

**TERMS OF REFERENCE
FOR THE PREPARATION OF A
FOCUS REPORT**

DDV Gold Limited

**Touquoy Gold Project
Moose River Gold Mines, Halifax Regional Municipality**

NOVA SCOTIA ENVIRONMENT AND LABOUR

May 7, 2007

Introduction

The Touquoy Gold Project proposed by DDV Gold Limited (the Proponent) was registered for environmental assessment as a Class 1 Undertaking pursuant to Part IV of the Environment Act on March 15, 2007.

On April 10, 2007, following a review of information submitted by the proponent, government agencies and the public, the Minister of Environment and Labour decided that a review of the information indicates that the adverse effects or significant environmental effects which may be caused by the undertaking are limited and that a focus report is required. In accordance with section 13(1)(c) of the Environmental Assessment Regulations, the Minister directed the Proponent to provide a Focus Report to examine potential impacts of the proposed Touquoy Gold Project on the recreational, wilderness, and ecological value of the Scraggy Lake, Fish River, and Moose River system and undeveloped lands lying south-west of the project site. The Minister has required that particular attention be focussed on the potential release of contaminants to this downstream environment, as well as impacts of noise, dust and aesthetics on both the region described above and the Tangier-Grand Lake Wilderness Area. The report shall include characterization of risks to the downstream environment and subject lands, methods for avoiding interactions with these areas, proposed mitigation measures and contingency plans for potential effects on wilderness recreation values and activities in the region. The Focus Report should demonstrate that these concerns have been considered in mine design.

The proponent is required to submit the Focus Report within one year of receipt of this Terms of Reference. Upon submission of the Focus Report by the proponent, Nova Scotia Environment and Labour (NSEL) has 12 days to publish a notice in the newspaper, that advises the public where the Focus Report can be accessed for review and comment. A 30 day public review period of the Focus Report follows.

At the conclusion of the 30 day public review, NSEL has 25 days to review public, government comments, and provide a Report and Recommendations to the Minister.

The Minister of Environment and Labour will have the following decision options pursuant to the *Environmental Assessment Regulations*, following the review of the focus report:

- (a) the undertaking is approved subject to specified terms and conditions and any other approvals required by statute or regulation;
- (b) an environmental-assessment report is required; or
- (c) the undertaking is rejected.

Terms of Reference for a Focus Report

The following requirements are presented to the Proponent for response in the form of a Focus Report.

1.0 PROJECT DESCRIPTION

Provide a description of the Touquoy Gold Project including the following:

- the project location;
- the project boundaries clearly delineated on a map which also shows the focus report study area (as delineated in attachment 1 - Focus Report Study Area); and
- any assumptions which underlie the details of the project design, including impact avoidance opportunities

Describe project temporal and spatial boundaries which encompass the periods and areas during and within which the project may potentially interact with, and have an effect on components of the environment.

2.0 OTHER METHODS FOR CARRYING OUT THE UNDERTAKING

Describe other methods/alternatives for carrying out the undertaking, including alternative designs and / or locations for the tailings management area and processing facilities. Provide plans and maps showing any alternative designs that have been considered.

Demonstrate how potential impacts on the study area have been considered in the chosen design / facility locations.

3.0 DESCRIPTION OF THE STUDY AREA

Provide a description of the study area as delineated in attachment 1 with an emphasis on the following Valued Ecosystem Components (VECs):

Flora and Fauna / Rare Species and Species-at-Risk

Provide a general characterization of flora and fauna species and habitat within the study area. Identify flora and fauna species-at-risk, and potential habitat for flora and fauna species-at-risk in the study area. Current information shall be obtained from Nova Scotia Department of Natural Resources (NSDNR), Wildlife

Division; the Atlantic Canada Conservation Data Center; Environment Canada; the Nova Scotia Museum of Natural History and local naturalists and relevant interest groups.

Aquatic Resources

Identify fish (species and abundance) and fish habitat that exists in downstream receiving watercourses (downstream of the tailings management facility and mine) within the study area. The description of these species and habitat should identify any species-at-risk and ecologically sensitive or critical habitat.

Provide baseline data for existing mercury concentrations in fish tissue that are adequate to be used for comparison purposes for impact monitoring programs. Provide data on total mercury in whole fillets accompanied by fish species and size data). Provide baseline data for sediment quality in watercourses downstream of the proposed tailings impoundment that are adequate to be used for comparison purposes for impact monitoring programs. Sediment data should focus on mercury, arsenic, lead, copper, and any other metals which are expected to be emitted from the processing facility into the tailings impoundment.

Atmospheric Conditions

Provide a review of baseline ambient air quality and meteorological data, including annual and seasonal climatic conditions for the study area. Discuss the influence of local and regional emission sources and the influence of climate and weather conditions. The data should be used for the development of an appropriate model(s) for the study area to be provided in the Focus Report. Also describe any potentially sensitive receptors or locations.

Surface Waters and Wetlands

Provide a general hydrologic, hydraulic and water quality description of all surface water bodies downstream of the mine and tailings management facility within the study area (include mapping as appropriate) . Describe groundwater/surface water interactions. Existing uses, withdrawal capacities, and users of the watercourses shall be identified. Include baseline water quality data for arsenic, pH, and dissolved oxygen content.

Identify the location, size and class (based on the Canadian Wetland Classification System) of wetlands within the predicted zone of influence.

Ambient Light and Noise Levels

Describe the existing ambient acoustical environment in the study area. Provide

the spatial boundaries of existing noise and vibration levels, as well as locations of recording stations and length of record for any acoustic or vibration data presented. Consider the effects of different meteorological conditions on noise propagation.

Describe existing ambient light levels for areas where project activities could have an environmental effect on light levels. Describe night-time illumination levels during different weather conditions and seasons.

Ecological Value

Characterize the study area's ecological value in terms of unique, rare, or provincially under-represented ecosystems, landscapes, and wilderness attributes. This information shall be presented in a manner acceptable to NSEL's Protected Areas Branch.

Recreational Value

Describe current and traditional recreational land and water use within the study area, including a description of unique recreational attributes. Describe the methodology that is used to assess recreational values including details of all stakeholder engagement. This information shall be presented in a manner acceptable to NSEL's Protected Areas Branch.

4.0 ADVERSE EFFECTS AND ENVIRONMENTAL EFFECTS ASSESSMENT

The Focus Report shall identify and predict the magnitude and importance of project impacts, both positive and negative, on the study area. This discussion should demonstrate an ecosystem approach and a commitment to avoiding and minimizing effects. This section shall address direct impacts on identified VECs, including, but not limited to, socio-economic, community, and bio-physical environmental impacts. This section shall specifically address the environmental effects of malfunctions or accidents using risk modeling where appropriate. Potential interactions and risks should be considered for both during mine operations and post reclamation.

Describe potential effects of the following on the study area environment.

Lighting

Describe project lighting requirements and range of influence. Describe potential effects on the study area.

Noise and Blasting

Provide a quantitative assessment of anticipated project related noise levels within the study area, and discuss potential effects. Provide a comparison of anticipated levels with baseline levels.

Discuss blasting locations and frequencies. Describe potential effects of blasting on the study area.

Air Emissions and Dust

Provide an emission summary of all air contaminants that will be released from project activities. Provide a quantitative analysis of all air contaminants using dispersion modelling.

Describe potential distribution and effects of air emissions and dust within the study area. Particular emphasis should be placed on the effects of emissions on lichens of concern.

Qualify and quantify known and/or reasonably inferred potential impacts of projected sulphur dioxide emissions from project activities on the nine species of RED and YELLOW (NS General Status of Wild Species) listed species of cyanolichens known to occur in the mine development area.

Qualify and quantify known and/or reasonably inferred potential impacts of projected sulphur dioxide emissions on the nine species of RED and YELLOW listed cyanolichens and known occurrences of boreal felt lichen within a 100 km radius surrounding the proposed development area.

Visual Impact

Provide a visual impact assessment of the mine site on the study area (including visual impacts from Scraggy Lake). Provide mapping to indicate the range of mine site visibility and discuss potential effects.

Impacts to Surface and Ground Waters

Describe and quantify releases that could occur under both normal conditions and a 'worst case scenario', including potential tailings dam failure, effects of extreme weather events and climate change influence, and other potential accidental releases. Consider accidental releases during transportation and storage of dangerous goods to and at the site. Consider release of contamination from disturbance of historic mine wastes, acid rock drainage, and other contaminants that may leech from tailings either during operations or after closure of the tailings

facility. Describe the types, fate and distribution of contaminants within the study area under normal and worst case scenarios during operations and post reclamation.

Describe project related water withdrawal and any interactions with groundwater which may impact the downstream environment, and discuss effects.

Soil Contamination

Describe the expected concentrations of arsenic and metals in the tailings post-closure, relative to soil quality guidelines for expected future land uses of forest land and recreational use as described in the preliminary site reclamation plan. Identify potential 'hotspots' within the tailings such as locations of disposal of arsenic-rich sludges from the water treatment facility. Describe the expected forms in which arsenic will occur (e.g. ferric arsenate, arsenopyrite, oxides, etc) and the expected stability of these forms under the geochemical conditions that will prevail following site reclamation.

5.0 MITIGATION MEASURES AND MONITORING

The Focus Report shall describe all measures that have or will be taken to avoid or mitigate negative impacts, and maximize any positive environmental effects of the project. Mitigation includes the elimination, reduction or control of the adverse effects or the significant environmental effects of the project, and may include restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means.

Describe reclamation plans, and demonstrate how the reclamation approach has considered long term impacts on the study area.

Provide details of all monitoring programs that will be used to determine whether mitigation measures are adequate. Describe how baseline data collection and future monitoring programs are related.

Describe contingency plans to address accidental releases that could impact the study area.

Describe any proposed compensation that will be provided when environmental damage is unavoidable or cannot be adequately mitigated by any other means. This section shall address all VECs identified in Section 3 above.

6.0 FOCUS REPORT SUMMARY AND CONCLUSIONS

This section of the Focus Report shall summarize the overall findings and conclusions of the study.

Attachment 1: Touquoy Gold Mine Project: Focus Report Study Area

