

Red Chris Development Company Ltd.
Final Draft Terms of Reference for an Application for an Environmental Assessment Certificate
Red Chris Copper Gold Mine Development Project
June 2004

Red Chris Development Company Ltd.
Red Chris Copper-Gold Mine Development Project
Iskut, B.C.

Final Draft Terms of Reference
for an
Application for an Environmental Assessment Certificate
Under the Environmental Assessment Act S.B.C. 2002, c. 43

Prepared By:

RED CHRIS DEVELOPMENT COMPANY LTD.
488 - 625 Howe Street
Vancouver, B.C.
V6C 2T6

Submitted to:

Environmental Assessment Office
PO Box 9426 Stn Prov Govt
2nd Floor, 836 Yates Street
Victoria, BC
V8W 9V1

June 18, 2004

TABLE OF CONTENTS

1	Forward	1
2	Introduction.....	1
2.1	Project Purpose and Rationale	1
2.2	Proponent Information	2
2.3	History.....	2
2.4	Ownership and Land Tenure.....	2
2.5	Regulatory Framework	2
3	Project Description	2
3.1	Location and Access	2
3.2	Geology and Mineralization	2
3.3	Mineral Resources	3
3.4	Mining.....	3
3.5	Metallurgy and Processing.....	3
3.6	Water Supply	3
3.7	Waste Management.....	3
3.7.1	Ore and Waste Rock Handling	3
3.7.2	Tailings Storage Facility	4
3.7.3	Water Management.....	4
3.7.4	Hazardous Wastes.....	4
3.7.5	Non-Hazardous Wastes.....	4
3.7.6	Sewage Treatment.....	5
3.8	Infrastructure and Support Facilities.....	5
3.9	Power Supply	5
3.10	Concentrate Handling	5
3.11	Organization and Employment	5
3.12	Procurement, Hiring and Training	5
3.13	Project Execution and Schedule.....	6
4	Environmental Setting and Effects Assessment.....	6
4.1	Climate and Air Quality.....	6
4.2	Topography	7
4.3	Surficial Geology and Soils	7
4.4	Seismicity.....	7
4.5	Terrain Stability	8
4.6	Surface Hydrology	8
4.7	Groundwater Regime	8
4.8	Acid Rock Drainage (ARD) & Metal Leaching (ML) Potential	9
4.9	Water Quality.....	9
4.10	Sediment Quality	10
4.11	Fisheries and Aquatic Resources	10
4.12	Vegetation & Terrestrial Ecosystems	11
4.12.1	Terrestrial Ecosystem Mapping.....	11

4.12.2	Rare Plants Survey	12
4.12.3	Soils Mapping and Sampling	13
4.12.4	Vegetation Sampling	13
4.13	Wildlife and Wildlife Habitat	13
4.13.1	Wildlife Habitat Suitability Mapping	14
4.14	Noise	14
4.15	Land Use	15
4.16	First Nations	15
4.17	Archaeology and Cultural Use	16
4.18	Socioeconomic setting	16
4.19	Public Health and Safety	17
5	Environmental Management and Mitigation Measures	17
5.1	Environmental Policy, Practices and Procedures	17
5.2	Mine Plan	17
5.3	Tailings Impoundment Operating Plan	18
5.4	ARD/ML Prediction and Prevention Plan	18
5.5	Materials Handling Plan	19
5.6	Reclamation and Closure Plan	19
5.7	Wildlife Management Plan	20
5.8	Water Management and Sediment Control Plans	21
5.9	Pollution Prevention Planning	22
5.10	Spill Contingency and Emergency Response Plan	22
5.11	Environmental Effects Monitoring Program	22
5.12	Waste Management Planning	23
5.12.1	Mine Waste	23
5.12.2	Industrial and Domestic Wastes	23
5.12.3	Air Emissions	24
5.12.4	Hazardous Materials Handling Plan	24
5.13	Accidents and Malfunctions	25
5.14	Alternatives Assessment	25
5.15	Risk Assessment	25
5.16	Cumulative Effects Assessment	26
5.17	Sustainability	26
5.18	Follow-up Programs	27
5.19	Fisheries Habitat Compensation Plan	27
6	Consultation	28
6.1	Public Consultation	28
6.2	First Nations Consultation	28
6.3	Government Consultation	28

1 Forward

Red Chris Development Company Ltd. (“RCDC”) submitted its Project Description for the Red Chris Porphyry Copper-Gold Mine Development to the BC Environmental Assessment Office (“EAO”) on October 27, 2003. The Project Description provided a conceptual level outline of RCDC’s plans to develop an open pit copper- gold mining and milling operation on Todagin Plateau in Northwestern BC near the village of Iskut with construction beginning in the First Quarter of 2005 and operations commencing by the Fourth Quarter of 2006.

The EAO subsequently issued an Order under Section 10 (1) (c) of the BC Environmental Assessment Act S.B.C. 2002, c. 43 (“BCEAA”) on November 26, 2003 determining that the Project constitutes a reviewable project under Part 3 of the Reviewable Projects Regulation (BC Reg. 370/02) and as such an Environmental Assessment Certificate will be required pursuant to the BCEAA prior to the project proceeding.

These Terms of Reference have been developed by RCDC in accordance with the BCEAA in order to define the information requirements necessary for inclusion in an Application for an Environmental Assessment Certificate (“AEAC”) in order to allow for a determination of the significance of potential environmental, heritage, social, economic and health effects of the Project and the adequacy of measures proposed to prevent or mitigate such effects.

In anticipation that the Project will also be subject to review under the Canadian Environmental Assessment Act (“CEAA”), these Terms of Reference also include the information requirements necessary to meet the requirements of CEAA. In such case, it is expected that a cooperative environmental assessment process will be undertaken as provided for in the Canada-British Columbia Agreement for Environmental Assessment Cooperation.

2 Introduction

2.1 Project Purpose and Rationale

The AEAC will provide a description of the purpose of the project and the rationale for proceeding with the development at this time within the context of regional, provincial and federal economies, as well as the global implications of supply and demand on metal mines and markets.

2.2 Proponent Information

The AEAC will provide a description of the operating and parent corporations proposing to develop the Red Chris property including management structure, business history and contact information.

2.3 History

The AEAC will provide a summary of the history of exploration and development activity on and around the Red Chris property since its initial discovery.

2.4 Ownership and Land Tenure

The AEAC will provide a description of the ownership status and development rights held for the Red Chris property, including a listing of existing mineral claims and their status, as well as any additional tenures anticipated to be acquired in conjunction with the proposed development. The AEAC will also provide a summary of other mineral and land tenures held by third parties in the vicinity of the Project.

2.5 Regulatory Framework

The AEAC will identify federal and provincial legislation applicable to the Project and specific regulatory approvals that will be necessary for the Project to proceed in the planned manner. The AEAC will also identify which of these approvals, if any, are expected to be requested for concurrent review with the AEAC.

The AEAC will also address how proposed project activities will interact with the land use planning and management objectives and strategies established in the October 2000 Cassiar Iskut-Stikine Land and Resource Management Plan (LRMP).

3 Project Description

3.1 Location and Access

The AEAC will describe the geographic location of the Project in terms of topographical and hydrological features, as well as principal communities. The description will include existing and alternative access and transportation routes required for delivery of supplies to the mine and shipment of mineral concentrates from the mine.

3.2 Geology and Mineralization

The AEAC will provide a detailed description of regional and property geology, including a detailed description of the deposit geology, as well as mineralization, alteration and structural controls.

3.3 Mineral Resources

The AEAC will provide a detailed accounting of the defined mineral resource including measured, indicated and inferred categories for each zone and the property as a whole. Information provided will include a review of statistical and geostatistical evaluations of the drill hole database and block models at various cut-off grades.

3.4 Mining

The AEAC will provide a detailed description of the mining process including pit design, geotechnical considerations, explosive use, mining methods, mining equipment, ore and waste production scheduling, de-watering, grade control, material characterization and disposition.

Descriptions of the mining sequence will be provided over the life of the mine, including quantities and schedule for release of ore and waste generated by rock type. As discussed further under Section 5, the Mine Plan will provide for detailed geochemical characterization of waste rock to inform materials handling with respect to use and disposal of NPAG and PAG materials. The final configurations of the open pit and waste rock storage areas will be provided as well.

3.5 Metallurgy and Processing

The AEAC will provide a detailed description of the proposed ore processing facilities including primary crushing, coarse ore stockpiling and conveying, grinding, flotation, thickening, concentrate dewatering, storage and loadout. Metallurgical testwork programs and process design criteria will be reviewed, including electrical energy requirements

Descriptions will include reagent use, storage and handling, processing rates, an overall water balance including process water, potable water and fire protection water requirements and fresh and reclaim water consumption.

3.6 Water Supply

The AEAC will provide a detailed description of the proposed water supply facilities for the project along with a detailed project water balance.

3.7 Waste Management

3.7.1 Ore and Waste Rock Handling

The AEAC will provide a detailed description of ore and waste materials to be generated in conjunction with the mining and milling processes, including ore, low grade ore and waste rock. The AEAC will describe procedures for characterizing materials in order to

inform decisions on materials handling and ultimate disposition of such materials based on ARD/ML characteristics. The AEAC will also provide detailed plans for handling, disposition and reclamation of such materials, including the design of major waste rock dumps so as to meet BC Mine Waste Rock Pile Guidelines.

Descriptions will include volume and mass calculations for each product of the mining and milling process, as well as capacities for various storage facilities.

3.7.2 Tailings Storage Facility

The AEAC will provide a detailed description of the tailings storage facility, including location, conceptual dam designs so as to meet Dam Safety Guidelines, foundation materials, storage capacity, water balance, diversion works, seepage control and handling, supernatant quality and treatment works. Sources of dam construction materials, including borrows sources, will be identified.

The AEAC will also provide a description of closure conditions for the tailings storage facility.

3.7.3 Water Management

The AEAC will provide a detailed description of water management practices for the property, including the handling of runoff from the plantsite area, waste rock and low grade ore stockpiles, open pit water, and tailings supernatant. The AEAC will describe water handling structures and facilities including diversion ditches, settling ponds, spillways, sumps and pumping systems. The AEAC will also provide a description of planned discharge points with projections of effluent quantity and quality. Water management practices will be described for each of the construction, operation and closure stages of the mine life.

3.7.4 Hazardous Wastes

The AEAC will provide a detailed description of potentially hazardous waste materials (other than waste rock or tailings) that may be generated by project activities and describe how these materials will be handled, managed and disposed. Typically these will consist of waste oils, waste solvents, waste antifreeze, batteries, and other such materials.

3.7.5 Non-Hazardous Wastes

The AEAC will provide a detailed description of non-hazardous waste materials that may be generated by project activities and describe how these materials will be handled, managed and disposed. Typically these will include putrescible (kitchen wastes) and non-putrescible wastes (non-hazardous industrial garbage).

3.7.6 Sewage Treatment

The AEAC will provide a detailed description of sewage and gray waters estimated to be generated by the project and how these will be managed, treated and disposed.

3.8 Infrastructure and Support Facilities

The AEAC will provide a description of all ancillary structures and infrastructure necessary to support the mining and milling process including maintenance and service buildings, offices and warehouse facilities, accommodation complex, fuel storage, access roads, tailings impoundments, waste rock storage, water intakes, pump houses, ditches and diversions, explosives manufacturing and storage, and port facilities.

3.9 Power Supply

The AEAC will provide a description of how electrical power will be provided for the project including a description of any power generation facilities, including backup power supply, any power supply lines and how power will be distributed for use at the project site.

3.10 Concentrate Handling

The AEAC will provide a description of how mineral concentrates will be handled, stored and shipped off site for smelting and refining. This will include a description of port facilities to be used for the short term storing, loading and shipping of mineral concentrates.

3.11 Organization and Employment

The AEAC will provide a detailed description of the organization and reporting structure for personnel, including a breakdown of the numbers of personnel by job categories and total numbers of employees. The AEAC will also provide estimates of numbers of persons to be employed during construction and number of persons to be indirectly employed by contractors during operations.

3.12 Procurement, Hiring and Training

The AEAC will provide a list of typical contracts for goods and services to be required in association with mine development and operation, and a description of procedures to be employed in letting of contracts for goods and services, hiring practices and training programs.

3.13 Project Execution and Schedule

Subject to receipt of the necessary government regulatory approvals, permits and licenses, the Company foresees commencement of construction in the First Quarter of 2005 and commencement of production in the Fourth Quarter of 2006.

The AEAC will provide a timetable and schedule for construction of the project with an estimate of timing to reach commercial production.

4 Environmental Setting and Effects Assessment

The AEAC will discuss the environmental setting in which the project is located, the potential effects of the project on the environment and the potential effects of the environment on the project. Potential effects of the project on the environment and of the environment on the project will be discussed for each of the construction, operations and closure stages of the mine life for each applicable component of the environmental setting as discussed below.

4.1 Climate and Air Quality

Meteorological data was collected at site between 1994 and 2000. A manual weather station was established in 1994 on "Dynamite Hill" situated immediately to the north of the Red Chris deposit. An automated station was installed in 1996.

Data was collected on rainfall, relative humidity, solar radiation, temperature and wind through 2000. Two snow courses were established in 1996 and monitored over the period from January through April 1997. The snow course was re-established in 2003 and monitoring commenced in February 2004. No air quality data has been collected to date

Regional weather stations exist at Dease Lake and Telegraph Creek, among others. The local data complements and can be correlated to weather information from the regional stations and appears to follow most closely the trends seen at Dease Lake.

The AEAC will summarize site weather data and correlate site data to long-term regional Atmospheric Environment Service weather stations to provide for long-term site weather predictions. Meteorological data will be used to predict rates of maximum and minimum annual precipitation and storm events for various return periods for use in the design of tailings storage facilities and other structures, and water balance calculations for both operations and closure conditions.

While no baseline air quality monitoring has been conducted to date, the site is located in a remote location with minimal potential for air quality impacts associated with anthropogenic sources. Baseline air quality is therefore considered to be essentially pristine.

The AEAC will employ standard modeling techniques to predict the potential for air quality impacts associated with the operation and to design mitigation measures as appropriate. The model will incorporate both point and mobile emission sources, including vehicle exhaust and particulates. No further baseline air quality data collection is planned for the purposes of compiling the AEAC.

4.2 Topography

Topographic mapping is available for the area of the Project in NTS format at a scale of 1:50,000 (map sheets 104H/12 and 104H/13), and in TRIM format at a scale of 1:20,000.

An aerial photographic survey of the property and surrounding area was undertaken in 1993. Topographic mapping of the mine site area to 10-meter contours was completed in 1995. More detailed aerial photography of the mine site area is planned for 2004 in order to support topographic mapping to 1-meter contours over the tailings storage and plant site areas.

The AEAC will provide a detailed description of the topographic features on and in the vicinity of the property, including surface drainage features. Available topographic mapping will be used in support of Project design and environmental assessment data presentation.

4.3 Surficial Geology and Soils

The AEAC will provide a detailed description of surficial geology in the vicinity of the property including such things as glacial, colluvial, alluvial and fluvial landforms and features. A detailed description of soils will also be provided.

A soil survey will be conducted in conjunction with the Terrestrial Ecosystem Mapping schedule to be undertaken in June 2004. This information will be compiled and presented in the Addendum to the AEAC to be submitted in September 2004. Additional information on the proposed soil survey is presented in the discussion of the TEM program in Section 4.12.3.

4.4 Seismicity

The AEAC will provide an analysis of regional seismicity and earthquake potential based on data generated by the Pacific Geosciences Centre. Seismic data will be incorporated into designs for the tailings impoundment dams and other structures. The AEAC will provide information on seismic design parameters for the project and the earthquake hazard classification.

4.5 Terrain Stability

The AEAC will provide a terrain stability analysis for the property and access road alignment, including the potential for landslides and avalanches. Information generated from the terrain stability analyses will be utilized in assessing the location and design of structures such as the access road, tailings storage facility, buildings, etc.

4.6 Surface Hydrology

The Red Chris mineral deposit occurs on a plateau at the boundary of two drainage basins. Drainage from both basins ultimately flows into the Stikine River. In 1994, five staff gauges were established to measure stream levels and flows. This was followed by the installation of two automated hydrology stations on White Rock Canyon Creek and Quarry Creek in 1995. Stream flow measurements were taken in drainages around the property between 1994 and 1998. Data collected from the automated hydrology stations were downloaded from 1994 through 2002.

Regional stations in the Iskut River and Klappan River watersheds also provide data of use to the Red Chris project.

In the fall of 2003, automated hydrology stations were re-established at three locations and flows were monitored at the five previously monitored stations. Data continues to be collected by the automated stations and flows will be measured on occasions when data is downloaded throughout 2004.

The AEAC will summarize the results of the site hydrological program and site measurements will be correlated to long term regional hydrological stations to provide for long term estimates of stream flow over a variety of return periods.

Hydrological data will be used in the design of water retention, storage and diversion systems, including the tailings impoundment, and will be used as a basis for determining the effects on and maintaining flows in natural systems, particularly fish-bearing streams. The effects of the project on surface hydrology will be discussed.

The AEAC will include an assessment of potential impacts of the project on surface waterways as defined under the Navigable Waters Protection Act, including a detailed description of any crossing points or other proposed structures, and provisions proposed for meeting the requirements of the NWPA.

4.7 Groundwater Regime

A number of piezometers were established in 1995 in conjunctions with geotechnical evaluations conducted at that time. While these are no longer functional, drill logs and information collected from the piezometers at that time provide valuable hydrogeological

information. An additional seven piezometer/groundwater wells were established in the fall of 2003. Rising head tests were conducted and the wells were sampled for water quality analyses.

Information from these programs will be used in the AEAC to provide a detailed analysis of the groundwater regime in the vicinity of project area and to assess the potential impacts associated with mine development, operation and closure.

Groundwater wells will be re-sampled in 2004 and results compiled and presented in the Addendum to the AEAC to be submitted in September 2004.

4.8 Acid Rock Drainage (ARD) & Metal Leaching (ML) Potential

A total of some 959 acid base accounting tests were completed on representative samples of all major rock types over the period from 1994 to 1997. In addition, another 67 samples were collected from the 2003 drill program. Of these latter samples, 14 were selected for humidity cell testing. As well, ten samples of tailings produced from metallurgical testwork conducted in 2004 have been tested for ABA and composites from each of the Main Zone and East Zone subjected to humidity cell testing.

The AEAC will summarize the results from the ABA and kinetic testwork programs and provide detailed characterization of all major rock types and lithologic units, including detailed mineralogical assessment of the sulphide and carbonate minerals present. The AEAC will provide a detailed description of the location and spatial distribution of samples collected and assess how that relates to the units they represent. Humidity cell data will be used to predict rates of NP depletion and sulphide oxidation and, on that basis, time to onset of acid generating conditions. Potential for neutral pH metal leaching from waste rock and tailings will also be addressed in the AEAC.

The results of the ML/ARD characterization program will be used in determining materials handling procedures, ultimate disposition of materials and proposed reclamation practices in order to mitigate ML/ARD potential. As well, as discussed in more detail under Section 5.4, results of the ML/ARD program will be used in the development of an ML/ARD Prediction and Prevention Plan to accompany the AEAC.

4.9 Water Quality

Stream sampling, initially at nine and then fourteen stations within the vicinity of the property, was initiated in 1994 and continued through until 1997. The sampling regimen included pre- and post freshet weekly sampling at three locations in 1996 and pre-freshet monitoring at four locations in 1997. As well, sampling was also conducted from discrete depths over the water column in each of three lakes surrounding the property. Sampling locations were selected in order to provide baseline characterization of drainages from the property so as to cover off a variety of alternative development scenarios, including the current proposal.

Data were collected on physical parameters, total metals, dissolved metals, nutrients and total organic carbon. A full suite of water quality sampling has been conducted again in early October, 2003.

The AEAC will provide a detailed compilation and analysis of existing baseline water quality data. This data will be used in conjunction with water balance and hydrological data to complete mass loading models for an assessment of discharge impacts from the operation including runoff, seepage and any controlled discharges, which will be included in the AEAC.

Water quality will continue to be sampled in 2004 to extend the existing baseline data. Results will be compiled and presented in the Addendum to the AEAC to be submitted in September 2004.

4.10 Sediment Quality

Baseline monitoring of sediment quality has not been undertaken at this time. A program to undertake this work is planned for the summer of 2004. Sediments will be collected from surface water courses in areas susceptible to sediment loading associated with mine development and operations. This information will be compiled and presented in the Addendum to the AEAC to be submitted in September 2004.

4.11 Fisheries and Aquatic Resources

Aquatic life surveys were conducted in the project area in 1995 and 1996 to determine the population and distribution of fish species, benthic invertebrates, periphyton, phytoplankton and zooplankton. Electrofishing was conducted at 12 sites in 1995 and 16 sites in 1996. The small streams draining the Todagin plateau where the mine will be located do not support fish populations. The lakes and streams in the valleys to the north and south of the plateau where the access road and tailings impoundment will be located have been shown to support Rainbow trout. No other species of fish has been identified in these systems. Additional work was carried out in the fall of 2003 on fish populations in Kluea, Todagin and Ealue Lakes and fish populations and habitat in Trail Creek upstream of Kluea Lake, generally confirming the earlier work. Fish metals levels were sampled from area lakes in 2003.

The AEAC will provide a detailed compilation of baseline aquatic resource data. Invertebrate and periphyton data will form a baseline for assessing impacts to water quality and aquatic resources. Fisheries information will be utilized in an assessment of fish utilization and habitat in the vicinity of the minesite, and in particular in areas proposed for development, such as the tailing storage facility. The AEAC will assess the potential for mine development, operations and closure to affect fish and fish habitat. Where potential impacts are predicted, mitigation measures will be proposed.

Additional baseline fisheries and fisheries habitat inventory work is planned for 2004 to supplement and further quantify the existing database. This information will be compiled and presented in the Addendum to the AEAC to be submitted in September 2004.

Should it be determined that mine development, operation and/or closure will result in an unavoidable loss of fish habitat, a fish habitat compensation plan may be required. Such a plan would require additional field work to identify appropriate compensation measures. This field work would be carried out in summer 2004. The plan would then be prepared and included in the Addendum to the AEAC to be submitted in September 2004.

4.12 Vegetation & Terrestrial Ecosystems

The area of the Red Chris project is classified as a spruce-willow-birch (SWB) zone. Higher elevations fall within the Alpine Tundra (AT) zone. The vegetation ranges from coniferous, mixed coniferous-deciduous forests in the valley bottoms to alpine grasslands then alpine tundra in the upper reaches of the plateau. A total of 14 thirty metre transects were conducted in July 1995 to confirm vegetation community types. All plant species encountered were identified, categorized and compared to regional biogeoclimatic mapping. Additional information on vegetation community types were collected in conjunction with 21 wildlife transects covering 60.5 km conducted in June 1996

Baseline terrestrial ecosystem mapping and an assessment of metals in vegetation have not been carried out to date. These programs are scheduled for completion in the summer of 2004 and will be incorporated into the Addendum to be submitted in September 2004. Selection of vegetation for metals analyses will be determined through an analysis of browse species for project area wildlife and of First Nations cultural/traditional use for consumption and medicinal purposes.

The Addendum to the AEAC will assess and utilize the baseline information on vegetation and terrestrial ecosystems in terms of the potential for impacts to terrestrial resources, propose measures to mitigate such impacts and to inform decisions on reclamation measures to be undertaken during the life of the operation and upon closure.

4.12.1 Terrestrial Ecosystem Mapping

Terrestrial Ecosystem Mapping (TEM) will be completed to provide information on the types and extents of ecosystems that will be affected by the mining development. Mapping will be conducted at 1:5,000 scale for the proposed pit, tailings area, mill site and camp area. The ecosystems in these areas will be disturbed due to construction activities and the ecosystem mapping will be used to develop reclamation plans to restore the affected ecosystems once the mine is decommissioned.

Mapping at a scale of 1:20,000, Level 3 or 4, will be completed outside the above area, as well as along a corridor approximately 1000m wide centered on the proposed and existing access road.

The area of 1:20,000 mapping will include the sub-watershed areas that contain the proposed mine and associated infrastructure with a sufficient buffer zone to provide local context to the areas to be disturbed and reclaimed.

The TEM will be carried out as outlined in the Standards for Terrestrial Ecosystem Mapping in British Columbia (1998). Fieldwork will be carried out in late June, and possible again in August, once the area is snow-free and vegetation has emerged sufficiently to allow ecosystem identification. Field crews experienced in vegetation and soils identification will complete standardized plots ranging from full ecosystem to visual reconnaissance plots. Plots will be conducted to ensure survey intensity levels are achieved as required by the TEM Standards, which are approximately 35% (range 25-50%) polygon visitation for the 1:5,000 scale mapping and 20% (range 15-25%) visitation for the 1:20,000 scale mapping. Terrain and ecosystem confirmation as well as any polygon line adjustments will be made during the fieldwork. Following the field work, the air-photos will be mono-restituted to create a digital map of the polygons. Final map production, based on the digital mapping will be completed, with deliverable products being a Terrain Map, and an Ecosystem Map. A report outlining the results of the fieldwork and mapping will also be completed. TEM products will be used in conjunction with traditional use studies to identify harvesting areas for consumptive and medicinal use by First Nations. This information will be compiled and presented in the Addendum to the AEAC to be submitted in September 2004.

4.12.2 Rare Plants Survey

Identification and mapping of endangered ecosystems will be carried out in conjunction with the TEM project using members of the study team specializing in ecosystem and plant identification. As endangered ecosystems are still being identified and assessed in the study area, the study team will be in communication with A. Banner, (Ministry of Forests), and A. Hetherington (Ministry of Water, Lands and Air Protection) to ensure the latest information is available. Information on rare and endangered plant species will be assembled based on communication the above specialists as well as the Conservation Data Centre in Victoria. In addition to regionally rare ecosystems, there are 10-20 mostly blue-listed species that could potentially be found on alpine, wetland or grassland sites in the area.

Air-photos will be used to plan sampling and mapping of rare plants and ecosystems within the project area. Sampling for rare plants will be concentrated in the proposed pit and infrastructure areas to determine if there are any species at risk in those areas. Additional sampling will be carried out in the surrounding area to determine if these plants or ecosystems are represented outside the areas affected by the proposed mine development. All field sampling will be carried out in conjunction with the TEM work. Vegetation samples that can not be identified in the field will be sent to specialists for those species for their identification. Mapping of any rare ecosystems and plant locations identified will be noted on the TEM products, with an associated report on the field sampling and mapping completed.

4.12.3 Soils Mapping and Sampling

Soils mapping and sampling for soils recovery and reclamation will be carried out in detail on the proposed pit and infrastructure areas, and at a reconnaissance level within the surrounding study area. Fieldwork for the soil mapping will be carried out during the TEM field sampling using study team members specializing in soils. Soil samples will be gathered of representative soil types for analysis and the TEM polygons used as the basis for the soil mapping polygons. Information on the soil-mapping units such as rooting depth, drainage, soil texture, soil structure and coarse fragment content, will be collected. Soil samples will be collected of representative soil units and stored in sealed bags, with soil samples representing the rooting layer, plus 10 cm, or as appropriate. Soil samples will be analyzed for particle size and chemical parameters such as nutrients and buffering capacity by a recognized soils laboratory. The final products from this portion of the project will be a 1:20,000 soils map and an associated report outlining soil recovery and reclamation recommendations and options. This information will be compiled and presented in the Addendum to the AEAC to be submitted in September 2004.

4.12.4 Vegetation Sampling

To provide baseline information on the ambient concentrations of trace elements in selected plants that are used by wildlife near the proposed pit and tailings area, samples will be collected from herbaceous vegetation such as sedges (*Carex* spp.), willows (*Salix* spp.) etc. in conjunction with the TEM field work. Foliar samples will also be collected from plant species identified as important to First Nations for consumptive and medicinal purposes that could concentrate trace elements. A final report will be completed that outlines the locations and results of the vegetation sampling. This information will be compiled and presented in the Addendum to the AEAC to be submitted in September 2004. Such baseline information will form the basis for comparisons to conditions during operations and closure for assessing the effects of uptake of metals in vegetation on wildlife and human health.

4.13 Wildlife and Wildlife Habitat

Wildlife observations were recorded by exploration personnel and Hallam Knight Piesold personnel on site visits during the period from 1994 to 1996. More detailed wildlife studies were conducted by Hatler in and around the immediate project area during 1996 and 1997 to identify the full range of terrestrial vertebrate wildlife. This entailed a detailed wildlife reconnaissance inventory which include on the ground wildlife transects, breeding bird surveys, small mammal assessments, general exploration surveys, and aerial surveys. Aerial surveys, particularly focused on alpine ungulates (Stone's sheep, mountain goat), have been conducted on 4 occasions in 1996, 3 occasions in 1997 and once in 2003.

The AEAC will provide a detailed compilation and assessment of the baseline wildlife information. This information will be used to develop mitigation measures for potential impacts to wildlife and wildlife habitat associated with mine development and operations, and to ensure a return of disturbed areas to productive wildlife habitat upon closure. The AEAC will include a discussion of Species at Risk, as defined in the Species at Risk Act, in the vicinity of the project and the potential for the project to impact on red/blue and COSEWIC listed species and their habitat.

Wildlife surveys will continue in 2004 with a spring survey planned to assess locations of sheep and goat natal areas, as well as habitat along the existing and proposed access road alignment. Additional habitat use information will be gathered while conducting the TEM fieldwork by qualified wildlife biologists familiar with the species of interest and habitat use patterns. This information will be compiled and presented in the Addendum to the AEAC to be submitted in September 2004.

4.13.1 Wildlife Habitat Suitability Mapping

Using the information gathered during the field assessments and the mapping produced by TEM as discussed above, seasonal habitat suitability mapping will be completed as per the British Columbia Wildlife Habitat Rating Standards, Version 2.0 (1999). The habitat ratings will be used in conjunction with the TEM to produce 1:20,000 seasonal habitat suitability maps for mountain goats, Stone's sheep and bears for both pre-development and post-closure scenarios. Suitability maps will be fine tuned using the information from the previously conducted aerial surveys and ground assessments. The final products for the wildlife habitat suitability mapping will be 1:20,000 seasonal suitability mapping for each selected species and an associated report containing a species account, the rationale behind the habitat ratings and a discussion of any modifications made to the mapping due to the aerial surveys and ground assessments. This information will be compiled and presented in the Addendum to the AEAC to be submitted in September 2004.

4.14 Noise

While no baseline noise monitoring has been conducted to date, the site is located in a remote location with minimal potential for noise impacts associated with anthropogenic sources. Baseline noise levels are therefore considered to be essentially natural. The AEAC will employ standard modeling techniques, taking into account topography and weather conditions for the area, and experience from similar operations to predict the potential for noise impacts on wildlife, including tremor effects from blasting on fish, and the public associated with the operation and to design mitigation measures as appropriate. No further baseline noise data collection is planned for the purposes of compiling the AEAC.

4.15 Land Use

Current land uses in the vicinity of and adjacent to the Red Chris property relate primarily to the remote wilderness nature of the area. These include, in addition to mineral exploration: hunting, trapping, guide-outfitting, backcountry wilderness tourism and recreation. Forestry activity is limited and the nearest other mineral occurrence with development potential is the Mt. Klappan coal deposit some 80 km to the southeast. Mineral exploration has been ongoing on and around the Red Chris property for almost 50 years.

The AEAC will provide information on the extent of other land uses in the area and identify the potential for mine development and operations to impact on such other users and identify means to avoid or mitigate such impacts.

The Red Chris property is located within the 5.2 million hectare area of northwestern BC encompassed by the Cassiar Iskut-Stikine Land and Resource Management Plan (LRMP) of October 11, 2000 as approved by the B.C. Cabinet. The existence of the Red Chris mineral claims is recognized within the 131,000 ha Todagin Area Specific Resource Management Zone and mineral exploration and mine development and associated access continue to be recognized as appropriate activities. In order to meet the specific objectives of the LRMP, strategies have been considered to accommodate future mine development and operations, including fully integrating the management of wildlife along with mineral exploration and mine development.

To this end, as described under Section 5.13, baseline wildlife inventories have been undertaken in support of mine development. The AEAC will propose wildlife management strategies, mitigation measures and monitoring programs in order to integrate development activity with the objectives of the LRMP.

4.16 First Nations

The Red Chris property lies within the area claimed by the Tahltan people as their traditional territory. The total area of the Tahltan traditional territory in north-western BC covers some 93,600 km². The Tahltan people have historically traveled extensively throughout their territory in search of migratory game and other wildlife, and to trade with other native groups.

The closest community to the Red Chris property is Iskut, home to the Iskut First Nation, 18 km north of the property. Other communities include Dease Lake and Telegraph Creek, home to the Tahltan First Nation, 80 km north and 85 km to the west-northwest of the property respectively.

The Tahltan people, through the Tahltan Nation Development Corporation (incorporated in 1985), have been active in contracting operations within their traditional territory for many years, including the Golden Bear and Eskay Creek mines. Through these

employment and associated training opportunities, the Tahltan have developed a well-trained and experienced workforce upon which RCDC hopes to draw a significant portion of its employees.

RCDC has engaged in cooperative discussions with the Tahltan and Iskut First Nations with the commencement of activity in 2003. It is the intention of Red Chris management that the Tahltans and Iskuts will benefit economically in the Red Chris project throughout its projected life and in the reclamation process following mine closure. RCDC and the Tahltan and Iskut First Nations entered into a Memorandum of Understanding and Statement of Principles in January 2004 that will form the basis of a mutually beneficial working relationship and guide the Parties towards meeting their mutual goals in a cooperative manner.

The AEAC will document the consultation process between the Tahltans, Iskuts and RCDC, identify issues raised and their means of resolution, or conversely, those that remain unresolved.

4.17 Archaeology and Cultural Use

Members of the Iskut and Tahltan First Nations continue to hunt, trap, fish and collect medicinal plants from the area surrounding Red Chris. The First Nations have traditionally camped in the vicinity of the proposed minesite, however no permanent settlements have been established.

No archaeological or cultural use assessment has been conducted in the immediate vicinity of the property. Such an assessment is planned for the summer of 2004 and will be compiled and presented in the Addendum to the AEAC to be submitted in September 2004. The assessment will discuss the potential effects of the project on First Nations use of the area. The AEAC will use information from such assessment to mitigate impacts to archeological sites and minimize or eliminate any possible infringements to aboriginal interests.

4.18 Socioeconomic setting

A long term mining operation such as that proposed at Red Chris has the potential to create significant positive economic benefits to the northwestern portion of British Columbia, as well as to the province and country as a whole, through the provision for job and training opportunities, the purchase of goods and services, an increased tax base at all levels and increased disposable income. At the same time the mine development has the potential to impact on local and regional resources through increased demand on social services such as police, health care, housing and education. Social impacts at the community and family level also have the potential to occur as a result of increased disposable income, lifestyle changes and work associated demands.

For the most part, potential social impacts at the local level will pertain primarily to the Tahltan, as the project lies within the traditional territory of the Tahltan people. Local communities are, and therefore local employees are expected to be, primarily Tahltan. The potential social impacts and benefits of the project are being addressed with the Tahltan and will continue to be throughout the life of the mine.

The AEAC will provide an assessment of potential economic and social impacts associated with mine development based on regional demographics and community profiles. The assessment will include and be based on factors such as estimates of employment income, taxation levels, and purchased goods and services, as well as expected numbers of local versus non-resident employees, increased population resulting from in-migration of employees, shift rotation schedules and on-site accommodation versus community based housing.

4.19 Public Health and Safety

The application will examine the potential impacts of all phases of the proposed project (construction, operation, maintenance, decommissioning) on public health and safety with consideration of relevant determinants of health. Included in this assessment will be descriptions of the general public health setting and characteristics influenced by such factors as public utility services (water, waste, etc.), emergency services, noise, and air quality. The application will assess and evaluate the potential project impacts upon the health and safety of employees, their families and local communities (including First Nations), and describe mitigation measures for any possible effects to human health and safety.

5 Environmental Management and Mitigation Measures

5.1 Environmental Policy, Practices and Procedures

The AEAC will include an outline of bcMetals environmental management system, including its environmental policy and management practices and procedures.

5.2 Mine Plan

A conceptual mine plan will be developed for inclusion in the AEAC. The mine plan will include (pursuant to *Application Requirements for a Permit Approving the Mine Plan and Reclamation Program Pursuant to the Mines Act*):

- general composition, size, shape and location of all consolidated and unconsolidated geological units disturbed by the project;
- preliminary mining and ore processing schedule;
- preliminary design of explosives manufacturing and storage facilities and preliminary explosives use schedule;

- prediction of the geochemical performance of the different geological units in the different forms in which they will be exposed and determine of potential for deleterious effects (e.g. ARD);
- determination of characterization needs for ore and waste rock extraction, handling and disposal operations;
- preliminary characterization of surficial and bedrock geology for geotechnical assessments;
- preliminary design of ore processing facilities;
- preliminary design of tailings impoundment facilities and waste rock dumps;
- preliminary open pit design;
- preliminary access and site road design;
- preliminary design of water diversion and storage facilities;
- preliminary design of the electrical power supply and distribution system;
- preliminary design of concentrate storage and transportation facilities.

5.3 Tailings Impoundment Operating Plan

A conceptual tailings management plan will be developed for inclusion in the AEAC.

The conceptual tailings management plan will provide the following:

- conceptual design details for the impoundment and dams including methods to minimize excess seepage;
- a detailed water balance for tailings impoundment operation;
- predicted supernatant discharge volume and quality;
- potential for acid generation from deposited tailings and appropriate mitigation measures;
- discharge location and capacity;
- contingency plans for treatment of non-compliant discharges;
- considerations for flooding on closure;
- impoundment monitoring during operation and closure.

Impoundment closure and reclamation will be discussed in the reclamation plan.

5.4 ARD/ML Prediction and Prevention Plan

A preliminary Acid Rock Drainage and Metal Leaching (“ARD/ML”) Prediction and Prevention Plan will be developed for inclusion in the AEAC. The Plan will set out the objectives of ARD management and detail operational practices and procedures for determining the ARD/ML potential of mined, excavated and processed material prior to their extraction, use or disposition. The development of the ARD/ML prediction plan will be based on the results of short-term acid-base accounting data and long-term kinetic (humidity cell) tests conducted to date as detailed previously under Section 4.8. Short-term tests will be used to determine which rock units have the geochemical potential to generate acid and/or have pH neutral metal leaching, and kinetic tests used to predict the

approximate time delay for onset of acid generation in rock units that are predicted to generate acid. It is expected that the ARD Prediction and Prevention Plan will be based on blasthole composite sampling, possibly supported as necessary by post-blast waste rock sampling. Materials suitable for use in construction purposes will be identified. The rationale for testing methodologies, sample selection and sample frequency will be provided in the Plan.

Prevention will consist of the identification and handling of potentially acid-generating and/or pH neutral metal leaching rock units so as to inhibit acid generation and prohibit the release of oxidation products and metals. This may include such practices as placement of PAG materials underwater in the tailings impoundment, co-disposal with acid consuming rock, temporary stockpiling and drainage collection or backfilling in a mined-out open pit and flooding. Pre-mining sampling data will be used to identify potentially acid-generating/pH neutral metal leaching waste rock units as to location, volume and probable mining sequence so as to maximize acid generation and metal leaching prevention capability at the mine. Waste rock and tailings will be managed so as to prevent the initiation of acid generation and/or metal leaching where practical.

In addition to day-to-day operational monitoring, the ARD prediction plan will also be related to long-term closure objectives for geochemical stability.

5.5 Materials Handling Plan

A Materials Handling Plan will be developed in conjunction with, and form an integral component of, the ML/ARD Prediction and Prevention Plan. The Materials Handling Plan will set out the day-to-day operational management, materials handling and test procedures designed to integrate the ML/ARD Prediction and Prevention Plan with the disposition of excavated, mined and processed material in order to ensure the objectives of ML/ARD management are met.

The Plan will focus on handling and disposition of materials based on geochemical stability in both the short term and long term and, where necessary, the control of drainage from such materials.

5.6 Reclamation and Closure Plan

The AEAC will include a conceptual reclamation and closure plan for the property at the end of its planned mine life. The conceptual plan will be based on the requirements of the *Application Requirements for a Permit Approving the Mine Plan and Reclamation Program Pursuant to the Mines Act*. The conceptual reclamation plan will list the areas of disturbed mining land units and provide a schedule for anticipated progressive reclamation. Conceptual methods for reclaiming the identified mining units will be provided, including proposed treatments and possible vegetation prescriptions, and provision for reclamation research over the life of the mine. An outline will be provided as to how reclamation is envisaged to be integrated into the mining operation.

The conceptual reclamation and closure plan will discuss options being considered for closure and outline the geotechnical considerations to ensure stability of final mine configurations. Since acid generation potential will be a factor in the design for the development of the Red Chris deposit, results of ARD test work will be integrated into reclamation planning as a key component with the goal to ensure no long-term release of metals or acidic drainage from the site on closure. Proposals to provide for a stable, productive post-mining landscape consistent with current wildlife values in the area will be detailed. The Reclamation and Closure Plan will also include a breakdown of estimated costs to complete the anticipated reclamation and closure activity at the end of the planned mine life.

The conceptual reclamation plan will include:

- pre-mine land uses and proposed end land use objectives within the scope of the LRMP;
- pre-mine land capability and productivity and proposed post-mine capability and productivity objectives;
- plans for soil and overburden characterization;
- consideration of long-term stability;
- treatment of structures and equipment, including mill building, maintenance shops, camp, explosives manufacturing plant, powerlines, pumphouse, and other such facilities;
- resloping and reclamation of waste dumps;
- reclamation of water courses;
- tailings impoundment reclamation;
- road reclamation;
- provision for comparing metals levels in soils and vegetation prior to mining and on closure;
- geotechnical performance prediction of mine units;
- revegetation plans;
- estimates of reclamation and closure costs.

5.7 Wildlife Management Plan

The AEAC will include a Wildlife Management Plan aimed at integrating mine development, operation and closure with the stated objectives for wildlife management in the Todagin Wildlife Management Zone as set out in the Cassiar Iskut-Stikine Land and Resource Management Plan. The Wildlife Management Plan will be developed with the overall objective of minimizing negative interactions between wildlife within the project area and with project activities. As set out in the LRMP, the key species of concern for the project area are Stone's sheep. Other species which will warrant specific consideration within the Plan include mountain goat, moose, black bear and grizzly bear, as well as any red/blue listed or COSEWIC listed species identified within the project

area, although the potential for disturbance to wildlife species generally will be considered within the context of project environmental planning. The plan will address:

- loss of habitat and alternatives considered to minimize such losses;
- habitat replacement options for reclamation and closure
- rehabilitation of access roads on closure
- disturbance of wildlife from project activities during construction and operation;
- location of facilities relative to critical habitats, migration routes etc.
- collision prevention between wildlife and project mobile equipment;
- protection of wildlife from accidental entry into hazard areas on the project, such as the tailings pond, open pits, etc.;
- management of human-bear interactions to safeguard both parties;
- restrictions on use of recreational vehicles (ATV's, snowmobiles)
- restrictions on flight paths for helicopters and other aircraft
- refuse handling to minimize attraction of wildlife
- employee wildlife orientation to prevent incidents through education;
- wildlife harassment policy
- employee access control to critical habitats
- access road security to restrict access for hunting
- wildlife monitoring
- a no-firearms policy; and
- other site-specific issues as appropriate.

5.8 Water Management and Sediment Control Plans

A two-phase sediment control plan addressing (1) construction and (2) operation will be developed as part of mine planning presented in the AEAC. The closure phase will also be discussed with reference to the reclamation plan. The goal on closure will be to stabilize mining units such that erosion and sedimentation of water bodies does not occur.

For construction, the main issue will be sedimentation from disturbed areas. An analysis will be conducted to identify areas and activities of potential erosion and sedimentation during construction. Mitigation measures will be developed and will likely consist of temporary or permanent (used during operation) sedimentation ponds built to an acceptable design flood event depending on the intended life of the pond.

For operation, designs will be provided as part of the overall water management plan for sediment collection ponds to treat runoff and seepage from disturbed areas and stockpiles, such as waste rock dumps and ore storage piles, site roads, etc. The overall objective will be to prevent sedimentation to the extent practical and to treat any runoff and seepage that has the potential to collect suspended sediments prior to release to the environment. The Plan will specify construction techniques, maintenance provisions, the use of settling aids (flocculants) and reclamation of sediment control structures. The Plan

will also identify discharge points from control structures as well as projections of effluent discharge quantity and quality.

5.9 Pollution Prevention Planning

The objective of pollution prevention planning will be to assess potential sources of pollution associated with project development, operation and closure, and to investigate practical ways of minimizing or eliminating pollution at source. To a large extent, pollution prevention planning will be incorporated directly into mitigation strategies developed in response to the impact assessment for the AEAC. Pollution prevention planning will be inherent within other plans, such as sediment control, water and waste management, reclamation, etc. and the planning process will serve primarily to integrate pollution prevention at the project site and to catch any items that are not specifically captured in other plans.

5.10 Spill Contingency and Emergency Response Plan

The AEAC will include a Spill Contingency and Emergency Response Plan. The Plan will incorporate spill prevention and response procedures, as well as general emergency response procedures. The spill plan will identify potential sources of accidental spills of hazardous liquids and other materials, and provide standard operating procedures to first prevent, and then institute counter and control measures for such incidents. The spill plan will lay out procedures to be used to train employees in spill prevention and control; separate training materials will be developed as part of mine planning. Proven procedures to assess risks and deal with accidental spills will be incorporated into the spill plan.

Emergency response will deal with a broader range of issues including, e.g., fire, medical emergencies, uncontrolled explosions, and temporary loss of power at the mine. Site maps showing refuges, location of fire fighting and spill clean up equipment, etc. will be included in the plan. The plan will set out standard responses to spills and other emergencies, and emphasize flexibility in dealing with specific situations within a well-understood framework, including a chain of command and designated first responders for specific emergencies. Company policy will be safety first and ensure adequate training of all employees prior to commencement of work at the Red Chris mine.

5.11 Environmental Effects Monitoring Program

An environmental effects monitoring program will be developed for operations pursuant to the requirements of Waste Management Permits issued for the Project, the Metal Mining Effluent Regulations under Fisheries Act and any other provisions that may be set as part of the terms of approval of the project. A proposed environmental effects monitoring plan will be developed as part of the overall monitoring plan for the mine and presented in the AEAC. Key elements of the plan will include the aquatic environment and monitoring of wildlife-project interactions. The aquatic effects monitoring program will provide details of proposed monitoring of downstream effects of the mine on

receiving water bodies including such things as: water quality, sediment metals, fish populations and tissue metal levels, benthic invertebrate populations and effluent toxicity. Wildlife monitoring will focus on Mountain goats and Stone's sheep as the species identified for integrated management consideration for the Todagin Wildlife Management Area in the LRMP. The wildlife monitoring program will seek to complement other studies designed to meet the aims and objectives of the Cassiar Iskut-Stikine Land and Resource Management Plan. A cooperative program with First Nations, the local Guide-Outfitter and WLAP will be initiated prior to commencement of mine operations to obtain samples of game animal meat for tissue metals determinations. The program will form the basis for long term monitoring and will concentrate on species harvested by First Nations.

5.12 Waste Management Planning

A variety of solid, liquid and air emissions will be generated by the mining operation. These will include such things as: waste rock, tailings, sewage effluent, industrial-type refuse, municipal-type refuse, and air emissions from dust collectors, fume hoods and other point sources. The AEAC will characterize the solid, liquid and gaseous waste streams in terms of quantity and quality as part of the environmental impact assessment. Waste management plans developed for each source and will provide conceptual treatment and design details.

5.12.1 Mine Waste

Management plans for mine waste have been discussed under the Materials Handling Plan. ARD prevention will be a key component design as detailed under the ARD Prediction and Prevention Plan. The Materials Handling Plan for the AEAC will provide a schedule of generation of waste rock by type and identify the location(s) for storage of the rock. The Materials Handling Plan and ARD Prediction Plan will be linked to the Water Management Plan in terms of control of runoff and seepage from the dump(s), and also to the Reclamation Plan in terms of reclamation and closure of the dumps.

As with waste rock, tailings discharge volumes and quality will be discussed in the Material Handling and ARD Prediction and Prevention Plans, as well as in the Tailings Management Plan.

5.12.2 Industrial and Domestic Wastes

A conceptual plan for management of industrial and domestic wastes will be developed for the AEAC to include:

- non-burnable solid wastes;
- burnable solid wastes;
- putrescible (kitchen) wastes;
- domestic gray water and sewage.

Plans for handling industrial and domestic wastes will include:

- estimates of the type and volume of industrial wastes to be generated during construction and operation of the Red Chris Mine;
- location for storage of machinery that may be recyclable (bone yard);
- location, design and conceptual construction of a landfill, if appropriate;
- type and size of camp incinerator(s) planned;
- type and size of the proposed package sewage treatment plant;
- disposal plans for incinerator ash;
- estimated volume and disposal plans for treated sewage.

5.12.3 Air Emissions

The AEAC will detail sources, quantity and quality of point source air emissions associated with mine and mill operations. These will include emissions from dust control equipment from crushing and conveying operations, fume hoods from reagent handling and assay laboratory, and any other similar sources. The AEAC will also provide a description of pollution control equipment proposed for use in controlling such emissions and expected efficiencies.

5.12.4 Hazardous Materials Handling Plan

A variety of supplies and materials classified as potentially hazardous will be required at the mine and mill for general operations. Other materials will be backhauled from the Red Chris site on an ongoing basis. The hazardous materials handling plan will be developed for the AEAC which will provide a framework and standard operating procedures for hazardous materials transportation, storage and handling. Routine operations will be included in the hazardous materials handling plan. Accidents, malfunctions and emergencies will be covered by a separate spill contingency and emergency response plan.

Hazardous materials and wastes require special handling and training procedures which will be covered in the plan. This will include specific legislated training programs, such as WHMIS training for all employees, and TDGA training for employees that may handle dangerous goods.

The largest volume hazardous materials to be handled will likely include the following:

Petroleum products (diesel, gas, lubricants, oil)	To the Mine
Propane	To the Mine
Explosives	To the Mine
Ammonium nitrate	To the Mine
Mill reagents	To the Mine
Waste Batteries	From the Mine

Waste Oil	From the Mine
Waste antifreeze	From the Mine
Waste solvents	From the Mine
Empty reagent containers	From the Mine
Empty petroleum containers	From the Mine
Copper/Gold Concentrate	From the Mine to Stewart

5.13 Accidents and Malfunctions

Consideration of the potential for accidents and malfunctions will be built into the impact assessment sections of the AEAC under each activity where an accident or malfunction has been identified as having the potential to occur (e.g., petroleum spills, tailings spills, road accidents, etc). Environmental effects will be discussed and mitigation measures will be detailed to address identified accidents and malfunctions to minimize or eliminate their impacts. As discussed below, risk assessment will be factored into the design of facilities and structures based on the determination of the significance of potential impacts. As well, the potential for accidents and malfunctions will form an integral component of the spill contingency and emergency response plan.

5.14 Alternatives Assessment

The AEAC will include an assessment of alternatives considered for various components of the Project design. Project alternatives will be reviewed for:

- rate and sequence of mining the deposit;
- road alignment;
- transportation;
- power supply;
- type and location of waste management facilities;
- waste and water treatment;
- water management;
- water supply;
- location of site infrastructure

Alternatives will be discussed together with the environmental, socio-economic and management implications of various alternatives. The reasons for selecting the preferred alternative, as well as reasons for rejecting alternatives will be detailed.

5.15 Risk Assessment

The risks of impacts occurring will be assessed specifically in conjunction with the assessments of the potential for accidents and malfunctions and alternatives considered, as well as along with the assessment of impacts associated with the development,

operation and closure of the mine generally. The risk assessment will include the potential effects of the project on the environment, as well as the potential effects of the environment on the project as discussed in Section 4. Risk assessment will be based on a combination of the probable frequency of occurrence together with probable significance of the impact. The risk assigned to an issue will provide key input into the assignment of significance of the potential impact, as well as into the decision-making process on design considerations and alternatives considered. Structures having a high failure consequence will be identified.

5.16 Cumulative Effects Assessment

The AEAC will include a cumulative effects assessment (CEA) prepared on the following basis:

- Determine if a project activity will have an effect on a Valued Ecosystem or Socioeconomic Component (VEC and VSEC).
- If an effect occurs, determine if the incremental effect acts cumulatively with the effects of other actions, either past, existing or reasonably foreseeable.
- Determine if the effect of the project, in combination with other effects, may cause a significant change now or in the future after the application of mitigation.

A five-step process will be employed, designed to be consistent with current CEA practice and the Canadian Environmental Assessment Agency's 1999 Cumulative Effects Assessment Practitioners Guide:

1. scoping
 - a. identify regional issues
 - b. selection of VECs and VSECs
 - c. identify spatial and temporal boundaries
 - d. identify other actions that may affect the same VECs and VSECs
 - e. identify potential impacts due to actions and possible effects
2. analysis of effects
3. identification of mitigation
4. evaluation of significance
5. follow up (monitoring).

5.17 Sustainability

The AEAC will provide information on the company's policies and commitments to sustainable development. During the construction, operation and abandonment of the Red Chris Mine, bcMetals will use technical, environmental and social procedures to develop and modify the above plans so that sustainable development as defined by International Council on Mining and Metals (ICMM) will remain a goal throughout the life of the project.

For any renewable resources that are likely to be significantly affected by the project, the AEAC will include consideration of the capacity of those renewable resources to meet the needs of the present and those of the future.

bcMetals will maintain policies for environmental compliance, health and safety and operating ethics. The key practices and procedures will include the following:

- ◆ Consider specific risks in the overall management process;
- ◆ Management systems and defined procedures for environmental control;
- ◆ Defined and frequently reviewed emergency response procedures ;
- ◆ Provide specific training on environmental matters where necessary
- ◆ Regular review of management systems and performance;
- ◆ Recognize the input of First Nations to the environmental management process

5.18 Follow-up Programs

Follow up programs, or monitoring, function to provide feedback on the validity of environmental assessment impact predictions in practice and to determine the effectiveness of mitigation measures. A number of follow up or monitoring programs will be developed in conjunction with specific impact mitigation plans. The AEAC will provide conceptual monitoring plans for construction, operation and closure phase of the mining project.

Follow up programs may include such things as:

- water and sediment quality
- air quality
- effluent quality
- effluent toxicity
- environmental effects monitoring
- fish and wildlife monitoring
- geotechnical stability of waste and water management facilities
- geochemical stability of waste rock, tailings and pit walls (ARD monitoring)
- fish habitat compensation success
- reclamation success

5.19 Fisheries Habitat Compensation Plan

Fisheries and Oceans Canada will make a determination based on project design parameters and baseline fisheries information whether an Authorization to harmfully alter, disrupt, or destroy fish habitat is required under Section 35(2) of the fisheries Act. As a consequence, a fisheries habitat compensation plan may be required by DFO as a condition of project approval. Such a plan will be developed in consultation with DFO and WLAP and submitted for approval. Such approval will form the basis for the Section 35(2) Authorization subject to prior completion of the CEAA and BCEAA processes.

6 Consultation

6.1 Public Consultation

The BCEAA and CEAA contain provisions for public consultation as a component of the Environmental Assessment process. RCDC will develop a program of public consultation for inclusion in the AEAC. Results of public consultation efforts held prior to submission of the AEAC will be included in the application. Those undertaken after submission will be submitted to the EAO subsequently for consideration in the EA process.

6.2 First Nations Consultation

The Red Chris property lies within the area claimed by the Tahltan people as their traditional territory. The closest community is Iskut, home to the Iskut First Nation, 18 km north of the property. Other communities include Dease Lake and Telegraph Creek, home to the Tahltan First Nation, 80 km north and 85 km to the west-northwest of the property respectively.

RCDC has renewed and has maintained regular contact with the Iskut and Tahltan First Nations and local communities since the outset of activity in 2003. Discussions have been directed at a cooperative approach to mine development that would see the Iskut and Tahltan First Nations benefit economically and socially from a long-term environmentally responsible and sustainable mining operation within their traditional territory. To this end, a Memorandum of Understanding and Statement of Principles was signed with the Tahltan and Iskut First Nations in January 2004.

The AEAC will provide a summary of meetings held with First Nations detailing attendance, issues discussed and resolution of issues or action items identified for follow-up. Records of subsequent meetings will be provided to EAO as the EA process progresses for consideration in the EA process.

6.3 Government Consultation

Pre-application and application meetings with government, First Nations and stakeholders are an integral component of the EAO process. Meetings, chaired by EAO, are held periodically as required by the assessment process. As well, one-on-one meetings with government regulators and First Nations will be held as required to discuss issues as they arise or can be anticipated. The AEAC will provide a summary of all such meetings held detailing attendance, issues discussed and resolution of issues or action items identified for follow-up. Records of all subsequent public meetings will be provided to EAO for consideration in the EA process.