranges, distribution and abundance		DAR Adden., Appendix E: Section 8.4 (Effects to abundance and occurrence)
	8	effects to sensitive or important areas or habitat		DAR Adden., Appendix E: Section 8.2 (Effects of habitat loss and fragmentation)
	9	habitat fragmentation		DAR Adden., Appendix E: Section 8.6.2 (Effects to population cycles)
	10	effects to population cycles		DAR Adden., Appendix E: Section 8.6.3 (Effects from predator-prey relationships)
	11	effects to predator-prey relationships		DAR Adden., Appendix E: Sections 8.6.1 & 8.6.3
	12	attraction to predators of birds and bird eggs		DAR Adden., Appendix E: Section 8.6.1 (Risk of project-related mortality)
	13	increased human-wildlife conflicts (e.g. bear encounters)		Not applicable , as infrastructure approved as part of the winter road. The proposed Project and the approved winter road does not include wires.
	14	mortality from collisions with temporary or permanent structures and wires		DAR Adden., Appendix E: Sections 8.1 to 8.6
	15	potential disturbance to raptors nesting within 1km of the proposed project footprint		DAR Adden., Appendix E: Sections 4.3, 4.4.4, 7.2 to 7.9, 8.1 to 8.6
	16	use of the project area by resident and migratory birds protected by the Migratory Birds Convention Act, 1994		DAR Adden., Appendix E: Sections 6.5, 6.8, 6.9, 7.2 to 7.9
	17	how road-related changes in harvest pressures could impact the resource		DAR Adden., Appendix E: Sections 7.9 & 8.6.5
	18	ability of habitat or species to recover		DAR Adden., Appendix E: Sections 8.2, 8.4, 8.6.1 & 8.6.3
	19	response to edge effects		DAR Adden., Appendix E: Sections 8.6.4 & 8.7.7
	20	invasive species (vegetation and wildlife)		
7.3.9 Vegetation	1	alteration or loss of species, or vegetation assemblages that are rare, valued, protected or designated sensitive or important areas or habitat	Appendix 7	DAR Adden., Appendix E: Section 8.7.1 (Effects of land clearing on terrestrial ecosystems)
	2	amount of merchantable timber removed during right of way clearing and the potential for facilitating use of waste timber by communities		DAR Adden., Appendices A (Appendix E Table 2) & E (Section 8.7.2 (Effects to merchantable timber resources))
	3	amount of vegetation clearing		DAR Adden., Appendices A (Appendix E Table 2) & E (Section 8.7.1 (Effects of land clearing on terrestrial ecosystems))
	4	introduction of invasive species and threats		DAR Adden., Appendix E: Section 8.7.8 (Introduction of invasive plants)
	5	effects to rare plants		DAR Adden., Appendix E: Section 8.7.7 (Effects on rare plants)

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
7.3.9 Vegetation	6	effects of fire management practices	Appendix 7	DAR Adden., Appendices A (Appendix C RCMP) & E (Section 8.7.3 (Effects from fire))
	7	potential changes to fire risk		DAR Adden., Appendix E: Sections 8.7.4 & 8.7.5
	8	effects of road emissions including dust		DAR Adden., Appendix E: Section 8.7.9 (Effects to soil, hydrology and permafrost regimes)
	9	how changes in right of way clearing might impact permafrost and the all season road itself		DAR Adden., Appendices A (Appendix C BPMRP) & E (Section 8.7.10.2 (Revegetation during reclamation))
	10	changes to the soil, hydrological or permafrost regimes related to vegetation changes		DAR Adden., Appendices A (Appendix C RCMP) & E (Section 8.7.10.3)
	11	re-establishment of vegetation and reclamation of borrow sites and other disturbances (particularly identification of vegetation types and seed mixes to be used, and identification of the specific borrow site to be re-vegetated, and those borrow sites that will not be re-vegetated)		
	12	vegetation control during operations		
7.3.10 Cultural and Heritage Resources	1	traditional lifestyles, values and culture	5.2 & 11.9.1	DAR Pages 125-126, 268
	2	cultural and spiritual sites and activities	11.9.2 & 11.9.3	
	3	impacts to archaeological sites	11.9.3	
7.3.11 Employment and Benefits to the Community	1	direct and indirect employment opportunities generated by the development and the potential for uptake of these opportunities locally by Aboriginal peoples and within the North	11.10	
	2	current or proposed socio-economic initiatives or agreements (please list and provide the non-confidential details)		DAR Adden. Section 20.3
	3	the effectiveness of past or present socio-economic benefit initiatives including levels of success in improving recruitment, retention, and advancement of workers from potentially affected communities		
	4	employment and income for every phase and year of construction and operation, with particular reference to wage and salary employment by length of employment, form of employment (full time, part time, seasonal), and skills category		DAR Adden. Section 20.4
	5	location of camps (new or existing, temporary or permanent) and size of crews (number of individuals) working at each camp		DAR Section 4.8.1. DAR Adden. Section 20.5 & Appendix A (Section 2.9)
	6	employee drug and alcohol policy		
	7	security personnel at the sites		DAR Adden., Appendix A (Appendix C ROP)
	8	anticipated access of crews to surrounding communities		DAR Adden. Section 20.6
	9	potential negative effects of the project such as crime and substance abuse		

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
7.3.11 Employment and Benefits to the Community	10	changes to policing demands	11.10	DAR Adden. Section 20.7
	11	measures, plans and commitments for maximizing local and Aboriginal employment and businesses		
	12	effects on tourism activities (including potential opportunities for increased tourism) in the region from all season access		
	13	potential for increased exploration in the area		
	14	speculative migration into the area		
	15	changes to the cost of living in the area		
	16	how local and Aboriginal participation in contractor and sub-contractor business opportunities will be maximized		DAR Adden. Section 20.8
	17	effects on capacity of local businesses to service other sectors during the construction phase		DAR Adden. Section 20.9
	18	the timing and duration of education and skills development programs that would be required for road-related employment		
	19i	training required for use of the proposed road		
	19ii	local and regional training opportunities		
	19iii	timing and duration of programs, in relation to the development schedule		
	19iv	skills and experience gained that could be applied to other available projects or sectors		
	19v	the number of people expected to be employable and available		
	19vi	the potential for local development of skills for senior professional positions (e.g. labourer or heavy equipment operator vs. supervisor or manager)		
19vii	proposed programs that would be provided by or sponsored by the developer			
7.3.12 Impacts on Existing Transportation Infrastructure	1i	possible accidents with tourist traffic and wildlife	11.11	DAR Adden. Section 21.1 & 21.2
	1ii	increased dust along the highway and the effect on adjacent properties		DAR Adden., Appendix A (Section 2.12)
	1iii	safety along the highway		
	1iv	spills along the highway		
	1v	highway integrity		
	2	effects on existing water transportation routes and navigation on navigable waters (i.e. Liard River crossing)		DAR Adden. Section 21.3

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location		
Sub-Sec.	Item	Description	DAR Section	Additional Reference	
8 Effects of the Environment on the Project	1	long-term climate change scenarios (e.g., loss of permafrost, increased evaporation and evapotranspiration, greenhouse gas emissions)	12	DAR Appendix 2, Section 6 p. 63-65. DAR Adden., Section 22.1 & Appendix F, p.11.	
	2	how likely changes in permafrost will affect the amount of granular material required for care and maintenance of the all season road		DAR Appendix 2, Section 5.4 p. 62-63, Section 6 p. 63-65, Section 8 p. 77-81. DAR Adden., Appendices A (Section 2.13) & F (Section 2.12, p.14).	
	3	short-term climatic and extreme weather events (e.g., major precipitation, wind, fog, drought)		DAR Appendix 2, Section 7.1 p.65-68, 7.3 p.74-76.	
	4	changes in permafrost regime		DAR Appendix 2, Section 5.4 p. 62-63, Section 6 p. 63-65, Section 8 p. 77-81. DAR Adden., Appendix F, p.8-9.	
	5	subsidence		DAR Appendix 2, Section 5, p.17; Section 8.1.3 p. 79-81. DAR Adden., Appendices A (Section 2.13) & F (Section 2.12).	
	6	fires	13	DAR Appendix 2, Section 5, p.17; Section 5.4 p. 63. Appendix C. DAR Adden., Section 22.1 & Appendix F, p.11.	
	7i	map of high risk zones		DAR Appendix 2, Section 7.2 p.71-73. DAR Adden., Appendix F, p.13-16.	
	7ii	site-specific contingencies for high risk areas			
	8	description of contingency plans		DAR Appendix 2, Section 7.3 p.74-76; Section 7.3.3. DAR Adden. Sections 22.1 & 22.2	
9 Potential Accidents and Malfunctions	1	explosions	6.7 (Spill Plan)	DAR Adden. Appendix A (Appendix C; ROP)	
	2	transportation, storage, manufacture and use of explosives		13	
	3	fires			DAR Adden., Appendix A (Appendix C RCMP, ROP)
	4	a risk assessment using best practices for the project including components, systems, hazards, and failure modes		DAR Appendix 2, Section 7.2 p.68-74. DAR Adden., Appendix F, p.12-16.	
	5	assessment of the likelihood and severity of each risk identified		DAR Appendix 2, Section 7.2 p.68-74.	
	6	a description of contingency plans for accidents, malfunctions, or unforeseen impacts of the environment on the development and the development on the environment		DAR Appendix 2, Section 7.3 p.74-76; Section 7.3.3. DAR Adden. Appendix C (RCMP, ROP)	
	7	a description of emergency response plans that will be in place	6.7 (Spill Plan)	DAR Adden. Appendix A (Appendix C, RCMP & ROP)	
10 Cumulative Effects	1	identify the valued components, or their indicators, on which the cumulative effects assessment is focused, including the rationale for their selection. These are valued components affected by the all season road in combination with other past, present or reasonably foreseeable future human activities and developments. Present spatial and temporal boundaries for the cumulative effect assessment for each valued component selected. Emphasize valued components with special environmental sensitivities or where significant risks could be involved.	8.13, 9.7, 10.14 & 14	DAR Appendices 2 (Section 9) & 7 (Section 8). DAR Adden. Appendix E (Section 9)	

TABLE A: CONCORDANCE TABLE

Terms of Reference			Location	
Sub-Sec.	Item	Description	DAR Section	Additional Reference
10 Cumulative Effects	2	identify the sources of potential cumulative effects. Specify other past, present or reasonably foreseeable future human activities and developments that may substantially affect the valued components identified above. These may be in the vicinity of the road or may affect a mobile resource that moves into its vicinity (like a river or a caribou herd).	8.13, 9.7, 10.14 & 14	DAR Appendices 2 (Section 9) & 7 (Section 8). DAR Adden. Appendix E (Section 9)
	3	predict the combined effects of the road and the other activities identified above.		
	4	identify how the developer or others will mitigate the identified cumulative impacts		
11 Follow-Up and Monitoring	1	clearly describe the regulatory and non-regulatory monitoring requirements for the life of the project	15.1	DAR Adden., Appendices A (Appendix C), C & E (Section 10)
	2	provide a description of the purpose of each program, responsibilities for data collection, analysis and dissemination, and how results will be used in an adaptive management process	15.1 & 15.2	DAR Adden. Section 23.2 & Appendix A (Appendix C, RCMP)
	3	describe how project-specific monitoring will be compatible with the NWT Cumulative Impact Monitoring Program or other regional monitoring and research programs	15.1	DAR Adden. Section 23.3
	4	describe how the results of follow-up monitoring and the management response framework would be used and incorporated into land use permit and water licence applications in support of the all season road construction and operations	15.1 & 15.3	DAR Adden. Section 23.2 & Appendices A (Appendix C plans) & E (Section 10). Note: These applications have already been made
12 Closure and Reclamation	1	what the proposed closure and intermediate closure plans are, including the duration of the activities	16	DAR Adden. Section 24.2 & Appendix A (Appendix C: RCMP)
	2	identify areas where pre-project conditions will not be returned		
	3	identify how pre-project conditions will be reinstated (i.e.: surface drainage, water courses, topography, vegetation, floodplain extent)		DAR Adden. Appendix A (Appendix C: RCMP)
	4	discuss long-term physical integrity of any permanent features		DAR Adden. Section 24.3 & Appendix A (Section 2.15 & Appendix C: RCMP)
	5	discuss monitoring plans during reclamation		DAR Adden. Appendix A (Appendix C: RCMP)
	6	identify how potentially-affected communities were engaged in determining end land use and water objectives for reclamation.		DAR Adden. Section 24.5

Terrain Stability Classification Table

Terrain Stability Class	Dominant Slope	Material	Geomorphic Processes	Comments
Unstable	<ul style="list-style-type: none"> ▪ >70% ▪ >30% if -X in fine-grained materials ▪ 10-50% if rockfall talus 	<ul style="list-style-type: none"> ▪ C ▪ Rs 	<ul style="list-style-type: none"> ▪ -R[^], -Rb, -Rd, -Rs, -Ru, -Rm, -Rj ▪ -F[^]x, -F[^]k -Fc ▪ -K ▪ -V ▪ -L ▪ -X[^]f 	<ul style="list-style-type: none"> ▪ Contains areas where landslide scars are common ▪ Cc and Cf are always in this category
Potentially Unstable	<ul style="list-style-type: none"> ▪ >60% ▪ 5-60% if C ▪ 10-30% if LG ▪ <30% if -X, -FcX or -LX in fine-grained materials 	<ul style="list-style-type: none"> ▪ C, except Cc and Cf ▪ R ▪ M ▪ LG ▪ FG ▪ F 	<ul style="list-style-type: none"> ▪ -R[^]b, -R[^]m, -Ru ▪ -F[^]j, -Fj, -Fc ▪ -V ▪ -L ▪ -X if in fine-grained materials 	<ul style="list-style-type: none"> ▪ May contain areas where landslide scars are present, but rare and/or difficult to discern ▪ May be imperfectly to poorly drained and/or associated with organic deposits ▪ Includes low slope areas that may be part of a larger slide feature
Stable	<ul style="list-style-type: none"> ▪ <40% ▪ <50% if M ▪ <60% if R 	<ul style="list-style-type: none"> ▪ R, D ▪ M ▪ FG ▪ F ▪ E ▪ O 	<ul style="list-style-type: none"> ▪ -L ▪ -U, -M, -I, -B 	<ul style="list-style-type: none"> ▪ Potential for mass movement is negligible

Changes to terrain stability mapping polygons to align with Classification Table

KP	Polygon Description	Change Required
001	Polygon N and NE of KP001: Cv, 70-90, P	Change P to U
014	Polygon N of KP014 and river: Dh, 30-50, P	Remove 30-50 and P
018	Polygon S of KP018: Rka-X	Remove -X
033	Polygon N and NW of KP033 and river: Cv//Rs-R^b, 50-80, P	Change P to U
033	Polygon S of KP033: Cbv//Rr-R^b, 30-50, P	Change P to U
034	Polygon NW of KP034 and river: Cv/Rk-R^br, 70-100, P	Change P to U
033-035	Polygon containing KP033-035: Cbv//Rr-R^b, 30-50, P	Change P to U
038	Polygon N of KP038 and river: Cur/Cc-Rb, 40-60, P	Change P to U
051.5	Polygon crossing route midway between KP051 and 052: FGt, 15-30, U	Change to FGt only
062	Polygon S of KP062: Cvb, 20-40, U	Change U to P
106 alternate route	Polygon containing KP106: Cvb-RL, 30-60, P	Change P to U
112 original route	Polygon NE of KP112: Rak/Cv//Cj-R^b, 50-70, P	Change P to U
113 original route	Polygon E of KP113: Cvb//Rs	Add slopes 30-70. Add U
119 alternate route	Polygon SW of KP119 and SW of river: Mut/FGb/Cv, 0-15, P	Change to 0-40, P to U
119 alternate route	Polygon containing KP119: Cv, 30-60, P	Change P to U
126	Polygon SW of KP126: Mr-X	Add slopes 20-30. Add P