# APPENDIX 6.4.5-A

# COUNTRY FOODS ASSESSMENT

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# 1.0 INTRODUCTION

This country foods assessment provides an overview of the potential effects on health by evaluating how the Project might affect country foods and whether people consuming these foods are likely to experience any adverse health effects. This assessment should be read with cross-reference to:

- Section 2.0 (Project Description);
- Section 5.4.4 (Human Health);
- Section 6.2.2 (Air Quality);
- Section 6.2.7 (Surface Water Quality);
- Section 6.2.8 (Environmental Health);
- Section 6.3.3 (Wildlife and Habitat); and
- Section 6.4.2 (Traditional Land Use).

## 1.1 Country Foods Assessment Framework

Health Canada requested an assessment of potential effects on country foods as a result of the Project through the review of the draft EIS. Potentially exposed populations for country foods in the Regional Study Area (RSA) are all peoples collecting country foods for consumption in the Provincial FalC forest. As discussed in Section 5.4.4 (Human Health), country foods in the RSA may include plants (including berries), animals, fowl, or fish. Contamination of these country foods can occur through dust deposition or effluent discharge to surface water. This country foods assessment is conducted with reference to guidance published by Health Canada (2009) and the United States Environmental Protection Agency (USEPA, 2005) and follows a standard framework:

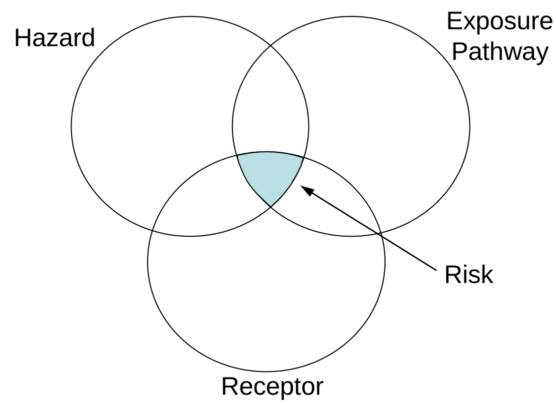
1. **Problem Formulation:** The problem formulation is the initial step in a risk assessment and serves to conceptualize the site, the source and nature of contaminants, fate and transport mechanisms, potential exposure pathways and the nature and type of receptors that may be exposed.

2. **Exposure Assessment:** This step in the process assesses the potential for human receptors to be exposed to chemicals of potential concern (COPC) via country foods by examining operable exposure pathways.

3. **Effects Assessment:** The purpose of this country foods effects assessment is to examine the relationship between the Project and the possible adverse health outcomes in people who might be affected by the Project. General methods for effects assessment (EA) are described in Section 6.1 (Overview and Methods) and the socio-economic criteria have been adapted for assessing effects in the context of human

health. For human health, effects are evaluated in terms of the change in exposure profiles for each potentially exposed population.

## 1.2 Approach and Methods




The assessment is a process used to describe the nature and magnitude of potential risks associated with the exposure of human receptors to potential chemical hazards. As illustrated in the diagram to the right, in order for risk to exist, three elements need to be present: receptors, hazard, and exposure pathway. In other words, the Project must release a COPC into the environment, a pathway must exist for the receptor to be exposed to the COPC, and the chemical must have some adverse health effect. If any one of these components is missing, then potential effects are negligible. Therefore, health risks for country foods are assessed only where a human receptor has increased exposure to a COPC that might be present in a food source as a result of project activities.

## 1.3 Temporal Boundaries

For the Project Effects Assessment, temporal boundaries encompass project activities during construction, operations, closure and post-closure phases. Country foods are primarily affected by air and water emissions. Effects on air quality and water quality will begin during construction and reach a peak during operations, diminishing again during closure and post-closure. Therefore, the temporal boundaries for country foods are based on a scenario when air quality impacts would be highest throughout the life of the project. This is predicted to occur in Year 6 when the Star pit is in Phase 1 with the maximum ore mining rate of 14.7 million tonnes per annum (Mtpa), and when the highest material quantities will be disposed of into the mine materials stockpiles.

## 1.4 Spatial Boundaries

The country foods assessment was completed for the RSA which includes a 30 km by 30 km area around the Star pit. This area is large enough to capture the measurable impacts on air quality and the portions of the Saskatchewan River that may be impacted by discharge from the diffuser outfall. Traditional land use (TLU) mapping shows a number of current cabin and camping areas within this area. Three locations closest to the Project fence line and subject to the greatest deposition have been identified for the country foods assessment.

# 2.0 PROBLEM FORMULATION

The problem formulation is the initial step in a risk assessment and serves to conceptualize the site, the source and nature of contaminants, fate and transport mechanisms, potential exposure pathways and the nature and type of receptors that may be exposed. The objective of the problem formulation is to develop a conceptual site model (CSM) for country foods by identifying the country foods consumed, COPC, human receptors, and potential exposure pathways.

## 2.1 Identification of Country Foods Consumed

As discussed in Section 5.4.4 (Human Health), country foods in the RSA may include plants (including berries), animals fowl and fish. The following sections provide a summary of information collected regarding the types of country foods harvested in the RSA.

### 2.1.1 Plants

The Traditional Use (TU) Plant Potential section (Section 5.3.2, Appendix C) contains a listing of plants with TU potential in the study area, including: cranberry, blueberry, gooseberry, saskatoon, strawberry, wild sarsaparilla, hazelnut, and pincherry. Five species of currants occur in the area as well as Lingonberry or Bog Cranberry (*Vaccinium vitis-idea*), which may also be gathered as a food source. It is reasonable to assume that these plants are used by Aboriginal groups and non-Aboriginal groups in the RSA.

### 2.1.2 Wildlife

Hunting is permitted within the FalC Wildlife Management Unit, which includes the spatial extent of the Local Study Area (LSA). White-tailed deer and black bear are among the two most populous animals within the LSA and RSA. Moose and elk hunting occur across the FalC, however hunting for these game animals along the Saskatchewan River and along access trails and roads is more common (Saskatchewan Wildlife 2009). The FalC is a popular area for elk hunting (SMOE 2009b). Regular hunting for upland game birds, including sharp-tailed grouse, ruffed grouse, hungarian partridge and spruce grouse, also occur in the FalC.

### 2.1.3 Fish

Within the FalC forest there are no commercial fishing operations, and no issuance of domestic nets (SMOE 2009b). In addition, there is very limited recreational fishing within the FalC forest due to accessibility and proximity to higher quality fishing areas (i.e., Codette Lake, Tobin Lake, and numerous fishing lakes to the north). Of the nine creek/ravines located in the LSA, only one species of sport fish, small bodied walleye, was located in the East Ravine. However, the presence of walleye was specific to the spawning season, and field staff accessing the area concluded that this creek is unable to support a viable fishery due to its size and the presence of several obstructions. The only other water body containing viable sport fish within the boundaries of LSA is the Saskatchewan River which contains several species with fishing potential including walleye, sauger, yellow perch, northern pike, cisco and lake sturgeon.

## 2.2 COPC Selected for Evaluation

The selection of COPC is based on an understanding of those chemicals expected to be emitted from mining activities as a result of the equipment being used (e.g., heavy equipment) or the activities being performed (e.g., earthworks). In the context of country foods assessment, the potential for a COPC to accumulate in the food chain must also be considered.

The air quality assessment (Section 6.2.2) predicts the emissions to the atmosphere from construction and operation activities of the Project and is used as the basis for identifying COPC. The primary emission sources have been identified as:

- vehicles and stationary equipment exhaust emissions;
- fugitive dust emissions from blasting, ore mining, materials handling, overburden removal, and waste disposal; and
- fugitive dust generated by vehicles in the open pit and on haul roads.

Anticipated pollutants generated by these sources will likely include:

- suspended particulate (TSP, $PM_{10}$, $PM_{2.5}$);
- sulphur dioxide ($SO_2$);
- nitrogen dioxide ($NO_2$);
- carbon monoxide (CO);
- carbon dioxide ($CO_2$); and
- metal elements in dust.

Not all of the above substances are considered to have the potential to pose a risk to human health via country food uptake. Criteria air contaminants ($SO_2$, $NO_2$, CO, $CO_2$) do not accumulate through the food chain. Therefore, COPC relevant to an assessment of country foods are limited to metals in dust. The selection of metals for evaluation in the country foods assessment was limited to metals that are present in elevated concentrations in the kimberlite ore and that have the potential to negatively affect human health. Based on a review of kimberlite geochemistry for the Project, the metals of potential concern are identified as:

- barium;
- chromium;
- cobalt;
- copper;
- nickel;
- vanadium; and
- zinc

## 2.3 Human Receptors

The area relevant to country foods is that used to define the study area related to the air quality (Section 6.2.2) and surface water quality (Section 6.2.7) disciplines. The closest permanent resident is within the James Smith Cree Nation (JSCN) reserve. Temporary and seasonal land uses within the FalC forest include:

- Traditional land uses in the FalC (e.g., camping, using cabins, fishing, hunting, trapping, harvesting medicinal and edible plants);
- Recreational uses of the FalC forest (e.g., hiking, biking, snowshoeing, cross-country skiing, horseback riding, canoeing, camping, bird watching, snowmobiling, fishing, trapping, recreational water sports and hunting); and
- People working in the FalC forest (e.g., exploration, aggregate, forestry and grazing related workers).

Temporary and seasonal land users are assumed to visit the area up to and including the project fence line for the duration of the construction and operations phases. This assumption is consistent with traditional land use information provided to Shore Gold and represents a worst-case exposure scenario for assessment. Traditional land use mapping (Figure 1) has identified a number of cabin and camping areas within the RSA. For the purposes of the country foods assessment, three current cabin locations, in close proximity to the Project fence line (and therefore maximally exposed to dust deposition), have been selected for evaluation (Figure 1).

## 2.4 Exposure Pathways

The primary pathways for off-site emissions from the Project are through aerial deposition and discharge to surface water.

Dust Emissions

The principal mining wastes generated from diamond mining will be non-hazardous natural materials: overburden removed from the pit(s), Fine Processed Kimberlite (PK) and Coarse

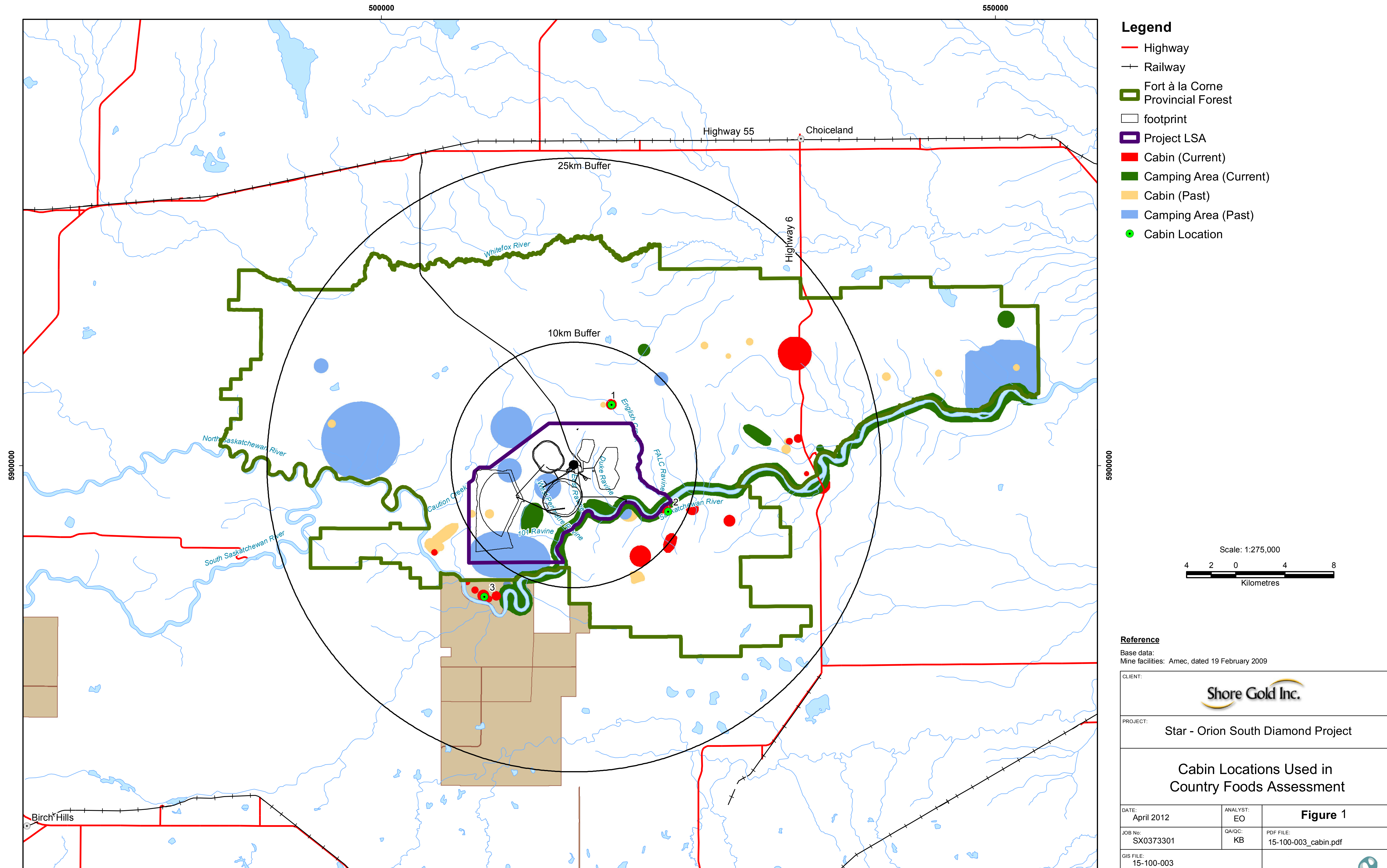
PK. Dust will be generated from road traffic, blasting, movement of overburden and from wind erosion on bare ground (e.g., PK stockpiles).

Surface Water Discharge

During operations there will be discharge through a diffuser to the Saskatchewan River. Discharge water will be a combination of runoff and shallow and deep groundwater. Contact water sources, including discharge and seepage from the Coarse and Fine PK, will be recycled and treated using natural wetlands prior to discharge. Runoff from the overburden and rock storage area, and other site areas will be settled prior to discharge. Water from East Ravine will be collected in a runoff pond and used for flow supplementation in area Ravines or other site purposes. Both shallow and deep groundwater will be pumped and flows in tributaries draining the Project site may be changed (Section 6.2.4- Hydrology Effects). Flows in the Saskatchewan River will be slightly increased from diffuser discharge and there will be minor changes to Saskatchewan River water quality immediately downstream of the diffuser.

## 2.5 Country Foods Conceptual Site Model

Possible routes of human exposure from country foods include ingestion of fish tissue contaminated with metals accumulated from water and sediment uptake; ingestion of vegetation (e.g., berries) contaminated with metals accumulated from uptake from soil, and from the ingestion of game meat that have accumulated metals. The country foods conceptual site model (CSM) is illustrated on Figure 2.




**Reference**

Base data:
Mine facilities: Amec, dated 19 February 2009

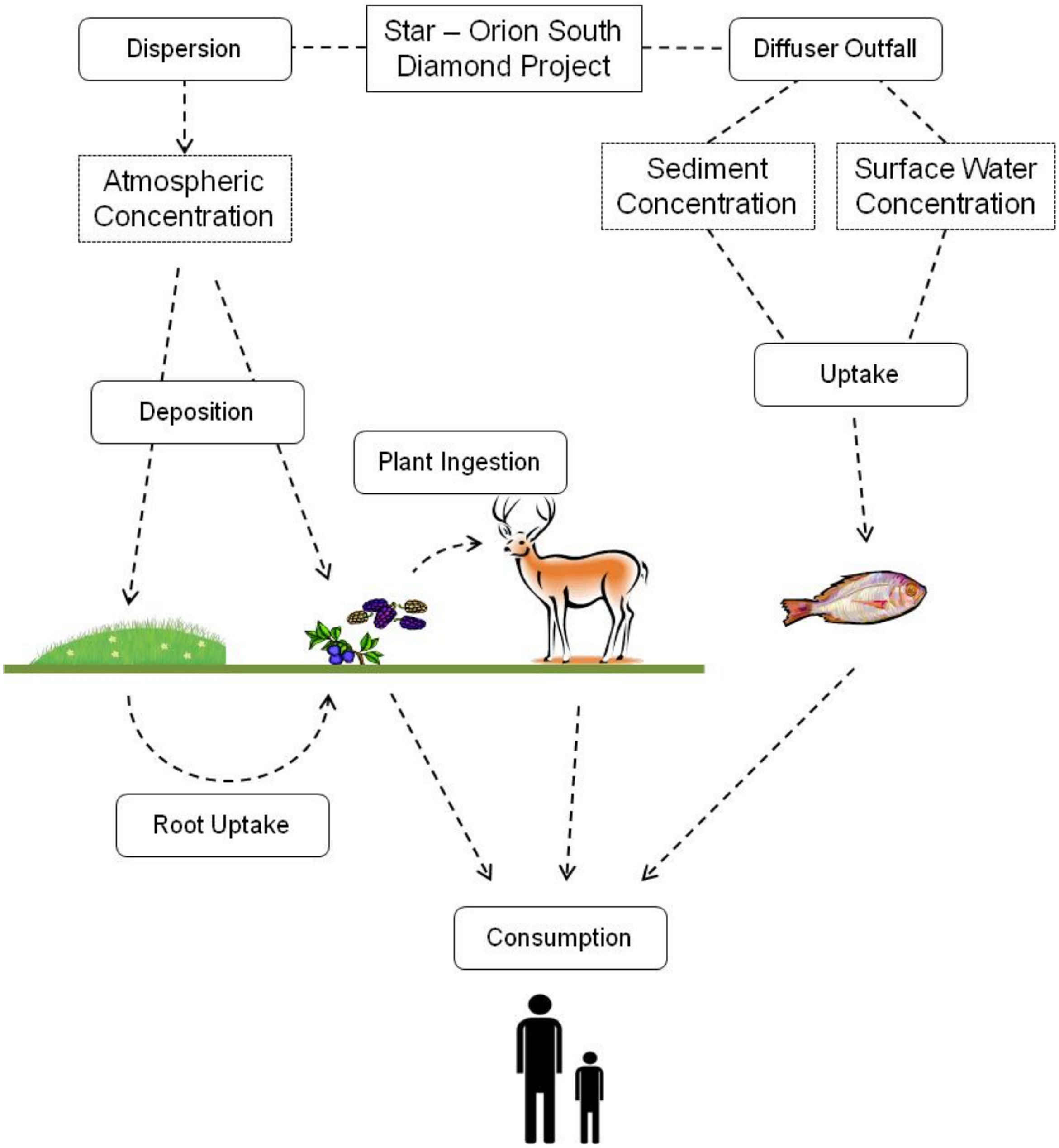
CLIENT: Shore Gold Inc.

PROJECT: Star - Orion South Diamond Project

Cabin Locations Used in Country Foods Assessment

| | | |
|---|---|---|
| DATE: April 2012 | ANALYST: EO | Figure 1 |
| JOB No: SX0373301 | QA/QC: KB | PDF FILE: 15-100-003_cabin.pdf |
| GIS FILE: 15-100-003 | | |
| PROJECTION: UTM Zone 13 | DATUM: NAD27 | amec |

***Figure 2: Country Foods CSM***



# 3.0 EXPOSURE ASSESSMENT

The amount of metals that people would be exposed to from country foods depends on the concentration of metals in:

- Soil - due to dust fall, which affects metal concentrations in plants due to root uptake;
- Plants - due to dust fall onto the plant surfaces;
- Wild game - as a result of ingestion of vegetation; and
- Fish – resulting from uptake from dissolved metals in surface water.

Each of the primary exposure pathways – soil deposition and surface water discharge – are assessed in the following sections,

## 3.1 Soil Deposition

Potential exposure resulting from deposition to soil with subsequent exposure via consumption of country foods was assessed by examining the increase in the concentration of COPC in soil resulting from direct deposition. The potential for risk was determined through a comparison of resulting concentrations with background soil concentrations.

### 3.1.1 Emission and Deposition Rates

Potential exposure to aerial emissions is based on the results of air dispersion modelling which relies on an understanding of the emission rates of different COPC from various sources and dispersion characteristics of those contaminants under different atmospheric and physical settings. While the air dispersion modelling is presented in Section 6.2.2, key elements affecting dust deposition are summarized in the following sections.

Project activity and resulting air pollution will vary almost continuously throughout the duration of the Project. Therefore, the only practical approach for quantifying air quality is to define representative levels of activity during selected periods of time. To avoid the complication and potential confusion of numerous scenarios, a probable worst case scenario has been analyzed for the year during which the largest amount of material will be mined and processed. This is predicted to occur in Year 6 when the Star pit is in operation phase 1 and waste stripping is in phases 1a to 4. The dust fall prediction refers to the worst case scenario meaning the year when meteorological conditions were most favourable for deposition (i.e., the lowest dispersion rate). The dust fall predictions for the three cabin locations, close to the Project fence line, as illustrated on Figure 1, are provide in Table 1.

***Table 1: Dust Fall Predictions at Selected Cabin Locations***

| Location No. | UTM Co-ordinates | | Dust Fall g / $m^2$ annum |
|---|---|---|---|
| | m E | m N | |
| 1 | 518632 | 5905037 | 2.5 |
| 2 | 508547 | 5889178 | 1.3 |
| 3 | 523174 | 5896491 | 3.3 |

The metals content of the dust is determined by reference to kimberlite geochemistry and assuming that all dust is generated from kimberlite ore. This overestimates metals content as only a portion of dust generated would originate from kimberlite with higher metals content. Nevertheless, predicted dust fall rates for each of the metals identified in Section 2.2 are presented in Table 2.

***Table 2: Metals Dust Fall Predictions at Selected Cabin Locations (µg / $m^2$ annum)***

| Metal | Cabin Location No. | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Barium | 1,555 | 809 | 2,053 |
| Chromium | 1,168 | 607 | 1,541 |
| Cobalt | 223 | 116 | 294 |
| Copper | 83 | 43 | 109 |
| Nickel | 2,500 | 1,300 | 3,300 |
| Vanadium | 160 | 83 | 211 |
| Zinc | 110 | 57 | 145 |

**Notes:** Metals dust fall calculated by apportioning total dust fall based on kimberlite geochemistry as follows: barium - 622 µg/g; chromium – 467 µg/g; cobalt – 89 µg/g; copper – 33 µg/g; nickel – 1,000 µg/g; vanadium - 64 µg/g; zinc – 44 µg/g

### 3.1.2 Soil Concentrations

The contribution of dust fall as described above to the concentration of different COPC in soil is summarized in Table 3. Key assumptions in this table are:

- The maximum dust fall rate calculated for Year 6 continues for the entire 20 year mine life;
- Metals mix within the top 0 – 5 cm of surface soil. This is the layer defined by Health Canada as the “public health layer” and is considered to be of prime concern for evaluation of human health effects;
- There are no losses of metals from this surface layer from natural processes such as leaching, runoff, and erosion; and

- Soil concentrations are calculated for the cabin location with the highest dust fall (Location No.3).

***Table 3: Deposition of COPC to Soil***

| Metal | Total Depostion (20 year mine life) mg/m$^2$ | Incremental Soil Concentration Due to Deposition[1] (mg/kg) | Background Soil Concentration[2] (mg/kg) | % Change |
|---|---|---|---|---|
| Barium | 41.052 | 0.55 | 527 | 0.1 |
| Chromium | 30.822 | 0.41 | 40.6 | 1.0 |
| Cobalt | 5.874 | 0.08 | 8.2 | 1.0 |
| Copper | 2.178 | 0.03 | 15.4 | 0.2 |
| Nickel | 66 | 0.88 | 23 | 3.8 |
| Vanadium | 4.224 | 0.06 | 60.3 | 0.1 |
| Zinc | 2.904 | 0.04 | 57.2 | 0.1 |

**Notes:** 1. Assumes mixing in top 5 cm and a bulk soil density of 1,500 kg/m$^3$.
2. Background soil concentrations from *Major- and Trace-Element Concentrations in Soils from Two Continental-Scale Transects of the United States and Canada*, Smith et. al., 2005.

As evident from the table, deposition to soil makes no measurable difference to background concentrations of the different COPC under the worst case scenario. Soil concentrations are greatly over-estimated using this scenario. As such, this exposure pathway has negligible potential for increased health risk.

### 3.1.3 Vegetation Concentrations

In terms of deposition to vegetation (plants, berries) with subsequent uptake via ingestion, the degree of exposure will be dependent on the extent of deposition during the growing season, the types of plants/berries harvested, consumption rates within a family, and preparation methods (e.g., washing and cooking). To estimate concentrations within plant tissue, the maximum rate of deposition described above was used as the input parameter for a standard equation that accounts for the surface area of the plant exposed to deposition and the loss of deposited material due to mechanisms such wind and water erosion (USEPA, 2005):

$$C_{plant} = \frac{D \times R_p \times [1 - exp(-kp \times tp)] \times [1 - WC]}{Y_p \times kp}$$

where:

$C_{plant}$ = metal concentration in plant tissue, mg/kg wet weight
D = dust fall rate (mg/m$^2$ year)

$R_p$ = 0.39, interception fraction of the edible portion of the plant (unitless)
kp = 18, plant surface loss coefficient ($yr^{-1}$)
tp = 0.16, length of plant exposure to deposition per harvest (yr)
WC = 0.85, dry weight to wet weight conversion factor (unitless)
$Y_p$ = 2.24, yield or standing crop biomass of the edible portion of the plant (kg dw/$m^2$)

Based on this equation and the maximum dust fall prediction, plant concentrations are presented in Table 4.

***Table 4: Predicted Plant Concentrations***

| Metal | Total Deposition ($mg/m^2$ year) | Incremental Plant Concentration Due to Deposition (mg/kg ww) |
|---|---|---|
| Barium | 2.0526 | 0.0028 |
| Chromium | 1.5411 | 0.0021 |
| Cobalt | 0.2937 | 0.0004 |
| Copper | 0.1089 | 0.0001 |
| Nickel | 3.3 | 0.0045 |
| Vanadium | 0.2112 | 0.0003 |
| Zinc | 0.1452 | 0.0002 |

As evident from the table, deposition to plants results in no measurable incremental concentrations of the different COPC under the worst case scenario. Plant concentrations are greatly over-estimated using this maximum dust fall rate hence this exposure pathway has negligible potential for increased health risk.

Nevertheless, as a worst case example, we have calculated the amount of plant (e.g., berries) that a person could consume without exceeding the tolerable daily intake (TDI) for nickel (the COPC with the highest deposition rate) using the following equation:

$$Consumption\ Rate\ \frac{kg}{day} = \frac{TDI\ \frac{mg}{kg-bw/day} \times Body\ Weight\ (kg-bw)}{C_{plant}\ \frac{mg}{kg}}$$

Assuming a TDI for nickel of 0.0013 mg/kg-day and a body weight of 16.5 kg (Health Canada, 2009), a toddler could consume 4.8 kg of plants every day without adverse health effect. This approximates to 60 cups of berries every day (one cup of blueberries or cranberries weighs approximately 80 g). This result shows that metal concentrations in edible plants are not a concern to human health, even if large quantities of local plants are consumed on a daily basis.

### 3.2 Surface Water Discharge

Potential exposure resulting from discharge to surface water with subsequent exposure via consumption of fish was assessed by examining the increase in the concentration of COPC in the Saskatchewan River resulting from this discharge. The potential for risk was determined through a comparison of resulting concentrations with background concentrations.

#### 3.2.1 Effluent Characteristics and Volumes

During mining operations, run-off water and water from pit dewatering will be managed through the diffuser and discharged into the Saskatchewan River. Approximately 90% of this water will be from deep aquifers in the Mannville Formation, either directly or from the PKCF, with the remainder coming from shallow aquifers or precipitation.

This water will be discharged via a 60 m long diffuser pipe with 40 ports spaced 1.5 m apart. The diffuser design is based on the assumption of an average constant effluent discharge rate of 120,000 $m^3$/d (or 1.4 $m^3$/s). In comparison, Saskatchewan River average annual and ice covered 7Q10 flows at this location have been calculated at 37 930 000 $m^3$/d (439 $m^3$/s) and 14 600 000 $m^3$/d (169 $m^3$/s), respectively. Open water low flow for the river has been calculated at 16 200 000 $m^3$/d (188 $m^3$/s).

#### 3.2.2 Surface Water COPC

COPC in surface water were identified in Section 6.2.8 (Environmental Health) by screening maximum concentrations in the Mannville aquifer ground water against the Saskatchewan Environment interim Surface Water Quality Objectives SWQOs (Saskatchewan Environment 2006) and other guidelines as required where SWQOs were not available (e.g., CCME, BC, Ontario). Parameters discussed in Section 6.2.8 include metals, VOCs, general chemistry, and nutrients, however within the context of country foods assessment, only those parameters with potential to accumulate in fish tissue and result in adverse human health effects are relevant. Based on this screening, COPC for surface water include:

- Cadmium;
- Chromium;
- Cobalt;
- Copper;
- Lead;
- Nickel;

- Selenium;
- Silver;
- Vanadium; and
- Zinc

### 3.2.3 Surface Water Concentrations

Water quality modelling has been completed to assess the effects of effluent discharge on concentrations in the Saskatchewan River (refer to Section 6.2.7, Table 6.2.7-4). A summary of results is presented in Table 5.

***Table 5: Predicted Surface Water Concentrations (µg/L)***

| Parameter | SWQO[1] | Background Saskatchewan River | Incremental Increase Above Background Within 40 m Downstream From the Diffuser | | Resulting Concentration in the Saskatchewan River |
|---|---|---|---|---|---|
| | | | Mean | Mean % Increase | |
| Cadmium | 0.06 | 0.08 | 0.001 | 1.3% | 0.081 |
| Chromium | 1 | 2 | 0.01 | 0.5% | 2.01 |
| Cobalt | 5.2[2] | 0.5 | 0.002 | 0.4% | 0.502 |
| Copper | 3 | 2 | 0.03 | 1.5% | 2.03 |
| Lead | 4 | 0.6 | 0.004 | 0.67% | 0.604 |
| Nickel | 100 | 2 | 0.008 | 0.4% | 2.008 |
| Selenium | 1 | 0.4 | 0.004 | 1% | 0.404 |
| Silver | 0.1 | 0.2 | 0.0002 | 0.1% | 0.2002 |
| Vanadium | 20[2] | 2 | 0.02 | 1% | 2.02 |
| Zinc | 30 | 10 | 0.4 | 4% | 10.4 |

**Notes**: 1. Saskatchewan Interim Surface Water Quality Objectives, 2006 (hardness, 150 mg/L).
2. Ontario Aquatic Protection Values, 2011.

As evident from the table, discharge through the diffuser to the Saskatchewan River makes no measurable difference to background surface water concentrations of the different COPC under the mean predicted increase. This finding is consistent with the negligible contribution that the discharge makes to flow volumes in the river. As noted above, the discharge volume through the diffuser (1.4 $m^3/s$) is <1% of both the Saskatchewan River open water low flow and ice covered 7Q10 flows at this location (188 $m^3/s$ and 169 $m^3/s$, respectively).

In other words, a return to background metals concentrations would be rapidly achieved within a short distance of the discharge. Fish are expected to be transient through this location and would pass through the 40 m stretch of the River in a short time. This brief potential exposure would not be sufficient to allow for accumulation of metals with subsequent human exposure through consumption. As such, exposure to COPC via fish consumption has negligible potential for increased health risk.

## 4.0 CONCLUSIONS

This country foods assessment has evaluated the potential for Project emissions to adversely affect human health through consumption of country foods harvested in the RSA. The key conclusions of the assessment are summarized below:

- Country foods harvested in the RSA include berries, wild game, and fish.
- The COPC identified consist of metals that are associated with kimberlite ore and have the potential to accumulate in the food chain.
- The Project may interact with the surrounding environment through air and/or surface water emissions.
- Potential exposure resulting from Project emissions was assessed by examining the increase in the concentration of COPC in the receiving environment. The potential for risk was determined through a comparison of resulting concentrations with background concentrations.
- Dust deposition to soil makes no measurable difference to background soil concentrations of the different COPC under the worst case scenario.
- Dust deposition to plants results in non-detectable incremental plant COPC concentrations. Predicted safe plant consumption rates greatly exceed typical consumption rates.
- Effluent discharge through the diffuser to the Saskatchewan River makes no measurable difference to background surface water concentrations of the different COPC under the mean predicted increase.
- Based on these findings, country food exposure pathways are not predicted to result in increased health risk.

While this assessment has indicated that impacts to country foods are unlikely, it is difficult to accurately predict such impacts before the Project begins. Air quality and water quality modelling include assumptions that introduce uncertainty with respect to potential future metal concentrations in soil, water, or vegetation. Therefore, it is recommended that country foods baseline sample collection be completed prior to project development to document naturally occurring levels of metals. The sampling program should be planned out in terms of type, number and location of samples based on information on what people harvest and from where. This will provide a baseline for additional country foods assessments if changes in soil, water or vegetation quality are found in the future. Shore Gold has initiated this process and results will be reported once sufficient data have been collected and analysed. Re-evaluation of country foods will be considered if the metal concentrations in the soil, vegetation and water within the RSA show an increase over time.